CULTIVATING THE POTENTIAL OF A SPROUTING GENERATION

HOW TO ENRICH TITLE I

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Since the issue of poverty has consistently endured as one of the leading impediments of educational attainment, it is clear that while eradication may not be realistic, appraising comprehensive strategies for reducing prevalent factors should be conducted. This report will establish a link between diet and the educational attainment of students in the U.S. By exploring: the origins of government-subsidized meals in American schools, lunch programs that top-performing nations have implemented which reflect an inherent emphasis on healthy dieting, governmental studies which underscore the significance of diet in adolescent development, and a review of the potential costs of a food insecure population, this report seeks to draw attention to the urgency for an overhaul of the nutritional requirements of federally-funded school lunch programs. The totality of this information ultimately culminates to reveal not only a need for more specificity in the formulation of meal design, but also to the fundamental flaw in the way that school administrations prospect the worth of student nutrition. To conclude, I will postulate feasible policy precepts which would aid the growth of higher educational achievement rates.
Following “Black Thursday” and the U.S. stock market crash of 1929, many Americans were forced to look to the government for general relief and assistance in regaining the pride they had once possessed from gainful employment. At nearly 25% unemployment, the United States was in dire need of drastic economic stimulation, and in 1933, the U.S. would impose a progressive tax reform, which collected from America’s top earners. Franklin Delano Roosevelt’s “New Deal” not only provided a multi-faceted plan which combatted the economic slump from banking to farming/agriculture, from industry to sin tax, but also founded the concept of welfare (although the concept of welfare has subsequently gained a poor reputation and now comes with a negative stigma, as Christians, caring for the down-trodden should never be viewed in a negative light). One program in particular, which stressed the health of its participants and became the greatest contributor to the ‘healthy body, healthy mind’ philosophy was the Civilian Conservation Corps. As stated in his July 8th address to many young men enrolled in his program,

“Physically fit, as demonstrated by the examinations you took before entering the camps, the clean life and hard work in which you are engaged cannot fail to help your physical condition and you should emerge from this experience strong and rugged and ready for a reentrance into the ranks of industry, better equipped than before.” (Roosevelt 1933).
In due course, FDR’s initial emphasis on the physical health of the individual would evolve into the still developing health policy reform movement of today.

Over the course of a decade, the Civilian Conservation Corps “put more than three million young men to work in the nation’s forests and parks” (Public Broadcasting Service 2015) and “was responsible for over half the reforestation, public and private, done in the nation’s history” (H. Staff, Civilian Conservation Corps 2015). Although the Civilian Conservation Corps was primarily created with the sole intent of creating jobs for displaced laborers, the fact that the workers “received three square meals a day” (Speakman 2015) chiefly speaks to the notion that, while the government could have charged the workers for their meals, its facilitators recognized the inherent need for a nutritional regiment. Ultimately, this particular facet of the program amounted to the most cost effective guarantee that workers received adequate nourishment. Rather than fending for themselves and gambling with possibility of a malnourished workforce, Roosevelt’s excerpt provides the rudimentary basis for the government’s initial concern for the physical health of the American workforce.

FAIR LABOR STANDARDS ACT

Next, the Fair Standards Labor Act of 1938, put the nation’s focus specifically on the student, with a certain emphasis on investing in the U.S. workforce of tomorrow. Following the advent of the assembly line and the Industrial Revolution, the U.S. was still recovering from one of (if not) the
greatest economic disasters in history; recognizing the need for personnel who could one day carry out tasks with more complexity than menial labor, became an agenda at the forefront of American politics. As “the educational reformers of the mid-nineteenth century convinced many among the native-born population that primary school education was a necessity for both personal fulfillment and the advancement of the nation ... the need for education was so clear that Congress in 1949 amended the child labor law to include businesses not covered in 1938” (H. Staff, Child Labor 2015). And similarly to the “New Deal”, the development of child labor laws became the next step in the U.S. government’s realization that its single greatest natural resource was not something that could be dug up or grown on plantations, but it is the citizenry itself.

NATIONAL SCHOOL LUNCH ACT

Further action towards the care of America’s disadvantaged student population came post-World War II. In 1946, the 79th Congress proposed, and ultimately passed, the National School Lunch Act (NSLA). Although this concept was still remotely new to the West, many European countries already had comparable programs implemented since the turn of the century. However, prior to comprehensive federal subsidies, several major east coast cities (and even a few west coast ones) had already begun to institute programs with the goal of providing steady, nutritional meals for schoolchildren. During the 1920’s and 1930’s, charity groups (aided by city governments) pioneered the way for food services designated to compensate
for the food deprivation of underprivileged children. In due course, as these programs gathered prevalence, and many cities requested federal funding for sponsorship, a push towards permanent federal legitimacy was established. Much like the evolution that occurred in Europe, the humble and sporadic efforts of private welfare groups shifted to gain the national attention that garnered the necessary support to draft the NSLA. Unfortunately, the demand for federal appropriations was not met until the U.S.’s period of Reconstruction. Although the NSLA came with a hefty price tag, due to the mass investment towards the infrastructure needed to support the program’s mandates, it quickly became evident that “the educational features of a properly chosen diet served at school should not be under-emphasized” (House Committee on Agriculture Report P.L. 396-79th Congress 1946). Furthermore, by stating that “not only is the child taught what a good diet consists of, but his parents and family likewise are indirectly instructed” (House Committee on Agriculture Report P.L. 396-79th Congress 1946), it becomes clear that Congress’ aim was not simply to improve the health of students, but to improve the health of the entire population.

This initial program set a decent foundation for student nutrition; however, a “large proportion of needy children who were entitled to free or reduced-price lunches became a very real burden upon the local districts which were the least able to pay ... the situation was further complicated by lack of facilities and space for meal preparation particularly in the smaller schools in rural areas and older schools in large cities” (Gunderson 2014).
Nonetheless, once discovered, Congress acted by appropriating additional subsidies in order to provide the assistance necessary to compensate for the neediest of schools deemed to have “poor local economic conditions” (Public Law 87-112 1961).

LBJ & “THE GREAT SOCIETY”/BIRTH OF TITLE I

    Amidst the Civil Rights movement of the 1960’s, President Lyndon Baines Johnson furthered the government’s attack on the root causes of poverty and the low academic achievement of the underprivileged by instituting a set of domestic policies which he christened “The Great Society”. By focusing on urban renewal, Johnson sought to achieve a flourishing society by enacting programs comparable to those laid out in Walter Lippmann’s 1937 classic, “The Good Society”. Much like Roosevelt, Johnson’s multilateral attack on socioeconomic disparity was rooted in the credence that investing in the American public, in order to enrich the long-term outlook of an entire generation, was essential to the U.S.’s sustainability. In Johnson’s final words regarding his outline for “The Great Society”, he underscores the need to focus on the U.S.’s school system, exclaiming:

    "Poverty must not be a bar to learning, and learning must offer an escape from poverty ... We must seek an educational system which grows in excellence as it grows in size ... It means exploring new techniques of teaching, to find new ways to stimulate the love of learning and the capacity for creation” (Johnson 1964).

    Johnson’s underlying perception was that the consequences of a failing education system coupled with widespread malnourishment would be
disastrous if they were to persist. Ultimately, because scientific data which ties nutrition to academic achievement did not yet exist, the need for a healthy and intelligent population was evident. Although this concept may seem elementary, placing value in the well-being of every citizen (especially minorities), signaled the coming of an even larger movement, a higher standard of living. As such, in order to reach that advanced level of civilization, producing the innovators who could make that future a reality necessitated the production of a workforce at a sufficient rate. Ultimately, Johnson’s speech establishes the link between poverty and low achievement; by realizing that a supplementary investment in the workers of tomorrow is vital to the growth of the U.S., it becomes apparent that improvement in the American education system cannot solely be achieved through employing better teachers or by shrinking class sizes, but will require the combined multidimensional efforts of the entire population.

In following through with his plan to create a “Great Society”, Johnson enacted the Elementary and Secondary Education Act of 1965, which sought to proactively fight against the increasing number of educationally deprived inner-city students who had been suffering from the effects of an inadequate school system. This provisionary statute effectively called for “new grants to districts serving low-income students, federal grants for text and library books, it created special education centers, and created scholarships for low-income college students... [as well as] federal grants to state educational agencies to improve the quality of elementary and secondary education” (e.
Staff 2015). Essentially, this all-encompassing supplementary program sought to fortify the American education system in every way imaginable, creating a specific section which took direct aim at combatting the low achievement of under-privileged students. The Financial Assistance to Local Educational Agencies for the Education of Children of Low-Income Families Act (more commonly referred to as Title I), was the first bill of its kind to focus on the needs of the students of low-income families. Pertaining exclusively to the “disadvantaged”, this revolutionary Act made appropriations to offset the negative effects of childhood poverty in an effort to assist affected children in obtaining a high-quality education.

**CHILD NUTRITION ACT**

Congress then broadened the scope set forth by Johnson’s “Title I” by proposing the Child Nutrition Act of 1966, which decisively affirmed the magnitude of diet as it relates to a child’s development. As a means of furthering the overall health of students in public schools, this act bolstered the advances in adolescent welfare by expanded the provided meal plans to: include a pilot breakfast program, provide funding for any additional equipment (which may have been needed to deliver the additional services), as well as a few other enhancements. Although the pilot breakfast program did not catch on, extending the “Special Milk Program” to 1970 and consolidating oversight to the United States’ Department of Agriculture, ensured that an already successful program would continue, and the entire process could cut out some of the unnecessary bureaucracy.
In moving forward, and getting back to the curricular aspect of Title I, though the Elementary and Secondary Education Act has been reinstated every year since its original inception in 1965, it had not received any revisions until 2002, when George W. Bush aptly re-named the program the No Child Left Behind (NCLB). And even as that revised version took steps to further bridge the educational achievement gap, just over a decade later, it is clear that in order for the program to function at its full potential, exploring various options for additional mandates is essential.

Today, due to the mandatory cutbacks of the 2008 recession, 2015 will be the first year since the housing market crash that funding will be returning to a budget comparable to pre-recession levels (Zembar 2014). However, given the fact that the amounts have not been adjusted for inflation or enrollment, actualizing the full potential of Title I is a little ways off.

To conclude, the emergence and evolution of Title I has effectively created a means of directly investing in the development of tomorrow’s workforce. With the ability to specify the exact features of student meal plans, the government maintains the ability to affect the overall health of everyone it serves; as such, this knowledge begs the question “Is the U.S. government wielding this authority to its full potential?” Due to the fact that the United States ranks 14 out of 40 in overall educational performance (The Economist Intelligence Unit 2014), it should be abundantly clear that the U.S. needs to invest in its future now more than ever.
In taking a look at the current standings of the overall academic achievement in the U.S. and comparing it with the overall achievement of foreign countries, recognizing the need for improvement is quite apparent. As a simple increase in the budget may be the initial response to this dilemma, in comparing the percentage of GDP that the U.S. spends on education with the amount that top-performing Asian countries spend on education, it becomes clear that higher funding does not always translate to higher performing students. In fact, the U.S. spends nearly twice that of several Asian countries. According to a recent study by Pearson’s biennial “Learning Curve” study, as of January 2015, the top ten performing educational systems in the world are as follows: 1) South Korea, 2) Japan, 3) Singapore, 4) Hong Kong, 5) Finland, 6) United Kingdom, 7) Canada, 8) Netherlands, 9) Ireland, 10) Poland, and U.S.A. coming in 14th (The Economist Intelligence Unit 2014). And in breaking down the total percentage of GDP (Gross Domestic Product) spent on education, of the top ten ranking countries, relative to other Asian countries, South Korea is one of the highest spenders in national education (given its unwavering ability to maintain its place as one of the top ten achievers), with a 2010 high of 7.6% (ICEF Monitor 2014); Japan spent 3.8% in 2010, 3.8% in 2011, and 3.9% in 2012 (The World Bank Group 2014); Singapore spent 3.1% in 2012 (Koh 2013); Hong Kong spent 14.7% in 2010, 14.7% in 2011, and 14.2% in 2012 (The World Bank Group 2014); Finland spent 21.1% in both 2010 and 2011.
(The World Bank Group 2014); the United Kingdom spent 26% in 2010 (The World Bank Group 2014); Canada spent 5.5% in 2010 and 5.4% in 2011 (The World Bank Group 2014); the Netherlands spent 6% in 2010 and 5.9% in both 2011 and 2012 (The World Bank Group 2014); Ireland spent 6.4% in 2010 and 6.2% in 2011 (The World Bank Group 2014); Poland spent 5.2% in 2010 (The World Bank Group 2014); and lastly, the U.S. spent 5.4% in 2010 (The World Bank Group 2014). After reviewing the stats of the preceding half-decade, establishing a distinct link between expenditure on education and overall “cognitive skills and educational attainment” appears to be nearly non-existent. And if this is the case, this begs the question as to what may cause these education gaps. Although the current top three countries (South Korea, Japan, and Singapore) had also been ranked in the top ten following the 2012 survey, focusing on just a couple of these nations would be the most ideal for a societal comparison.

POVERTY & OBESITY AS FACTORS

As a nation’s poverty level would logically seem to have an effect on education, in a comparison between the United States, South Korea, and Japan there does not appear to be a correlation; as a 2009 study conducted by the U.S.’s Central Intelligence Agency confirms that South Korea had an estimated 16% of its population living below the poverty line, Japan had an estimated 16% of its population living below the poverty line in 2010, and an estimated 15.1% of citizens in the U.S. living below the poverty line.
However, there are two other major social issues which separate the United States from the other two countries, although recently one of the countries is quickly covering ground between itself and the U.S. As overweight and obesity rates in the U.S. continue to climb, they have suddenly spiked in South Korea, and like the U.S., nearly reached epidemic status (Power 2013). However, as this trend among developing nations is a new phenomenon, and the U.S. maintains its position as one of the heaviest countries on the planet (Davies 2015), Japan boasts a mere 3.5% obesity rate (Ghosh 2013).

DIETARY DIFFERENCES

In conclusion, this information ultimately propounds the concept that academic achievement is more complex than mere budgeting, and that in order to secure results, taking a closer look at the issue is essential to unearthing a better performing student. The fact of the matter is that although countries such as Japan, Singapore, and South Korea spend about 1/3 of what the U.S. spends on education, it is clear that the size of the budget is not the key to smarter students, but it is how they are using it. According to an ongoing documentary focusing on Japanese society, “In Japan, almost 100% of primary (elementary) schools serve lunch to their students, and so do about 80% of middle schools.” (Ohata 2015) However, unlike Japan, only until recently has the U.S. government made student diet a priority. And although the CDC has stated that “schools should ensure that only nutritious and appealing foods and beverages are provided in school
cafeterias ... [and] nutrition education should be part of a comprehensive school health education curriculum”, only until recently has the federal government examined the system’s level of adherence.

**JAPAN’S EMphasis ON NUTRITION**

In 2005, Japan enacted a law on food and nutrition education, which affirms the importance of children learning proper eating habits in life, and proactively promotes food education; for example, unlike most school lunch programs in the U.S., the meals in Japan are made completely from scratch. Another aspect of the lunch program in Japan that sets them apart from the U.S. is an on-campus school nutritionist who is tasked with formulating a menu which is expected to be well-balanced, fulfill specific nutritional criteria, and take into consideration what the children are eating at home. Keiko Ito, one of Tokyo’s public school nutritionists, maintains that public schools in Japan constantly strive to “serve items that require quite a lot of time and effort, as these might be regarded as tough to make at home” (Ito 2010). This passion to exceed the ordinary in attempt to provide the best possible meals for students displays Japan’s true dedication to the health and overall welfare of their future generations. Throughout public schools in Japan, lunch programs both maintain and achieve the greatest level of nourishment by establishing a standard of specific parameters by which each meal must adhere; for example: rice, fish, miso soup, and vegetables are most often the staples of the provided lunches. And though this regiment may sound dull or could possibly become tiresome, schools in Japan find ways around
this by sometimes replacing rice with noodles and/or replacing the fish with meat in order to preserve the respective carbohydrate and protein portions. Additionally, most elementary schools in Japan take this concept a step further by providing meals that are not linked to traditional Japanese culture. In fact, the Japanese school system makes a point of it to serve cuisines of other cultures as an opportunity to provide educational lesson into foreign cultures. Koji Seki, the principal of an elementary school in Japan, stresses this theme by stating that:

"the significance of school lunches in Japan goes beyond just eating lunch at school ... school lunches are part of the education here, not separate from it ... school lunch teaches children about their health, about nutrition, and about their bodies. A school lunch nourishes the mind, as well as the body, that’s what school lunch is all about”.

As such, although the meal plans remain largely static (in regards to nutritional value), the schools have been able to retain a great deal of fluidity. However, this model and attitude towards student health has unfortunately not been reflected in the U.S. Since the NSLP’s initial launch in 1966, many of the guidelines regarding the nutritional requirements for school lunches have not been updated to accommodate the modern standards necessary for adolescent development, and it has now become apparent that American society has been forced to pay the price.

In summation, although each countries’ poverty rates and percentages of GDP spent on education would logically seem to have some correlation to the overall academic achievement of a country, an actual link, does not appear to exist. However, while a population’s diet would seem much less
likely, the fact that Japan not only places a high value on the food itself, but on its entire philosophy towards food in general, and consistently reaches a place in the top ten nations of academic achievement, does suggest that it may be a factor. Nonetheless, at the very least, it should be evident that a concurrence between an emphasis on diet and overall academic achievement does exist. Ultimately, this inference leads to a set of inquiries along the lines of: “Does diet, in fact, play a role in the development of an adolescent’s lifelong educational attainment?” and if so, “should the U.S. make the diet of children in public school more of a priority?”

CHAPTER 3 WHY IS THE DIET OF ADOLESCENTS AN ISSUE?

AVERAGE NUTRITIONAL DEFICIENCY

As the general population within the U.S. understands that a fundamental importance lies within the diet of adolescents, many do not realize that a large portion of this nation’s children are not being provided with the essential nourishment for optimal development. In fact, studies conducted by the Center for Disease Control (CDC) have actually found that:

"Most U.S. youth: do not meet the recommendations for eating 2½ cups to 6½ cups* of fruits and vegetables each day, do not eat the minimum recommended amounts of whole grains (2–3 ounces* each day), [and] eat more than the recommended maximum daily intake of sodium (1,500–2,300 mg* each day)"

LONG TERM EFFECTS

In the long run, these figures indicate that a poorly sustained diet can lead to a whole host of physical problems, such as: stomach, prostate, esophageal, colorectal, and lung cancers, as well as a propensity for obesity. In an effort to make the public more aware of this significance, and the potentially long-term effects of a healthy or unhealthy diet during adolescence, the CDC has officially stated that,

"Hunger and food insecurity (i.e., reduced food intake and disrupted eating patterns because a household lacks money and other resources for food) might increase the risk for lower dietary quality and undernutrition. In turn, undernutrition can negatively affect overall health, cognitive development, and school performance” (Kaiser LL, Townsend MS. 2005) (Alaimo K 2001) (12.Kleinman RE 1998).

As these official statements clearly establish a direct correlation between diet and both “cognitive development, and school performance”, it should be abundantly clear that the CDC should play a major role in the formulating of school lunch plans. Although, they would obviously relinquish the authority of actual recipe design to the chefs, constructing a comprehensive blueprint of what types and amounts of nutrients are crucial at each stage of adolescent development could be key to actualizing the potential of America’s youth. As the purpose of the CDC is to “increase the health safety” of the nation, it just makes sense that making an investment in the initial development of the U.S. population should be one their highest priorities. Simply by establishing healthy eating habits in the entire U.S. population early in life, is logically the best method for increasing widespread health
safety. Because eating healthy could barely even qualify as preventative care, it would also most likely be the most cost-efficient as well. And by keeping the school lunch programs up-to-date on the latest-and-greatest knowledge of food sciences, cultivating an entire generation of exceptional students might not be so far-fetched.

EFFECTS OF AN ADEQUATE DIET

Furthermore, the CDC has also stated positive effects of an adequate diet. For example, maintaining a healthy dieting practices: “promotes the optimal growth and development of children, helps prevent high cholesterol and high blood pressure and helps reduce the risk of developing chronic diseases such as cardiovascular disease, cancer, and diabetes ... and helps reduce one’s risk for developing obesity, osteoporosis, iron deficiency, and dental caries (cavities) (Dietary Guidelines Advisory Committee 2010) (CDC 1998). And most importantly, regarding students, “eating a healthy breakfast is associated with improved cognitive function (especially memory), reduced absenteeism, and improved mood” (HL 2005) (Rampersaud GC 2005) (Hoyland A 2009).

SOCIETAL EFFECTS ON DIET

As it should now be evident that every student’s diet can be in direct correspondence with their educational attainment, understanding that aiming to establish healthy eating habits even before grade school, should also be taken into consideration. Today, society is much different than it was only a
quarter of a century ago. In most families, both parents work, however, this was not the norm in the 1970’s. And as a result, parents have changed their dining habits due to the fact that there is simply not enough time to consistently prepare nutritionally well-rounded meals. A recent study by the CDC concluded that “As lifestyles become more hectic, fast-food consumption has become a growing part of the American diet” (2. Paeratakul S 2003), which ultimately accounts for the drastic increase in foods heavy in saturated fats (e.g. meats and cheeses)². Unfortunately, many parents in the U.S. often opt for faster, more convenient options, which tend to much less healthy and can actually be detrimental to a child’s development. In comparison, when most households did have a stay-at-home-parent, that parent often possessed more autonomy in regulating the meals that their family consumed and as a by-product, was more concerned with what the family ate. As such, if that is no longer an option, finding a way to address that need should also be investigated. One of the simplest solutions to this growing demand for stability in the common adolescent diet would be to institute a universal preschool program. By providing a dependable foundation for satisfactory eating habits, parents could not only spend the time they need focusing on their careers to provide for their family, they would also have the assurance that their children would be receiving all the necessary nutrition to begin elementary school with the most suitable health and schooling. Because federally-ran programs typically come with a strong negative connotation, creating a mandate with subsidies would not only benefit the students by making them more apt to success once they reached
elementary school, but it would also stimulate the economy by creating the
jobs necessary to compensate for the influx of demand for services. The
United States would benefit from universal Preschool through an infinite
amount of ways. As it is already widely accepted that preschool dramatically
improves the chances of a child’s success in elementary school, due to the
countless statistics which support that claim, a slew of studies conducted
within the past decade actually support the theory that the adoption of a
universal preschool program will benefit the U.S. Ultimately, the endgame of
a preschool is to better prepare the child for elementary school, which will
contribute to their success in middle school, high school, college, and then in
their hunt for a job; in the end, cultivating contributing members of society is
the final goal. In accordance with these statistics and the overall line-of-
thinking, the more people that eventually contribute to society the better off
the country.

At the end of the day, this all boils down to one simple fact, where
poverty exists, low achievement exists. Furthermore, due to the
circumstance that many students of a lower socioeconomic status depend on
governmentally subsidized meals as their sole source of daily sustenance, it
is imperative that these meals provide as much nourishment as possible. As
such, the primary focus must shift to discovering the most efficient means of
assisting the underprivileged youth of the nation. Due to the fact that
“students raised in poverty are especially subject to stressors that undermine
school behavior and performance” (Jensen 2009), working harder to aid
impoverished students in their pursuit of education will always be the best option compared to the alternative.

CHAPTER 4 COSTS OF AN UNEDUCATED & FOOD INSECURE POPULATION

INCARCERATION RATES

Currently, as the United States retains “about 1.6 million prisoners in 2010, according to the latest available data from the Bureau of Justice” (Tsai & Scommegna, 2012), Japan’s prison population is currently just under 63 thousand, while South Korea’s prison population is just under 48 thousand (prisonstudies.org Staff, 2014). Ultimately, although incarceration rates obviously reflect the quality of life within a country, it is most likely not the deciding factor in how well the general population of students perform in school. As such, the obvious questions these statistics raise are: “why does the United States have such a high incarceration rate?”, “Is there a root cause behind the high propensity for American citizens to commit crimes?” and lastly, “Is there a common element shared by these convicts?”

LINK BETWEEN “WESTERN DIET” & VIOLENCE

According to a leading producer of evidence-based health news for consumers and physicians, Americans are taking in “too many calories” (Chris Woolston 2015), due to the fact that most Americans subscribe to a “Western diet”, which, “in addition to fats and calories … is loaded with cholesterol, salt, and sugar” (Chris Woolston 2015). And though this may
not come as news, the implications that stem from such an unhealthy population may be thoroughly shocking.

According to multiple studies conducted by CAPT Joseph R. Hibbeln, M.D. (Acting Chief of the National Institute on Alcohol Abuse and Alcoholism and the National Institutes of Health), has found that countries with a high proliferation of consumption of junk foods packed with omega 6-fatty acids have experienced increased levels of murder rates since the 1960’s, whereas Japan’s rate have remained low. (Lawrence 2006). Once again, as the dietary habits of the West are compared to those of Japan, the link between the vicious cycle of poverty, violence, and malnutrition becomes thoroughly evident. Furthermore, in a

"pilot study on 30 patients with violent records found that those given omega-3 supplements had their anger reduced by one-third, measured by standard scales of hostility and irritability, regardless of whether they were relapsing and drinking again” (Lawrence 2006).

Essentially, while recognizing the obvious connection between a poor diet and its negative impacts, it is crucial to understand that there is also a correlation between healthy diet and the positive impacts.

In a study conducted by the Kushi Institute, prison inmates with the lowest levels of serotonin and blood sugar were most likely to exhibit “impulsive behavior patterns” (Esko 2015), thus displaying a chemically caused lapse in judgement and the increased likelihood of irrational behavior. Ultimately, “researchers found that 81 percent of repeat offenders had abnormally low blood sugar levels. Low levels of serotonin, together with low levels of blood
sugar, characterized 84 percent of the repeat offenders studied” (Esko 2015).

And by understanding the link between diet and a propensity for violent behavior, the realization that the disadvantaged can be helped simply through dieting alone provides a sense of assurance that something can be done to aid those around us out of poverty. But most importantly, before a lackadaisical approach to solving this social ill can be formulated, realizing what is at stake and how dire the situation in the U.S. already is crucial to recognizing the legitimate level of urgency.

Over the course of the past couple decades the prison population in the United States has grown across the board, however, though many might point to race as a factor, according to a 2012 study conducted by Becky Pettit (a Sociology professor at the University of Washington), the percentage of incarcerated African-American males without a high school diploma (or G.E.D.) has nearly doubled and the percentage of white men without a high school diploma (or G.E.D.) has tripled, between 1990 and 2008 (Pettit, 2012). As these statistics clearly demonstrate that educational disparity is an epidemic that crosses racial lines and that the system has been failing our citizens for a long time. Furthermore, over the past decade, this deficiency has had some serious economic costs, costs which the American taxpayer has had to pay. However, as dismal as many of these statistics may appear, the beginnings of both private and governmental programs have started pushing society back in a healthy direction.
Although student performance may be lacking, it should now be evident that results are not always a direct indicator of the quality of the teacher. As such, the development of both governmental and non-governmental organizations have taken it upon themselves to develop programs which seek to aid students in the learning process, both inside and outside the classroom. Furthermore, as Title I was created solely for the purpose of providing the most basic means necessary for survival, it is clear that making the children a part of the solution may be the next step in creating a solution to one aspect of malnourishment. In accordance with this solution, a number of programs aimed at getting children more involved with their own diet has recently begun to emerge.

EDIBLE SCHOOLYARD PROJECT

In 1996, the first major project created with the purpose of connecting students with their food, was by famous restaurateur Alice Waters in Berkeley, California. Waters’ Edible Schoolyard Project was established to "build and share an edible education curriculum, from kindergarten through high school ... for gardens and kitchens to become interactive classrooms for academic subjects, and for every student to have a free, nutritious, organic lunch" (Staff, Chez Panisse Restaurant & Café 2015). In line with her restaurant’s (Chez Panisse) focus on promoting a healthy diet while contributing to the local economy, Waters serves as the trailblazer for both the localivore and foodie movements.
In 1999, Bon Appetit Management Company (originally a San Francisco based catering company), launched its Farm-to-Fork program, which was “a groundbreaking, companywide initiative requiring our chefs to buy at least 20% of their ingredients from small farmers, ranchers, fishermen, and food producers within 150 miles of their kitchens” (Staff, Bon Appetit Management Company 2015). Similarly to Waters’ program, Bon Appetit sought to utilize California’s natural abundance of livestock, fruit, and produce in order to provide locals with a healthy alternative to the common “Western” diet, while also contributing to the establishment of a more self-sustaining economy.

JAIMIE OLVER FOOD FOUNDATION

Next, in 2002, the Jaimie Oliver Food Foundation was created “to shape the health and wellbeing of current and future generations and contribute to a healthier world, by providing better access to food education for everyone”. And from that, his “Kitchen Garden Project”, “Ministry of Food” programme, and “Fifteen Apprentice Programme” were also created. And in 2010, he aired his television series, “Jaimie Oliver’s Food Revolution”, with the purpose of visiting America’s “food deserts” (areas without easy access to quality nutrient-rich foods) and teaching locals about what how to cook a well-rounded meal and providing them with information on how to lead an overall healthier lifestyles. Ultimately, Oliver primarily contributed to the ideal that, if people could be more informed about the
importance of diet in regards to their health, they would be more likely to make dramatic changes to their own lives through slight alterations in their eating habits.

“HEALTHY HUNGER-FREE KIDS ACT”

The most recent advancement in national policy regarding the health of students came into fruition in 2014, from First Lady Michelle Obama. Her “Healthy Hunger-Free Kids Act” is a multi-faceted attack on poverty and educational disparity through a collection of progressive reform mandates related to the National School Lunch Program as well as the School Breakfast Program. Essentially, this act serves as the skeleton for school wellness policies at the local level. By encouraging consistency and the sharing of past, current, and future outcomes of varying school food programs in order to collectively develop and produce the most efficient, the endgame of this act is “to support a school environment that promotes sound nutrition and student health, reduces childhood obesity, and provides transparency to the public on school wellness policy content and implementation” (Local School Wellness Policy Implementation Under the Healthy, Hunger-Free Kids Act of 2010 2014)

CHARTER SCHOOL LUNCH PROGRAMS

Another recent advent which has aided the rebound of students is the charter school model, which similarly to public school, requires no tuition in order to attend. However, unlike traditional public schools, they do not have
to abide by many of the district regulations. On the other hand, a charter school still receives its funding from the district, and in exchange for funding, the charter school must meet agreed upon quotas relating to GPA and even attendance. As a result, many charter schools have chosen to lease out their lunch program contracts to private companies in order to receive better service than the districted schools. For example, D.C. Preparatory Academy has paired its schools with Revolution Foods ("fresh food company dedicated to supporting schools and food service directors by offering fresh, hand-prepared breakfast, lunch, snack and supper meals and products" [Revolution Foods, 2015]), in an effort to up the nutrition level for their students. Since its original founding in 2006, Revolution Foods has grown from its humble beginnings in Oakland, California to serve schools all over the United States, including Northern and Southern California, New York and New Jersey, Colorado, and even Louisiana. Primarily focusing on inner-city schools, Revolution Foods serves as a prime example for how the government could assist schools in bringing fresh, healthy food back to the kids that need it the most.

HEAD START

Lastly, expanding already beneficial after-school programs such as California Head Start, which: maintain nutritional standards for the snacks they give their pupils, employ individuals that are trained to work with the parents in order to assess the nutritional needs of each child, and set up a meal plans that meet those needs, would be another agreeable way that the
U.S. could improve the current system. In fact, “Head Start sites participate in the CACFP program and must have a registered dietitian review and evaluate their menus” (French 2013). Due to the fact that after school programs are carrying the burden of providing a decent well-rounded meal at the end of the day, presents the need for a more efficient federal lunch program. Furthermore, much like universal preschool, allowing for private companies with agreeable business models to take the burden of figuring out the individual nutritional needs of each of the millions of students within the U.S. may be the most efficient method of properly providing for them.

CHAPTER 6 CONCLUSION

As most are familiar with Morgan Spurlock’s documentary about what a poor diet can do to a person, as well as a few of the irreversible effects of maintaining such an insalubrious lifestyle (Spurlock, 2004), when looking at society as a whole, it quickly becomes apparent that those effects are equally multiplied to scale. However, in Spurlock’s case, whereas a few of the health effects were irreversible, treatment of individuals within a society can have profound results. Furthermore, if diet continues to remain largely off of the federal agenda, a myriad of major social and economic challenges will become undoubtedly worse.

As the purpose of this analysis has been to establish the inherent link between an individual’s diet and their educational attainment, survey the studies behind development during adolescence, review a few of the consequences of a malnourished and/or uneducated population, and list a
few of the beneficial governmental and non-governmental programs, it has ultimately been to formulate a contention for the ever-growing need for comprehensive Title I reform. As such, since “demographic trends will cause a steady increase in the number of very dependent older persons needing LTC [long-term care] services” (Feldstein, 2003); and following the advent to the Affordable Care Act, “what will this equate to, financially, to current taxpayers?” “If the greatest percentage of the U.S. population is unhealthy and unable to care for themselves, what will be the extent of the medical bills they will incur over the course of their lifetime?” And lastly, “if they are unable to pay, and a family member is called to ‘provide service’ to their relative whom is no longer capable of caring for themselves, what will be the cost incurred for the loss of work?” At this point it should be thoroughly understood that not only are there initial costs of an unhealthy population, but also long-term costs.

Due to the fact that caring for the welfare of future generations is as much of an ethical concern as it is an economic concern, solving this complex issue should be a joint effort between both the U.S. government and the domestic business community. By perhaps offering financial incentives to fledgling companies, or even well-established ones, whose goal is similar to those of the Bon Appetit Management Company or Revolution Foods, the above-all goal should be to create and maintain the most efficient, feasible, and sustainable program which could provide meals to public school students. And in return, the business community would not only be provided
with the top-notch scholars it so desperately needs, but also not have to pay higher tax rates to compensate for the long-term costs of a violent and unhealthy populace. In summation, it pays to be healthy.

Indeed, God the Father created our bodies, God the Son redeemed them, and God the Holy Spirit indwells them. This makes our body the very temple of the Holy Spirit of God. Those who do not belong to Christ do not have the Spirit of Christ residing in them (Romans 8:9).
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**CHAPTER 8 APPENDIX**

1 "demonstrated relationship between food and good nutrition and the capacity of children to develop and learn, based on the years of cumulative successful experience under the National School Lunch Program with its significant contributions in the field of applied nutrition research, it is hereby declared to be the policy of Congress that these efforts shall be extended, expanded, and strengthened under the authority of the Secretary of Agriculture as a measure to safeguard the health and well-being of the Nation's children, and to encourage the domestic consumption of agricultural and other foods, by assisting States, through grants-in-aid and other means, to meet more effectively the nutritional needs of our children" (P.L. 89-321 1965)

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