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## Hungry for More: Why Recognizing the Lunchroom as an Educational Space is Imperative for U.S. Public Schools

Durel Crosby Sankofa

Yale College, New Haven Connecticut

**Abstract:** This capstone challenges readers to think carefully about the way public schools *structure* nutrition experiences, and what students are taught through interacting with said experiences. Recognizing that half of the leading causes of preventable illnesses in the country spawn from poor dietary choices, this research seeks to reveal the challenges that prevent schools from addressing these habits during the twelve years most students are compelled to attend. At the heart of this conversation lies a key question: how (the nation) came to assign some of the most essential lessons (healthy eating and healthy movement) to some of the least “valued” people in the school building? Driven by the need to address that paradox, this research discusses key priorities of advocates who have influenced the structure of school meal experiences at critical points, centers research that reveals increasing culinary capacity of food service workers as a vital ingredient long omitted from school lunch recipes, and elevates research that proves this remedy addresses key challenges in the effort to install healthier lunches in schools.

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**Abstract**

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**Keywords:** nutrition and schools, school lunch, lunch reform

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## **Acronyms and Abbreviations**

CNA: Child Nutrition Act, notably, this legislation brought school food service programs under the U.S. Department of Agriculture

CNR: Child Nutrition Reauthorization, this is a chance to update school meal programs and occurs every five years

CSLP: Committee on School Lunch Participation

DGA: Dietary Guidelines for Americans, scientific research likely to inform food policy decisions

HHFK: Healthy and Hunger-Free Kids Act, 2010 legislation mandated stronger nutrition standards for school meals

NANA: National Alliance for Nutrition and Activity, advocates that fought for HHFK

NSLA: National School Lunch Act, formalized National School Lunch Program in 1946

NSLP: National School Lunch Program

SNAP: Supplemental Nutrition and Assistance Program

USDA: US Department of Agriculture, governing body over school meal programs

WHO: World Health Organization

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## Introduction

Even if we choose never to explicitly say it, as a nation, we have been teaching students about nutrition and physical education for a very long time. We throw two muffins and an orange juice box on to a tray and teach them it is acceptable to feed them that for breakfast. We choose not to nurture the creativity and talents of the people who place food into their hands. We restrict the bulk of their food service workers to low wages and part-time hours<sup>1</sup>. The reality being these workers are overwhelmingly female and holding other marginalized identities means we attempt to teach them that those identities are less valuable. James Baldwin once wrote, “Children have never been very good at listening to their elders, but they have never failed to imitate them.”<sup>2</sup> Indeed, while conversation about “nutrition” that may occur in classrooms it is overpowered by the daily short-comings of meal options in school, and many of the children carry the lessons we teach them in public school lunchrooms well into their adult years, operating as if they are unaware of the connection between dietary choices and health outcomes. Since public schools are a manifestation of the government<sup>3</sup>, and the government is funded by citizens, it is our right and duty to demand coherent and high-quality education from every space in the school, including the lunchroom.

While not a central focus of this research, it must be acknowledged that nutritional offerings at lunch impact academic performance. Research has shown providing students with

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<sup>1</sup> Ken Jacobs and Dave Graham-Squire, “Labor Standards for School Cafeteria Workers, Turnover and Public Program Utilization Symposium Response Pieces,” *Berkeley Journal of Employment and Labor Law* 31, no. 2 (2010): 449.

<sup>2</sup> James Baldwin, “‘Fifth Avenue, Uptown’ by James Baldwin,” *Esquire*, October 16, 2007, <https://www.esquire.com/features/fifth-avenue-uptown>.

<sup>3</sup> Heather C. McGhee, *The Sum of Us: What Racism Costs Everyone and How We Can Prosper Together*, First edition (New York: One World, 2021), 18. At this point in her text McGhee discusses several everyday structures that exist as a result of government intervention yet are not often considered as such are discussed.

healthier meal options to result in improved english and math test scores as well as school attendance<sup>4</sup>. During a hearing for No Child Left Behind in 2001, Representative Ted Strickland spoke of widespread awareness of this as far back as the 1990s when he remarked, “In several Ohio school districts, breakfast is served to every student during the week of the test and only during the week of the test...I think that tells us something important. We already know what works in schools, yet we aren’t willing to fund it.”<sup>5</sup> Considering that the primary motivation of students eating school lunch is hunger<sup>6</sup> parties interested in improved educational outcomes should also be concerned about school nutrition.

### **The Magnitude of the National School Lunch Program**

Second only to the Supplemental Nutrition and Assistance Program (SNAP), the National School Lunch Program (NSLP) stands as the government’s largest commitment to feeding public schoolchildren in the US<sup>7</sup>. Before the onset of corona virus caused massive disruptions in public schooling, the National School Lunch Program (NSLP) was feeding close to 30 million students across close to 100,000 schools each day and spending about \$14 billion annually. This program is a major point of interaction between government spending and people living in the United States.

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<sup>4</sup> Michèle Belot and Jonathan James, “Healthy School Meals and Educational Outcomes,” *Journal of Health Economics* 30, no. 3 (May 2011): 499.

<sup>5</sup> U.S. House of Representatives, “‘No Child Left Behind’: Member Hearing Day,” (Pub. L. No. H.R.1, 12 2001), 12.

<sup>6</sup> Mary Kay Fox et al., “School Nutrition and Meal Cost Study Final Report Volume 4: Student Participation, Satisfaction, Plate Waste, and Dietary Intakes” (Alexandria, VA, USA: U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, April 2019): xxvii.  
<https://www.mathematica.org/publications/school-nutrition-and-meal-cost-study-final-report-volume-4-student-participation-satisfaction-plate>.

<sup>7</sup> “USDA ERS - National School Lunch Program,” accessed April 21, 2022,  
<https://www.ers.usda.gov/topics/food-nutrition-assistance/child-nutrition-programs/national-school-lunch-program/>.

## The Magnitude of the National Preventable Disease Burden

People living in the United States are both afflicted with high rates of preventable disease complications and the diversion of significant amounts of government spending towards associated medical expenses. The CDC reports that in recent years, approximately 10% of the US population has been found to have diabetes. As more than nine out of ten diabetes cases are type 2, the CDC's reporting is "more likely to be characteristic of type 2" or preventable diabetes<sup>8</sup>. The same report cites the American Diabetes Association as having found the direct and indirect cost burden of diagnosed diabetes on the US to have been \$327 billion<sup>9</sup> in a recent year, more than 20 times the amount spent on the typical cost of the NSLP listed above. Additionally, diabetes is cited as risk factor for heart disease, complications of which pose additional tremendous cost burden on the US<sup>10</sup>. Recognizing that school meals influence dietary choices of students experiencing them<sup>11</sup>, these tremendous costs justify investing in school lunches to reduce childhood obesity and preempt type 2 diabetes in the US<sup>12</sup>.

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<sup>8</sup> Centers for Disease Control and Prevention, "National Diabetes Statistics Report, 2020" (Atlanta, GA: Centers for Disease Control and Prevention, U.S. Dept of Health and Human Services, 2020), 1, accessed April, 10, 2022 <https://www.cdc.gov/diabetes/pdfs/data/statistics/national-diabetes-statistics-report.pdf>.

<sup>9</sup> Centers for Disease Control and Prevention, 9.

<sup>10</sup> CDC, "Heart Disease Facts | Cdc.Gov," Centers for Disease Control and Prevention, February 7, 2022, accessed April 12, 2022 <https://www.cdc.gov/heartdisease/facts.htm>.

<sup>11</sup> Ronette R. Briefel, Ander Wilson, and Philip M. Gleason, "Consumption of Low-Nutrient, Energy-Dense Foods and Beverages at School, Home, and Other Locations among School Lunch Participants and Nonparticipants," *Journal of the American Dietetic Association* 109, no. 2 (February 2009): S101, accessed April 12, 2022 <https://doi.org/10.1016/j.jada.2008.10.064>.

<sup>12</sup> Kristen J. Nadeau et al., "Childhood Obesity and Cardiovascular Disease: Links and Prevention Strategies," *Nature Reviews Cardiology* 8, no. 9 (September 2011): 522, accessed April 12, 2022 <https://doi.org/10.1038/nrcardio.2011.86>.

## The Magnitude of National Devaluation of Reproductive Labor

Long-standing patterns of devaluing reproductive labor contribute to the nation's failure to utilize the food service workers who administer the school lunch program as culinary professionals. Gaddis uses the work of England, Budig, and Folbre to situate the cafeteria work as "a commodified form of reproductive labor" having its "wages and value" bound to "a legacy of feminization, racialization, and devaluation"<sup>13</sup>. Reproductive labor facilitates social reproduction, which encompasses many activities required to "maintain everyday life and to sustain human cultures"<sup>14</sup> that are commonly left in the hands of women. Jacobs and Graham-Squire surveyed 2008 census data and found that nearly 90% of the more than 400,000 workers that were making the school meals possible daily were women<sup>15</sup>. Their analysis also found that a fifth of the foodservice workers earned minimum wage, and their median work week length was 25 hours with a take home salary of less than \$10,000 annually, which was one third of the national workforce average. The low wages of many cafeteria workers meant they relied on public support programs administered by the government. Considering this, a pivot to longer hours and better wages for skilled cafeteria workers could not only reduce the burden of preventable disease in the US, but it could reduce the welfare burden.

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<sup>13</sup> Jennifer Gaddis and Amy K. Coplen, "Reorganizing School Lunch for a More Just and Sustainable Food System in the US," *Feminist Economics* 24, no. 3 (July 3, 2018): 93, accessed February 12, 2022 <https://doi.org/10.1080/13545701.2017.1383621>.

<sup>14</sup> Giovanna Di Chiro, "Living Environmentalisms: Coalition Politics, Social Reproduction, and Environmental Justice," *Environmental Politics* 17, no. 2 (April 2008): 281, accessed February 12, 2022 <https://doi.org/10.1080/09644010801936230>.

<sup>15</sup> Ken Jacobs and Dave Graham-Squire, "Labor Standards for School Cafeteria Workers, Turnover and Public Program Utilization Symposium Response Pieces," *Berkeley Journal of Employment and Labor Law* 31, no. 2 (2010): 449.

This capstone project argues that public health outcomes can be improved by recognizing that the lunchroom is an educational site that can be used to teach Americans about sound dietary decisions. This conclusion was reached after seeking an answer to the question of why one of the most valuable lessons, how to eat healthy, is often left in the hands of some of the least valued people in the school building, cafeteria workers. To explain this, I begin with a discussion of a contemporary conception of health, which elevates the urgency of improving school lunch even higher than the reasons mentioned above. From there I discuss the key voices centered in the establishment of the National School Lunch Program, with the chief objective of elevating the concern that the decision to place the program under the US Department of Agriculture as opposed to the Department Education contributes to general hesitancy towards recognizing the lunch hour as valuable educational time. I proceed immediately to a discussion of the priorities centered in the Healthy Hunger-Free Kids Act, which modified the content of school lunch, but I argue that falling short of recognizing the need for a skilled cafeteria staff renders the legislation's ultimate aims inaccessible.

## **Methodology**

The methodology for this capstone project was a review of literature on the National School Lunch Program (NSLP). I consulted available primary and secondary sources until I retrieved enough information to address my central research question written above.

I consulted primary and secondary sources using Google Scholar, JSTOR, PubMed, Yale Library, and New York Times Archives.

## Developing a Contemporary Conception of Health

I open this section with a discussion of how health should be conceived of. This understanding provides foundation for later calls for sweeping changes in school lunch that can drastically improve public health outcomes for students and cafeteria workers alike.

In 1948, the World Health Organization (WHO) set forth the principle that “health is a state of complete physical, mental, and social well-being and not merely the absence of infirmity.”<sup>16</sup> The use of the word “complete” is not adequate in a contemporary setting, due to the proliferation of both chronic health conditions and physiological measurement tools.<sup>17</sup> It is difficult for a dynamic system to achieve such a state of “completeness”, and harder still for medical practitioners to set standards in a country with both an extremely diverse populace and extremely segregated segments. A second issue with describing health as a complete state, is that it relegates those with chronic diseases and disabilities to a perpetual state of illness, and inability to be described as healthy<sup>18</sup>. Widely held conceptions of health are important because they influence therapeutic strategies and the meaning of their outcomes.

A practical example of this is the spectrum of dental philosophies. Dentists may operate with a range of mentalities that is more conservative on one end, meaning their preference is to preserve original teeth and minimize interference, or more aggressive on the other end, meaning an inclination towards surgical interventions<sup>19</sup>. While there are a few malicious actors, some

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<sup>16</sup> World Health Organization, *Basic Documents*, 48th ed (Geneva: World Health Organization, 2014), <https://apps.who.int/iris/handle/10665/151605>.

<sup>17</sup> M. Huber et al., “How Should We Define Health?,” *BMJ* 343, no. 2 (July 26, 2011): 1, accessed February 1, 2022 <https://doi.org/10.1136/bmj.d4163>.

<sup>18</sup> *Ibid.*, 2.

<sup>19</sup> Kent Palcanis, “How Do I Deal With What I Perceive to Be Overtreatment by Another Dentist When His or Her Patients Come to Me to Discuss Their Proposed Treatment Plans?,” *The Journal of the American Dental Association* 142, no. 4 (April 2011): 447–48, <https://doi.org/10.14219/jada.archive.2011.0202>.

dentists operate more aggressively simply due to antiquated belief systems and approaches to dentistry<sup>20</sup>. The American Dental Association delineates ethics and codes of conduct, but there are too many dentists for them to watch closely, meaning that even in the presence of oversight, conceptions of health may have significant ramifications for the ways individuals experience dental and medical professionals.

### **Three Dimensions of Health**

In this paper, I consider three dimensions of health, which are physical, mental and social. The term physical is used to consider the physical aspect of a person, while mental refers to one's capacity to conceive of and commit to healthy decisions, and social refers to the value connections with others adds to one's existence.

The first dimension, physical health, is a measure of one's ability to conduct allostasis — a vital balance of the body's systems in the presence of physiological stress (think: running, lifting a heavy box, or sitting in the sun without fainting). Allostatic load is described as the lasting damage your body takes on as a result of operating outside of its preferred parameters due to physiological stressors. This account takes a more nuanced view of what is often described as homeostasis or dynamic equilibrium in basic biology courses<sup>21</sup>. The likelihood for illness and injury increases as an individual's allostatic loading or physiologically perturbed status increases<sup>22</sup>.

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<sup>20</sup> Johan Hartshorne and Thomas K. Hasegawa, "Overservicing in Dental Practice--Ethical Perspectives," *SADJ: Journal of the South African Dental Association = Tydskrif van Die Suid-Afrikaanse Tandheelkundige Vereniging* 58, no. 9 (October 2003): 364.

<sup>21</sup> Sarah C. Coste, "Allostasis, Homeostasis, and the Costs of Physiological Adaptation," *Quarterly Review of Biology* 81, no. 1 (March 2006): 55–56, <https://doi.org/10.1086/503934>.

<sup>22</sup> Bruce S McEwen, "Interacting Mediators of Allostasis and Allostatic Load: Towards an Understanding of Resilience in Aging," *Metabolism* 52 (October 2003): 10–16, [https://doi.org/10.1016/S0026-0495\(03\)00295-6](https://doi.org/10.1016/S0026-0495(03)00295-6).

The second dimension, mental health, is conceived of as operating on a spectrum from better to worse. In the desired state, the term “mental health” is used here to describe an individual’s capacity to assess their situations and commit to actions that align with their best interests. Toward the undesirable end of the spectrum, making healthy decisions becomes more difficult to conceive of and carry out.<sup>23</sup> This model leaves room for people in good health to have aspects of their mental health that are not “complete” yet still be considered healthy<sup>24</sup>. Further, Antonovsky conceived of mental health as having “capacity to cope, recover from strong psychological stress, and prevent post-traumatic stress disorders.”<sup>25</sup> Cognitive behavioral therapy (CBT), which involves changing a patient's mentality, was shown to be effective for a group suffering from Chronic fatigue syndrome (CFS). The group’s improved health status was also accompanied by increases in the grey matter volumes of their brains<sup>26</sup>. Grey matter enables voluntary motor functions, emotions, and memory<sup>27</sup>.

The third dimension, social health, is contingent upon the relationships one has with the people in their community. It is determined by the degree to which one can participate with the social structures that surround them<sup>28</sup>. Patients who participated in peer-led chronic disease self-management programs report greater feelings of social attachment, greater health-related

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<sup>23</sup> Bengt Lindström and Monica Eriksson, “Salutogenesis,” *Journal of Epidemiology and Community Health* 59, no. 6 (June 2005): 440–42, <https://doi.org/10.1136/jech.2005.034777>.

<sup>24</sup> Shifra Sagy, Monica Eriksson, and Orna Braun-Lewensohn, “The Salutogenic Paradigm,” in *Positive Psychology in Practice*, ed. Stephen Joseph (Hoboken, NJ, USA: John Wiley & Sons, Inc, 2015), 61–80, <https://doi.org/10.1002/9781118996874.ch5>.

<sup>25</sup> Aaron Antonovsky, “Health, Stress and Coping. By A. Antonovsky. (Pp. 225; Illustrated; £9.50.) Jossey-Bass: London. 1979.”, *Psychological Medicine* 11, no. 1 (February 1981): 206–206, <https://doi.org/10.1017/S003329170005371X>.

<sup>26</sup> Floris P. de Lange et al., “Increase in Prefrontal Cortical Volume Following Cognitive Behavioural Therapy in Patients with Chronic Fatigue Syndrome,” *Brain: A Journal of Neurology* 131, no. Pt 8 (August 2008): 2172–80, <https://doi.org/10.1093/brain/awn140>.

<sup>27</sup> Anthony A. Mercadante and Prasanna Tadi, *Neuroanatomy, Gray Matter, StatPearls [Internet]* (StatPearls Publishing, 2021), <https://www.ncbi.nlm.nih.gov/books/NBK553239/>.

<sup>28</sup> M. Huber et al., “How Should We Define Health?,” *BMJ* 343, no. 2 (July 26, 2011): 2, accessed February 1, 2022 <https://doi.org/10.1136/bmj.d4163>.

choices, and reduced interaction with emergency rooms as compared with others in their community who were wait-listed and served as a control<sup>29</sup>. Additionally, studies have shown that patients who adapt to changes in their physiology and retain measures of independence as they age report health statuses that do not align well with their reported overall states of functioning<sup>30</sup>. In other words, the ability to retain autonomy despite the body's changing physical abilities was found to be extremely valuable to people as they advanced in age.

To close this section, I will comment on the how the WHO's antiquated conception of health invites thinking like the "disability paradox" which asks "Why do many people with serious and persistent disabilities report that they experience a good or excellent quality of life when to most external observers these people seem to live an undesirable daily existence?" If we define health according to the 1948 standard, this is indeed a most curious question.

Alternatively, if we make a more careful appraisal of what health is, recognizing that it is multidimensional and occurring along spectra, it is striking that a "disability paradox" be raised. Individuals have a multitude of abilities to be healthy, and the absence of one, or a few, does not negate others.

The subsequent sections of this capstone examine the NSLP in the US, searching for ways students can interact with public schools that will push them towards the positive ends of their physical, mental, and social health spectrums.

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<sup>29</sup> Kate R. Lorig et al., "Evidence Suggesting That a Chronic Disease Self-Management Program Can Improve Health Status While Reducing Hospitalization: A Randomized Trial," *Medical Care* 37, no. 1 (1999): 5–14.

<sup>30</sup> M. von Faber et al., "Successful Aging in the Oldest Old: Who Can Be Characterized as Successfully Aged?," *Archives of Internal Medicine* 161, no. 22 (December 10, 2001): 2694–2700, <https://doi.org/10.1001/archinte.161.22.2694>.

## **Priorities Shaping the National School Lunch Act and Implementation**

This section discusses key priorities held by school lunch program advocates largely from three camps: nutrition, agriculture, and national defense. This conversation situates the National School Lunch Program (NSLP) in history and prepares for parallels to be drawn between the advocacy surrounding the Healthy and Hunger-Free Kids Act of 2010. In the decades preceding the NSLP the government subsidized crops and often surplus found its way to schools for lunches, but the arrangement was insecure<sup>31</sup>. This context helped spur advocates to demand the government subsidize children's school lunches somewhat similarly to the way it was subsidizing the farmers. The emphasis here is that the NSLP centered agriculture's interest over children's health outcomes, which lends context to a persisting lack of perceiving the cafeteria as an educational site.

## **A Discussion of the Major Interests that Shaped 20th Century School Lunches**

Why does the U.S. offer lunch to its pupils while they attend compulsory public education schools? It seems logical that the reason would be that the students are human beings and require sustenance. Further, since schools are spaces erected with the aim of "educating" people, it would also seem logical that school lunch be formed with the obvious intent of teaching students about dietary choices. That answer, however, is far too simple, and incongruent with reality. A myriad of other forces and interests converged upon the U.S. government to

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<sup>31</sup> Susan Levine, "Welfare for Farmers and Children," in *School Lunch Politics: The Surprising History of America's Favorite Welfare Program* (Princeton, UNITED STATES: Princeton University Press, 2010), accessed February 15, 2022 <http://ebookcentral.proquest.com/lib/yale-ebooks/detail.action?docID=803581>.

convince it to solidify the National School Lunch Program (NSLP). According to the verbiage of the National School Lunch Act of 1946, the legislation provided for the NSLP:

As a measure of national security, to safeguard the health and well-being of the Nation's children and to encourage the domestic consumption of nutritious agricultural commodities and other food, by assisting the States, through grants-in aid and other means, in providing an adequate supply of food and other facilities for the establishment, maintenance, operation and expansion of nonprofit school lunch programs.<sup>32</sup>

Chief priorities in establishing the program were the consumption of agricultural commodities, national security, and the well-being of American children. Susan Levine notes that it was then, in 1946, when the intersection of long-standing policies of U.S. subsidies in agriculture, heightened concerns over national security, and voices of child-nutrition advocates gave rise to the NSLP.<sup>33</sup> While the moment was ripe with triumph, after all, school lunch had been officiated, the meals would be much more palatable to Southern agricultural interests than the largely middle-class body of school children the early arrangement would aim to feed.<sup>34</sup>

### **Key Advocates in the Formation of the National School Lunch Program**

The call for school lunch found the perfect time and place in the wake of the second world war. The key voices insisting upon the program were those who wanted healthier children, farmers straining under the weight of the Great Depression, those concerned about national

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<sup>32</sup> "PL 79-396 - Richard B. Russell National School Lunch Act | Food and Nutrition Service," 2, accessed March 30, 2022, <https://www.fns.usda.gov/nsla-amended-pl-116-94>.

<sup>33</sup> Susan Levine, "Welfare for Farmers and Children," in *School Lunch Politics: The Surprising History of America's Favorite Welfare Program* (Princeton, UNITED STATES: Princeton University Press, 2010), accessed February 15, 2022 <http://ebookcentral.proquest.com/lib/yale-ebooks/detail.action?docID=803581>.

<sup>34</sup> Ibid.

security, and those who wanted healthier children. They were joined by many other aligning interests, such as the women who found it impractical to return home from their new roles in the workforce to prepare a midday meal.<sup>35</sup>

### **Advocating for Agricultural Commodities**

Starting in 1932, the federal government responded to rising unemployment and agricultural surpluses destabilizing the market by purchasing surplus from farmers and directing it to be disposed of in a way that would not further depress prices<sup>36</sup>. School lunch programs proved the most logical landing site for the disposals, as many families were unemployed and not in a good position to purchase school lunches. By 1939, the FSCC planned on expanding the operation to reach 5,000,000 students annually after collaboration amongst the Surplus Commodities Corporation, Works Progress Administration (WPA) and school officials proved beneficial for farmers and schools alike. Fruits, whole grain products, and milk were among the many foods making their way onto student's plates as a result of federal subsidies and school officials reported improved performance of their pupils as a result.<sup>37</sup>

It should also be noted that while agricultural surplus was being redirected to school lunch counters, the Community Service Division of the WPA was directing unemployed women to roles in school lunch programs. These women provided a ready and inexpensive labor supply to take on roles preparing foods and supporting administration. By early 1942, these women

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<sup>35</sup> Jennifer Geist Rutledge, "From Charity to Security: The Emergence of the National School Lunch Program," *History of Education* 44, no. 2 (March 4, 2015): 187–206, <https://doi.org/10.1080/0046760X.2014.979252>.

<sup>36</sup> Susan Levine, "Welfare for Farmers and Children," in *School Lunch Politics: The Surprising History of America's Favorite Welfare Program* (Princeton, UNITED STATES: Princeton University Press, 2010), accessed February 15, 2022 <http://ebookcentral.proquest.com/lib/yale-ebooks/detail.action?docID=803581>.

<sup>37</sup> *Ibid.*

were the backbone of federally subsidized school lunches operating in close to 100,00 schools.<sup>38</sup> This was the start of a proclivity towards inexpensive labor that persists in public school lunchrooms to this day.

### **Advocating for National Security**

When the growth spurt of school lunches seen during the early 1940s was challenged by the escalation of a second world war, arguments for school lunch as a line of national defense mounted. While opponents argued the lunch program was propped up by surplus crops, which had dried up, advocates argued that feeding the children of the day was affording the country a body of soldiers for battles to come.<sup>39</sup> This argument echoed concerns expressed about the impact of malnourishment on children's future eligibility for the draft during the first world war. While the WPA provided labor, women entering various other segments of the workforce provided demand for food services at schools, as staffing their various worksites made being at home to prepare meals difficult or impossible in many cases.<sup>40</sup>

### **Advocating for Nutrition and Health**

The third major driving concern in the call for the school lunch program was the aim of using school lunch to improve the nutritional value of American diets. While the people in support of this cause were many and spanned decades, one important case that illustrates the value and possibility of school lunches that are prepared by skilled cafeteria workers, a vital approach that this paper centers, is the work of Ellen Richards. Richards, an MIT graduate with

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<sup>38</sup> Geist Rutledge, "From Charity to Security."

<sup>39</sup> Susan Levine, "Nutrition Standards and Standard Diets," in *School Lunch Politics: The Surprising History of America's Favorite Welfare Program* (Princeton, UNITED STATES: Princeton University Press, 2010), accessed February 15, 2022

<sup>40</sup> Geist Rutledge, "From Charity to Security."

the good fortune of being a woman during a time period when most fields of science in the U.S. were exceedingly disinterested in embracing women scientists, found herself promoting nutritious dietary practices through a network of kitchens serving lunches to school children in Boston in the at the dawn of the 20th century.<sup>41</sup> If people struggle to access reliable nutritional information with the internet in the palm of their hands, one can only imagine how mind-blowing Richards' notions were for the families her kitchens fed.

### **The Shifting Contours of the NSLP During the 20th Century**

After a brief discussion of the dominating forces in the formation of the NSLP, this section briefly reviews further trending toward agriculture and food industry interests, key forces and ways of thinking that lead to lowly-skilled cafeteria workers and diminishing priority on nutrition and improving health outcomes through school lunch.

### **Providing Breakfast for Students**

The school breakfast program began as a pilot project under the Child Nutrition Act but was not made permanent until years of political pressure generated by advocacy from groups such as the Committee on School Lunch Participation (CSLP) and other grassroots efforts, such as the Black Panther Party's free breakfast program.<sup>42</sup> The Committee on School Lunch Participation was a consortium of women's organizations that made public the short-comings of the National School Lunch Program in the late 1960's and pressured government officials for

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<sup>41</sup> Susan Levine, "A Diet for Americans," in *School Lunch Politics: The Surprising History of America's Favorite Welfare Program* (Princeton, UNITED STATES: Princeton University Press, 2010), accessed February 15, 2022

<sup>42</sup> Susan Levine, "A Right to Lunch," in *School Lunch Politics: The Surprising History of America's Favorite Welfare Program* (Princeton, UNITED STATES: Princeton University Press, 2010), accessed February 15, 2022

remedial measures. The free breakfast offered by the Black Panther Party placed the government's lack of a robust institutional parallel in an awkward position, as Susan Levine describes in *School Lunch Politics*, "When Senator George McGovern asked school lunch program administrator Rodney Leonard whether the Panthers fed more poor children than did the state of California, Leonard admitted that it was 'probably true'."<sup>43</sup>

### **Centering Agriculture and Food Industry Interests**

During the second half of the 20th century the NSLP became increasingly biased towards the interest of agriculture and food industry and simultaneously disinvested in preparing healthy meals on site. The Child Nutrition Act of 1966 folded "school foodservice programs from other agencies into one program under USDA".<sup>44</sup> Placing school lunch under the control of the Department of Agriculture as opposed to the Department of Education contributes to the conception of the lunchroom as merely an eating ground as opposed to an educational space as important as any other within the school, a core pattern this paper seeks to address. In *Free for All*, Janet Poppendieck describes how the proliferation of the NSLP in the early 70s included the widespread employ of "'meal packs'—the equivalent of TV dinners, produced in factories, frozen, shipped to school districts" so that they could be "reheated" in a jiffy for school lunch.<sup>45</sup> Poppendieck quotes food critic Mimi Sheraton as having a harsh review of a meal pack she saw in New York City during the mid 70s, "The standard items are tough, sodden hamburgers that are pasty with vegetable protein and usually biting salty... and salty hot dogs, often tinged with

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<sup>43</sup> Ibid.

<sup>44</sup> Katherine Ralston et al., "The National School Lunch Program Background, Trends, and Issues," 7, accessed April 1, 2022, <http://www.ers.usda.gov/publications/pub-details/?pubid=46046>.

<sup>45</sup> Janet Poppendieck, *Free for All: Fixing School Food in America* (Berkeley, UNITED STATES: University of California Press, 2010), 57, accessed March 12, 2022 <http://ebookcentral.proquest.com/lib/yale-ebooks/detail.action?docID=470968>.

a gray-green pallor.”<sup>46</sup> Poppendieck also describes budget balancing measures as playing a key role in diminishing the skill of cafeteria staff during this time period, citing that school lunch programs “realized that if the tasks to be performed require little skill, then the people of limited skills can be hired to perform them, and that these people will earn—that is cost—less, not only because they have less skill, but also because they are more easily replaced, more interchangeable with other unskilled people”.<sup>47</sup> This priority of diminishing short-term costs does not center the health and well-being of the multitude of children eating school lunch or the cafeteria workers administering the program.

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<sup>46</sup> Janet Poppendieck, *Free for All: Fixing School Food in America* (Berkeley, UNITED STATES: University of California Press, 2010), 57, accessed March 12, 2022  
<http://ebookcentral.proquest.com/lib/yale-ebooks/detail.action?docID=470968>.

<sup>47</sup> Janet Poppendieck, *Free for All: Fixing School Food in America* (Berkeley, UNITED STATES: University of California Press, 2010), 75, accessed March 12, 2022  
<http://ebookcentral.proquest.com/lib/yale-ebooks/detail.action?docID=470968>.

## Priorities Shaping the Healthy Hunger-Free Kids Act and Implementation

The Healthy, Hunger-Free Kids Act of 2010 (HHFK) was an exciting piece of that legislation resulted in healthier food and beverage options being included in school lunch by requiring the USDA to align school meal standards with the Dietary Guidelines for Americans of its time.<sup>48</sup> While the school lunch and breakfast programs are permanent installations, the opportunity to review and potentially improve them arises every five years during the Child Nutrition Reauthorization (CNR) proceedings.<sup>49</sup> Made clear by the word choice of the title, “healthy”, this legislation centers new priorities than the original act of 1946, specifically bringing health concerns into clearer focus. Analysis of data collected during the School Nutrition and Meal Cost Study (SNMCS) found that by 2015, food in schools saw increases in proportions of whole grains, fruit and vegetables and reduction in sodium levels.<sup>50</sup>

The proceeding is a discussion of the interests that advocated for the HHFK for the purpose of comparing them with advocacy that resulted in National School Lunch Program (NSLP) formation. The reauthorization of 2010 mirrors the initial act in 1946 in that “diverse coalitions representing nutrition, public health, antihunger-” and national security converged for the good of food in schools.<sup>51</sup> Interestingly, military leaders highlighted the necessity for skilled “food service professionals”<sup>52</sup>, despite the lack of emphasis on this lever in the text of the act.

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<sup>48</sup> Colin Schwartz and Margo G. Wootan, “How a Public Health Goal Became a National Law: The Healthy, Hunger-Free Kids Act of 2010,” *Nutrition Today* 54, no. 2 (March 2019): 67, <https://doi.org/10.1097/NT.0000000000000318>.

<sup>49</sup> *Ibid.*, 68.

<sup>50</sup> “School Nutrition and Meal Cost Study Final Report Volume 1: School Meal Program Operations and School Nutrition Environments,” *Mathematica*, accessed March 8, 2022, <https://www.mathematica.org/publications/school-nutrition-and-meal-cost-study-final-report-volume-1-school-meal-program-operations-and-school>.

<sup>51</sup> *Ibid.*, 72.

<sup>52</sup> William Christeson, Amy Dawson Taggart, and Soren Messner-Zidell, “Too Fat to Fight: Retired Military Leaders Want Junk Food Out of America’s Schools” (Washington, D.C.: Mission Readiness: Military Leaders for Kids, 2010), 7, accessed March 29, 2022i

The interests of agriculture and the food industry received lower priority in 2010 compared to 1946, but insufficient attention is given to the reality that we need skilled, empowered cafeteria workers if we seek a strong, coherent school lunch program.

### **Demanding Healthier School Lunches for Nutrition**

While the notion of using school lunches to improve health outcomes through school lunch stretches back at least as far as Ellen Richards and her network of scratch kitchens and the progressive era<sup>53</sup>, HHFK's 2010 success is seen as having strong roots in the advocacy that resulted in the 1994 Child Nutrition Reauthorization (CNR), which required school meals be based on the Dietary Guidelines for Americans (DGA), starting in the early 1990's.<sup>54</sup> Advocacy for healthier lunches was largely advanced by the groups like the National Alliance for Nutrition and Activity (NANA), which "helped coordinate the activities of national, state, and local organizations working on school foods".<sup>55</sup>

### **Demanding Healthier School Lunches for National Security**

In 2010, Mission: Readiness, a group of veteran military leaders, advanced the demand for healthier school lunches along bipartisan lines. Their provocatively titled report, "Too Fat to Fight" called on Congress to modify the Child Nutrition Reauthorization by embracing healthier nutrition standards in the NSLP, fund school lunch so that meals could be prepared and distributed to students who needed them, and use schools to teach students about sound dietary

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<sup>53</sup> Susan Levine, "A Diet for Americans," in *School Lunch Politics: The Surprising History of America's Favorite Welfare Program* (Princeton, UNITED STATES: Princeton University Press, 2010), accessed February 15, 2022

<sup>54</sup> Colin Schwartz and Margo G. Wootan, "How a Public Health Goal Became a National Law: The Healthy, Hunger-Free Kids Act of 2010," *Nutrition Today* 54, no. 2 (March 2019): 68, <https://doi.org/10.1097/NT.0000000000000318>.

<sup>55</sup> *Ibid.*, 68.

decisions and active lifestyle choices.<sup>56</sup> What is most salient in this document is a call for “funding to equip and train food service professionals with the means to prepare more nutritious and appealing meals”<sup>57</sup> which was conspicuously ignored in the text of the HHFK.

### **Research on Practices that Improve Health Outcomes Via School Lunch**

Despite the victories of the HHFK, failing to divorce ourselves from thinking that does not recognize the lunchroom as an educational space and skilled cafeteria workers as essential to improving public health and learning outcomes continues to be the bane of the NSLP. A discussion of research on best practices in school meal programs makes clear the need for skilled food service workers to be advanced as key to the healthy and palatable school lunches that children deserve. The following subsections emphasize the best practices rendered inaccessible due the current working conditions of cafeteria staff to illustrate this reality.

### **Changing the Time Structure of School Lunch**

Students need a school lunch period that provides them adequate time to sit and eat their lunch, and the current absence of national policy on lunch duration results in some schools offering pupils insufficient eating time. In 2002, Conklin et al. analyzed three K-12 lunch consumption that included students from 18 schools across four states.<sup>58</sup> The researchers found

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<sup>56</sup> William Christeson, Amy Dawson Taggart, and Soren Messner-Zidell, “Too Fat to Fight: Retired Military Leaders Want Junk Food Out of America’s Schools” (Washington, D.C.: Mission Readiness: Military Leaders for Kids, 2010), 7, accessed March 29, 2022

<https://strongnation.s3.amazonaws.com/documents/24/ec1ae5e5-f170-4f75-ade5-0e8063430f16.pdf?1469638848&inline;filename=%22Too%20Fat%20to%20Fight.pdf%22.vi>

<sup>57</sup> Ibid., 7.

<sup>58</sup> Martha T Conklin, Laurel G Lambert, and Janet B Anderson, “How Long Does It Take Students to Eat Lunch? A Summary of Three Studies,” n.d., 9.

that students benefited from at least 20 minutes of time at the lunch table. This provided for 7-10 minutes of eating, and additional time for other table activities, such as socializing.<sup>59</sup> It is important to note that this does not mean lunch periods should only be 20 minutes, because students also spend varying amounts of time traveling to the lunch space and waiting in line, depending on how their school arranges the experience. In 2015, Cohen et al. built on these studies by investigating the question of how time allocated for eating impacted the consumption of particular food types. They found that students given at least 25 minutes to eat were more likely to select a fruit and consume significantly larger portions of their entree and vegetable portions than students having less than 20 minutes to eat<sup>60</sup>, but even with this increase, students still were not consuming recommended amounts of fiber-rich foods.<sup>61</sup>

In addition to providing enough time at the table, time of day is also an important factor. Placing recess before lunch has been shown to be correlated with increases in both consumption of fruits and vegetables and the number of students participating in fruit and vegetable consumption. Price et al. advance allocating recess before lunch as “one of the most cost-effective ways schools can increase the consumption of fruits and vegetables during school.”<sup>62</sup> Research has also shown that students offered “midday” lunch consumed more than “early” or “late” lunch students.<sup>63</sup>

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<sup>59</sup> Ibid., 6.

<sup>60</sup> Juliana F. W. Cohen et al., “Amount of Time to Eat Lunch Is Associated with Children’s Selection and Consumption of School Meal Entrée, Fruits, Vegetables, and Milk,” *Journal of the Academy of Nutrition and Dietetics* 116, no. 1 (January 2016): 123–28, <https://doi.org/10.1016/j.jand.2015.07.019>.

<sup>61</sup> Deana Hildebrand et al., “TIME TO EAT SCHOOL LUNCH AFFECTS ELEMENTARY STUDENTS’ NUTRIENT CONSUMPTION,” n.d., 13.

<sup>62</sup> Joseph Price and David R. Just, “Lunch, Recess and Nutrition: Responding to Time Incentives in the Cafeteria,” *Preventive Medicine* 71 (February 2015): 29, accessed April 2, 2022 <https://doi.org/10.1016/j.ypmed.2014.11.016>.

<sup>63</sup> Leah Elizabeth Chapman et al., “Factors Associated with School Lunch Consumption: Reverse Recess and School ‘Brunch,’” *Journal of the Academy of Nutrition and Dietetics* 117, no. 9 (September 2017): 1415, accessed April 2, 2022 <https://doi.org/10.1016/j.jand.2017.04.016>.

While much of the research discussed here is from the 2000s, there is investigation from at least as far back as the early 1990s that documents student complaints about insufficient mealtime and lunch being placed too early in the day for them to have developed an appetite.<sup>64</sup> The persistence of school lunch sessions being placed either too early or too short in duration makes the impact of recess and placement during the day on lunch participation a topic warranting additional research and attention.

### **Leveraging Verbal Prompting by Cafeteria Workers**

With the citation of the research in this section, the strong case for demanding cafeteria workers be skilled and recognized as a factor to be leveraged for increasing public health outcomes begins to be mounted.

In 2007, Marlene Schwartz evaluated the impact of a seemingly small intervention on elementary school children: the cafeteria worker's posing of a question about including fruit with their lunch.<sup>65</sup> Her findings were that schools posing the question saw students take a fruit serving 90% of the time, in comparison to 60% of students at a school not posing the question. In both settings, students were observed to consume the fruit they took 80% of the time. While this study was limited to a single question's impact on fruit consumption rates of elementary students, the findings raise the question of what other significant impacts cafeteria workers could have on students' choices to expand their palettes in favor of healthy new food options. Additional research in this area is warranted.

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<sup>64</sup> "School Lunch Eligible Non-Participants | Food and Nutrition Service," accessed April 1, 2022, <https://www.fns.usda.gov/school-lunch-eligible-non-participants>.

<sup>65</sup> Marlene B. Schwartz, "The Influence of a Verbal Prompt on School Lunch Fruit Consumption: A Pilot Study," *International Journal of Behavioral Nutrition and Physical Activity* 4, no. 1 (December 2007): 1–5, <https://doi.org/10.1186/1479-5868-4-6>.

## Reducing Stigma by Instituting Universal Free Lunch

Stigma associated with being eligible for free or reduced lunch diminishes participation in the NSLP, and this has been a documented issue for decades.<sup>66</sup> In *School Lunch Politics*, Susan Levine comments on *Their Daily Bread*'s report that poor children were “often discriminated against of embarrassed in the lunch line” as far back as the 1960s.<sup>67</sup> Parents have reported apprehension towards applying the school lunch and breakfast programs due to “being embarrassed at not being able to provide for their children”, fearing “being criticized for not being ‘good’ parents or ‘abusing the system’”.<sup>68</sup> Another issue has been discomfort with the reality of their working jobs, yet having income not great enough to avoid being “eligible” for free or reduced lunch. For the families who do apply and are approved, various school lunch officials interviewed by Poppendieck described a decline in interest that corresponds with children’s increasing understanding of free and reduced lunch as being for those of lower social standing, and growing apprehension towards being viewed as such by eating said lunches.<sup>69</sup> Responses to the question of buy-in commonly address administrative issues associated with registration<sup>70</sup>, but a more robust remedy is universal free lunch, which was sought by the Committee on School Lunch Participation.<sup>71</sup> This option is elevated both to rid students of labels

<sup>66</sup> “School Lunch Eligible Non-Participants | Food and Nutrition Service.” accessed April 5, 2022 <https://fns-prod.azureedge.us/sites/default/files/EligNonPart-Pt1.pdf>

<sup>67</sup> Susan Levine, “A Right to Lunch,” in *School Lunch Politics: The Surprising History of America’s Favorite Welfare Program* (Princeton, UNITED STATES: Princeton University Press, 2010), <http://ebookcentral.proquest.com/lib/yale-ebooks/detail.action?docID=803581>.

<sup>68</sup> “School Lunch Eligible Non-Participants | Food and Nutrition Service.”, 3.2, accessed April 5, 2022 <https://fns-prod.azureedge.us/sites/default/files/EligNonPart-Pt1.pdf>

<sup>69</sup> Janet Poppendieck, “The Missing Millions: Problems of Participation,” in *Free for All: Fixing School Food in America* (Berkeley, UNITED STATES: University of California Press, 2010), <http://ebookcentral.proquest.com/lib/yale-ebooks/detail.action?docID=470968>.

<sup>70</sup> Katherine Ralston et al., “The National School Lunch Program Background, Trends, and Issues,” accessed April 1, 2022, <http://www.ers.usda.gov/publications/pub-details/?pubid=46046>.

<sup>71</sup> Susan Levine, “A Right to Lunch,” in *School Lunch Politics: The Surprising History of America’s Favorite Welfare Program* (Princeton, UNITED STATES: Princeton University Press, 2010), <http://ebookcentral.proquest.com/lib/yale-ebooks/detail.action?docID=803581>.

and preempt various other administrative challenges that arise when serving students from diverse cultural, socioeconomic, and linguistic backgrounds, as the NSLP does.

### **Improving Meal Quality through Culinary Capacity**

A major shift that has been explored in select schools and districts which requires far more engagement and practice is increasing the “worker agency” of cafeteria staff.<sup>72</sup> Tsui et al. describe this agency as “foodservice workers’ power to influence what is served in institutional settings”, and the use of the term in this paper is intended to reference that description. This agency would give staff the freedom to allot a larger portion to a student who just had a growth spurt as opposed to being locked into a one-size fits all standard, and the room to create new menu options. To inspire the public’s confidence in cafeteria staff’s ability to handle this kind of power, the NSLP and public must commit to increasing “culinary capacity”, “the skills, time, and equipment needed to turn raw ingredients into freshly prepared meals”.<sup>73</sup>

Cohen et al. detailed one example of how this could look during their evaluation of the “Chef Initiative” in two of Boston's Public Schools.<sup>74</sup> This project was developed by an alliance of a non-profit organization, the public school district, the public health commission, and a university. The school district opened the doors of two schools that were both willing to engage new lunch practices and capable of cooking food on site. A chef was brought in to work closely

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<sup>72</sup> Emma K. Tsui et al., “Missed Opportunities for Improving Nutrition Through Institutional Food: The Case for Food Worker Training,” research-article, 9, accessed April 5, 2022 <https://doi.org/10.2105/AJPH.2013.301293> (American Public Health Association, August 7, 2013), world, <https://doi.org/10.2105/AJPH.2013.301293>.

<sup>73</sup> Jennifer Gaddis and Amy K. Coplen, “Reorganizing School Lunch for a More Just and Sustainable Food System in the US,” *Feminist Economics* 24, no. 3 (July 3, 2018): 100, Accessed April 5, 2022 <https://doi.org/10.1080/13545701.2017.1383621>.

<sup>74</sup> Juliana F. W. Cohen et al., “Long-Term Impact of a Chef on School Lunch Consumption: Findings from a 2-Year Pilot Study in Boston Middle Schools,” *Journal of the Academy of Nutrition and Dietetics* 112, no. 6 (June 2012): 928, <https://doi.org/10.1016/j.jand.2012.01.015>.

with cafeteria staff at the two sites “to develop recipes, plan menus, and train existing staff to create healthier, more flavorful lunches”.<sup>75</sup> The program ran for two years, with the chef visiting the two sites multiple times a week to discuss menu changes and strategies for incorporating healthier ingredients. The two experimental schools were compared with two non-participating schools with student bodies of comparable racial, ethnic, and socioeconomic composition.

The findings of this evaluation support the feasibility of enhancing the “dietary quality” and “palatability” of school lunches through collaboration between a staff and cafeteria workers.<sup>76</sup> At schools collaborating with the chef whole grain inclusion in meals was 39% higher, 100% of vegetables were fresh or frozen compared to 80% being canned at control schools, and 71% of fruits served were fresh versus 60% being “canned in syrup” at control schools.<sup>77</sup> While plate waste, a major concern commonly voiced during conversations about making school lunches healthier<sup>78</sup>, was comparable amongst all students observed, whole grain consumption and vegetable serving consumption were higher at chef-collaborating sites.<sup>79</sup>

More recently, Djang et al. evaluated an even larger program, the Orfaea Foundation’s School Food Initiative, which sought to improve health outcomes via increasing worker agency. This massive effort spanned nine years and engaged 84 schools and upwards of 50,000 students. The educational model employed included “13-week intensive culinary trainings” where “public school food-service personnel” learned skills vital to incorporating scratch-cooking in their lunch

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<sup>75</sup> Ibid.

<sup>76</sup> Ibid., 930.

<sup>77</sup> Ibid.,

<sup>78</sup> “Child Nutrition Programs: Flexibilities for Milk, Whole Grains, and Sodium Requirements,” *Federal Register* 83, no. 238 (December 12, 2018): 63775–995.

<sup>79</sup> Juliana F. W. Cohen et al., “Long-Term Impact of a Chef on School Lunch Consumption: Findings from a 2-Year Pilot Study in Boston Middle Schools,” *Journal of the Academy of Nutrition and Dietetics* 112, no. 6, 930 (June 2012): 928, <https://doi.org/10.1016/j.jand.2012.01.015>.

programs.<sup>80</sup> To supplement the culinary training periods, four chefs were spread across selected school districts to advise them on “adapting recipes, time management, procurement and processing of local produce, and maximizing the use of equipment”.<sup>81</sup> In response to the decline in “kitchen equipment and infrastructure” that resulted from the pivot from scratch cooking towards “highly processed, heat-and-serve” meals in public school lunches, schools were invited to apply for grants to secure tools and “renovate a school district’s central kitchen.”<sup>82</sup> Food literacy, understanding how dietary choices influence health, environmental and economic outcomes<sup>83</sup>, was promoted by programs in classrooms, cafeterias, and school gardens that presented students with on-going opportunities to learn about the origins and benefits of food in their schools as well as to encourage their peers and younger counterparts to make sound dietary decisions.<sup>84</sup> The last component of this initiative was the collaboration of chefs with “wellness committees” to create “wellness policies and produce a user-friendly, one-sheet version” to help educators, families and other grassroots stakeholders “embody a culture of health and wellness” and raise funds for these efforts.<sup>85</sup>

The four most valuable elements of this program were the 13-week “Culinary Boot Camp”, “Equipment and infrastructure grants”, “on-site technical assistance”, and “support offered to schools and districts to improve school culture”.<sup>86</sup> One of the first measures of success discussed by Djang et al. is the improvement of school lunch and breakfast meals by the

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<sup>80</sup> Holly Carmichael Djang et al., “Key Ingredients for School Food Systems: An Evaluation of the Orfalea Foundation’s School Food Initiative,” *The Foundation Review* 8, no. 2, 21 (June 1, 2016), <https://doi.org/10.9707/1944-5660.1295>.

<sup>81</sup> *Ibid.*

<sup>82</sup> *Ibid.*

<sup>83</sup> “About,” Food Literacy Center, accessed April 17, 2022, <https://www.foodliteracycenter.org/about>.

<sup>84</sup> Carmichael Djang et al., “Key Ingredients for School Food Systems.”

<sup>85</sup> *Ibid.*, 25.

<sup>86</sup> *Ibid.*

inclusion of greater amounts of “fresh fruits and vegetables”, “organic and local goods”, and “surpassing federal and state guidelines for sugar, salt, and fat in meals” while pivoting away from highly processed ingredients.<sup>87</sup> Equally as significant, cafeteria staff reported “feeling more professional and empowered”, “modeling principles of healthy eating and making positive changes in their personal food choices”, and “being perceived more favorably by other school staff”<sup>88</sup>. In addition to students’ dietary options being improved this report reveals that cafeteria workers’ physical and social health<sup>89</sup> was concurrently elevated by this massive commitment to improve school lunches. Lastly, one unintended consequence of the initiative reported was the increased consumption of food prepared at schools by “teachers and administrators” at the sites involved.<sup>90</sup> This last aspect highlights the painful irony of students being extended school food options that the people shaping their educational experiences are not themselves interested in consuming.

After the above discussion of a few initiatives that improved student health outcomes by increasing worker agency, it is appropriate to discuss the ways strategies along these lines are viable and timely in the NSLP. Tsui et al. situate school meals in a larger “institutional food sector”, one that includes “adult care facilities, senior centers, hospitals, jails, and emergency food providers”, which can serve as a means of driving better public health outcomes in the United States.<sup>91</sup> Empowering and educating cafeteria workers is a necessary and under discussed complement to popular top-down approaches like the Healthy and Hunger-Free Kids Act. Tsui et

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<sup>87</sup> Ibid., 26.

<sup>88</sup> Ibid.

<sup>89</sup> M. Huber et al., “How Should We Define Health?,” *BMJ* 343, no. jul26 2 (July 26, 2011): d4163–d4163, <https://doi.org/10.1136/bmj.d4163>.

<sup>90</sup> Holly Carmichael Djang et al., “Key Ingredients for School Food Systems: An Evaluation of the Orfalea Foundation’s School Food Initiative,” *The Foundation Review* 8, no. 2, 29 (June 1, 2016), <https://doi.org/10.9707/1944-5660.1295>.

<sup>91</sup> Tsui et al., “Missed Opportunities for Improving Nutrition Through Institutional Food.”, e15

al. discuss the tremendous influence of New York City Department of Education<sup>92</sup>, which is reported as having nearly 750,000 students receiving free or reduced lunch in recent years.<sup>93</sup> Also of note is the sharply declining consumption of school meals as students in the school system grow older, as indicative of potential for an improved system to have an even larger reach.<sup>94</sup> The economic feasibility of investing in the training and empowerment of cafeteria workers is obvious in the presence of the persisting burden placed on healthcare by obesity-related medical interventions.<sup>95</sup>

### **Challenges to Implementing Research Supported Practices that Improve Health Outcomes Post Healthy Hunger-Free Kids Act**

In December of 2018, eight years after the Healthy and Hunger-Free Kids Act, the USDA announced a jarring departure from previously established nutrition goals for school lunches. The Federal Register reveal their decision to reduce the requirement of 100% of school lunch and breakfast menus being “whole-grain rich” down to 50% and “provide schools in the lunch and breakfast programs more time for gradual sodium reduction by retaining Sodium Target 1 through the end of school year (SY) 2023-2024, continuing to Target 2 in SY 2024-2025, and eliminating the Final Target that would have gone into effect in SY 2022-2023”.<sup>96</sup> Reasons for

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<sup>92</sup> Ibid.,

<sup>93</sup> “Indicator Report: Children Receiving Free or Reduced-Price School Lunch - Public Schools Number and Percent Children in Grades K-12: NYS Kids’ Well-Being Indicators Clearinghouse (KWIC),” accessed April 17, 2022, [https://www.nyskwic.org/get\\_data/indicator\\_profile.cfm?subIndicatorID=52](https://www.nyskwic.org/get_data/indicator_profile.cfm?subIndicatorID=52).

<sup>94</sup> Tsui et al., “Missed Opportunities for Improving Nutrition Through Institutional Food.”

<sup>95</sup> John Cawley et al., “Direct Medical Costs of Obesity in the United States and the Most Populous States,” *Journal of Managed Care & Specialty Pharmacy* 27, no. 3 (March 2021): 354–66, <https://doi.org/10.18553/jmcp.2021.20410>.

<sup>96</sup> “Child Nutrition Programs.”, 63776.

the whole-grain goal retreat included challenges with food preparation and menu development.<sup>97</sup> The choice to delay Target 1 was influenced by the high sodium levels generally seen in the “food supply”, the lack of infrastructure for “scratch cooking” in many schools, and the likelihood of students accustomed to high-sodium diets in meals served outside of school to reject novel healthier options.<sup>98</sup> One thing to note, in their detail of parties for and against backing off healthier goals, the voices centered in the choice to abandon stronger goals were of the minority amongst commenters surveyed.<sup>99</sup> Issues regarding meal prep and menu development would be addressed by increasing the culinary capacity of cafeteria staff as discussed previously. Issues regarding the food supply require another consideration.

### **Concern Over Plate Waste and Participation**

On October 3, 2012, two years after HHFK, Sen Pat Roberts published a letter voicing concerns about increasing plate waste in school lunchrooms that had supposedly resulted from students not being interested in eating healthier diets.<sup>100</sup> A major concern of school lunch administration is the amount of participation, or students opting for school lunch. According to the School Nutrition and Meal Cost Study Final Report Volume 4, which included a nationally representative sampling of schools, plate waste has been a persistent issue since the early 1990s and was not exacerbated by changes required by HHFK.<sup>101</sup> The findings also indicate that hunger

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<sup>97</sup> Ibid., 63782.

<sup>98</sup> Ibid.

<sup>99</sup> Ibid.

<sup>100</sup> Mike Mitka, “Meal Programs Questioned,” *JAMA* 308, no. 18 (November 14, 2012): 1849, <https://doi.org/10.1001/jama.2012.33468>.

<sup>101</sup> Mary Kay Fox et al., “School Nutrition and Meal Cost Study Final Report Volume 4: Student Participation, Satisfaction, Plate Waste, and Dietary Intakes” (Alexandria, VA, USA: U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, April 2019),

was a primary motivator for participants, while dissatisfaction with the quality of school lunch was a deterrent for non-participants.<sup>102</sup> Plate waste and participation levels should be remedied by increasing culinary capacity, not increasing salt, fat, and sugar content of school meals offered.

### Concern Over Food Supply

On the issue of food supply, it is important to recognize that there is a “bi-directional nature of influence between the food industry and federal nutrition regulations”.<sup>103</sup> Schwartz and Wootan describe how food suppliers moved in favor of uniform national standards after experiences with varying local policies that made “school lunch requirements more logistically challenging and expensive for beverage and snack food companies”.<sup>104</sup> With First Lady Michelle Obama at the helm of its’ Partnership for a Healthier America, Let’s Move secured numerous corporate agreements to create a healthier food industry landscape.<sup>105</sup> Schools are such a large market that they can drive the industry to innovate healthier products, as was the case with the creation of Smart Snacks in response to USDA regulations on snacks sold in schools.<sup>106</sup> Regulation in favor of healthier school meals and culinary capacity can drive the shift toward healthier products being prepared by industry and available for school lunch programs.

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<https://www.mathematica.org/publications/school-nutrition-and-meal-cost-study-final-report-volume-4-student-participation-satisfaction-plate>.

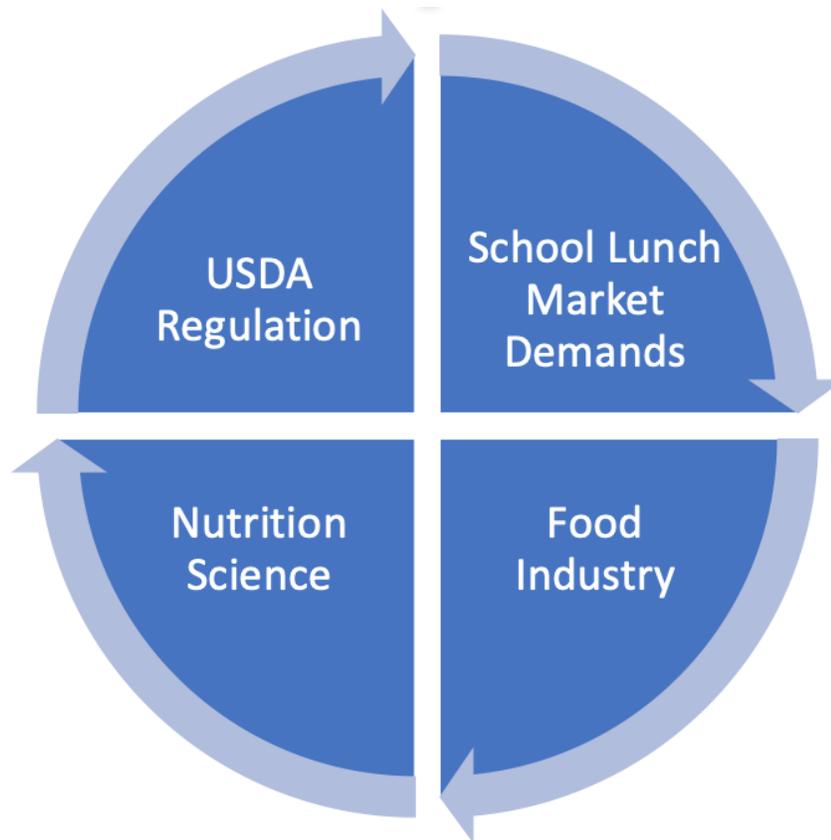
<sup>102</sup> Ibid.

<sup>103</sup> Juliana Cohen and Marlene B. Schwartz, “Documented Success and Future Potential of the Healthy, Hunger-Free Kids Act,” *Journal of the Academy of Nutrition and Dietetics* 120, no. 3 (March 2020): 362, <https://doi.org/10.1016/j.jand.2019.10.021>.

<sup>104</sup> Colin Schwartz and Margo G. Wootan, “How a Public Health Goal Became a National Law: The Healthy, Hunger-Free Kids Act of 2010,” *Nutrition Today* 54, no. 2 (March 2019): 70, <https://doi.org/10.1097/NT.0000000000000318>.

<sup>105</sup> “Achievements | Let’s Move!,” accessed April 20, 2022, <https://letsmove.obamawhitehouse.archives.gov/achievements>.

<sup>106</sup> Jaquelyn L. Jahn et al., “Product Reformulation and Nutritional Improvements after New Competitive Food Standards in Schools,” *Public Health Nutrition* 21, no. 5 (April 2018): 1011–18, <https://doi.org/10.1017/S1368980017003445>.



**Figure 1. Circular of Influences in the School Lunch Ecosystem.** This figure depicts the Food Industry’s ability to influence Nutrition Science through selective funding of research, Nutrition Science’s ability to influence USDA Regulation through selective presentation of research findings, the USDA’s ability to influence school lunch through regulation, and lastly the School Lunch Market Demand ability to influence Food Industry by creating logistical challenge or simplicity.

## Concern Over the Dietary Guidelines for Americans

The Dietary Guidelines for Americans (DGA) is a document that has been updated by the USDA and US Department of Health and Human Services every five years since 1980.<sup>107</sup> The DGA is intended to capture the latest nutrition science information to guide federal nutrition policy, health promotion from the local to the national level, and inform the food and beverage industries. This document is not without influence from the food and beverage industry. Despite this ambition, Jennifer Gaddis captures the gist of Brownell and Warner’s research on the troubling history of the tobacco industry by writing, “large agri-food companies and trade associations shape nutrition science and policy through selective funding of scientific research, professional lobbying, and donations to lawmakers and professional organizations”.<sup>108</sup> One manifestation of this was the absence of recommendations for sustainable practices to be employed in agriculture despite broad support among Americans.<sup>109</sup> Michelle Simon details the conflicting interests of researchers in key roles that shape nutrition science research and publications<sup>110</sup> like the DGA.

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<sup>107</sup> “Previous Dietary Guidelines | Health.Gov,” accessed April 20, 2022, <https://health.gov/our-work/nutrition-physical-activity/dietary-guidelines/previous-dietary-guidelines>.

<sup>108</sup> Gaddis and Coplen, “Reorganizing School Lunch for a More Just and Sustainable Food System in the US.”, 96.

<sup>109</sup> Natalie Wood-Wright / Published Mar 11 and 2016, “New U.S. Dietary Guidelines Ignore Broad Support for Food Sustainability,” The Hub, March 11, 2016, <https://hub.jhu.edu/2016/03/11/dietary-guidelines-sustainability-survey/>.

<sup>110</sup> Michele Simon, “Nutrition Scientists on the Take from Big Food,” [eatdrinkpolitics.com](http://eatdrinkpolitics.com), June 2015, <https://www.eatdrinkpolitics.com/wp-content/uploads/ASNReportFinal.pdf>.

## Limitations and Shortcomings

Before concluding, I will use this section to discuss the limitations of this project and opportunities for further research. As this paper has been prepared by an undergraduate college student, the work is limited by the experience and time constraints of the primary investigator who prepared it. Additionally, I spent 12 years eating public school lunches and may have developed bias against the program and the uninspiring meal selections it so often offered during my time as a student.

Originally, this project aimed to analyze school nutrition and physical education as two elements treated haphazardly and the ramifications on public health that result. After investigating meals in schools, not enough time remained to perform a symmetric exploration of physical education in the United States. I recommend curious parties look in to:

- The Physical Education for Progress (PEP) Act, 1999-2000<sup>111</sup>. This legislation would have provided funding for physical education on activities that are more inclusive of the general student body of a school and as well as more likely to build active practices students would carry into adulthood. It explicitly did not center sports that require considerable equipment funding.
- Elizabeth Gagen's *Making America Flesh: Physicality and Nationhood in Early Twentieth-century Physical Education Reform*<sup>112</sup>. A quick reading reveals interesting details and aims of early physical education efforts for American children.

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<sup>111</sup> Ted Stevens, "Physical Education for Progress Act," Pub. L. No. S. 1159 (1999), <https://www.congress.gov/106/bills/s/1159/BILLS-106s1159is.pdf>.

<sup>112</sup> Elizabeth A. Gagen, "Making America Flesh: Physicality and Nationhood in Early Twentieth-Century Physical Education Reform," *Cultural Geographies* 11, no. 4 (October 2004): 417–42, <https://doi.org/10.1191/1474474004eu321oa>.

- Investigate the extent square dancing was deployed in schools to deter students from jazz, and other ways political interests shaped physical education experiences during the 20th century.
- President John F. Kennedy's Physical Fitness Program.
- 2016 Shape of the Nation Report<sup>113</sup>. This details the state of physical education, a subject currently lacking any federal regulation require it be taught in schools.

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<sup>113</sup> SHAPE America, "2016 Shape of the Nation," 2016, [https://www.shapeamerica.org/uploads/pdfs/son/Shape-of-the-Nation-2016\\_web.pdf](https://www.shapeamerica.org/uploads/pdfs/son/Shape-of-the-Nation-2016_web.pdf).

## Conclusion

Using school meals as a chance to improve public health outcomes requires empowering cafeteria workers to increase their culinary proficiency. This requires a marked transformation in the way the public, school body members, educational leadership and government conceive of the lunchroom and the food service workers at the core of its daily operations. Failure to depart from the previous lack of critical thinking regarding school meals, at this critical moment, might just condemn our school children to “take the first step into a thousand years of darkness”<sup>114</sup>.

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<sup>114</sup> “A Time for Choosing Speech, October 27, 1964,” Ronald Reagan, accessed April 21, 2022, <https://www.reaganlibrary.gov/reagans/ronald-reagan/time-choosing-speech-october-27-1964>.

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