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Eugenethenics: The Literary Connection Between Domesticity and Eugenics

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EUGENOTHENICS: THE LITERARY CONNECTION BETWEEN DOMESTICITY
AND EUGENICS

A Thesis Presented

by

CALEB J. TRUE

Submitted to the Graduate School of the
University of Massachusetts Amherst in partial fulfillment
of the requirements for the degree of

MASTER OF ARTS

September 2011

History

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DEDICATION

To Kristina.

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ABSTRACT

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AND EUGENICS

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This is an analysis of the connection between the domestic science movement and the eugenics movement. While it is made clear by historians such as Megan Elias and Kathy Cooke that there is ample connection between eugenics and eugenics, there has not been as comprehensive an analysis of the direct connections between domestic science and eugenics. Close examination of literature from the domestic science movement reveals the shared goals of domestic science and eugenics. The domestic science movement was also a necessary precursor to the eugenics movement, not simply a “re-envisioning” of home economics by Ellen Richards. When Richards died, her eugenics ideals would continue to be a part of domestic science in the early decades of the twentieth century. This analysis will contribute in part to the understanding of how, through rhetoric, nations can progress towards more unsightly policies of social engineering from seemingly benign beginnings. Eugenics may not have origins in domestic science, a field of homemaking, cookery, etiquette, and child-rearing, but eugenics certainly shares goals, purposes, and a vision with domestic science.

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CHAPTER I

INTRODUCTION

Euthenics began nominally when Ellen H. Richards (1842-1911) coined the term in her 1905 text *The Cost of Shelter*. She explained it fully in her 1910 text *Euthenics: The Science of Controllable Environment*. In the former text, Richards defines euthenics as “the science of better living.” In the latter text, her definition is “the betterment of living conditions, through conscious endeavor, for the purpose of securing efficient human beings.”¹ This progression of definitions shows how her ideas solidified and expanded in the five years between publications. Richards’s simple concept about “good living” entailed grander notions for family, society, and country. The purpose of “securing efficient human beings” is no petty task for the homemaker. Such a charge has grand nationalistic implications. Just as the definition of Euthenics changed in a scant five years, the meaning of domestic science transformed, until it, too, was recognized as having grand nationalistic implications. At what point around the turn of the century did the home, the kitchen, the nursery join the frontlines in the quest for an efficient, competitive American race?²

¹ Ellen H. Richards. *The Cost of Shelter* (New York: John Wiley & Sons, 1905): 12, and Ellen H. Richards. *Euthenics: The Science of Controllable Environment*. (Boston: Whitcomb & Barrows, 1910): vii-viii

² For authoritative material on euthenics, the works of Ellen H. Richards are key. Richards defined euthenics, coined the term, and discussed extensively its purposes. There are also a number of old articles on euthenics, some of which deserve treatment as both primary and secondary sources. While, for example, Ellen H. Richards’s *Euthenics: The Science of Controllable Environment*, is certainly a primary source where the question of understanding euthenics is concerned, Carl E. Seashore’s *The Term “Euthenics,”* written much later in 1941 is primary only in that it is one academic’s interpretation and opinions on the subject; it is also an opinion formulated from a definite historical distance albeit one still far nearer the event in time that we happen to be.

In this essay I will explore eugenics, the domestic science movement, and euthenics. Euthenics was the last of these three movements named. It was so named in order that it was identifiable with eugenics; domestic science, beginning earlier in the nineteenth century, was not as seemingly closely related. By tracing the development of eugenics alongside the domestic science movement in the nineteenth and early twentieth centuries, I will show how domestic science and eugenics are closely related; the two movements share similar goals and use similar rhetoric to promote those goals. I will attempt to show that the evolution of race hygiene theorizing at the same time as the institutionalization of domestic science education was, if not more than a coincidence, a startling historical concurrence.

Euthenics is, in a way, a convergence of both domestic science and eugenics, but it is also a compromise between the two movements. On the one hand, it is the acknowledgment—by a member of the scientific community, rather than a founding educational force like Catharine Beecher (1800-1878)—of a woman’s influence and power over the health of the American nation through her prescribed role as housewife and homemaker. That role is illustrated, refined, and championed by the domestic science movement. On the other hand, the creation of euthenics speaks to a larger intellectual divide among scientists of the time regarding the debate over heredity and environment.³ Some important eugenicists, responding to new findings in the field of

³ In this paper I will address these two perspectives of contested importance in the early twentieth century. Heredity is referred to as “nature,” in the sense that the dispositions of future generations are most dependent on inheritance, not upbringing. Environment is referred to as “nurture.” This terming ought not downplay the importance of either. Hopefully it will simplify comparisons that will be made. Environment, in the realm of

genetics, began to downplay the importance of environment (“nurture”) in favor of heredity (“nature”) as the most important factor in developing a fit and competitive citizenry. As a response, those who still championed the importance of environment began to talk in terms of eugenics—a comparably scientific name that simultaneously indicated both a split and a continued relationship to “eugenics.”

To conduct this study, I will look at period literature. To discuss the rise of eugenics, Sir Francis Galton (1822-1911), cousin of Charles Darwin, will be the focus. His many authored works and his own personally-evolving definition of eugenics serve to illustrate the progression of thought that is key to understanding the changing relationship of these movements over time.⁴ There are also period articles from scholarly journals that will help in understanding the intellectual debate around the definition and purposes of eugenics in this formative period. For material on domestic science,⁵ Catharine Beecher’s (1800-1878) *A Treatise on Domestic Economy*, first published in 1841, is an essential, authoritative work. While there are later works that need analyzing, such as James E. Talmage’s *Domestic Science* (1891), Beecher’s book comes much earlier and is influential far longer. (Talmage’s work will come under consideration as part of the post-Beecher domestic science movement.) Catharine Beecher discusses the larger

domestic science, has to do primarily with the home environment in which children are raised to be good American citizens. Euthenics will up the importance of nourishment to the concept of environment, thus the child is both psychologically and physically nurtured, and kept in good health; in short, “bred” for success.

⁴ Galton is English. When “eugenics” is discussed in this paper, what is meant more specifically is the scientific basis, developed in the nineteenth century largely as a result of Galton’s work, for the American eugenics movement, which really only crystallizes in the twentieth century.

⁵ “Domestic science” is, in a way, a catch-all that includes a few definitions of roughly the same thing: “domestic economy,” “home economics,” and “domesticity” all fall under “domestic science” for the purposes of this paper.

implications of domestic labor, not simply the nuts and bolts of domestic upkeep. These larger implications, for society, for nation, present in *A Treatise*, link domestic science to the eugenics movement. As with eugenics, there are a number of period articles from the late nineteenth and early twentieth century that argue for domestic science education and its importance. These sources serve dual purposes as well: primary, as persuasion, as iterations of a highly articulate and growing movement; and secondary, as arguments about or for a subject already mapped out and defined by founders, groundbreakers, individuals with chisels like Catharine Beecher.⁶

Relating the eugenics and domestic science movements to one another can be tricky. I will present the short histories of these two movements, one after the other, to show how these movements are complimentary. The literatures of domestic science and eugenics are linguistically related in the ways that they frame their purposes and goals; both movements are in ways utopian, although with later twentieth century contributions on the subject of utopia from people like Betty Friedan and Aldous Huxley (grandson of Darwin's bulldog, Thomas Henry Huxley), it is understood that utopian can mean vastly different things in different hands.⁷

⁶ There are countless books written between 1880 and 1910 on child welfare, American diet, nutrition, domestic problems, hygiene, and other topics that lie squarely within the confines of domestic science. Because of their language, because of their appeals and arguments, these sources show an alignment between domestic science and eugenics, even if they happen to contain no direct mention of or allegiance to any specific movement. Literature of this period also helps in characterizing the development of domestic science after Catharine Beecher. *Domestic Problems*, by A. M. Diaz, and *The Training of the Human Plant* by Luther Burbank are good examples of such works at either end of that timeline.

⁷ Ideas leading to this project come from a few modern sources. Laura Shapiro's *Perfection Salad: Women and Cooking at the Turn of the Century* discussed Catharine Beecher and the *Treatise's* power and influence for Ellen Richards' time. David Tucker's *Kitchen Gardening in America* brings forth some interesting ideas about social

It is also important to understand the cultural context that lies behind our cast of characters and movements. In the time period of greatest concern for us, between 1885 and 1925, America was transforming into a modern state. The final convincing move into modernity came with American intervention in World War I. At the end of the nineteenth century, technological advances, growing consumerism, and scientific progress all affected American life. The home transformed from a realm of production to one of consumption; the concept of the domestic sphere expanded to a national level, to be at odds with the “foreign” instead of the material, commercial, and competitive “civic realm”; and science brought vast insight into the centuries-old practices of childrearing in America. These changes affected America at all levels. To understand the transformation and creation of movements, this turn-of-the-century context must be addressed.

Finally, I use the metaphor of marriage and divorce to talk about the fissure between nature and nurture, between heredity and environment, but I do not mean to extend the gendering of these ideas to extremes with such a metaphor. There is already, admittedly, plenty of gendering in these ideas: nurture deals with the home, the domestic sphere, child welfare, nutrition, and so forth; nature is preoccupied with “hard scientific” natural selection, survival of the fittest, Punnett squares, etc. Rather, I wish to illustrate,

Darwinism in this period from an agricultural perspective, and agriculture feeds directly into dietetics, a key part of a Euthenics and “nurture.” Amy Kaplan’s article *Manifest Domesticity* equates a shift in American foreign policy around the time period I am examining to a shift in the conceptualization of the domestic sphere, thus raising the domestic to societal, national, and international importance. Finally, Kathy J. Cooke, in “The Limits of Heredity: Nature and Nurture in American Eugenics Before 1915,” discusses the rift between environment and heredity, and solidified the date of ultimate divorce: 1915.

with the metaphor of marriage, the close, symbiotic relationship between nature and nurture, and the respectability of both environmental and hereditary concerns. And, the idea of divorce is used as much to illustrate the rate of separation—slow, perhaps not intentional at first, attritious—as it is to show the growing discomfort and change in attitude of one party, the scientific “hereditarians,” towards the “environmentalists.” By 1915, there was very little respect in the core eugenic community for the so-called “science of environment.”

CHAPTER II

A SHORT HISTORY OF “NATURE”

Kathy J. Cooke asserts that “historians generally have underestimated and downplayed the role of nurture in early American eugenics.”⁸ Nurture included all those external factors affecting the development of individuals after nature has taken its course. The improvement of external factors, including education, is the science of eugenics. While some historians have acknowledged the importance of environment alongside heredity in the American eugenics movement before World War I, the historical narrative has generally ignored the important role played by non-hereditary factors.⁹

There are a few reasons why environment may have been ignored. Kathy J. Cooke suggests one reason: at the turn-of-the-century, there was a closer scientific relationship between concepts of heredity and influences of the environment. Neo-Lamarckian theory suggested that the environment could change heredity by altering characteristics in a parent generation that would then be acquired and subsequently transmitted to the offspring. It was not until breakthroughs in heredity—the development of Johanssen’s genotype and Thomas Hunt Morgan’s gene theory—that eugenics, and further considerations of environmental influence, were branded as soft science.¹⁰ Eugenics, after 1915, became closely associated with heredity, and eugenics dropped off the historical radar, being subsumed instead by dietetics, food science, nutrition, domestic science, home economics and other prescriptive movements to which it was relevant.

⁸ Kathy J. Cooke. “The Limits of Heredity: Nature and Nurture in American Eugenics Before 1915.” *Journal of the History of Biology* Vol. 30, No. 2 (Summer, 1998): 263

⁹ Cooke, 263

¹⁰ Cooke, 264-5

In order to understand where the term “euthenics” came from, it is necessary to understand the origins of the term eugenics as it developed in the nineteenth century. In America, shortly before World War I, eugenics was a generally recognized, but not a generally understood term. Roswell H. Johnson cites streetcar commuters identifying the term variously as “the science of health,” “the cause and prevention of prostitution,” and “the science of sex.”¹¹ These are all correct definitions in some way, but incomplete. Much later, in 1941, Carl E. Seashore retrospectively, quite assuredly and casually identifies it as “the science of being well born.”¹²

Sir Francis Galton, Charles Darwin’s cousin, was a nervous but driven man with a knack for statistics. Galton was said to be “preoccup[ied] with demonstrating the influence of heredity over environment,”¹³ but it seems Galton’s more passionate inclination had to do was asserting his own worth among a British cultural and scientific elite. From a very young age Galton was brought up to be as great as his eminent cousin Charles Darwin. Under Darwin’s long shadow Galton studied vigorously as a child and, lucky for his Anglican upbringing (his father was a Quaker), was admitted to study at King’s College Medical School. Galton did well in his studies but suffered nervous breakdowns, headaches, and other stress-related afflictions. He eventually graduated, traveled in Africa and the Middle East, and published widely on his travels, on statistical observations, and other subjects. Why he began to focus in on eugenics is not entirely

¹¹ Roswell H. Johnson. “Eugenics and So-called Eugenics.” *The American Journal of Sociology*, Vol. 20, No. 1 (Jul., 1914): 98

¹² Carl E. Seashore. “The Term ‘Euthenics.’” *Science*, New Series, Vol. 94, No. 2450 (Dec. 12, 1941): 562

¹³ Douglas Lorimer. “Theoretical Racism in Late Victorian Anthropology, 1870-1900.” *Victorian Studies*, Vol. 31, No. 3 (Spring, 1988): 422

clear, but a conversation with his cousin Darwin may have planted a seed. Daniel J. Kevles suggests that personal guilt about Galton's own childless marriage; his infidelities while abroad (and venereal disease); and his hatred for Christian religion (especially original sin, the concept of which may have tormented him throughout his life) all played a major part in his establishment of what Kevles terms "a secular faith."¹⁴

Galton's early intimations of racial hygiene theory appeared in his 1865 essay "Hereditary Talent and Character," though Galton did not actually use the term "eugenics" for another eight years.¹⁵ Galton initially tested various terms to describe hygienic control of breeding: "viriculture," in "Hereditary Improvement" (1873), then "stirpiculture" in "A Theory of Heredity" (1875). "Stirpiculture" was a term borrowed from John Humphrey Noyes, the founder of the Oneida Community; Noyes's stirpiculture encompassed his ideas for selective breeding at Oneida, as detailed and defined in his *Essay on Scientific Propagation*¹⁶ first presented in 1870.¹⁷

"Eugenics" caught on when stirpiculture, which was used for a while, had "degenerated and become objectionable to all refined natures."¹⁸ "Stirpiculture" had become disproportionately associated with what would later be termed negative eugenics.

¹⁴ Daniel J. Kevles. *In the Name of Eugenics: Genetics and the Uses of Human Heredity* (New York: Alfred A. Knopf, 1985): 5-13; "secular faith," 12

¹⁵ Johnson, "Eugenics," 99

¹⁶ John Humphrey Noyes. "Essay on Scientific Propagation" (Oneida, NY: Onieda Community Publication, 1872): 12. Another good source for the history of the Oneida Community can be found in Elizabeth Reis, ed., *American Sexual Histories* (Boston: Wiley-Blackwell, 2001).

¹⁷ Anthropological Society of Washington. *The American Anthropologist*, Vol. IV (Washington, D.C.: Judd & Detweiler Printers, 1891): 321

¹⁸ Lester F. Ward. "Eugenics, Euthenics, Eudemics." *American Journal of Sociology* Vol. 18, No. 6 (May, 1913): 737, quote 738

Having a more positive Greek etymology, “eugenics,” meaning “good genes,” or “good breeding,” would last far longer.¹⁹

In Galton’s 1873 publication *Inquiries into Human Faculty*, where “eugenics” first showed up, Galton defined the term as “the science of improving stock, which is by no means confined to questions of judicious mating...to give to the more suitable races or strains of blood a better chance of prevailing speedily over the less suitable.”²⁰ Galton certainly begins this definition with a nod to heredity as the most important factor, but he also insists that eugenics goes further than simple “judicious mating.” Galton wants this to be clear, even in the 1911 edition of *Inquiries into Human Faculty*—part of the Everyman’s Library, as “Anthropology I”—perhaps to stake out an all-encompassing claim in response to Ellen H. Richards and others who had formulated a case for environment and other alternatives to strict nature, or, hereditarian eugenics.

What proponents of eugenics were doing, by defining a separate science of environmental influence, was a response to the loss of scientific credibility of nurture, in the scientific community. Environment lost ground steadily to heredity in the latter half of the nineteenth century, coming to an approximate split by the beginning of World War I. Two factors greatly contributed to the softening of the science of nurture. First, as Douglas Lorimer points out:

¹⁹ Johnson, “Eugenics,” 101

²⁰ Quoted in Johnson, “Eugenics,” 99. In the 1911 edition of *Inquiries into Human Faculty*, Galton has revised the work to include the term eugenics in many places; footnote 1, p. 17, however, where this quote is from, is still intact in its original form. Francis Galton. *Inquiries into Human Faculty and Its Development*. New York: E. P. Dutton & Co., 1911

Environmentalism...was weakened...by the assaults of the...polygenetic racial typologists of the 1850s and '60s...[Additionally, by the 1880s and '90s,] [b]iological determinism offered simple and universal explanations for complex historical changes, and[,] by analogy to nature[,] favored winners and survivors over losers and victims.²¹

That is to say, early racial theorists challenged the scientific validity of nurture. The idea of biological determinism, as a tool for validating dominance, jived logically with both politicians and laymen at the time.

Second, groundbreaking changes and advances in the study of evolutionary science, occurring in the first years of the twentieth century, lent a new credibility to heredity eugenics. There was a general shift in evolutionary science, from a naturalist's reliance upon observation, logic, and a fossil record, to, first the statistician's game of numbers,²² and then later to the biologist's game of modern experimentation and replication.²³ A replicable scientific method became far more trusted than field observation and speculation.

Great discoveries, most coming shortly after 1900, rectified many of the competing theories about evolution and heredity. By 1911, Mendelian inheritance had been "rediscovered"; William Bateson had studied hereditary physiology heavily and coined the term "genetics" (1906); Hugo deVries published his mutation theory; and Sutton and Bovari linked Mendelian inheritance to cytology.²⁴ Then Thomas Hunt Morgan published *The Mechanism of Mendelian Heredity* in 1915, which united

²¹ Lorimer, "Theoretical Racism," 430

²² Kevles, *In the Name of Eugenics*, 13-15. Galton "approached the problem through the infant science of statistics..."

²³ Marsha L. Richmond. "The 1909 Darwin Celebration: Reexamining Evolution in the Light of Mendel, Mutation, and Meiosis." *Isis* 97 (2006): 448

²⁴ Richmond, "1909," 448-9

competing theories into Mendelian genetics.²⁵ Galton may have continued to include non-hereditary factors in his “science of improving stock” during the first decade of the twentieth century,²⁶ but others were working hard to shed associations with nurture in favor of the undeniably hard-scientific aspects of heredity. Morgan’s discovery in 1915 was in many ways the *coup de grâce* in ending the slow divorce of nature and nurture.

²⁵ Richmond, “1909,” 449

²⁶ Galton iterates the same in a 1904 paper, “Eugenics, Its Scope and Aims,” (Johnson, “Eugenics,” 99) and even goes on to mention the “healthful rearing of...children” in his (first published, 1908) book *Memories of my Life* as an integral part of “furthering the productivity of the Fit” [*sic*]. Francis Galton. *Memories of My Life* (New York: E. P. Dutton & Co, 1909): 323. Quoted in Johnson, “Eugenics,” 100

CHAPTER III

DOMESTIC SCIENCE: A SHORT HISTORY OF “NURTURE”

After the American Revolution, many wondered what American freedom would mean for American women. Before the Revolution, customs and traditional gender roles were for the most part imported from Europe and there was no ideological framework that suggested that women’s roles would be any different in the new world; women were educated only in upper middle and upper classes to prepare them for marriage, home life, and child rearing. Most women were illiterate. As the eighteenth century progressed, female literacy increased; privileged women were obtaining more well-rounded educations, learning more than simply what would make them “admirable adornments in the home.”²⁷

When the values of a new American republic were declared in 1776, the question of a woman’s citizenship; of a woman’s patriotism; and a woman’s duty in the new Republic were posed. The eventual solution to this unanswerable question was the convenient reiteration of domesticity, Republican Motherhood. Republican Motherhood celebrated an American woman’s role as a producer of virtuous citizens who would perpetuate the ideals of the republic. They would be the first arbiters of those ideals, of morals; women would be responsible for both the physical and civic nurturing of young Americans. Out of the context of Republican Motherhood in the early nineteenth century came two different groups of women’s advocates. One group sought political equality to men in America; this group would become the first-wave feminists, the suffragists. The other group sought an elevation of social status of women within the prescribed context

²⁷ Lillian Faderman. *Odd Girls and Twilight Lovers: A History of Lesbian Life in Twentieth Century America* (New York: Columbia University Press, 1991): 19

of the home, with the ideal of Republican Motherhood. Some from this latter group became domestic scientists. Domestic scientists advocated women's education, though there was an emphasis on practical training for the woman's expected domestic profession.²⁸ Many domestic advocates were often driven by Christian values as well. They extended the religious mandate for female domesticity to their own lives, identifying the home as the sphere in which they could have the greatest positive impact on society.²⁹

Catharine Beecher's ascent to prominence as a domestic scientist was fueled by her own personal experiences as a woman, as a daughter of a preacher, as a wife, and then a widower. Beecher's mother died when she was only sixteen, causing the younger children to come under her primary care. Beecher's father, the Evangelical preacher Lyman Beecher later remarried, and Beecher never got along with her stepmother. To complicate things, her father, sensing Beecher was fast becoming a woman, wanted her to experience "conversion as a part of [her] transition to young adulthood."³⁰ Beecher resisted this, unwilling to forfeit trust in her own worldly experiences for the salvation of an amorphous God. She was an independent young woman. When her fiancé died in a

²⁸ Such a technical emphasis did not preclude or discount aspects of a liberal arts education; Abby Morton Diaz, for instance, in *Domestic Problems*, wrote about the importance of a well-educated, *cultured* mother.

²⁹ For more on the legacy of the American Revolution as it pertained to women, see Nancy Cott, *Bonds of Womanhood: "Woman's Sphere" in New England, 1780-1835* (New Haven: Yale U. Press, 1977), Linda Kerber, *Women of the Republic: Intellect and Ideology in Revolutionary America* (Chapel Hill: U. of N. Carolina Press, 1997), Joan R. Gunderson, *To Be Useful in the World: Women in Revolutionary America 1740-1790* (Chapel Hill: U. of N. Carolina Press, 2006), Mary Beth Norton, *Liberty's Daughter: Revolutionary Experience of American Women 1750-1800* (Ithaca: Cornell U. Press, 1996).

³⁰ Kathryn Kish Sklar. "Beecher, Catharine Esther." *American National Biography Online*. Feb 2000. Accessed Tue, Apr. 20, 2010. See also Sklar's full-length biography, *Catherine Beecher: A Study in Domesticity* (New York: W. W. Norton & Co., 1976).

shipwreck, her independence was compounded. After that, she decided to become a teacher, wishing to impart the kind of strength and independence she discovered in herself to other young women.³¹

Catharine Beecher, like her contemporary education reformers Emma Willard and Mary Lyon, began her lifelong commitment to the education of women with the founding of an institution of higher learning: the Hartford Female Seminary. While Willard and Lyon improved the education of American women, Catharine Beecher set to work on a treatise that would imbue American women's education with national import.³²

Beecher's movement was revolutionary, but not in the same way that the women's suffrage movement was revolutionary. While suffragists sought to improve the lives of women by gaining equal footing in the American political system, Beecher identified great potential influence in a woman's prescribed domestic roles. She "recogniz[ed] the family as the most important and influential of all institutions," and just as men were to specialize for various professions through college education, so should a woman learn to maximize her contribution to society and nation through higher education.³³

Beecher saw higher education as the key to life-long understanding and application of knowledge. What is put into books, she argues, will not reach the majority of young ladies. Beecher writes: "It is now often the case, that young ladies rather pride themselves on their ignorance of [college] subjects."³⁴ Beecher sees a problem in the

³¹ Sklar, "Beecher."

³² Charlotte E. Biester. "Catharine Beecher's Views of Home Economics." *History of Education Journal*, Vol. 3, No. 3 (Spring 1952): 88

³³ Biester. "Catharine Beecher," 88-9, quote 88

³⁴ Catharine E. Beecher. *A Treatise on Domestic Economy for the use of Young Ladies at*

perception that unfamiliarity with higher knowledge is fashionable. While Beecher acknowledges that a woman of relative means can obtain books on “Chemistry and Philosophy,” most will not. If, however, the books on domestic science—her books—are used in a curriculum for women, and are integral parts of a larger and respected subject, the knowledge within those books will remain with the pupil for the duration of life. “If young ladies study such a work as this, in school, they will remember a great part of it,” Beecher says. And on the usefulness of books, she explains: “[W]hen [young ladies] forget, in any emergency, they will know where to resort for instruction.”³⁵ Beecher’s insistence on curricula as a way to ingrain information is not without an agenda. In addition to the very sound arguments for knowledge retention and the progress of women in American society, establishing an academic department, courses, and a program of study in domestic science is a surefire way to sell books. Being the daughter of Lyman Beecher, Catharine was as much a promoter as she was a reformer.³⁶

This aspect of her character was crucial in bringing her message to nationwide attention. Beecher’s message for American women came at a time when the nation was becoming more and more aware of its own strength, its homegrown wealth, and its growing international influence. Catharine Beecher wanted women to be aware of their own influence on an ever-expanding, flourishing nation, from the very first words of her book: “There are some reasons, why American women should feel an interest in the

Home, Revised Edition. (New York: Harper & Brothers, Publishers, 1856): 67

³⁵ Beecher, *A Treatise*, 66

³⁶ Biester, “Catharine Beecher,” 89

support of the democratic institutions of their country.”³⁷ She wanted her readers to know that it was not just the hands of men that were building America into a superpower.

The Monroe Doctrine was not even two decades old in 1841 when *A Treatise* came out. By Ellen Richards’s time, a half-century later, the whole paradigm of the domestic sphere had shifted. The domestic sphere would come to represent the domestic-foreign dichotomy instead of the domestic-“civic realm,” the realm of men, politics, economics, competition, and so forth.³⁸

At the turn of the century the definition of the domestic sphere was expanding in such a way that the definition of “domestic” changed. No longer merely representative of the home space, there was figurative “domestication” of all that which lay outside the woman’s sphere but was still within the national boundary.³⁹ The older paradigm of separate spheres limited a woman’s influence to the home. In the new domestic-foreign paradigm, a woman’s sphere gains potency beyond the boundaries of the home,⁴⁰ and is limited only by national boundaries. This “domestication” of realms beyond the home, cleared the way for women to forge greater freedoms and new futures in American politics. It was vital, then, not only for family, community, and social coherence, but for national integrity, that young women were made aware of the importance of their domestic roles in relation to their great nation.

³⁷ Beecher, *A Treatise*, 3

³⁸ Amy Kaplan. “Manifest Domesticity.” *American Literature*, Vol. 70, No. 3 (Sep., 1998): 581-2

³⁹ Kaplan, “Manifest Domesticity,” 582

⁴⁰ This should not discount the relevance of a woman’s *symbolic* influence on society from within the home—the notion celebrated by republican motherhood and domestic science alike—that her moral, just, virtuous raising of young citizens will insure the state’s future.

The publication of *A Treatise* was but one aspect of Catharine Beecher's larger plan in line with other domestic reforms that insisted a woman's work in the home was crucial to the rearing of generations of healthy and competitive Americans. It is important to note, alongside such ideas of America growing in international prominence in the 1840s, that slavery would continue on for two decades more. Perfecting the institution of the wife and homemaker was perhaps of lesser importance to wealthier slaveholding families, where domestic labor might be subdivided among a variety of specialized servants. The Beechers of New England, however, were among the staunchest abolitionists. If questioned about the relevance of domestic science to the southern belle—who was to embody grace and sophistication through casual engagement with music, art, or literature rather than come to terms with the hundred practical arts of wifery—Catharine may have responded that it was very unlikely such an undemocratic, un-Christian institution could be expected to last forever.

In a nation quickly becoming the vanguard of civilized nations it was important that women and men, in their travails, compliment one another. By shifting the domestic sphere paradigm from domestic-“civic realm” to domestic-foreign, men and women no longer “inhabit a divided social terrain,” but are instead united in opposition and resistance to that which is foreign. This is part of what Amy Kaplan terms the “cultural work of domesticity:” the construction of the foreign “other” to bolster national cohesion across gender and class lines.⁴¹

A further purpose of constructing a foreign “other” is to heighten the sense of American identity. A sense of cohesion is in some ways a byproduct of painting the

⁴¹ Kaplan, “Manifest Domesticity,” 582

foreign “other” in oppositional, alien, or even threatening colors. America, in the nineteenth century, was only beginning to form ideas of a cohesive American identity. Bernard Bailyn wrote that “American culture, in th[e] early period, becomes most fully comprehensible when seen as the exotic, far western periphery, a marchland, of the metropolitan European culture system.”⁴² In effect, American culture was a hick echo of the cosmopolitan cultures of Paris, London, Berlin. Bailyn was talking, in particular, about American culture a bit earlier than the mid-nineteenth century; and, it is important to note that Bailyn’s ideas pertain to high culture.⁴³ After the civil war, America could forge a consistent national identity that deviated less across geographic than class lines.

Women needed to play a part in the creation of a unique American culture. Mrs. A. M. Diaz, who we will encounter more in-depth later in this paper, addresses this issue in her 1881 work, *Domestic Problems*. She writes about the roles of women as cultural participants and as homemakers. She stresses the importance of a woman’s engaging with culture so that she could in turn share that culture with her household, family, and children—culture is indeed vital to the rearing of intelligent children. Diaz’ poses the question: “How many women enjoy the delights of culture, and at the same time fulfill her duties to family and household?”⁴⁴ To seek an answer to that question, she explores the ways a woman can balance a life of cultural participation with her duties as a wife,

⁴² Quoted in Tom Engelhardt. *End of Victory Culture: Cold War America and the Disillusioning of a Generation*, 2nd Ed. (Boston, MA: U. of Massachusetts Press, 2007): 24

⁴³ For our purposes, this would be the high culture of the traditional north (especially New England) where domesticity and wifery were one and the same; in the south, a white woman’s role as a wife and a member of high society does not fit the same definition of “northern” domesticity.

⁴⁴ A. M. Diaz *Domestic Problems: Work and Culture in the Household, And the Schoolmaster’s Trunk*. (Boston: James R. Osgood and Co., 1881): 7

mother, and homemaker. For Diaz, writing from the same time period Kaplan considered with regards to a homemaker's "cultural work," there certainly are other forms of "cultural work" a homemaker can engage in that do not involve demonizing the foreign "other" for the sake of reactive national cohesion.

Unfortunately, until the emancipation of American slaves, the racial "other," present well within domestic bounds, existed as a grand hypocrisy in the face of ideas like "national cohesion." One ought not even speak about national cohesion realistically until after the conclusion of the civil war. Such cultural work for national cohesion would break the woman's traditional sphere, but, before the conclusion of the civil war, this type of cultural work might seem insular or naïve. Nonetheless, one should not necessarily fault Catharine Beecher, as an example, for omitting glaring questions about race in her work on domesticity. And it can hardly be doubted that, given Beecher's family involvement with abolitionism, she was aware of the relatedness of slavery to the fluctuating yet subordinate roles of women in America.

It is notable that the issue of slavery in the mid-nineteenth century tied together two groups of feminists that were otherwise quite disparate. Beecher's group, that of domestic reformers intent on uplifting women's status through her prescribed domestic work, stood in opposition to the group that desired no less than women's emancipation from her domestic roles. The former group thought, because of their Christian beliefs or otherwise, that women were mandated and best suited for domestic roles, and that women did not need the vote. The latter group, the suffragists, sought women's emancipation politically, through enfranchisement, and it was in the abolition movement that many suffragists honed their political skills and related the fight for black Americans' rights to

female Americans. Slavery was offensive to the northern middle and upper middle class mind—to domestic reformers and suffragists alike; indeed, it was quite acceptable for a woman with middle or upper middle class status to be politically involved in the abolition movement.⁴⁵

Slavery certainly would have offended Beecher's Christian sensibilities—it was her profound Christian beliefs that served as justification for much of Beecher's acceptance of a woman's station and drive to spread her domestic gospel—in other words, her unique understanding of the larger import of divinely mandated domesticity. Beecher conjures “the image of the ideal American housekeeper leading her family and hence the nation into a glorious Christian future...”⁴⁶

The intersection of Christianity and the new paradigm of domestic-foreign spheres brings with it colonial implications. Just as missionaries brought religion as a strategy of conquest in the colonial era, so too does Beecher's *Treatise*, according to Jane Tompkins, serve as a “blueprint for colonizing the world in the name of the ‘family state’ under the leadership of Christian women⁴⁷—*American* Christian women, to be more precise. At a moment when women were identified by reformers and others as being

⁴⁵ Part 2 of Sandra F. VanBurkleo's *Belonging to the World: Women's Rights and American Constitutional Culture* (New York: Oxford University Press, 2001) discusses the development of what I would term protofeminist (as the word feminist had not been invented yet) domestic reformers within the conceptual framework of “republican motherhood.” She also discusses abolition as one political issue women of status could be acceptably involved in. Nancy Cott's *The Grounding of Modern Feminism* (New Haven: Yale University Press, 1989) and Ellen Carol Dubois. *Feminism and Suffrage: The Emergence of an Independent Woman's Movement in America 1848-1869* (Ithaca, NY: Cornell U. Press, 1999) both discuss in detail mid and later 19th century women's movements and their political contexts.

⁴⁶ Laura Shapiro, *Perfection Salad: Woman and Cooking at the Turn of the Century* (New York: Farrar, Strauss, and Giroux, 1986): 25

⁴⁷ Quoted in Kaplan, “Manifest Domesticity,” 582

crucial participants in forging an American culture, so too are they crucial to the religious, or moral, hygiene of a nation. American culture, once its images and goods are exported, takes with it assumptions of its peoples' attitudes, morality, and social structures. While Americans, in part, defined themselves and their unique culture in opposition to the foreign "other," by the postbellum years, American culture had begun to calcify. Just as women's "cultural work for domesticity" brought about cohesion, identity, and culture through opposition to the foreign "other," so too did the aftermath of the civil war see national cohesion through a "brotherly redemption" narrative.⁴⁸ With slavery over, to non-suffragist domestic reformers like Catharine Beecher, there was only the morally acceptable definition of the foreign "other" to bring Americans together. To Beecher and other domestic reformers, slavery would no longer complicate the smooth narrative of a democratic nation under God.

Although implications of a woman's place in national life and culture changed in the nineteenth century, Catharine Beecher's concept of a woman's domestic role remained statically Christian. Through rather sentimentalized biblical notions of hierarchy and implicit dominant-subordinate social roles, she compelled the reader to understand the benefits of a woman's special station in life. There is much power in such a station:

In matters pertaining to the education of their children...in all benevolent enterprises, and in all questions relating to morals and manners, they have a superior influence...[Indeed,] the democratic institutions of this country are in reality no other than the principles of Christianity carried into operation...[These

⁴⁸ Engelhardt, *Victory Culture*, 29, discusses such a narrative: "There was...a more minimalist path of interpretation from the moment victorious Union soldiers and vanquished rebels exchanged a 'salute of honor' at surrender ceremonies near Appomattox Courthouse. This was to treat the war as a white family 'tragedy' to be followed by rites of 'reconciliation' rather than ceremonies of victory..."

principles] have secured to American women a loft and fortunate position, which, as of yet, has been attained by the women of no other nation.⁴⁹

Perhaps hers was a perspective particular to her privileged upbringing, where she and her equally talented sister Harriet were blessed with an extent of freedom greater than most young women, encouraged by their father Lyman Beecher to be insightful and curious as girls, perhaps even ambitious and outspoken—the kind of atmosphere where being a woman felt much less like a social hindrance than a unique opportunity. When it came time, Beecher made her own foray into the life and work of the homemaker with a scientific eye, and an enthusiasm for challenge. Her situation might not have been shared by hordes of other women nationwide, who did not necessarily look forward to predestination as housewives trapped in the home, the kitchen, the nursery. Catharine Beecher thanks God for the privilege of being able to lead a “socially useful life,” but knew that other women might not be spiritually fulfilled or see great value in daily drudgery.⁵⁰

One strategy for bringing value to women’s work was to professionalize it. Before Beecher even published *A Treatise*, she recognized just how undervalued teaching was. It did not have the same prestige as being a lawyer or a doctor, nor did it have an academic journal where enthusiastic professionals could comment on the state of the field, suggest improvements, share victories, conduct experiments, or review books. The field of domestic work was in the same position as that of the teacher, and Beecher saw the need to professionalize homemaking in order for it to gain respect. Part of her plan to professionalize was to get the subject taught in schools. Beecher, along with other

⁴⁹ Beecher, *A Treatise*, 33-4

⁵⁰ Joan N. Burstyn “Catharine Beecher and the Education of American Women.” *The New England Quarterly*, Vol. 47, No. 3 (Sep., 1974): 390

domestic scientists in the nineteenth and early twentieth centuries, advocated for the inclusion of “home economics” in school curriculums. Another part of her plan was the creation of an academic department of domestic science with a structured curriculum in domestic science for college women.⁵¹ This is all, as Joan Burstyn explains it, part of the systematization of knowledge of a profession. One goal of professionalization is “to subdivide work within an occupation so that the practitioner becomes a different person from the researcher.”⁵²

Catharine Beecher argued for the inclusion of domestic science among the other natural sciences in the college curriculum. This is one way that the earliest glimmerings of the domestic science movement—even before the mid-nineteenth century—connect directly with the euthenics movement of the early twentieth century. In a chapter of *A Treatise on Domestic Economy* titled “On Domestic Economy as a Branch of Study,” Beecher writes:

And let the young women of this Nation find, that domestic economy is placed, in schools, on equal or superior ground to Chemistry, Philosophy, or Mathematics, and they will blush to be found ignorant of its first principles...⁵³

Beecher lists Chemistry first, perhaps because Chemistry is closest to domestic science with regards to managing and understanding the intricacies of cleaning agents, culinary chemicals, and home remedies.

Ellen H. Richards, who would coin and define euthenics about sixty years later, was born only a year after the first publication of *A Treatise*. Richards grew up not only in the era of Beecher’s, Willard’s and Lyon’s lobbying for the education of women, but,

⁵¹ Burstyn, “Catharine Beecher,” 388-90

⁵² Burstyn, “Catharine Beecher,” 388

⁵³ Beecher, *A Treatise*, 67

having been born and raised in Massachusetts, nearly grew up in their midst. Richards attended the Westford Academy, a coeducational institution, then taught there briefly before quitting to care for her dying mother. Richards was diagnosed with neurasthenia, subsiding only when her parents sent her to Vassar College. She studied Astronomy and Chemistry at Vassar, then, upon graduating, sought work as an educator in Argentina. This failed, as did her attempts to gain employment as a chemical analyst, but one firm suggested she apply to Massachusetts Institute of Technology. She was accepted. They waived all of her tuition but were not entirely keen to have her; they waived her tuition because they did not want to have a woman “on the official rolls.”⁵⁴

Richards became the first woman admitted to MIT, and later the institute’s first female lecturer. In her professional work, she would marry hard science to Beecher’s movement in works like *The Chemistry of Cooking and Cleaning: A Manual for Housekeepers* (1881), and then would encapsulate all of domestic science within a thoroughly scientific moniker with the publication of *Euthenics: The Science of Controllable Environment*, shortly before her own death. It is important to note what kind of environment Catharine Beecher was creating for the next generation of women reformers like Richards. Beecher’s strategy lasted into the twentieth century. Beecher’s plan was different because it “emphasized the scientific basis of the home and its importance in daily living.”⁵⁵ Her strategy, geared towards a national audience, demonstrated the importance of women’s roles to the integrity of society.

⁵⁴ Sarah Stage. “Richards, Ellen Henrietta Swallow.” *American National Biography Online*. Feb. 2000. Accessed Tue, Apr. 20, 2010.

⁵⁵ Beverly Bartow. “Isabel Bevier at the University of Illinois and the Home Economics Movement.” *Journal of the Illinois State Historical Society* (1908-1984), Vol. 77, No. 1 (Feb., 1979): 22

CHAPTER IV

LITERATURE AND THE MATURATION OF THE DOMESTIC SCIENCE MOVEMENT

After Catharine Beecher, the domestic science movement was furthered by a variety of reformers with varying agendas. Many who would take the torch bore only a tangential relation to the core domestic science movement, often missing the importance of balancing housework know-how with self-awareness, national import, and hard science. Nonetheless, much of this tangential literature played a part in advancing the domestic science movement to its Euthenic stage post-1900.

Mrs. Abby Morton Diaz, a native of Plymouth, Massachusetts, grew up in a socially conscious household. Morton's Unitarian father worked establishing schools in the area with the help of Horace Mann. As a four-year-old, Abby volunteered in the Plymouth Juvenile Anti-slavery Society, founded by her aunt. When Abby graduated from one of her father's girls' high schools, she and her two brothers continued their education at Brook Farm, a transcendental community. There she met her husband, Manuel Diaz. They had three children, and soon divorced, whereupon Abby raised the children herself. It was in this period Abby began her literary career, writing juvenile fiction. In the 1870s she began exploring issues of "education, health, suffrage, sexual equality," using her own experiences and literary talents to bring a personal element to her persuasive writing.⁵⁶ What makes Diaz an intellectual relative of Catherine Beecher is her attention to cultivating the home environment through women's education. She hones in on culture as a necessity to the raising of moral citizens; "high culture" is

⁵⁶ Lucy M. Freibert. "Diaz, Abby Morton." *American National Biography Online*. Feb 2000. Accessed Tue, Apr. 20, 2010

specifically what she means, in the sense that someone is “cultured” and has a working knowledge of classical literature, philosophy and so forth. Though institutions were popping up everywhere, it was still uncommon for a woman to obtain a classical education. Diaz insisted that culture was a prerequisite to success.

In 1881, Diaz published her book *Domestic Problems: Work and Culture in the Household, and the Schoolmaster’s Trunk*. Diaz’s concern is with a woman’s—more specifically a mother’s—need for culture. This need can be at odds with her duties as a homemaker, a caregiver, and so on. Diaz asserts the need of a woman to engage in culture and to become *cultured*, for her own well-being, to “train up her children rightly, and to make home happy.”⁵⁷ She incorporates a vignette to introduce the problem:

[H]ave we, or have they, a full sense of what woman requires to fit her even for the first of these duties? Suppose a philosopher in disguise on a tour of observation from some distant isle or planet [!] should favor us with a visit. He finds himself, we will say, on a spot not a hundred miles from New York or Boston or Chicago. Among the objects which attract his attention are the little children drawn along in their little chaises.

‘Are these beautiful creatures of any value?’ he asks of a Bystander.

‘Certainly. They are the hope of a country. They will grow up into men and women who will take our places.’

‘I suppose there is no danger of their growing up any other than the right kind of men and women, such as your country needs?’⁵⁸

And the vignette continues with the Bystander agreeing with the Philosopher, that indeed all criminals in society were once “innocent little children”; that the social outcome of a child depends heavily on early training, but that, since no two children are alike, no two modes of training can be. The philosopher is astounded, exclaiming, “But how judicious, how comprehensive, must [be] the course of education which will fit a person for such an

⁵⁷ Diaz, A. M. *Domestic Problems: Work and Culture in the Household, And the Schoolmaster’s Trunk*. (Boston: James R. Osgood and Co., 1881): 20

⁵⁸ Diaz, *Domestic Problems*, 20

office!” (22). The Bystander is taken aback by this, responding with clever sarcasm that a woman who marries certainly cannot need much education. The Philosopher eventually gets to the point, when he is directed to a young mother of the community who confirms there she gained no special sort of training at the “institute.” The Philosopher berates the young woman:⁵⁹

‘Are you competent to the direction and culture of the intellectual and moral nature? Have you skill to touch the hidden springs of action? Have you, thus uninstructed, the power, the knowledge, the wisdom, requisite for guiding that mighty force, a child’s soul?’⁶⁰

These are Diaz’s characters, their voices are hers, and the moral of the story is that what domestic science instruction may exist in schools at the time is bereft of cultural training. Only a slice of microfiction could do justice to the philosophical importance of culture, something which Diaz, through the Philosopher, insists is crucial to developing children “rightly.”

But what exactly does Diaz mean by culture? Perhaps it has to do with fostering conversation between mother and child, or, more generally, developing the skill of conversation, of critical thinking and oratory skills, in the child from a young age. The importance of culture as it relates to the mother’s job of nurturing a child is perhaps most represented by the communication necessary in imparting a sense of “culture” onto her offspring. Culture is, of course, shared; in one way Diaz uses “culture” as a verb, and in “culturing” the child, the satisfactorily-cultured mother is indoctrinating them with the values, knowledge, even philosophy of her contemporary American world. In one sense,

⁵⁹ Diaz, *Domestic Problems*, 21-3

⁶⁰ Diaz, *Domestic Problems*, 23

Diaz is saying that the mother is directly “culturing” the brain, the psyche, of her offspring.

Nurture, then, begins to take on profoundly psychological connotations. Child psychology of the twentieth century owes its existence in part to that branch of domestic science that deals with psychological environment. While Diaz does not come out and claim her position among domestic science reformers, her book argues an original angle well within the confines of domestic science and its purposes. She adds psychology to the structure of environment, adding to nurture’s many glittering facets.

Diaz cites a number of prominent thinkers, like Horace Mann and Herbert Spencer, and quotes more anecdotal evidence to support her argument for culturing young women likely bound for domestic service. Exposure to art, hygiene, painting, modeling, and music might have saved the historic mythical “Margaret” from ill-rearing her children; of some nine hundred descendants of hers, two hundred were said to be criminals, while another large amount were “idiots, imbeciles, drunkards, lunatics, and paupers.”⁶¹ Diaz does heap a great deal of blame on mothers themselves, who have a “love so strong, and yet so blind, that it even does harm.”⁶² In the end, she calls for reform of educational methods in general, quoting the Reverend Robert Quick in *The Atlantic Monthly* saying “no more striking proof of the inertia of the human mind can be found...than in the fact that for many generations the true philosophy of teaching has had its prophets and apostles, and yet...we are training our children in the same old way.”⁶³

⁶¹ Diaz, *Domestic Problems*, 34-5

⁶² Diaz, *Domestic Problems*, 65

⁶³ Diaz, *Domestic Problems*, 109; Rev. Robert Quick. “Education.” *The Atlantic Monthly* (May, 1875): 637. Obtained online courtesy of the John Davis Batchelder Collection.

She then recommends, as an improvement, Locke's educational progression of "good principles...[,] intellectual activity, and actual knowledge last of all."⁶⁴

A decade later, James E. Talmage, a very well educated Brit-turned-Mormon, published *Domestic Science: A Book for Use in Schools and For General Reading*, a lengthy volume.

Talmage moved from England with his family in 1876, three years after converting to Mormonism. After finishing his education at Brigham Young University, Talmage studied geology and chemistry at Lehigh University. He did not take a degree, but passed almost all of the required 4-year examinations in his single year of attendance. He moved back to Utah after that, working as a professor of the sciences at BYU. It was during this time that he worked on his *Domestic Science* monograph.⁶⁵

Like Catharine Beecher's *Treatise, Domestic Science* was to have dual purposes in and outside formal education. Talmage's work seems completely geared towards the classroom, with review questions at the end of each chapter.

There is no sociological analysis in *Domestic Science*; no call for the self-actualization of the homemaker, the woman who was to apply the information she found in *Domestic Science*. The work is "hard" science, the product of Talmage's education and career in Chemistry. Chapters deal with the minutiae of incidental physics in the home, many of which have little or no relevance to the day-to-day of a homemaker's toils, but certainly put Talmage's own education to use. Titles like "Permanency of the Atmosphere," "Communication of Heat; Latent and Specific Heat," and "Water: Its

⁶⁴ Diaz, *Domestic Problems*, 112

⁶⁵ Kerri A. Inglis. "Talmage, James Edward." *American National Biography*. Feb. 2000. Accessed Tue, Apr. 20, 2010

Occurrence” in Parts I and II of the book seem to be more like flourishes in a popular science book than one on domestic science. The title does not mislead entirely; Talmage does deal with some science relevant to a domestic setting. It is only with Part III of *Domestic Science*, “Food and Its Cookery,” that hard science meets everyday usefulness to a preparer of nourishment. Talmage starts at the basics—elemental composition of the body—and proceeds to discuss properties of food, even mentioning milk as the ideal nourishment of the infant, an idea popular around this time.⁶⁶

The nutritional information from which Talmage draws detailed diagrams came four years before W. O. Atwater published his food composition tables.⁶⁷ Talmage identifies many of the same basic elements of food that W. O. Atwater would map out, namely salts, fats, and proteins. Talmage includes minerals prominently in his treatment of food makeup, as well as “auxiliary foods and condiments:” “vinegar, fruit juices, essential oils, spices, and artificial drinks (tea, coffee, cocoa, chocolate, etc.).”⁶⁸

What is very interesting in Talmage’s treatment of diet is that he argues for moderation in animal consumption.⁶⁹ Though his ideas did not reflect the prevailing

⁶⁶ James E. Talmage. *Domestic Science*. (Territorial Convention of School Officers, 1892): 253. The same thing is asserted in Ellen H. Richards’s *Food Materials and Their Adulterations* (Boston: Whitcomb & Barrows, 1906): 47. This is also discussed a bit later by McCullum, E. V., and Simmonds, Nina, *The American Home Diet: An Answer to the Ever Present Question “What Shall We Have for Dinner?”* (Detroit, MI: Frederick C. Matthews, 1920): 65, and DuPuis, *Nature’s Perfect Food: How Milk Became America’s Drink* (New York: NYU Press, 2002) discusses, in great detail, the production of milk by Nestle and others in this time period as pure, clean, healthy white nourishment for babies, especially those in smoggy, dirty cities.

⁶⁷ Shapiro, Laura. *Perfection Salad: Women and Cooking at the Turn of the Century*. (New York: Farrar, Straus and Giroux, 1986): 74

⁶⁸ Talmage, *Domestic Science*, 254

⁶⁹ Talmage, *Domestic Science*, 255. For Thomas Jefferson’s diet views see David M. Tucker. *Kitchen Gardening in America: A History*. (Ames, IA: U. of Iowa Press, 1993): 43-54. Ellen H. Richards begins her *Food Materials and Their Adulterations* (Boston:

attitude towards meat consumption, such vegetarian-leaning ideals were shared by Thomas Jefferson a century earlier,⁷⁰ Sylvester Graham a generation earlier,⁷¹ and Talmage's contemporary, Ellen Richards, among others. Perhaps Talmage's particular argument for moderation has something to do with his study of geology, which may have given him some understanding of the differential ecological cost of producing plant versus animal fare.⁷²

Talmage's exhaustive treatment of diet, of the requirements of the body and the composition of food, is very similar to Ellen Richards's *The Chemistry of Cooking and Cleaning*, published in 1897.⁷³ Both do not hold back in providing the latest hard data and chemical equations, but unlike Talmage's work, the information provided in *The Chemistry of Cooking and Cleaning* is more approachably couched within broader scientific contexts for the lay reader. Where Talmage's work is more of a popular science book on chemistry or physical sciences, Richards's is a work of domestic science geared towards the curious domestic with practical concerns.

Whitcomb & Barrows, 1906) by saying the "Esquimeaux today live upon the product of the seal fishery from necessity, not from choice" (I), and further discusses the unsanitary conditions of meatpacking as a reason to consume in moderation (108-9).

⁷⁰ See Chapter 4, "The Enlightenment Garden of Thomas Jefferson" in David M. Tucker, *Kitchen Gardening in America: A History* (Ames, IA: Iowa State Press, 1993).

⁷¹ See Graham's *A Defence of the Graham System of Living or, Remarks on Diet and Regimen* (New York: W. Applegate, 1935): 123: "Reason and experience emphatically exclaim, 'eat no animal food;' but if it is used at all, let it be eaten as seldom as possible, avoiding high-seasoned meat, and abstaining from animal food during the warm months of summer Dinner is the only meal at which it is at all admissible to eat flesh."

⁷² This difference in ecological cost, if one was curious, can be found in detail in Michael Pollan's *Omnivore's Dilemma* (New York: Penguin, 2006).

⁷³ Ellen H. Richards. *The Chemistry of Cooking and Cleaning: A Manual for Housekeepers* (Boston: Home Science Publishing Co., 1897): 24-33, for just one example of the incorporation of complex chemistry into the readable home manual.

About a decade later, a successful botanist and horticulturalist named Luther Burbank published an essay on child rearing based on his own work with plant strains. Burbank had a successful background in plant cultivation, first running a nursery in Santa Rosa, California, then developing new, experimental plant strains. He was an avid promoter, publishing a catalog of his cultivated varieties. The local press picked up on Burbank's success, celebrating his achievements and using him as a symbol of American innovation and entrepreneurship.⁷⁴

Burbank would go on to apply his skills and philosophy as a plant horticulturalist to health and social issues of the day, most notably in his sociobiological work, *Training the Human Plant*.⁷⁵ Burbank outlined his personal take on the roles of nature and nurture. He spends a great deal of time on raising children. Like Diaz, he recognizes that “no two children are alike,” that one “cannot expect [children] to develop alike. “Training” must be customized.

In the chapter titled “Sunshine, Good Air, and Nourishing Food,” Burbank talks about child disposition and relies heavily on the theory of acquired characteristics. “If,” Burbank says, “you want your child to grow up into a sane, normal man, a good citizen, a support of the state[,] you must keep him in the sunshine. Keep him happy.”⁷⁶ Burbank links the exact three things that make for healthy plants (excepting water) to those factors that produce upstanding men of the state.

Burbank uses this chapter on outdoor themes and food to advocate physical exercise. He champions durable clothing, adequate for rough-and-tumble outdoor play,

⁷⁴ Katherine Pandora. “Burbank, Luther.” *American National Biography*. Feb. 2000. Accessed Tue, Apr. 20, 2010.

⁷⁵ Luther Burbank. *The Training of the Human Plant* (New York: The Century Co., 1908)

⁷⁶ Burbank, *Human Plant*, 31

branding expensive, fine clothing as “dead weight upon [a] child.”⁷⁷ There is a euthenic sense of frugality with his treatment of clothing; that durable materials will last longer; to sacrifice fine, dignified garments for the chance to harden a young boy to the elements holds a quality of investment in the future. Notions of the importance of being out in the elements would ring home for a horticulturalist like Burbank, who would know a thing or two about hearty plant strains. Regarding food, Burbank insists that “the food the child is fed in [the] first ten years largely depends its moral future.”⁷⁸

These are all themes of nurture that Burbank discusses: education (“training”), the outdoors, happiness, physical activity, food. Burbank, though he does not state it explicitly, is a Euthenicist. His background and training more likely suggest an allegiance to nature, to hereditarian eugenic strategies of race purification. But, Burbank declares his learned understanding of the situation differently: “Heredity is simply the sum of all the effects of all the environments of all past generations on the responsive, ever-moving life forces.”⁷⁹ Burbank lived, and wrote *The Training of the Human Plant*, in the short nominal era of Euthenics, and allies himself, in this essay, with them, on the side of nurture. Of course, nurture does not come at the expense of nature, just as euthenics is not necessarily at the expense of eugenics. These varying strategies to reform are all different mechanisms toward the same ends. Luther Burbank is one more example of a scientist with a knowledgeable understanding of heredity who nonetheless agrees with Ellen H. Richards and other die-hards about the scientific importance of nurture in developing offspring into satisfactory adults. In the ninth chapter, titled

⁷⁷ Burbank, *Human Plant*, 31

⁷⁸ Burbank, *Human Plant*, 36

⁷⁹ Burbank, *Human Plant*, 68

“Environment[:] The Architect of Heredity,” Burbank clarifies the relationship between these two forces of evolution:

Heredity is not...merciless and unchangeable, the embodiment of Fate itself. This dark, pessimistic belief which tinges even the literature of to-day comes, no doubt, from the general lack of knowledge of the laws governing the interaction of these two ever-present forces of heredity and environment wherever there is life. Environment is the architect of heredity...[,] acquired characteristics *are* transmitted[,] and...*all* characters which *are* transmitted have been acquired, not...all at once...but as an increasing latent force ready to appear as a tangible character [trait].⁸⁰

Turn-of-the-century instruction of ladies in domestic science seems either purely scientific—like James E. Talmage’s exhaustive text on the ins and outs of household science—or purely lessons in taste. The functional yet unappealing qualities of working and lower class homes may have cried out to some of the domestic reformers working around the same time; certainly they cried out to Helen Sayr Gray, who begins her 1909 article in favor of domestic science education with an appeal to taste:

The ill effects of ignorance of household art and science are found everywhere, in homes, boarding-houses, restaurants and hotels. In thousands of homes the walls are covered with nondescript paper that is ugly in color and design and soon fades. The carpets and rugs are likewise ugly. The rooms are not living-rooms, but museums cluttered with rubbish—tinsel ornaments, fancy-work and picture that ought to be in the wood-pile...The same amount of money expended on these things would furnish a house well if the owners had any taste or judgment.⁸¹

The appeal to taste, used to move people in favor of domestic science instruction, is only part of the greater argument for domestic science—and eugenics. Helen Sayr Gray, like other proponents, sees tasteful homemaking as integral to the creation of healthy individuals and families:

⁸⁰ Burbank, *Human Plant*, 81-2

⁸¹ Helen Sayr Gray. “Domestic Science in the Schools and Colleges.” *The North American Review* Vol. 190, No. 645 (Aug., 1909): 200

There is [a] class of women...who have studied the subject of housekeeping and realize that the health, energy, morals, habits, manners, appearance, success and happiness of the members of the family depend on the home...⁸²

⁸² Gray, "Domestic Science." *The North American Review*, 200

CHAPTER V

EUTHENICS: PROGRESS AND COMPROMISE

Ellen H. Richards took the reins from Catharine Beecher, becoming the scientific figurehead the domestic science movement needed in order to insist, with clout, that domestic science did indeed deserve respect as a science. Richards graduated from MIT and returned to the institution to teach, founding a “Women’s Laboratory” for the study of “Household Chemistry,” ideas she developed while volunteer educator at a local high school for women.⁸³ “Richards was,” as Laura Shapiro puts it, “the first woman to cross into the man’s scientific world and return with good news for housekeepers.”⁸⁴

The development of eutherics came gradually. With Ellen Richards’ generation, the home had transformed nearly completely from a forum of production to one of consumption. What was once produced by housewives—clothing, linens, quilts, canned goods, preserved goods, cured meats—could now be purchased.⁸⁵ Additionally, ever-improving technology was making some of these tasks obsolete or unnecessary. The boost the civil war gave to industry continued through to the twentieth century, and the beginnings of American consumer culture accompanied the new century. This consumer culture had a practical side, as technological innovation after innovation poured out of factories to eliminate rustic work from a homemaker’s task list. Ellen H. Richards saw

⁸³ Shapiro, *Perfection Salad*, 38

⁸⁴ Shapiro, *Perfection Salad*, 37

⁸⁵ Weigley, Emma Seifrit. “It Might Have Been Eutherics: The Lake Placid Conferences and the Home Economics Movement.” *American Quarterly*, Vol. 26, No. 1 (Mar., 1974): 80-1; Shapiro, *Perfection Salad*, 12

this transformation of the home as a good thing. With the modernization of the home “the environment could be controlled and consequently the quality of life improved.”⁸⁶

As early as 1881, Richards was finding her stride as the chief inheritor of the domestic science movement from Catharine Beecher. In addition to her revolutionary MIT education and her founding of the Women’s Lab, she was also reiterating, in her own way, the most important theme of domestic science. She was expressing the movement in terms of national importance. Chapter two of *Food Materials and Their Adulterations* is titled “The relation of General Intelligence to the Quality of the Food Supply”; this is Richards’s way of introducing the systematic and technical evaluation of foodstuffs later in her book as vitally important, vitally relevant. The reader is immediately geared to absorb what Richards has to offer, to apply that knowledge in a scientific way to the procurement and preparation of food for her children, lest they become future members of the lower echelon of society in America; for it is not merely intelligence or health that is at stake, but also morals. Richards writes:

The prosperity of a nation depends upon the health and the morals of its citizens; and the health and the morals of a people depend mainly upon the food they eat and the homes they live in... Good tempered, temperate, highly moral men cannot be expected from a race which eats badly cooked food...⁸⁷

The first phrase is nearly the same wording that Luther Burbank will use years later, and certainly it is the same idea. This idea, then, was not confined to specific fields, to sociologists, evolutionists, the sciences, or the child welfare experts. It had to be pervasive. The role food plays in the development of a strong nation logically would influence established nations like England, Germany, or France, but the question might

⁸⁶ Weigley, “Lake Placid Conferences,” 81

⁸⁷ Richards, *Food Materials*, 4

still stand, in 1881, as to what exactly American diet is. At that moment in time, good American diet was still indistinguishable from good European diet. Ideas about nutrition had only just started to link up with ideas about national identity. Even by 1920, McCollum and Simmonds, chemical hygiene professors at John Hopkins, do not mention any truly unique characteristics of American diet as opposed to English or German diet.⁸⁸ McCollum and Simmonds's work continues the same narrative begun by W. O. Atwater, who happened to endorse Americans' excessive protein consumption simply because Americans worked harder and could afford it.⁸⁹

In Richards' *The Cost of Shelter*, coming about twenty-five years after the publication of *Food Materials*, bears the first usage of the word "Euthenics." *The Cost of Shelter* is a text about efficiency within the home; this is the work that considers the modernization of American life. The introduction of the term is framed within a problem considered by a socialist and a "student of social ethics—Euthenics." Richards asks whether or not a rise in living costs entails an increase in efficiency; whether or not "the people [are] growing more healthy, well-favored, well-proportioned, stronger, happier."⁹⁰

Maximizing efficiency is an American virtue; it certainly was in the era of assembly line manufacturing and interchangeable parts, to use industrial examples. For the American family, Euthenics, as a science of maximizing efficiency, helped mediate between expense and benefit. Richards's *The Cost of Shelter* meticulously showed how a homemaker can maximize the value of consumed goods—in other words, how she can

⁸⁸ McCollum, E. V. and Simmonds, Nina. *The American Home Diet: An Answer to the Ever Present Question, What Shall We Have For Dinner?* Detroit: Frederick C. Mathews Co., 1920

⁸⁹ Shapiro, *Perfection Salad*, 75

⁹⁰ Richards, *Cost of Shelter*, 12

“stretch a dollar.” This is a modern concept of efficiency, a kind of efficiency geared towards a consumer rather than a producer-based home; money, as a link between goods and services, gained in its relationship to the home. Instead of producing many of the goods, edibles, and fixtures that secure a quality home environment, many of these things must now be factored into a budget. To the ever-increasing number of urban dwellers this is perhaps old news, but it is necessary information for young would-be homemakers who cannot learn modern budgeting from older generations who either existed during the production-consumption transition or before it. Richards details the breakdown of household income in the last third of *The Cost of Shelter*. In the third chapter, about “Legacies from the Nineteenth Century Not Adapted to Changed Conditions,” she discusses the four types of extant housing in America. Out of the four, she identifies tenement housing, and, generally, urbanization and the proliferation of “city housing of an inexpensive sort”⁹¹ as a potential cause of ill health and domestic issues.⁹² This hearkens towards common ground between euthenics as she promotes it—a science of health and good rearing—and eugenics. By denouncing the tenements, even indirectly, Richards cannot help but be construed as denouncing the peoples who primarily live in those tenements and may have no means of leaving such living conditions. In the larger coastal cities, those dwellers would be immigrants, perhaps “races” that in the near future eugenicists would hone in on as bearers of less satisfactory, less “American” genetic strains.

Nonetheless, in the first decade of the twentieth century, Ellen H. Richards was still trying to disassociate Euthenics and Eugenics. By the time *Euthenics: The Science*

⁹¹ Richards, *Cost of Shelter*, 34

⁹² Richards, *Cost of Shelter*, 31-47

of Controllable Environment comes out in 1910, Richards has completed her exploration of the definition of Euthenics and distinguishes it from Eugenics in the foreword:

Eugenics deals with race improvement through heredity.
Euthenics deals with race improvement through environment.
Eugenics is hygiene for the future generations.
Euthenics is hygiene for the present generation.
Eugenics must await careful investigation.
Euthenics has immediate opportunity.
Euthenics precedes eugenics, developing better men now, and thus inevitably creating a better race of men in the future. Euthenics is the term proposed for the preliminary science on which Eugenics must be based.⁹³

This exacting definition of Euthenics leaves little to be debated. It is in agreement with Luther Burbank's ideas about environment with regards to heredity, though he arrived at them from a different perspective. Perhaps the unequivocal nature of Richards's word choice in this foreword has something to do with the eugenicists sidling away from environment once there was scientific data enough to allow heredity to stand alone. Richards's 1910 definition came a time when the data was pouring in from all corners of evolutionary and genetic science, and the slow divorce of environment and heredity, of nature and nurture, had begun. Richards would be vindicated decades later with the advent of behavioral and developmental psychology, but until then, at least her books would continue to hold importance in domestic science and home economic instruction. Ellen Richards tackled large questions of national strength, morality, and health, but she always did so with her eye on the microcosm of society, the home. Her voice, even in *Euthenics*—the last book she published before she died—was directed at the young female reader who was to take Richards's advice and insight plainly. The

⁹³ Richards, *Euthenics*, viii

subtitle of Chapter 1 of *Euthenics* reassures the reader of Euthenics' persistent usefulness:

"The opportunity for betterment is real and practical, not merely academic."⁹⁴

⁹⁴ Richards, *Euthenics*, xiii

CHAPTER VI

AFTER RICHARDS: EUTHENIC PROLIFERATION AND PROFESSIONALIZATION

A great deal of euthenic literature poured out of the publishing houses in the last years of the nineteenth century and the first decades of the twentieth. While much of the literature did not profess a political or sociological stance, all—even the driest how-to manuals, like Talmage’s *Domestic Science*—were written for the improvement of the American nation from the grassroots up.⁹⁵ These manuals sometimes targeted the enthusiastic homemaker and mother, a woman ever hungry for scientifically-backed knowledge about how to perfect her children; how to prolong and preserve the health of her husband; and how to keep herself going at maximum efficiency in the process. As the professionalization of eutherics progressed into the nineteen teens, however, often the new texts were course materials.

In 1914, two textbooks were published: *Domestic Science Principles and Application*, by Pearl L. Bailey, an appointed “supervisor of domestic science and domestic art in the St. Paul [Minnesota] public schools,”⁹⁶ and *A Text-Book of Domestic Science*⁹⁷ by Mathilda G. Campbell, an instructor and lecturer in domestic science.⁹⁸

⁹⁵ Some examples of other Domestic Science textbooks produced include Bertha J. Austin, *Domestic Science* (New York: Lyons & Carnahan, 1914), Ida Hood Clark, *Domestic Science* (Boston: Little Brown, and Co., 1911), Charles William Hales, *Domestic Science* (London: Cambridge U. Press, 1915), Gertrude Tacy Johnson, *Domestic Science: A Text in Cooking and Syllabus in Sewing* (Kansas City, MO: Burton Publishing Co., 1911), and Thomas Cartwright, *Domestic Science: The Science of Domestic Economy and Hygiene Treated Experimentally: With Numerous Illustrations* (New York: Thomas Nelson & Sons, 1900).

⁹⁶ Pearl L. Bailey. *Domestic Science Principles and Application*. St. Paul: Web Publishing, 1914: iii

⁹⁷ It is interesting to note that “eutherics” has not caught on yet as a replacement term for “domestic science.” Perhaps this is because of the stronger scientific implication of the

Immediately apparent is that these are authoritative works by professional women in what was in 1914 still a field only a few decades old. There are still James Talmages, that is, male “authorities” in the field of domestic science, but what should be clear is that at this time domestic science is one of the only educational fields founded by women and to a great extent populated by women professionals. While the arts and sciences of keeping a home may seem unrevolutionary or banal to modern perceptions, it must be understood just how many opportunities opened up for women in “domestic science.” Women, still non-voting citizens at this time, had few career opportunities outside the home that were not perceived to be at odds with homemaking as the standard career.⁹⁹ With these works we also see a change in how women are branded as professionals. Unlike the authors of previous works on domestic matters, “Mrs. A. M. Diaz (Abby Morton Diaz) and the author of *The Boston School Kitchen Text-Book*¹⁰⁰ Mrs. D. A. Lincoln (Mary Johnson Bailey Lincoln¹⁰¹), the authors of these 1914 texts have their names prominently displayed in the standard academic fashion: first, middle initial, last. There is no indication—whether on the cover, in the notes, or in the text—that either of

term eugenics, still primarily associated with MIT professor Ellen Richards, who died in 1911.

⁹⁸ Mathilda G. Campbell. *A Text-Book of Domestic Science*. New York: Macmillan, 1914

⁹⁹ For example, teaching was considered a profession to have until one married or in place of marriage—the job of a spinster. Weaving and other tasks performed outside the home (in mills) were also jobs supposedly for young unmarried women. Of course, by “standard” career, I mean standard for a middle-class white American household.

¹⁰⁰ Mrs. D. A. Lincoln. *Boston School Kitchen Text-Book*. Boston: Little Brown & Company, 1905

¹⁰¹ An author of *Boston School Kitchen Text-Books* for many years, Lincoln copywrote her books under the pen name Mrs. D. A. Lincoln and sometimes Mary J. Lincoln. Why she decided to use different names different years may have something to do with her image as a traditional homemaker versus that of a professional or scientist.

these women is married at all. Instead, beneath each of their names on the title page, there is a list of their positions, appointments, lectureships or other qualifications.

In *Domestic Science Principles and Application*, Bailey divides the book into sixty-four lessons to be taught over two years. She devotes fifty-six out of those sixty-four lessons to the science of cooking and preparing various foods. The other lessons deal with proper equipage and other peripheral tasks to food preparation: stain removal (lesson 1), cleaning and disinfecting (lesson 1), digestion science (supplement between lessons 6 and 7), leftovers (lesson 32), serving (2nd year, lesson 27), dietetics (2nd year, lesson 28), school luncheons (2nd year, lessons 29-30), economics (2nd year, lesson 31) and, interestingly, “invalid cookery” (lesson 32).¹⁰² The level of organization is evident. For instance, girls’ “cooking uniforms” are specified to the inch. Made up of the skirt, bib, straps, belt, and pocket, the exact dimensions of each piece of the uniform are provided for various student body types.¹⁰³ This shows the level of professionalization that domestic science has achieved by 1914.

Along with standardization of dress, standardization of class procedure follows. Two members of the class are to be designated housekeepers alongside each lesson; each housekeeper, dubbed “1” and “2” for the sections of the class they are assigned to, have detailed instructions for their operation. “Housekeeper No. 1, Section I,” for instance:

1. Bring out the supplies for section I.
2. Pass dish cloths and towels.
3. If ovens are to be used, get ovens for section I.
- (...)
14. Set the garbage cans out for the janitor. See that the can is scalded each week and set in sun and air.¹⁰⁴

¹⁰² Bailey, *Domestic Science*, ix-xiv

¹⁰³ Bailey, *Domestic Science*, 1-2

¹⁰⁴ Bailey, *Domestic Science*, 3

The instructions for section II involve seventeen exacting steps.

One might think that whole of domestic science would involve instruction in chores other than cooking; that cooking is but one of a handful of regular tasks of a homemaker. This manual seems to ignore the relative importance or time commitment required for cleaning, bed-making, laundry, or any of the myriad more intimate child-raising tasks—reading, giving lessons, etc. A. M. Diaz was clearly concerned with these facets of child nurturing in her earlier work, for the “‘direction and culture of the intellectual and moral nature’ [of the child].”¹⁰⁵ Food seems to be the single important charge of the homemaker. This seems typical of the scientific attitude at the time, dependent on causality. It is just like the scientific debate over nature versus nurture. Heredity (nature) becomes, in the early twentieth century, more and more the preference of biologists and scientists (to the discounting of environment, or nurture) because heredity hones in on genes—something tangible, controllable. Domestic science, a.k.a. eugenics, seems to hone in on food as the single important factor, out of all of “environment,” for the rearing of successful and healthy citizens. This is also because food is something tangible and controllable. Unlike behavior and love, which can be written and speculated about forever (at least until science and technology progresses, later in the twentieth century, to merge fields like psychology and neurobiology), there were sufficient advances in food science at that time to give the professionals confidence in nutrition as the single most important determinant of environment.

¹⁰⁵ Diaz, *Domestic Problems*, 23

Mathilda G. Campbell's *Domestic Science* text of the same year reinforces this same idea. Her book begins with a very applicable analogy of food and body:

Foods are substances which...provide [the body] with heat and other forms of energy, and furnish it with material for growth and repair...[F]oods supply the fuel necessary for various bodily activity—for walking, for mounting stairs, for lifting weights; and they keep the bodily machinery in repair. In the case of a growing person, they also supply materials for the building up of the bodily machinery.¹⁰⁶

Food is to fuel as body is to machine. It is almost a hope, that food is truly paramount. It is so easily analyzed and measurable, and it seems that they, domestic scientists and professionals, food scientists, want it to be *the* factor in the successful replenishment of each generation of Americans.

The supremacy of food is evidenced by other texts of from the mid-nineteen teens. Alice Gitchell Kirk begins her 1917 monograph, *Practical Food Economy*, by saying that

[H]ome making is the biggest departmental occupation in the world, and the 'Food Department' is no small part of this business which men, women, and children should understand for their health, strength, and development—mental, moral, and physical.¹⁰⁷

The first lengthy chapter "Preparedness in the Home" ought to be titled simply "Preparedness in the Kitchen." Her whole point is about food economy to the exclusion of the other aspects of home management. Kirk immediately declares nutrition the hands-down most important factor in the production of sound human beings—"mental, moral, and physical," and she does so in sweeping general terms.¹⁰⁸

¹⁰⁶ Campbell, *Domestic Science*, 1

¹⁰⁷ Alice Gitchell Kirk. *Practical Food Economy*. (Boston: Little Brown & Co., 1917): 2

¹⁰⁸ Kirk, *Food Economy*, 2-3, "Preparedness in the Home," 1-50

A Purdue University student home economics outline demonstrates the same preference: food preparation is presented as the primary science of the homemaker; it is the topic of all the papers written and debates held as part of the course.¹⁰⁹ It is odd that food be so emphasized in education of young women in homemaking. While food provides that concrete and controllable substance that scientists crave in the shaping of the future—it is quantifiable, quality-controllable—other aspects of managing a home, such as clothing and shelter, ought to be similarly important.

One 1913 syllabus prepared for The American Home Economics Association by “its Committee on Nomenclature and Syllabus” seems to provide a more logical division of the homemaker’s labors. Approximately one-fourth of the syllabus is devoted to food; the largest section is on shelter; a section on clothing is approximately equal in length to food; and the syllabus ends with a short-and-sweet section on “Household and Institution Management.”¹¹⁰ This would suggest there was not complete unanimity in the idea of the importance of food to the successful development of offspring. Those who found food the best regulated aspect of the home environment probably also saw food as the most scientific labor of domestic science. If one were to further “domestic science” as a proper (or, “euthenic”) science in competition with eugenic sciences, then food is the medium to promote. In the scientific world, where heredity is constantly gaining ground over environment (perceived as the best factor for determining the quality of offspring), the

¹⁰⁹ Purdue University Department of Agriculture Extension: Division of Home Economics. *Home Economics: A Study Outline*. New York: H. W. Wilson Company, 1915

¹¹⁰ American Home Economics Association Committee on Nomenclature and Syllabus. *Syllabus of Home Economics*. Baltimore, MD: AHEA, 1913

best proof available for the relevance of environment is the most measurable, controllable, substance: food.

Alas, food does not hold all the answers. The tasks of the homemaker are not always so simply answered by prescriptive literature. A large segment of American homemakers still felt overwhelmed. Laura Shapiro mentions an issue of *Ladies Home Journal* in which the housekeeping editor published collected letters from readers over the course of a few months. The letters revealed just how inadequate, overworked, clueless or otherwise distraught many women felt about their household labors. One complains "...my house is never as tidy as my neighbors"; another, "[I] have been married three years but cannot grasp the idea of managing my own home"; one asks if there are "any efficiency methods that would help?"¹¹¹

The answer to these homemakers' malaise may yet have been found in technology. Ellen Richards, in her quest to professionalize the rearing and nourishment of American children, considered the current inadequacies of the household. Richards's article "Housekeeping in the Twentieth Century" is a kind of State of the Union of domesticity. "The questions which confront the Housewife of the Twentieth century," Richards begins the article, "are fourfold—ethical and economic, then scientific and social."¹¹² Richards says that the problems faced by homemakers are our own problems and "no one can settle these questions for us [but ourselves]." From there, she begins to outline what American families ought to seek to preserve into the twentieth century: the home as a sanctuary with the woman at the "center of its influence." She provides an

¹¹¹ Laura Shapiro, *Perfection Salad*, 34-5; Shapiro also mentions Richards's article.

¹¹² Ellen H. Richards, "Housekeeping in the Twentieth Century," *American Kitchen Magazine*, Volume 12 (March 1900): 203

antithesis to this ideal American way of life that will soon become very familiar to America in the twentieth century: the communist way of life. Richards says that what Americans do not want is the communistic eradication of the family—“no family life, only a community holding all things in common.” She says, to give up the family is the first “long step towards socialistic communism.” From there, Richards declares that technology ought to solve many of the problems of the overwhelmed homemaker: “It is the unmistakable tendency of modern economic and industrial progress to take out of the home all the processes of manufacture...”¹¹³

Richards was not alone in believing that technology, as it accelerated into the twentieth century, held solutions to many of society’s problems. Technology had already, in the nineteenth century, connected the American coasts and determined the outcome of the civil war, among other things. The “romance,” as Cecilia Tichi describes the effect, of technology in the early twentieth century derived from massive earth-moving projects such “as the Panama Canal...[,] the Wilson Dam...[,] and the Alaska Railroad.”¹¹⁴ The turn-of-the-century engineer, a “messianic figure,” championed “efficiency, organization, production, functional[ity] and elegant design.”¹¹⁵ It was a simple step for the American citizen to infer, from the successes of such grand engineering feats, that technology would eventually solve all of America’s problems—economic, governmental, social. For the average middle class family, technology would “revolutionize”¹¹⁶ a housewife’s relationship to labor; accelerating the transition of the

¹¹³ Richards, “Housekeeping,” 203

¹¹⁴ Tichi, Cecilia. *Shifting Gears* (Chapel Hill: U. of N. Carolina Press, 1987): 102

¹¹⁵ Tichi, *Shifting Gears*, 105

¹¹⁶ Tichi identifies rhetoric about the engineering revolution in the *New York Times* as early as 1869, *Shifting Gears*, p. 102

household from a productive to a consumptive zone, industrial progress assured the ubiquitous creation of the modern home.

The idea of the modern home was the target of inventors and engineers seeking to reduce the toil of the housewife. Ruth Schwartz Cowan subdivides household labor into three areas where industrial innovation was to improve life: “the food system, the clothing system, and the healthcare system.”¹¹⁷ Consumer appliances were aimed at these different areas to compliment the consumer goods that were taking the place of goods the traditional wife would have manufactured. In the food system, coal stoves were introduced once coal could be easily transported cross-country. Jobs the housewife used to do that were now being done in the marketplace included flour milling, butchering and canning.¹¹⁸ In the clothing system, sewing machines became available for the home, but their use was more for mending than for actual clothing production; as ready-made clothing took off at the turn of the century, the need for making clothing in the home declined.¹¹⁹ Concerning the health care system, change was gradual. Cookbooks began to omit recipes for home remedies and potions, no longer a body of knowledge required by the homemaker. Medicines were increasingly manufactured and sold by “peddlers” and through mail order. Nursing professionalized; hospitals increasingly became centers of treatment for everyone, for the upper classes and not simply for the “urban indigent.”¹²⁰

¹¹⁷ Ruth Schwarz Cowan. *More Work for Mother: The Ironies of Household Technology from the Open Hearth to the Microwave* (New York: Basic Books, 1983): 71

¹¹⁸ Cowan, *More Work for Mother*, 71-3; coal stoves, 63

¹¹⁹ Cowan, *More Work for Mother*, 74-5

¹²⁰ Cowan, *More Work for Mother*, 75-7

In all cases, however, the modernization of the home and the technological influx that came with modernization did little to reduce the housewife's daily labor, as so many appliance advertisements promised. Consider the case of the coal stove. Its efficiency freed the male head-of-household from wood-chopping, fire-tending, and household-heating labors. In fact, the stove not only freed the male from these tasks; in order to purchase coal to use in the stove, the male head-of-household now needed to go into marketplace and sell his labor to obtain capital with which to buy coal. The housewife, with the male away all day earning a wage, was left to do all those chores he left in his wake.¹²¹

Other cases are less extreme; concerning the clothing system, different household technology did provide convenience, but such convenience was a trade off. A wife shucked an ancient drudgery, washing clothes or weaving garments for her family, but in exchange she had to obtain special knowledge of how to operate new machinery—a washing or sewing machine. Additionally, her labor increases as her family consumes more and more ready-made clothing; she is required to do laundry more frequently, their garments require more mends.¹²²

Many appliances were invented in the first decades of the twentieth century to reduce a homemaker's labor. The toaster, the blender, and the dishwasher, for instance, were all invented within a few years of each other. So great was the proliferation of convenient appliances and knickknacks, that as early as the 1860s, as a "feminine parallel to agricultural engineering," women in certain areas were educated in "home economics equipment training" so that they could properly make use of newly available home

¹²¹ Cowan, *More Work for Mother*, 63

¹²² Cowan, *More Work for Mother*, 64-5

appliances. “By 1912, home economics had grown into its own division” on the campus of Iowa State University in Ames, Iowa.¹²³ Bix’s article is specifically about the program at Iowa State, and it serves as a prime example. Since home economics grew as a kind of woman’s supplement to the men’s agricultural engineering education, Iowa State was in the perfect location: it was in the Midwest, in the farmland, in the agricultural heart of America.

Household equipment training was vital, yet new household appliances arrived on the market so rapidly in the final decades of the nineteenth century that the specific education to operate new household machinery couldn’t keep up. To many, even the newest equipment seemed painfully foreign. Eloise Davidson, a graduate student at Iowa State in the early twentieth century, wrote that many homemakers held “‘much prejudice, fear, [and] ignorance,’” and that “‘tradition must be overcome before electrical, mechanical, or steam-powered devices can be introduced into our households.’”¹²⁴

Equipment training would eventually become a core part of the study of home economics at Iowa State, culminating, in 1929, with the “first (and for several decades...the only)...undergraduate major in the study of household equipment” in the United States.¹²⁵ By that time, electricity had been in homes all across America for decades, and the generation of women who could potentially enroll at Iowa State to obtain a degree in household equipment had to be quite used to electricity and the presence and application of many modern appliances of convenience.

¹²³ Amy Sue Bix, “Equipped for Life: Gendered Technical Training and Consumerism in Home Economics, 1920–1980.” *Technology and Culture* Vol. 43 (Oct. 2002): 731

¹²⁴ Bix, “Equipped for Life,” 732

¹²⁵ Bix, “Equipped for Life,” 729

It was not merely inventions of convenience that changed the makeup of the kitchen. To meet the demands of a new century, in a nation that had urbanized and industrialized, the structure of a kitchen was to change. *The A-B-C of Cooking*, by Christine Terhune Herrick, begins with an overview of kitchens of the time. “In the early period a big kitchen was taken for granted by a builder. In this period,” Herrick writes, “we have learned that the greater the area of the room the more is the exertion demanded by the worker.”¹²⁶ In *The Book of Kitchens*, Ellen D. Wangner agrees with Herrick:

Today there is no such thing as a kitchen in the old-time sense of the word. That drab, too large, labor-making room has disappeared, and we have instead what is frequently the cheeriest, best planned, most efficient and colorful room in the house.¹²⁷

Wangner both criticizes the size of old kitchens, and the fact that they are “labor-making” places. Traditionally, they were indeed that, places of production. The modern kitchen is a place of assembly and preparation, of consumption rather than production, where goods are obtained from the market and meals are assembled out of those goods. Just like Herrick, Wangner celebrates how the kitchen has downsized:

The great wide-open spaces that once spread between range and icebox have disappeared. In the modern home of average size the pantry with its myriad shelves has gone, and in its place we have a labor-saving breakfast nook for cozy breakfasts or children’s luncheons, or a cool place in which to work in comfort.¹²⁸

The adjectives abound. The language is flowery. Wangner is not only acknowledging the uneconomical aspects of the traditional kitchen, but is actively selling the new version. *The American Home Book of Kitchens* does come a bit later. Whereas Herrick is making observations of kitchens and size-efficiency in 1916, *Kitchens* was published in

¹²⁶ Christine Terhune Herrick. *A-B-C of Cooking* (New York: Harper & Bros., 1916): 1

¹²⁷ Wangner, Ellen D. *The American Home Book of Kitchens* (New York: Doubleday, Doran & Co., 1931): 1

¹²⁸ Wangner, *Book of Kitchens*, 1

1931, and has had an extra decade and a half to let the modern kitchen diffuse across America. Herrick is part observer, adapter, and visionary. Wangner is the historian and, strategically, the salesperson of the new kitchen and a new way of homemaking life. Even stronger than simply selling the new kitchens, Wangner's first chapter, "The Revolution in the Kitchen" borders on manifesto:

With the passing of the dark, inconvenient kitchens of that other day we demand in our modern household offices the four big C's that make for satisfaction: Compactness, Convenience, Cheer, and Comfort.¹²⁹

Wangner's "passing of the dark" symbolically means the same thing "dark" means when someone references the Dark Ages. It means there was something primitive and lacking in old ways. The household drudgery of the "dark" gives way to what is now enlightened. The "passing of the dark" literally has to do with the complete electrification of America and lighting-up of the cities. With power, something introduced far earlier, came electric kitchen conveniences—toaster, blender, etc. With these new inventions came a brand new kitchen for a changing American population. This new kitchen would come to include color, that is, painted walls, an idea originally considered "radical," but one which would eventually even be credited with making the kitchen more efficient by means of the room simply appearing more inviting and pleasant to be in.¹³⁰ In the chapter on "The Convenient Kitchen," Wangner states that "color is a part of the necessary equipment of the modern kitchen, making of it a cheery, inspiring workroom."¹³¹ Wangner includes blueprints for the new kitchen, showing where each

¹²⁹ Wangner, *Kitchens*, 2-3

¹³⁰ Wangner, *Kitchens*, 36

¹³¹ Wangner, *Kitchens*, 29

necessity is located—cabinets, gas range, refrigerator, sink—to optimize convenience, aesthetics, and safety.¹³²

Herrick, in *The A-B-C of Cooking*, acknowledges the masses of Americans who do not live on the land; who are crammed into tenement houses and apartment complexes. There is something to be learned from urbanization that puts a premium on space; it is efficient. Though Herrick is not explicitly saying that big kitchens are bad, or old-fashioned kitchens are bad, she has noticed the benefits of a tightly-wrapped, undoubtedly urban kitchen: “A kitchen of small or medium size, compactly planned, judiciously arranged, provides the maximum of efficiency at the minimum of effort.”¹³³ Thus begins Herrick’s work on cookery. The first steps to proper preparation of meals for American children begins with maximizing efficiency in one’s surroundings, streamlining the process:

The best floor-covering is linoleum...The walls are best painted...Light and ventilation are closely allied...In the ideal kitchen, the light falls upon the stove and the mixing-table alike...The height of the furniture at which work is performed is a matter of the moment...¹³⁴

This preparation *for* preparation is characteristic of Christine Terhune Herrick. She authored *The A-B-C of Housekeeping* a year earlier,¹³⁵ in which she also begins with extensive setup.

This systematic approach to the processes of the kitchen is something rather new. It comes from the scientific intrusion of methodology into the hitherto supposedly “unscientific” sphere of the homemaker. As Laura Shapiro puts it, “[s]cientific

¹³² Wangner, *Kitchens*, 21, 25

¹³³ Herrick, *A-B-C*, 1

¹³⁴ Herrick, *A-B-C*, 1-3

¹³⁵ Christine Terhune Herrick. *A-B-C of Housekeeping* (New York: Harper & Bros., 1915)

housekeeping, its proponents like to suggest, demanded the rigorous intellect and objectivity of a man's mind...[W]omen had to be trained to think like men." The idea was that when one applied science to housekeeping, as with child-rearing, cooking, education, it would be made more efficient, more effective and less laborious. Shapiro then delves into Ellen Richards, whom she dubs "[t]he woman who worked hardest to appropriate male thinking into the feminine domain,"¹³⁶ by which she means the person most responsible for bringing science (male-gendered) to domesticity (female-gendered), or put simpler, Euthenics.¹³⁷

By the nineteen twenties, small efficient kitchens were so prevalent that kitchenette cookbooks came into existence. In *Man-Sized Meals from the Kitchenette*, Hutton and Allen present "a recipe book for city housewives; especially the younger ones who are more at home in an office than a kitchen."¹³⁸ It is a cookbook aimed at cosmopolitan ladies, who may be married and may in some ways be housewives, but often still go to work each day like their husbands:

Marriage won't always wait prudently on business success and the ability to finance a suburban colonial. Thousands of young couples must start out in city apartments where rents are high and space is consequently sacrificed. Frequently the wife goes right on with her job.¹³⁹

Yet still the manual is a domestic manual and the title very clearly implies the role of the housewife as dutifully responsible for her husband's nutritional well-being. It also implies that a single woman can get by with less simply because she is a woman and has

¹³⁶ Shapiro, *Perfection Salad*, 37

¹³⁷ Amy Sue Bix approaches the same topic of gendered thinking in "Equipped for Life," 728

¹³⁸ Margaret Pratt Allen and Ida Oram Hutton. *Man-Sized Meals from the Kitchenette: A Kitchenette Cook Book* (New York: Macy Masius, The Vanguard Press, 1928): v

¹³⁹ Allen & Hutton, *Man-Sized*, v

dainty tastes and a small appetite. Allen and Hutton are well aware of theurbanization that has created not only smaller kitchens but the “kitchenette,” a further limitation on space, equipment and the versatility of cookery. To nourish a man, the scope of the kitchenette must be stretched, expanded.

Expansion requires precise planning if space is limited. The traditional suburban kitchen houses mechanical and newfangled electrical equipment for many tasks; molds, presses, canning equipment, mashers, grinders, and a variety of other implements existed for perhaps one or two different uses. They sat unused most of the time. Allen and Hutton list the essentials: “One medium frying pan...A quart casserole dish...An egg-beater is necessary...A half-pint measuring cup is necessary...[S]tainless steel knives” and, curiously, “[a]n asbestos pad will help you to simmer slow-cooked foods.” They emphasize the multiple use of the essential cookery instruments and they spurn the things that are of infrequent usefulness: “Don’t buy muffin pans...”¹⁴⁰

Regarding foodstuffs, the approach is rather typical of the past thirty or forty years. There is a chapter on “Meats—For an Man’s Dinner,” detailing the ways of preparing protein for the labor-intensive lifestyle of the male. What is interesting is the inclusion of the chapter immediately following, reminiscent of World War I days on the home front: “Eggs and Fish—For a Change.” The replacement of meat with other protein-rich foods was a rationing measure to free up vast quantities of meat for fighting men at the front during World War I.

¹⁴⁰ Allen & Hutton, *Man-Sized*, 13-15

Perhaps American nutritionists learned something during America's brief engagement in the war. While the energy requirements of producing eggs, fish, or dairy products versus meat were not yet a major ecological issue, there was likely an immediate and somewhat obvious monetary savings occurring at the single-household level when one family decided to replace meat with eggs, fish, or even something stranger: nuts, beans or spinach. The notion caught on. When Allen and Hutton, ten years after the conclusion of World War I, included this chapter in their work, it is a cohesive part of their work to present the most efficient and economical—yet still “Man-Sized” solutions—to the dinner question.¹⁴¹

Allen and Hutton's chapter on “Vegetables—For Variety” is liberal. While much of the rest of their work deals in limitation of quantity, concern over cost, or moderation, Allen and Hutton say, “on the subject of vegetables...the Kitchenette Cook, or any other kind of cook, will never go wrong by having too many.” They go on to advocate one green vegetable (at least) in every meal, and using canned vegetables when fresh are too expensive.¹⁴² It is a fascinating turn, but also another progressive one. Replace meat with eggs and fish, for the sake of one's wallet and well-being, and eat as many vegetables as one can.

Allen and Hutton's cookbook may not be a flaming example of a euthenic text, a cookbook with a bent towards the proper, successful raising of children of the American nation. What it does represent is the change, in the 1920s, in the ways households work, in the ways kitchens and homes are perceived. Realistically, not every American lives like a suburban homemaker; indeed, by this time period more are technically urbanites

¹⁴¹ Allen & Hutton, *Man-Sized*, 45, 64

¹⁴² Allen & Hutton, *Man-Sized*, 74

than rural-dwellers. The concept of the American home—of the ideal environment—is changing. Allen and Hutton cater to the mass of city-dwelling heterosexual couples who are also successful Americans in their own right, who raise children, who would have the means and access to healthy home lives and still balance those with careers. In it all, roles are still roles; a professional married woman is still a woman, and Allen and Hutton still write that it is a woman’s duty to rise to the challenge of preparing meals in her small kitchen, one built for convenience, for the assembling of “man-sized” meals out of the consumer goods a bustling city can provide.

The concept of the urban “kitchenette” does something else. The bare functionality and close proximity of the “kitchenette” to locations of production (the market), represents the final stages of the transition of the household from a producing household to a consuming household. The home, by the 1920s, is reintegrated with the “market or political realm,” as Amy Kaplan deems the sphere of influence of the traditional American man.¹⁴³ Kaplan identified the changing respect of the female Americans’ sphere of influence¹⁴⁴ occurring around the turn of the century. This occurred concurrently with the transition of the household.

It could be argued that the transition from a producer household to a consumer household triggered Kaplan’s change in the respect of the woman’s sphere of influence, by first opening up the home and requiring outside goods for the home to function. A producer household is self-contained; in the most traditional kind of producer household—a farm—all that is theoretically needed by the inhabitants is self-produced: vegetables, grain, meat, leather, wood, cloth, lye. When the processes of preparing food,

¹⁴³ Kaplan, “Manifest Domesticity,” 582

¹⁴⁴ See p. 16

baking bread, making clothing, soap and other necessities are outsourced to specialists in a local community, all of a sudden necessity opens the household and binds it to the outside world, Kaplan's "market or political realm." In a consumer household, money is required to upkeep everything.

In the "kitchenette" scenario, the young couple both work, and are equally bound by their paychecks and their investments in a home, even if it is a going assumption in the time period that the wife is responsible for having dinner on the table (and thus is the primary consumer of goods necessary to make dinner happen). In a single-income household, the homemaking wife, while liberated from the many arduous production tasks of the past, is still bound by her husband's paycheck. By extension, she is bound to the home, and bears a new responsibility as a strategic consumer, a spender of her husband's capital for the well being of her children and husband.

These Euthenic texts both respond and appeal to different people. Some get into the details of environment, an important factor in the creation of upstanding American citizens. Other texts seem to argue for environment in opposition to, or in defense against eugenic principles that downplay the effects of the home environment to child development. In a less combative sense, many of these texts perpetuate Richards's own ideas, honing in on food as the single most important factor in a child's upbringing. This preference, over other logically important factors like shelter, education, psychological well-being, reveals the desire of early reformers to attach something quantifiable and quality-controlled to the positive outcome of the child. The scientific approach begs for answers through controllable conditions, where input (food) can be measured directly by positive output (upstanding citizenship, strong, healthy body, good morals, work ethic,

clear, intelligent eyes, etc.). This is one area where, subtly, the shared goals of eugenics and eugenics are revealed. The desire to appeal to science, and its mechanisms for finding replicable truth, exists in the literature of both eugenics and eugenics.

Beyond the similarities between eugenics and eugenics, the literature in this section reveals changes in American society, as well as the changes in perception of the ideal environment. Industrialization, in the early decades of the twentieth century, is quite advanced; it has, in a way, completed its takeover of the modern world. With the mass installation of electricity, plumbing, sewage systems, and transportation, cities could outgrow their reputations as unsanitary, dark, labyrinthine places. Urbanization took off, urban living lost its stigma, and manuals appeared championing the “efficiency” of the smaller space, the compact kitchen, the reduction of a woman’s home labor. Industrialization also brought with it technological advances in the home. Following in the wake of mass plumbing and electricity came appliances and time savers which would change a homemaker’s relationship to labor. While these devices did not really reduce her labor, they changed it in specific ways; technology once and for all ended the transition away from a producer-home to a consumer-home. They also necessitated a certain kind of education. While home economics education was already growing rapidly in schools and colleges, technological advances contributed to the further education of young women, even if the education was quite specialized.

CHAPTER VII

INTERLUDE: FOOD, EUGENICS, AND WORLD WAR I

It is important to address an event that had a major impact on America's resources and its people. While World War I did not directly affect the trajectory of domestic science, it directly affected the dialogue around eugenics. As Edward Alsworth Ross, put it, in 1918:

The Great War has caused a vast destruction of the sounder portion of the belligerent peoples[,] and it is certain that in the next generation the progeny of their weaker members will constitute a much larger proportion of the whole than would have been the case if the War had not occurred. Owing to the immeasurable calamity that has befallen the white race, the question of eugenics has ceased to be merely academic. It looms large whenever we consider...the decline of our civilization in consequence of the losses the War has inflicted upon the more valuable stocks.¹⁴⁵

World War I began with the assassination of Archduke Franz Ferdinand in Serbia in 1914. Ultimatums were drawn up, alliances and secret alliances eventually drew most of a continent into war. Very quickly, Western Europe, the place of modernization and also, supposedly the home of the racially superior peoples of the world, was plunged into a stalemate killing field where hundreds of thousands of soldiers died in single conflicts. In the early stages of World War I, when the fighting nations were finalizing their "home for Christmas" battle plans, no one considered America to be a modernized, competent member of the elite. Germany did not at first feel threatened by the possibility of America joining the side of the allies, nor did she desire a share of America's vast resources. The Allies did not think they would need assistance either, and when

¹⁴⁵ Edward Alsworth Ross, "Introduction," in Paul Popenoe and Roswell H. Johnson, *Applied Eugenics* (New York: Macmillan Co., 1920): xi

American supplies and materiel finally became a necessity to Allied cause, it still took years before the American military was required to end the conflict.¹⁴⁶

When America finally committed to the war, national efficiency was at a premium. John B. McMaster writes, of the general “Call to the Colors” that ensued after the United States declared war on Germany: “every bushel of potatoes stored, every pound of vegetables put up for future use, every jar of fruit preserved, would help to win victory...”¹⁴⁷ The railroad schedules changed to “a war basis”; the Secretary of Agriculture called upon the “2,000,000 boys from fifteen to nineteen years of age” to take up the farm labors left by drafted men, to ensure the production of food in all sectors. Indeed, Henry Ford released 1,000 of his workers to the fields for this purpose. The USFA was created and one of its first measures was to get every woman over the age of fifteen to sign a card to become a member.¹⁴⁸ These cards were pledges of a sort, and were to be hung in the kitchen as reminders. The rules were not complex:

Consume less wheat, meat, milk, fats, sugar and fuel; eat more fruit, vegetables, and foods not suitable to camps or firing-lines; set no limits to the food of growing children; eat no more food than is necessary; buy food that was grown close to home.¹⁴⁹

¹⁴⁶ Neal Shipley. “Lecture: World War I.” 14 & 16 September, 2010. University of Massachusetts, Amherst.

¹⁴⁷ John Bach McMaster, *The United States in the World War* (New York: D. Appleton and Co., 1918): 374

¹⁴⁸ McMaster, *The U.S. in the World War*, 367-370

¹⁴⁹ Francis Whiting Halsey. *The Literary Digest History of the World War: Compiled from Original and Contemporary Sources: American, British, French, German, and Others, Vol. 4* (New York: Funk & Wagnalls Co., 1919): 126

It is interesting to see just how modern and conscientious the measures of war rationing were. While the health benefits of vegetables, as opposed to carbohydrates or protein, were not to be emphasized in the American diet till much later (if at all, one could argue) the charges by the USFA to both eat lots of fruits and vegetables, be sparing with meat, and to buy locally are all the kinds of eco-friendly maxims that exist today.

The United States Food Administration (USFA) undertook a major public awareness campaign; pamphlets and books were issued to instruct every civilian to conserve at home to spare for the front. In the beginning of *Food and the War*, a text provided by the USFA to complement a college course, it is charged:

To College Men:

If you cannot get into the ranks, you can yet fight with your fellows who have gone. *Will you?*

The battle-field is here. The battle is now.

The struggle for democracy is within you.

[...]

It is as necessary to provide food for our armies, and for the armies and families of the Allies, as it is to face the enemy.

Therefore:

1. Be intelligent; inform yourselves about food.
2. Create more food if you can.
3. Do not waste any.
4. Do not allow others to waste any...¹⁵⁰

This call to arms directed at the men left on the home front ends with the signature of Herbert Hoover, head of the U. S. Food Administration since 1917.

Food and the War goes on to paint a picture of the situation of food during wartime. To accomplish this, Katherine Blunt and the aptly named Florence Powdermaker explain, in “The World Food Situation” first how the international food

¹⁵⁰ United States Food Administration. *Food and the War: A Textbook for College Classes Prepared Under the Direction of the Collegiate Section of the USFA* (New York: Houghton-Mifflin, 1918): unnumbered page before table of contents

economy operates under normal conditions, then how it has changed since 1914. Among the changes from war include the diversion of men from farm work to battle, the “decreased importation of fertilizer” (low fertilizer sales for suppliers) and cattle feed, devastation of farmland (including the devastation of one-fifth of France), a 1917 cereal crop decreased by 575,000,000 bushels, and a decrease in the number of stock animals by over 100,000,000 head 1914-16.¹⁵¹

Food and the War then goes on to detail the dire meat situation. Naturally, it was the prevailing view that thousands of tons of meat were necessary for the vitality of the soldiers at the front. The crisis of war brought the USFA to the interesting and rather un-American conclusion of obtaining protein from sources other than meat—to abstain from meat.¹⁵² The great meatpacking engines of Chicago, Omaha and Kansas City were to redirect their output across the Atlantic. To educate the home front of their options in lieu of meat, an entire chapter of *Food and the War* is devoted to “Protein-Rich Foods Used in Place of Meat.” While the non-meat list includes fish, eggs, cheese, and milk—still hearty animal products—the inclusion of beans, peas, and nuts heralds perhaps a move towards a more modern understanding of a balanced diet.¹⁵³ Beans and peas, while simple complements or decorations of meat protein in the diets of Americans through the nineteenth century, perhaps at this point have obtained “meat status” by default. If war is a crisis, there can be no more dire illustration of such an American crisis than the

¹⁵¹ USFA, *Food and the War*, 3

¹⁵² It will be discussed more in depth later, but it is pertinent to mention here that W. O. Atwater, the American food chemist, noted around the turn of the century that Americans need more protein than Europeans in part because they “live more intensely...and have more money to buy it.” See footnote 117.

¹⁵³ USFA, *Food and the War*, 86

consumption of peas and beans in lieu of a hearty steak. This is the same unusual “American” situation as the food ration cards mirroring the nutritional maxims of today.

It is as though the governing institutions of America and the USFA presupposed Edward Alsworth Ross. The men needed proper feeding to achieve victory, and victory falls right into the same category with other occidental notions of success, strength, vigor, virility and vitality—the sorts of traits desired in a generation of young American men who would come of age to fight the war, and who would not “fear righteous war.”¹⁵⁴

World War I put the pedigree of the old world Western nations on the front lines, to parade in the trenches and die in waves. America, standing behind its fine specimens of the American race, called upon the whole nation to sacrifice a truly American symbol of potency—meat—so that the men at the front had belles full for victory. When the war was over, eugenicists stood perplexed at the immense loss of “good stock.” At the conclusion of the war, those who were paranoid about race suicide, as Roosevelt was, probably thought America needed those boundlessly fertile white men and women more than ever. They needed those men back home with their wives, reproducing on the double, making up for lost flesh and time, replenishing the American stock in an environment made more efficient every day by technologically-advancing kitchens; the ever-progressing science of nutrition; and the improving standards and cleanliness of the food industry (or at least the vigorous advertising of the industry as such), resulting in the increasing purity of the nation’s food. Pure food, naturally, assured the moral future of a

¹⁵⁴ These traits of vigorous men are celebrated in Theodore Roosevelt, *The Real Roosevelt: His Forceful and Fearless Utterances on Various Subjects* (New York: G. P. Putnam & Sons, 1910): 157-8; quote 158

child; in order to produce a perfect citizen, feed him (as, is so often the case, the concept of a citizen is male-normative) only the purest milk, meat, eggs, grains.

CHAPTER VII

THE AMERICAN RACE: FOOD AND “PURITY”

Purity took pseudo-scientific root as an important part of meal planning with the advance of eugenics into the twentieth century. Along with Ellen Richards, W. O. Atwater of Wesleyan University was one of the first to bring chemistry into the kitchen. Atwater, in 1895, published his food composition tables.¹⁵⁵ These tables were the first collations of data on American foodstuffs. Atwater states that up until that time, “those who wished to know about the chemical composition and nutritive values of food materials were compelled to depend upon analyses of European products.”¹⁵⁶ Atwater’s tables spelled out protein, carbohydrate, and fat composition for various American foods. Atwater’s prescriptions for the American diet increased the “necessary” intake of protein and fat and decreased the amount of carbohydrates from the typical German requirements, all on the excuse that “Americans live more intensely, work harder, need more food, and have more money to buy it.”¹⁵⁷ At the time of Atwater’s food science, vitamins did not yet have an important place in diet, thus the regulation of fats, proteins, carbohydrates and salts was the basis of food science. One result of this early food science was the overemphasis on protein to dietary health, usually at the expense of vegetable matter.

Protein’s most gallant vessel at this time was milk—pure, clean, healthy, white milk. While humankind’s first encounter with milk was undoubtedly with their own mother’s milk, the argument put forth for dietary superiority, health, and purity has to do

¹⁵⁵ W. O. Atwater, Ph.D., and A. M. Bryant, M.S. “The Chemical Composition of American Food Materials.” *Pure Products* Vol. 1 (1895): 354-363

¹⁵⁶ Atwater, “Chemical Composition,” 354

¹⁵⁷ Shapiro, Laura, *Perfection Salad*, 74-5

with human consumption of cows milk. Nestle, in advertising campaigns, went so far as to tout cow's milk "where the mother's milk is insufficient."¹⁵⁸ An advertisement for Carnation evaporated milk in *The Boston Daily Globe* in 1910 asserted that "evaporation is a severe test for any milk[,] since the more water you take out the more plainly will all impurities be in evidence." Drawn around this assertion of pureness is an idyllic and uniquely American panorama of vast mountains, a rushing stream, meadow, forest, and fresh blustery weather—cumulous clouds pouring in over the snowcapped mountain peaks. Perhaps this scene of the great outdoors is Alaskan; a small award badge is inlaid to the right of the advertisement text, proclaiming Carnation's "Grand Prize[, the] Highest Prize awarded by the Alaska-Yukon-Pacific Exposition."¹⁵⁹ Horlicks, in a 1920 advertisement trumpeted their "Safe Milk for Infants and Invalids[:] Horlick's[,] The Original Malted Milk."¹⁶⁰

Though our current historical perspective reveals a positive correlation between child mortality and cows milk consumption,¹⁶¹ in the past it seemed that any correlation between cow's milk and infant mortality had more to do with the failing purity of the available milk supply, and less with the fact that cow's milk is meant for calves and not infants. Both in England and in the United States, milk formula was touted as the single best substitute for mother's milk, or as the case seemed to be with Nestle's formula, perhaps even superior to mother's milk.¹⁶² The *British Medical Journal* regularly

¹⁵⁸ DuPuis, E. Melanie. *Nature's Perfect Food: How Milk Became America's Drink*. (New York: NYU Press, 2002): 90-1

¹⁵⁹ Carnation Milk Advertisement. "You Cannot Make Good Evaporated Milk from Mediocre Cows Milk." *The Boston Daily Globe* (Feb. 10, 1910): 13

¹⁶⁰ "Horlicks Malted Milk." *New York Times* (Jan. 1, 1920): 16

¹⁶¹ Dupuis, Melanie, *Nature's Perfect Food*, 5

¹⁶² See bottom of p. 42

published data on the milk supply in England. Simply put, in one 1903 article on the matter:

The series of articles on the milk supply of large towns, which has been appearing in the *British Medical Journal*, are an index of our sense of the importance of a pure milk supply as a means of reducing infantile mortality.¹⁶³

This suggests that milk was an important part of formula preparation in the towns where milk supply was regularly monitored, and that, indeed, a healthy milk supply (healthy, in this instance, meaning robust and efficient) would improve the infant mortality rates in certain areas. A later note published in 1913 by a Ronald Carter, M.D., would go further, recommending feeding not only milk formula, but whole milk to infants:

Sir—Dr. Cameron evidently believes that the vast majority of digestive disturbances are due to excess of either sugar or fat in the diet...I have had considerable experience in giving undiluted cow's milk at my infant consultations during the last five years, and I can fully confirm Dr. Cameron's opinion as to the success of this method...¹⁶⁴

This might not seem so excessive, as it is a note from a doctor who seems to have tried out the suggestion of another colleague, Dr. Cameron. The reality is that this correspondence, and Dr. Ronald Carter's success and confidence in feeding infants whole milk, must have influenced other practitioners, readers, and subscribers to *The British Medical Journal*.

To illustrate another end of the spectrum, there appears in one 1915 report on infant formulas, that a number of milk formulas represented only a small fraction of milk or dried milk:

¹⁶³ "Infantile Mortality in Relation to the Milk Supply." *The British Medical Journal* Vol. 1, No. 2213 (May 30, 1903): 1265

¹⁶⁴ Ronald Carter. "Whole Milk Diet for infants." *The British Medical Journal* Vol. 1, No. 2734 (May 24, 1913): 1139

Dr. Coutts expose[d] a great deal that is dishonest and detestable in the sale and advertisement of infants' foods. For example, one of the specimens...contained nearly 60 per cent of starch and 11 per cent of cane sugar.¹⁶⁵

This is a plea to the common parent to watch out for the formulas they purchase for their children—that they be educated, persnickety consumers. Perhaps it is even an encouragement for parents to make their own formulas that would have higher percentages of milk, higher *purity*, as the rhetoric would go. In the same article from 1915, a flamboyant advertisement for one formula tested in the report seems to have convinced one parent that royalty feed the formula to their own children. The parent concluded that ““what was good enough for royalty[...]was good enough for his young ones,”” even though Dr. Coutts warns that ““most of the so-called infant foods are mere mixtures of starchy meals, and quite unfit for the delicate digestion of infants.””¹⁶⁶

In another report filed later in that same year, milk is emphatically promoted as the best of the infant formulas: “it is the experience of all those who are best qualified to judge[,] that in cow's milk we have the most suitable standard diet available in a form that is cheap and easy to procure.”¹⁶⁷ And yet, in one precocious “Clean Milk” report filed four years earlier, in 1911, a veritable army of collaborating experts made it clear right from the beginning that milk could be dangerous:

Sir—It is recognized on all sides that few matters are of greater importance in promoting the health of the nation than a pure milk supply. Yet, unfortunately, milk is peculiarly susceptible and liable to contamination, not only while it is in the hands of the producer and retailer, but also as soon as it reaches the

¹⁶⁵ “Some Proprietary Foods for Infants.” *The British Medical Journal* Vol 1., No. 2819 (Jan. 9, 1915): 77

¹⁶⁶ “Some Proprietary Foods,” 77

¹⁶⁷ “Our Present Position With Regards to the Prescription of Proprietary Foods in Infant Feeding.” *The British Medical Journal* Vol. 2, No. 2851 (Aug. 21, 1915): 287

consumer...[Milk] is frequently...a potent factor in the dissemination of a number of serious diseases, and has a great influence on infant mortality.¹⁶⁸

The scientific evidence suggested that milk, as a nutritional pediatric choice, was either heavily dependent on the quality of the milk supply, or, provided there was a good milk supply, could still be a potential risk. Nevertheless, it was promotion, and not scientific evidence, that influenced public opinion and practice. The popular rhetoric supporting milk consumption was very convincing; the dual nationalistic appeals of purity and health struck home. Many could not get over the pastoral imagery that milk producers and distributors constantly pushed on the consuming public. In some cases it seems as though members of the scientific community got behind the idea of food “purity,” or at least supported the notion. Luther Burbank, for instance, in his tract *Training the Human Plant*, insisted “that upon the food the child is fed in these first ten years largely depends its [sic] moral future...”¹⁶⁹ If foods affect a child’s morality, then certainly one would not want to risk feeding a child impure fare. The rhetoric of purity expanded beyond the individual, the family, and the home. As cities’ populations rose and industrialization increased, the cleanliness of milk was figuratively maintained by associating the product with rural, pastoral production. Grazing cattle, chaste white milkmaids, trees, and rolling landscape all cultivated purity in the bottle of milk delivered to doorsteps in an industrial, smoggy city.¹⁷⁰

¹⁶⁸ W. B. Ripon, F. Maurice, et al. “Clean Milk.” *The British Medical Journal* Vol. 1, No. 2611 (Jan. 14, 1911): 112

¹⁶⁹ Burbank, Luther, *Training the Human Plant* (New York: The Century Co., 1908): 36

¹⁷⁰ Dupuis, Melanie, *Nature’s Perfect Food*, 93-4

Historically, milk consumption by northern Europeans was associated with their racial superiority. While McCollum and Simmonds acknowledge the importance of milk to the development of cultures “throughout Eastern Europe and parts of Asia,”¹⁷¹ the judgments of fitness of different cultures are made with a heavy consideration to milk consumption. The observations of a Major McKay:

The physical condition of the Bengalese is almost without exception miserably poor...They are...very inferior to the hill tribes of Tibet and other people who keep flocks and herds and use large amounts of milk in addition to vegetable foods and meat.¹⁷²

One might think this is a generally unanimous view held by Westerners, but indeed two years earlier in 1918, the U. S. Food Administration’s textbook *Food and the War* mentions that “the Bengali’s low vitality may be due to the presence of intestinal parasites instead of to the low protein of his diet.”¹⁷³ There appears to be a somewhat unsentimental and more racially-driven reason for McCollum and Simmonds’ arguments about impurity and supposed Bengali “feebleness.” Just two years earlier, the USFA’s comments suggest that feebleness of the Bengalis might not have anything to their vegetarianism.

Alongside milk was a whole host of other white foods that represented purity and were championed as healthful staples of an American diet. Flour, in *The American Home Diet*, is casually referred to as preferable to its whole-wheat counterpart because “we naturally associate whiteness with purity...as with garments, walls, and furniture; hence

¹⁷¹ McCullum, E. V., Simmonds, Nina, *The American Home Diet: An Answer to the Ever Present Question “What Shall We Have for Dinner?”* (Detroit, MI: Frederick C. Matthews, 1920): 65

¹⁷² McCullum, *American Home Diet*, 40-1

¹⁷³ USFA, *Food and the War*, 64

arose the practice of bleaching flour which is not naturally as white as was desired.”¹⁷⁴

Presumably, McCollum and Simmonds are speaking for the American public when they speak of “we.”

Alongside flour, a foodstuff made white and considered more appetizing because of its new purer appearance, was sugar. Sidney W. Mintz quotes Hagelberg saying that sugar is “the only chemical substance to be consumed in practically [99%] pure form as a staple food.”¹⁷⁵ Sugar and flour are edible purity, symbolically and literally. The only other comparably pure chemical substances consumed are hard narcotics.

In *The American Home Diet*, the potato, already as white as something naturally grown can be, “lends itself to consumption with other things such as butter, cream or milk, salt and pepper, or with fat.”¹⁷⁶ With the exception of pepper, a trifling condiment, every suggestion for consuming white potatoes includes covering them with foods even more immaculately white than they are.

Cream, in this case, is a particularly fitting way to eat potatoes; in other instances, cream is used to cover up many nonwhite edibles that are nonetheless necessary for a proper American diet. Chief among the nonwhite foods Americans supposedly need is meat, and meat can always be satisfactorily covered by white sauce; one example is the answer given by the Boston Cooking School about how to serve Frankfurter sausages, turkey, steamed halibut, and boiled chicken.¹⁷⁷ Vegetables, too, became “dressed” appropriately when covered with white sauce. Exciting orange carrots and blood-red

¹⁷⁴ McCullum, *American Home Diet*, 49

¹⁷⁵ Mintz, Sidney W. *Sweetness and Power: The Place of Sugar in Modern History* (New York: Penguin Books, 1985): 22

¹⁷⁶ McCullum, E. V., Simmonds, Nina, *The American Home Diet*, 54

¹⁷⁷ Shapiro, *Perfection Salad*, 91-2

beets were tamed by a simple white sauce.¹⁷⁸ Cream sauces were among the most important quick dishes for any housewife. In *Man-Sized Meals from the Kitchenette*, even the professional woman should know all the ins and outs of whipping up a quick “white sauce” to complete a meal: “One of the first things the Kitchenette Cook [sic] should do is try her hand at Cream Sauce...it’s the basis of so many quick and simple dishes, and in spite of the aura of respect surrounding its making, it’s almost as easy as boiling an egg...”¹⁷⁹ There is an “aura of respect” about white sauce, a respect perhaps diminished by 1928, when the liberated and voting woman could reevaluate the sacredness of things domestic, prescribed. The respect is nonetheless ingrained enough that it is worth mention in Allen and Hutton’s text on kitchenette cookery.

American national identity—that is, American elite national identity—was enmeshed in the layman’s literature on food, health, purity, and lifestyle. While health and diet practices must be focused at individual and family levels, the intended cumulative effects of health prescriptions at such levels are national. The children were the racial future of the nation, a sort of clean slate that needed preservation in an era when acquired characteristics were still valid science. Just as Teddy Roosevelt blamed “race decay” on white women who “scornfully” married but “refuse[d]” to bear children,¹⁸⁰ those who did perform their national procreative duty were responsible for the maintenance of purity in their white offspring as well. The maintenance of purity entailed an American diet full of healthy and hearty ingredients; a proper balance of carbohydrate, fat, and protein; and the sort of nurturing environment which might “leave

¹⁷⁸ Shapiro, *Perfection Salad*, 91

¹⁷⁹ Allen & Hutton, *Man-Sized*, 41

¹⁸⁰ Quoted in Solinger, Ricky. *Pregnancy and Power: A Short History of Reproductive Politics in America* (New York: NYU Press, 2005): 6

its impress upon the child, and the traits which [the child] inherited will be...in many cases...even more apparent than heredity.”¹⁸¹

¹⁸¹ Burbank, *Training the Human Plant*, 14

CHAPTER IX

CONCLUSION: “THE INSIDIOUS MAINSTREAM AGENDA”

A year ago I was embarking on a smaller project involving food and eugenics in the early twentieth century. In that project I sought to identify and discuss the eugenic activities inherent in marketing, procuring and preparing food in America. In marketing, purity was a major theme; in procuring food, ideas were convoluted by whatever nutritional science was most popular at the time; in preparing food, the scenario was euthenic: proper food preparation was key to insuring the health and success of one’s offspring. In many ways that project was similar to this one, and indeed there is some research from that project that crosses over. I was discussing my project with a colleague, trying to hone in on what exactly all of it was about, when she mentioned “the insidious mainstream agenda.” I had been trying to word the point of my project, and she had done it for me. What I was really looking at was “the insidious mainstream agenda” in history. It sounds conspiratorial, but she was saying that the mainstream agenda of a society—the most openly asserted ideas of a society¹⁸²—works its way into the simplest and most mundane parts of life to manipulate all members of society towards a general homogenization.

I was looking at American eugenics in the early twentieth century, a big movement with deliberate invasive actions taken against members of society deemed

¹⁸² Mainstream can mean a few different things. While it is associated often with the ideas of the majority, in many cases it has more to do with the minority controlling information and what they think (and want others to think). In this project, in early twentieth-century America, the “mainstream” would be those publishing about eugenics (and euthenics), those advertising purity, promoting white normalcy, bemoaning race suicide (Teddy Roosevelt, for example), and qualifying their work on nutrition, health, or family in terms of national power or innate racial superiority.

unfit, all for the purpose of propagating a generation borne of the most fit individuals. But I was looking at eugenics, with those principles in mind, in a harmless setting: the kitchen. Where, in the kitchen, did the principles of eugenics manifest themselves? I stumbled upon William Goldsmith's article titled "Eugenothenics," and the tie in to the Euthenics movement became clear.¹⁸³ I began looking at the eugenic agenda as it shows up all over the home, not just in the kitchen. The home constitutes the environment of the American child up until they leave home and found their own home environment for *their* children.

I discovered Ellen Richards, who coined euthenics, something that at once connects with eugenics and also draws a boundary with eugenics. As eugenics became a science of heredity and less so environment, euthenics took over environment. I went back in time from Ellen Richards to Catharine Beecher, who also professes a "science," simply by calling what she did "domestic science." Euthenics and domestic science are very similar concepts, though Beecher's science is borne out of Christian morality and a concern for the well being and quality of life of the typical middle-class white woman. Richards's science is borne of her own scientific background, and the knowledge that education is power. Studying Richards and Beecher, I realized that eugenics was being conceptualized at the same time. Beecher does come earlier, with her massively-influential *Treatise on Domestic Economy* published first in 1840. By the end of the fifties, Darwin's *Origin of Species* (1859) comes out. Both Beecher and Darwin's works were hugely successful, widely read; while the *Origin of Species* was not universally read, its ideas would disseminate, would change hands to the point that many understood

¹⁸³ William Goldsmith, "Eugenothenics," 403

the basic concepts. Shortly after *Origin of Species* comes out, Francis Galton appears on the scene, coming up with the basic theories of eugenics. By the eighteen seventies, Galton is writing vigorously about eugenics and Ellen Richards is working at MIT, slowly growing more concerned about the education of the typical homemaker, her ability to run a household smartly, her ability to raise children to be outstanding and successful American citizens. Broad ideas about national health and moral being had, by the turn of the century, become a part of the mainstream, and had become a part of the mainstream from completely different places. When one compares the early lives, the culture and education of Ellen Richards and Francis Galton, it is fascinating that their ideas should be so similar—or, at least, that their ideas be expressed in such similar terms. While it is impossible to compare the *ideas* of people in the past, what those people chose to write down can stand in as a worthy substitute, and both Galton and Richards published widely.

Euthenics stood for progress: for women, for science, for the academy. The creation of euthenics occurred at a time of many changes to domesticity and science at the turn of the century. The home economy had shifted from largely a realm of production to largely one of consumption. The domestic sphere shifted, to oppose the foreign instead of the “civic realm.” The natural sciences shifted, from reliance upon observation, logic, and field evidence to a system of modern, replicable laboratory experimentation. Finally, domestic science was in the process of professionalization, with more and more courses taught in schools and colleges. Domestic science professionalization, and its increasing inclusion in school and college curricula, evinces

the degree of importance many people attributed to the home environment as a place where moral citizens are made.

Euthenics was a logical extension of domestic science's prescriptions for composing the home environment. Euthenics went beyond the home, however, specializing in the environment as it related to the quality of human life on a societal level. As Caroline Louisa Hunt puts it in her biography of Ellen Richards:

Conviction that the world was full of unnecessary sickness, and that men and women were falling far short of the joy of living and of doing which ought to be theirs, grew upon Mrs. Richards with her experiences in the Women's Laboratory and with her insight through correspondence into the home life of America...[T]his was...the great, absorbing interest of her life, which included the bettering of conditions in the community, in the school, and in the factory, as well as in the home.¹⁸⁴

Euthenics as a science, as opposed to a methodology of domestic work (such as "home economics"), appears more credible, and more was likely to be taken seriously by the scientific community.

The creation of Euthenics was strategic in that it nominally separated nurture from nature in eugenic studies. It was strategic for Richards, personally, as well: "Euthenics" was one way that Richards could defend her own field among other hard sciences while retaining its relationship to the historic field of domestic science, a movement that could only benefit from such a link to the hard sciences. Despite this link, the debate raged on between proponents of heredity versus proponents of environment as the supreme factor in determining the quality and success of offspring.

The debate took place in part in issues of *Popular Science* magazine in the years leading right up to the big split of 1915. Charles B. Davenport published an article titled

¹⁸⁴ Caroline Louisa Hunt. *The Life of Ellen H. Richards* (Boston: Thomas Todd Co., 1912): 171

“Euthenics and Eugenics” addressing the relationship between the fields. It is interesting to note that the euthenic-eugenic debate is not framed, in this article, in terms of a scientific debate about the efficacy of one science over the other. Rather, in the same way that Ellen Richards saw euthenics as a science to ultimately cure problems of society, Davenport addresses euthenics and eugenics by way of addressing world plights:

Of late the reading, thinking public has been awakened to a realization that sickness, poverty and crime are great and perhaps growing evils. It does not seem right that there should always be about 3 per cent. of our population on the sick list, that our alms houses should support over 80,000 paupers...It ought not to be...that a hundred million dollars should be spent annually by institutions in this country for the care of the sick, degenerate, defective and delinquent.¹⁸⁵

Davenport sees euthenics and eugenics as two different methods for curing some of American society’s problems. Davenport is in favor of the eugenic solution. He sees the aforementioned problems caused by “bad breeding,” and expects them to go away “if marriage matings are made more wisely.” Davenport mocks the euthenic solution to the problem, initially disparaging it as socialist: “[The euthenists urge] that the socially unfit are the product of bad conditions and that they will disappear with the establishment of some modern utopia.” Davenport has to provide their side, however, and grudgingly acknowledges a few lines after that quip that he is “constrained to make numerous quotations from [Ellen H. Richard’s] valuable book entitled ‘Euthenics.’”¹⁸⁶ Davenport goes on to list about a half dozen quotes from her book, quotes that essentially say the

¹⁸⁵ Charles B. Davenport. “Euthenics and Eugenics.” *Popular Science Monthly*, J. McKeen Cattell, ed., (Jan to June, 1911): 16

¹⁸⁶ Davenport, “Euthenics and Eugenics,” 16

outcome of a man depends on his food supply, his level of physical activity, his level of education and so forth.¹⁸⁷

Davenport is convinced in this essay that euthenics and eugenics are opposed to one another, “each viewing the other unkindly.” Davenport uses an example of eye color to show how traits are passed from parents to child. He says the same is true for dispositions. “Even criminals,” Davenport asserts, “like poets and artists, are born and not made.”¹⁸⁸ So we are made to think that right-minded people will breed right-minded people, and Davenport believes that euthenics is helpless to fix bad blood. “If anyone doubts this,” Davenport says, “let him ask the agriculturalist.”¹⁸⁹

A year later, Professor Leon J. Cole of the University of Wisconsin tackled the same subject in *Popular Science*. His article is titled “Relation of Eugenics to Euthenics,” and in it he addresses the same problem of how to produce a generation of outstanding citizens. He comes across as a eugenicist, although he, unlike Davenport, wishes “[eugenics’s] relations [with euthenics to] be amiable and friendly, cooperative and helpful...[O]ur ideals are the same,” despite the fact that “we are not in thorough accord as to the methods by which [our objectives] may best be attained.”¹⁹⁰ By using definitions by Richards and Galton, Cole arrives at the obvious issue: whether controlling environment or controlling heredity is a better way of achieving that perfect generation of Americans. Strikingly, Cole alludes that the goals of euthenics and eugenics are largely shared.

¹⁸⁷ Davenport, “Euthenics and Eugenics,” 16-7

¹⁸⁸ Davenport, “Euthenics and Eugenics,” 17-8; quotes all p. 18

¹⁸⁹ Davenport, “Euthenics and Eugenics,” 20

¹⁹⁰ Leon J. Cole. “The Relation of Eugenics to Euthenics.” *Popular Science Monthly* (Nov, 1912): 476

After an even-handed introduction, however, Cole launches into the same argument as Davenport, using the familiar tricks: invoking the Zero family of Switzerland, said to have parented “hundreds of offspring...characterized by vagabondage, thievery, drunkenness, mental and physical defect and immorality;”¹⁹¹ equating euthenic aspirations to socialistic ones: “[it is of prime importance to give] thought to the hereditary factor in human betterment rather than trusting to a blind faith in the establishment of an environmental utopia.”¹⁹²

Two years after that, Professor Maynard M. Metcalf of Oberlin College contributed “Eugenics and Euthenics” to *Popular Science*, beginning in a wholly original way: “There are three phases to the problem of human betterment—culture, eugenics, and evolution.” He is a biologist, and asserts that sociologists could learn a lesson or two from him.¹⁹³ One might expect him then to get down to eugenics like his two predecessors Davenport and Cole. Instead he gets into euthenic-sounding notions:

Human betterment may be secured through work for the relief of distress, through education of the individual, by inspiring him to action upon a higher moral plane. By the cumulative effects of such a culture, generation after generation, great social advance may be made.¹⁹⁴

Metcalf uses culture as a sort of macroenvironmental mechanism that has affected the quality of generations of westerners over a long period of time. But his use of culture is only a nod. “But,” Metcalf says, “in all the centuries of known human history, while wonderful advance in individual conduct and social relations has been secured through the cumulative effect of the cultural effort[s], there has been little, if any, advancement in

¹⁹¹ Cole, “The Relation,” 477

¹⁹² Cole, “The Relation,” 479

¹⁹³ Maynard M. Metcalf. “Eugenics and Euthenics.” *Popular Science Monthly* (Apr. 1914): 383

¹⁹⁴ Metcalf, “Eugenics and Euthenics,” 383

innate human character.¹⁹⁵ He argues that culture has failed as an environmental improver of mankind, and that what “remains to us [is] the eugenic method of procedure.” He says that what eugenics could potentially do, over a few generations of implementation, is make humans “inherently decent, not [trained to] restrain their evil tendencies,” but modified genetically to be good people. Metcalf asserts “this is a social ideal higher even than was apparently present in the mind of Jesus.”¹⁹⁶

It seemed that the scientific community was already lining up on the side of heredity before Thomas Hunt Morgan published *The Mechanism of Mendelian Heredity* in 1915. At that point, eugenicists and other scientific proponents of heredity could, with finality, disassociate themselves from scientific studies of environment. Euthenics no longer existed as a respectable midpoint, a gateway, between domestic science and eugenics. After 1915, euthenics began to lose its hard scientific associations, becoming more a synonym to home economics and less a relative of eugenics. After 1915, the divorce between eugenics and euthenics was finalized.

In the public arena, Eugenicists would continue to advocate for control over America’s gene pool. In the home, the homemaker made the crucial feeding, environmental, and nurturing choices to ensure the purity, robustness, and success of her husband and, more importantly, her offspring. If the homemaker assures the health of her children, thus is the national future secure; the conceptual move from familial to national is not a difficult move to make. The early twentieth-century texts that proselytize about acquired characteristics, environment, heredity, and purity all have the white American family in mind when speaking of national health. The eugenic and racist overtones of

¹⁹⁵ Metcalf, “Eugenics and Euthenics,” 383

¹⁹⁶ Metcalf, “Eugenics and Euthenics,” 383-5; quotes 384

many early cooking and how-to texts are eerily typical, for the time, in their ideas and assumptions about normalcy. Historically, however, domestic science is not perceived to be a racist or even passively-racist movement; it is seen as a movement through which to understand concepts of gender, of ideals of Republican Motherhood, domesticity, and the separate spheres. That many early feminists—domestics and suffragists alike—were politicized in the abolition movement, may perhaps distract historians from seeing the racism in the fine details of both movements, but this does not explain things entirely. Historians such as Amy Kaplan, Alison Sneider, and Ellen Carol Dubois have studied the Suffragists in imperial and racial contexts, exposing the fact that they were allies with some rather disreputable political parties in the hopes of furthering the cause of suffrage. Their political alliances and some attendant charged rhetoric by prominent members of the suffrage movement betray at least passive racism and eugenic ideals held by many suffragists.

On the other hand, the domestic science movement has not been analyzed with regards to race. With regards to economics, the domestic science movement aided national modernization by encouraging consumerism and ushering in the transformation of the household from a zone of production to one of consumption. With regards to class, domestic science was a movement of white middle and upper class women, professing the ideals of a minority to the exclusion of many. With regards to gender and politics, domestic science was a movement through which to better understand the role of the female patriot, to answer the question: What is the national duty of the American woman?

To equate domestic science with eugenics; to link the movement (as others have done) to euthenics; and to view prescriptive literature, instructional food cookery manuals, treatises and the like through the lens of race, as I have done here, is to begin a new discussion and suggest avenues of further inquiry.

BIBLIOGRAPHY

- Allen, Garland. *Thomas Hunt Morgan: The Man and His Science*. Princeton: Princeton U. Press, 1978
- Allen, Margaret Pratt and Hutton, Ida Oram. *Man-Sized Meals from the Kitchenette: A Kitchenette Cook Book*. New York: Macy Masius, The Vanguard Press, 1928
- Anthropological Society of Washington. *The American Anthropologist*, Vol. IV (Washington, D.C.: Judd & Detweiler Printers, 1891): 321
- American Home Economics Association [AHEA], Committee on Nomenclature and Syllabus. *Syllabus of Home Economics*. Baltimore, MD: AHEA, 1913
- Atwater, W. O., Ph.D., and A. M. Bryant, M.S. "The Chemical Composition of American Food Materials." *Pure Products* Vol. 1 (1895): 354-363
- Austin, Bertha J. *Domestic Science*. New York: Lyons & Carnahan, 1914
- Bailey, Pearl L. *Domestic Science Principles and Application*. St. Paul: Web Publishing, 1914
- Bannister, Robert C. *Social Darwinism: Science and Myth in Anglo-American Social Thought*. Philadelphia: Temple University Press, 1979
- Bartow, Beverly. "Isabel Bevier at the University of Illinois and the Home Economics Movement." *Journal of the Illinois State Historical Society* (1908-1984), Vol. 77, No. 1 (Feb., 1979): 21-38
- Bayliss, W. M. *The Physiology of Food and Economy in Diet*. New York: Longmans, Green and Co., 1917
- Beecher, Catharine E. *A Treatise on Domestic Economy for the use of Young Ladies at Home, Revised Edition*. New York: Harper & Brothers, Publishers, 1856
- Beecher, Catharine E. and Stowe, Harriet Beecher. *American Woman's Home* (1869). Hartford: The Stowe-Day Foundation, 1987
- Bevier, Isabel. *Food and Nutrition Laboratory Manual*. Boston: Whitcomb and Barrows, 1914
- Bevier, Isabel, and Usher, Susanna. *The Home Economics Movement, Vol 1*. Boston: Whitcomb & Barrows, 1906
- Biester, Charlotte E. "Catharine Beecher's Views of Home Economics." *History of Education Journal*, Vol. 3, No. 3 (Spring 1952): 88-91

- Bix, Amy Sue. "Equipped for Life: Gendered Technical Training and Consumerism in Home Economics, 1920–1980" *Technology and Culture* Vol. 43 (Oct. 2002): 728-754
- Boas, Franz. "The History of the American Race." *Annals of the New York Academy of Sciences*, Vol. XXI (20 March, 1912): 177-183
- Briggs, Laura. *Reproducing Empire: Race, Sex, Science and U.S. Imperialism in Puerto Rico*. Berkeley, CA: U. of California Press, 2002
- Brown, Florence Sherbon. *The Child: His Origin, Development and Care*. New York: McGraw Hill Book Co., 1934
- Burbank, Luther. *The Training of the Human Plant*. New York: The Century Co., 1908
- Burstyn, Joan N. "Catharine Beecher and the Education of American Women." *The New England Quarterly*, Vol. 47, No. 3 (Sep., 1974): 386-403
- Carnation Milk Advertisement. "You Cannot Make Good Evaporated Milk from Mediocre Cows Milk." *The Boston Daily Globe* (Feb. 10, 1910): 13
- Carter, Ronald. "Whole Milk Diet for infants." *The British Medical Journal* Vol. 1, No. 2734 (May 24, 1913): 1139
- Cartwright, Thomas. *Domestic Science: The Science of Domestic Economy and Hygiene Treated Experimentally: With Numerous Illustrations*. New York: Thomas Nelson & Sons, 1900
- Campbell, Mathilda G. *A Text-Book of Domestic Science*. New York: Macmillan, 1914
- Carnation Milk Advertisement. "You Cannot Make Good Evaporated Milk from Mediocre Cows Milk." *The Boston Daily Globe* (Feb. 10, 1910)
- Clark, Ida Hood. *Domestic Science*. Boston: Little Brown, and Co., 1911
- Cole, Leon J. "The Relation of Eugenics to Euthenics." *Popular Science Monthly* (Nov, 1912): 475-482
- Cooke, Kathy J. "The Limits of Heredity: Nature and Nurture in American Eugenics before 1915." *Journal of the History of Biology*, Vol. 31, No. 2 (Summer, 1998): 263-278
- Cott, Nancy. *Bonds of Womanhood: "Woman's Sphere" in New England, 1780-1835*. New Haven: Yale U. Press, 1977

- Cott, Nancy. *The Grounding of Modern Feminism*. New Haven: Yale University Press, 1989
- Cowan, Ruth Schwarz. *More Work for Mother: The Ironies of Household Technology from the Open Hearth to the Microwave*. New York: Basic Books, 1983
- Davenport, Charles B. "Euthenics and Eugenics." *Popular Science Monthly*, J. McKeen Cattell, ed., (Jan to June, 1911): 16-20
- Dealey, William L. "The Eugenic-Euthenic Relation in Child Welfare." *American Journal of Sociology*, Vol. 19, No. 6 (May, 1914): 835-841
- DuBois, Ellen Carol. *Feminism and Suffrage: The Emergence of an Independent Woman's Movement in America 1848-1869*. Ithaca, NY: Cornell U. Press, 1999
- DuPuis, E. Melanie. *Nature's Perfect Food: How Milk Became America's Drink*. New York: NYU Press, 2002
- Diaz, A. M. *Domestic Problems: Work and Culture in the Household, And the Schoolmaster's Trunk*. Boston: James R. Osgood and Co., 1881
- Dowd, Mary T., and Jameson, Jean D. *Food, Its Composition and Preparation: A Textbook for Classes in Household Science*. New York: John Wiley & Sons, 1925
- Elias, Megan. *Stir It Up: Home Economics in American Culture*. Philadelphia: U. of Pennsylvania Press, 2010
- Engelhardt, Tom. *End of Victory Culture: Cold War America and the Disillusioning of a Generation*, 2nd Ed. Boston, MA: U. of Massachusetts Press, 2007
- Faderman, Lillian. *Odd Girls and Twilight Lovers: A History of Lesbian Life in Twentieth Century America*. New York: Columbia University Press, 1991
- Farmer, A. N. and Huntington, Janet Rankin. *Food Problems*. New York: Ginn and Company, 1918
- Freibert, Lucy M. "Diaz, Abby Morton." *American National Biography Online*. Feb 2000. Accessed Tue, Apr. 20, 2010
- Furnas, C. C. and Furnas, S. M. *Man, Bread, and Destiny: The Story of a Man and His Food*. New York: The New Home Library, 1937
- Galton, Francis. *Inquiries into Human Faculty and Its Development*, Everyman's Library. New York: E. P. Dutton & Co., 1911

- Galton, Francis. "Hereditary Talent and Character." *MacMillan's Magazine*, Vol. 12 (May, 1865): 157-166
- Galton, Francis. *Memories of My Life*. New York, E. P. Dutton & Co, 1909
- Goldsmith, William M. "Eugenethenics." *Science*, New Series, Vol. 63, No. 1633 (Apr. 16, 1926): 403
- Graham, Sylvester. *A Defence of the Graham System of Living or, Remarks on Diet and Regimen*. New York: W. Applegate, 1935
- Gray, Helen Sayr. "Domestic Science in the Schools and Colleges." *The North American Review* Vol. 190, No. 645 (Aug., 1909): 200-211
- Greene, John C. "Darwin as a Social Evolutionist." *Journal of the History of Biology*, Vol. 10, No. 1 (Spring, 1977): 1-27
- Greer, Carlotta C. *School and Home Cooking*. New York: Allyn and Bacon, 1920
- Gruenberg, Benjamin C. "What We Know About Heredity and Environment." *Brush Foundation Publication No. 7* (New York: Viking Press, 1930): 1-11
- Gunderson, Joan R. *To Be Useful in the World: Women in Revolutionary America 1740-1790*. Chapel Hill: U. of N. Carolina Press, 2006
- Hales, Charles William. *Domestic Science*. London: Cambridge U. Press, 1915
- Halsey, Francis Whiting. *The Literary Digest History of the World War: Compiled from Original and Contemporary Sources: American, British, French, German, and Others, Vol. 4*. New York: Funk & Wagnalls Co., 1919
- Herrick, Christine Terhune. *A-B-C of Cooking*. New York: Harper & Bros., New York, 1916
- Horlicks Advertisement. "Safe Milk for Infants and Invalids: Horlicks, the Original Malted Milk." *New York Times* (Jan. 1, 1920): 16
- Hunt, Caroline Louisa. *The Life of Ellen H. Richards*. Boston: Thomas Todd Co., 1912
- [Unauthored] "Importance of Teaching Domestic Science." *British Medical Journal*, Vol. 2, No. 2025 (Oct. 21, 1899): 1123-1124
- "Infantile Mortality in Relation to the Milk Supply." *The British Medical Journal* Vol. 1, No. 2213 (May 30, 1903): 1265

- Inglis, Kerri A. "Talmage, James Edward." *American National Biography*. Feb. 2000. Accessed Tue, Apr. 20, 2010
- Johnson, Gertrude Tacy. *Domestic Science: A Text in Cooking and Syllabus in Sewing*. Kansas City, MO: Burton Publishing Co., 1911
- Johnson, Roswell H. "Eugenics and So-called Eugenics." *The American Journal of Sociology*, Vol. 20, No. 1 (Jul., 1914): 98-103
- Kaplan, Amy. "Manifest Domesticity." *American Literature*, Vol. 70, No. 3, No More Separate Spheres! (Sep., 1998): 581-606
- Kelsey, Carl. "Influence of Heredity and Environment Upon Race Improvement." *Annals of the American Academy of Political and Social Science*, Vol. 34, No. 1 Race Improvement in the United States (July, 1909): 3-8
- Kerber, Linda. *Women of the Republic: Intellect and Ideology in Revolutionary America*. Chapel Hill: U. of N. Carolina Press, 1997
- Kevles, Daniel J. *In the Name of Eugenics: Genetics and the Uses of Human Heredity*. New York: Alfred A. Knopf, 1985
- Key, Ellen. *The Century of the Child*. New York: G. P. Putnam's Sons, 1909
- Kirk, Alice Gitchell. *Practical Food Economy*. Boston: Little Brown & Co., 1917
- Lincoln, Mary J. *Boston School Kitchen Text-Book*. Cambridge: The University Press, 1913
- Lincoln, Mrs. D. A. *Boston School Kitchen Text-Book*. Boston: Little Brown & Company, 1905
- Lockwood, Helen Drusilla. "The Meaning of Euthenics: An Essay on Actions as a Tool of Knowledge." Poughkeepsie, New York: Vassar College, 1929
- Lorimer, Douglas. "Theoretical Racism in Late Victorian Anthropology, 1870-1900." *Victorian Studies*, Vol. 31, No. 3 (Spring, 1988): 405-430
- Lovett, Laura L. *Conceiving the Future: Pronatalism, Reproduction and the Family in the United States: 1890-1938*. Chapel Hill: University of North Carolina Press, 2007
- Lusk, Graham. *Food in War Time*. London: W. B. Saunders Company, 1918

- McCollum, E. V. and Simmonds, Nina. *The American Home Diet: An Answer to the Ever Present Question, What Shall We Have For Dinner?* Detroit: Frederick C. Mathews Co., 1920
- McDermott, Edith F. "Shall Domestic Science and Household Economy be Taught in Our Public Schools?" *American Kitchen Magazine: A Domestic Science Monthly* Vol. VI, Oct. 1896 – Mar. 1897 (Boston: The Home Science Publishing Co.): 211-214
- McMaster, John Bach. *The United States in the World War*. New York: D. Appleton and Co., 1918
- Metcalf, Maynard M. "Eugenics and Euthenics." *Popular Science Monthly* (Apr. 1914): 383-389
- Mintz, Sidney W. *Sweetness and Power: The Place of Sugar in Modern History*. New York: Penguin Books, 1985
- Norton, Mary Beth. *Liberty's Daughter: Revolutionary Experience of American Women 1750-1800*. Ithaca: Cornell U. Press, 1996
- Noyes, John Humphrey. "Essay on Scientific Propagation with an Appendix Containing a Health Report of the Oneida Community." Oneida, NY: Oneida Community Publication, 1872. Available online courtesy of Syracuse University Library Department of Special Collections
<http://library.syr.edu/digital/collections/e/EssayOnScientificPropagation/>
- "Our Present Position With Regards to the Prescription of Proprietary Foods in Infant Feeding." *The British Medical Journal* Vol. 2, No. 2851 (Aug. 21, 1915): 287-9
- Pandora, Katherine. "Burbank, Luther." *American National Biography*. Feb. 2000. Accessed Tue, Apr. 20, 2010.
- Pollan, Michael. *Omnivore's Dilemma*. New York: Penguin, 2006
- Popenoe, Paul and Johnson, Roswell H. *Applied Eugenics*. New York: Macmillan Co., 1920
- Purdue University Department of Agriculture Extension: Division of Home Economics. *Home Economics: A Study Outline*. New York: H. W. Wilson Company, 1915
- Quick, Robert. "Education." *The Atlantic Monthly* (May, 1875): 637-640. Obtained online courtesy of the John Davis Batchelder Collection, Library of Congress.
- Reis, Elizabeth, ed., *American Sexual Histories*. Boston: Wiley-Blackwell, 2001

- Richards, Ellen H. *The Chemistry of Cooking and Cleaning: A Manual for Housekeepers*. Boston: Home Science Publishing Co., 1897
- Richards, Ellen H. *The Cost of Shelter*. New York: John Wiley and Sons, 1905
- Richards, Ellen H. *Euthenics: The Science of Controllable Environment*. Boston: Whitcomb & Barrows, 1910
- Richards, Ellen H. *Food Materials and Their Adulterations*. Boston: Whitcomb & Barrows, 1906
- Richards, Ellen H. "Housekeeping in the Twentieth Century." *American Kitchen Magazine*, Volume 12 (March 1900): 203-207
- Richmond, Marsha L. "The 1909 Darwin Celebration: Reexamining Evolution in the Light of Mendel, Mutation, and Meiosis." *Isis* 97 (2006): 447-484
- Ripon, W. B., Maurice, F., et al. "Clean Milk." *The British Medical Journal* Vol. 1, No. 2611 (Jan. 14, 1911): 112-13
- Roosevelt, Theodore. *The Real Roosevelt: His Forceful and Fearless Utterances on Various Subjects*. New York: G. P. Putnam & Sons, 1910
- Rose, Mary Swartz. *Everyday Foods in War Time*. New York: The MacMillan Co., 1918
- Rossiter, Margaret W. *Women Scientists in America: Before Affirmative Action 1940-1972*. Baltimore: JHU Press, 1995
- Salmon, Lucy Maynard. *Progress in the Household*. Boston: Houghton, Mifflin and Co., 1906
- Seashore, Carl. E. "The Term 'Euthenics.'" *Science*, New Series, Vol. 94, No. 2450 (Dec. 12, 1941): 561-562
- Shapiro, Laura. *Perfection Salad: Women and Cooking at the Turn of the Century*. New York: Farrar, Straus and Giroux, 1986
- Sherbon, Florence Brown. *The Child: His Origin, Development, and Care*. New York: McGraw Hill Book Co., 1934
- Shipley, Neal. "Lecture: World War I." 14 & 16 September, 2010. University of Massachusetts, Amherst.
- Sklar, Kathryn Kish. "Beecher, Catharine Esther." *American National Biography Online*. Feb 2000. Accessed Tue, Apr. 20, 2010

- Sklar, Kathryn Kish. *Catherine Beecher: A Study in Domesticity*. New York: W. W. Norton & Co., 1976
- Sneider, Alison. *Suffragists in an Imperial Age: U.S. Expansion and the Woman Question 1870-1929*. New York: Oxford U. Press, 2008
- Solinger, Ricky. *Pregnancy and Power: A Short History of Reproductive Politics in America* (New York: NYU Press, 2005): 6
- “Some Proprietary Foods for Infants.” *The British Medical Journal* Vol 1., No. 2819 (Jan. 9, 1915): 77-8
- Stage, Sarah. “Richards, Emma Henrietta Swallow.” *American National Biography Online*. Feb. 2000. Accessed Tue, Apr. 20, 2010.
- Starling, Ernest H. *The Feeding of Nations: A Study in Applied Physiology*. London: Longmans, Green and Co., 1919
- Stern, Alexandra M. *Eugenic Nation: Faults and Frontiers of Better Breeding in Modern America*. Las Angeles, CA: U. of California Press, 2005
- Talmage, James E. *Domestic Science*. Territorial Convention of School Officers, 1892
- Tichi, Cecilia. *Shifting Gears*. Chapel Hill: U. of N. Carolina Press, 1987
- Todhunter, E. Neige. *Everyday Nutrition*. Auckland, NZ: Whitcombe & Tombs, Ltd., 1935
- Tucker, David M. *Kitchen Gardening in America: A History*. Ames, IA: U. of Iowa Press, 1993
- United States Food Administration. *Food and the War: A Textbook for College Classes Prepared Under the Direction of the Collegiate Section of the USFA*. New York: Houghton-Mifflin, 1918
- VanBurkleo, Sandra F. *Belonging to the World: Women’s Rights and American Constitutional Culture*. New York: Oxford University Press, 2001
- Wagoner, Lovisa C., PhD. *The Development of Learning in Young Children*. New York: McGraw Hill Book Co., Inc., 1933
- Wangner, Ellen D. *The American Home Book of Kitchens*. New York: Doubleday, Doran & Co., 1931
- Ward, Lester F. “Eugenics, Euthenics, Eudemics.” *American Journal of Sociology* Vol. 18, No. 6 (May, 1913): 737-754

Weigley, Emma Seifrit. "It Might Have Been Euthenics: The Lake Placid Conferences and the Home Economics Movement." *American Quarterly*, Vol. 26, No. 1 (Mar., 1974): 79-96

Wood, Bertha M. *Foods of the Foreign-Born: In Relation to Health*. Boston: Whitcomb & Barrows, 1922