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How Has The Food Industry Manipulated The Way Consumers Perceive Food And Health?

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Introduction

Food is the most advertised commodity in the United States and food corporations spend on average over $36 billion a year on marketing and advertising (Albritton 172). Seventy percent of total advertising goes to market convenience foods, candy, snacks, soft drinks, desserts and alcohol (Albritton 172). As a result of the wide range of marketing on an even wider range of products, consumers have been taught to feel they have a considerable amount of choice. Ironically despite the array of brand-named commodities that give off this impression, only a few giant corporations control much of what is being offered. Despite the sense of power one feels in choosing Lays® over Doritos®, they were always going to be rewarding the same company nevertheless. Not that choice whether existent or nonexistent is a bad thing, rather the feeling that a person has full knowledge of whatever it is that their choosing to purchase is the problem. (Albritton 166). This idea of choice that holds hands with a supremacy of knowledge tends to aid the consumer in believing they have made a well-considered decision with full comprehension of the purchased product. However this understanding is a facade created by marketing, strategically secreting the real ingredients being consumed.

In Chapter 16, "The Viacom Generation", of her book, *The Consumer Child and the Corporate Parent,* scholar and researcher of consumerism and marketing, Juliet B. Schor, recounts a disturbing story of a child acting out in a full fledged temper tantrum when he doesn't get his way after asking for a specific food. Schor coincidentally was on her way to a food marketing seminar taking place in one of Boston's teaching hospitals when she overheard the

toddler asking for McDonald's. The request came repeatedly as they neared the main lobby when Schor looked up and realized why: the fast food facility was on the hospital's premises. By the time both Schor and the family had reached the restaurant, the young boy was in a full fledged outburst, completely "out of control and inconsolable" (206).

This incident is one small example demonstrating the overall impact of the influences of corporate branding. Not only has the American public shifted so far away from nutritional awareness and proper health ideologies, but just as important, allowed corporations to take over their nutrition education, as well as manipulate their consumption and purchasing decisions.

Literature Review

In 1974, multiple studies conducted by the U.S Department of Agriculture and published by the Oxford University Press indicated that many Americans were improperly nourished. In attempt to solve this issue and provide nutrition information, the Federal Trade Commission disseminated a survey to assess the extent to which consumers would want and use nutrition labels. Based on multiple studies conducted by the USDA and FDA the research results were consistent: Consumers indicated they not only want nutritional information-- just as important, they were willing to pay extra to get it (Jacoby, Chestnut, and Silberman, 121). Considering Albritton's theory, that I'll reference as "choice entitlement", consumers felt because they were making informed decisions among a wide range of food options, they confidently understood what was in the food that they were choosing to eat. I suggest they would be able to fully comprehend nutrition information on packages when organized and presented to them via labelling. However the amount of individuals who wanted nutrition information differed greatly from the amount of individuals who understood what each category of the nutrition label meant.

In 1976 a series of quizzes on the subject of nutrition was administered to a sample of 172 college undergraduates. Students were asked to provide some estimate of the quantity of each nutrient needed in their own daily food intake. The results were highly inaccurate, and proved that most had little to no real knowledge of their nutritional needs. Respondents felt that they needed at least four times the amount of protein as recommended by U.S. RDA standards.

Figure 1

PERCEIVED DIETARY REQUIREMENTS BY NUTRIENTS

Nutrient	Estimate[a] of actual needs	Mean reported needs		
		$\bar{X}$	S.D.	Range
Males				
Calories[b]	3,000	1,966	1,367	120–6,000
Carbohydrates[c]	—	1,216	330	2–2,000
Protein[c]	52	202	297	7–1,600
Fat[c]	—	125	262	0–1,600
Females				
Calories[b]	2,100	1,882	795	500–6,000
Carbohydrates[c]	—	179	335	2–1,800
Protein[c]	46	214	364	2–1,800
Fat[c]	—	124	306	0–1,800

[a] Per U.S. RDA allowances, Food Nutrition Board, 1973.
[b] The data on calories reflect the absence of one male subject whose exceedingly incorrect estimate (100,000) exerted a substantial biasing effect on the data of the remaining 110 subjects.
[c] Units are in grams.

Figure 2

SEQUENTIAL CONSIDERATION OF NUTRITION INFORMATION

Item	Percentages	
	Total sample	Subsample
Calories		
Stated awareness	82.1	89.5
Stated usage	57.1	69.7
Knowledge (ability to define)	16.3	15.8
Knowledge of daily needs	16.3	15.8
Protein		
Stated awareness	82.1	89.5
Stated usage	57.1	69.7
Knowledge (ability to define)	6.5	7.9
Knowledge of daily needs	2.7	2.6
Carbohydrates		
Stated awareness	82.1	89.5
Stated usage	57.1	69.7
Knowledge (ability to define)	7.6	9.2
Knowledge of daily needs	1.6	3.9
Fat		
Stated awareness	82.1	89.5
Stated usage	57.1	69.7
Knowledge (ability to define)	1.6	2.6
Knowledge of daily needs	1.1	1.3
Sample size	184	76

Estimates for carbohydrates and fat were similarly high. To illustrate: of the 82 percent stating an awareness of calorie information on the label, only 57 percent of the entire sample intended to use this information. Of this 57 percent, only 16 percent (of the entire sample) displayed the ability to define both the word calories and some knowledge regarding their daily caloric needs. The percentages therefore indicated that out of the significant portion of people planning to use

nutrition labels, very few had any proper understanding of what they were looking at or how to apply it to their daily food intake (Jacoby, Chestnut, and Silberman 123).

In 1998, a similar study was conducted where principal meal planners in a sample of U.S. households, that completed the USDA's 1989-1991 Continuing Survey of Food Intake of Individuals (CSFII), were contacted in the follow-up Diet and Health Knowledge Survey (DHKS). They were asked a series of questions about their diet, health, and nutrition knowledge (Cypel et al., 1996). Eighty-six percent of the CSFII households completed the DHKS. The sample consisted of 4,028 complete observations. After a series of questions regarding dietary fats and cholesterol knowledge, most failed to truly show an understanding of what cholesterol was and where it could be found. This further proved that between 1976 and 1998, twenty years after the first survey, and 8 years after the Nutrition Labeling and Education Act, (NLEA) had passed, Americans showed very little signs of improved health and nutrition awareness.

Figure 3

Dietary fats and cholesterol knowledge: α estimates and standard errors (in parentheses) of reduced-rank models

Question (1)	% Correct (2)	Model I $\hat{\alpha}$ (SE) (3)	Model I R^2_m (4)	Model II $\hat{\alpha}$ (SE) (5)	Model II R^2_m (6)
1. Butter/margarine	88.6	0.962 (0.089)	0.075	0.744 (0.088)	0.060
2. Egg yolks/whites	86.2	1.152 (0.098)	0.104	0.744 (0.089)	0.060
3. Hamburger regular/ground	87.0	0.959 (0.092)	0.075	0.905 (0.100)	0.087
4. Pork spare ribs/loin chops	72.8	0.706 (0.070)	0.042	0.619 (0.074)	0.042
5. Hot dogs/ham	62.5	0.984 (0.084)	0.078	0.906 (0.087)	0.087
6. Sour cream/yogurt[a]	87.8	1.000 —	0.081	1.000 —	0.104
7. Steak porterhouse/round	59.4	0.753 (0.072)	0.047	0.546 (0.068)	0.033
8. More likely liquid	29.6	0.954 (0.087)	0.074	0.859 (0.087)	0.079
9. Cholesterol free	55.7	0.743 (0.073)	0.046	0.873 (0.086)	0.081
10. Cholesterol found	38.8	0.560 (0.063)	0.027	0.374 (0.063)	0.016
Degrees-of-freedom		242		198	
χ^2		874.93		660.64	
R^2_M		0.47		0.60	

The first two items are in response to the question "Based on your knowledge, which has more cholesterol?" The correct choice appears on the left. Items 3–7 asked "Which has more fat?" Item 8 asked "Which kind of fat is more likely to be liquid rather than a solid: polyunsaturated/saturated; equally likely to be liquids?" Item 9 asked "If a food is labeled cholesterol free, is it also: either high or low in saturated fat/low in saturated fats; high in saturated fats?" Item 10 asked "Is cholesterol found in: animal products like meat and dairy products/vegetables and vegetable oils; all foods containing fat or oil?"

[a] α normalized to one for identification.

In 2001 the World Health Organization noted the dramatic increase of obesity within the past 20 years, and declared obesity a global epidemic (Atkinson and Nitzke 1018). Additional

studies done throughout the mid-2000's on the effects and results of the NLEA indicate that the labeling initiative had also resulted in an overall lower brand nutrition (Moorman, Ferraro, and Huber 734). In other words, food became less nutritional. Marketing and nutrition analysts such as Christine Moorman have spent decades researching this quandary, and proposing new theories and policy initiatives in order to counteract the data. They theorized that "managers were nervous about making improvements to nutrition because they believed that consumers care more about taste than nutrition" (Moorman, Ferraro, and Huber 733). Their suggestions for improved strategy implications included increasing nutrition in new products and brand extensions, introducing single-serving or smaller serving packages, and increasing the value consumers place on nutrition by featuring certain "nutrition facts" on front of package labels. Little did they realize that these initiatives or glorified marketing techniques, were actually some of the biggest problems leading to the universal lack of nutrition education and overall effectiveness of the NLEA.

Food consumption is variably affected by a whole range of factors including food availability, food accessibility, and food choice, which in turn may be influenced by geography, disposable income, urbanization, marketing, religion, culture, and consumer attitudes (Kearney 2802). Within these realms, food purchasing decisions are then further influenced by cost, palatability, knowledge, and convenience (Wansink 91).

More recently, some might factor their knowledge of the relationship between food and health into these purchases, as functional food consumption is increasing in almost all industrialized countries. Functional foods may be defined as "foods and food components that provide a health benefit beyond the basic nutrition" (Kearney 2800). Busier lifestyles make it

harder to meet all nutrition requirements using average food and drinks, so the need for enhanced foods with multiple nutrition benefits residing in one product ultimately became a more efficient way of consumption.

Though how would one know or understand the functionality of foods from just the title? Surely now we can google, but the demand for functional foods began before most had as much access to the internet. Labels and marketing claims began to tie new nutritional values to old traditional foods. Food companies now marketed their foods as enhancing health, optimizing bodily functioning and performance, and delivering a broad range of targeted health benefits relating to such issues as weight management, joint and bone health, immunity, digestive health, cardiovascular health, mental performance, and physical energy. (Scrinis 194). This was the beginning of an new intimate relationship that markets helped develop between food and consumers.

When packaging functional foods, establishing a meaningful connection between the product attributes and personal health consequences will stimulate a more frequent usage. Often the package itself is the first opportunity to teach the public about the health benefits of the product, and it also provides an opportunity to change consumers' behavior towards the food (Wansink 20). Based on the sociology behind how consumers interpret health claims, these simple manipulative phrases published front and center on food packages, began to build substantial brand preferences across the board.

In addition to health claims, whole grain and natural claims created a health halo effect around a product, such exaggerating the quality or healthful properties of a food in the eyes of consumers. Consumer surveys also have shown that many people assume that foods advertised

with whole grain claims are also high in fiber (Scrinis 208). These health claims tied together with nutrition claims were the golden key into not only winning consumer trust, but product loyalty. “Knowledge about nutrition influences eating habits only when a person is motivated to act on it. The most common form of motivation is one that ties a consumer’s general knowledge about how nutrition influences health with his or her knowledge of the nutrient content of a particular type of food. Indeed, awareness of a relationship between diet and health is commonly cited as the primary factor that leads to positive changes in a person’s diet.” (Wansink 140). Consumers had no education or association of nutrition label aspects prior to the manufacture marketing. Based on studies conducted previously by the FDA and USDA, corporations knew that in order to succeed in having their products regularly incorporated into consumer’s diets, they needed to introduce a short and easy way for buyers to pick out the “health benefits” of a particular product and grow attached. This also fed upon the consumer superiority and added to consumers’ sense of complete purchasing knowledge, or rather what they thought was their complete knowledge.

A prime example of functional nutrition would be in the 1990s and the new controversy between margarine and butter. Around this time some margarine producers, such as Unilever, developed a premium line of “cholesterol-lowering” margarine products fortified with plant sterols. The production of these margarines involves adding highly processed plant components to an already heavily processed food product. These margarines and spreads were now permitted to carry the health claim, approved by the US Food and Drug Administration, that they may reduce the risk of heart disease. (Scrinis 4). These health claims were only based on a hypothesis from the 1960’s linking blood cholesterol levels and heart disease risk, rather than on any direct

evidence that consuming these varieties of margarine leads to a reduction of the incident of heart disease.

This Functional Nutritionism shifts the nutrition goal from avoiding the bad nutrients of products, to optimizing the consumption of beneficial nutrients. Ratchford raises the interesting point that convenience or the desire for saving time may have been implicated in motivating consumers to focus less on nutrition, or the ideas of nutrition (747). This argument could help prove the reason for overlooking health claim labels on products without actually considering the nutritional content of the product. Looking back on the margarine and cholesterol incident of the 1990's, we can compare it to Figure 3. The survey conducted by the USDA found that only 33% of people knew what cholesterol was or where it could be found. When reading Unilever's, or other margarine manufacturer's claims, on margarine having lower cholesterol or reducing risk of heart disease during the 90's, there was probably no way that two thirds of consumers would even be able to verify that claim by turning over the container and reading the nutrition label. Especially, when as Ratchford proposes, the average shopper is looking for convenience and not necessarily even going to think twice about further reading the package to verify the claim before they place the product into their shopping cart.

Wansink observed that consumers who saw short claims on the front of a package generated a greater number of attribute specific thoughts (e.g., "this is high in protein") and fewer general evaluative thoughts (e.g., "this is good") about the product. "General evaluative thoughts are typically associated with less involved and less effortful thinking than are attribute-specific thoughts" (Wansink 154). Analyzing the number and type of thoughts one generates when reading a package label helps us better assess whether consumers are making

general evaluations or specific attribute-level observations. Knowing that people who see shorter health claims (versus longer ones or none) will find them more persuasive is a very useful and important knowledge to marketers of food.

One of the most clear aims of this nutritional marketing is to create a "nutritional facade" around a food product: an image of the food's nutritional characteristics and benefits. This nutritional facade becomes the focus of marketing campaigns and a distractor from underlying ingredients and processing techniques used to create the food. (Scrinis 203). Nutritional marketing typically focuses on the presence or absence of one or two nutrient components of a food, such as the presence of vitamin C, calcium, omega-3 fats, or reduced quantities of cholesterol or calories. The consumer, taking these marketing claims and strategies into consideration is manipulated to feel that they now have a better understanding and education of nutrition within these foods (Albritton 166).

Research Question and Theory

In 2012, Dondeena Bradley published a response to Moorman's study, "Unintended Nutrition Consequences." in an attempt to understand Moorman's theory on why the initiation of the NLEA act, in 1990, has only resulted in increasing rates of obesity and malnutrition. Moorman's analysis supports the idea that consumers value taste more than nutrition and perceive nutrition to be negatively correlated with taste. In contrast, Bradley suggests that these foods considered "nutritious" may just contain high salt and sugar contents, in addition to their "nutritional" marketing. She concludes her commentary by stating her eagerness to see what marketing scientists uncover when exploring the impact of NLEA further in the future.

Based on the prior studies shown in Figures 1-3, it is clear that most Americans did not understand how to read nutrition labels or identify what foods correlated with certain nutrient categories. An important question is whether or not similar studies, assessing nutrition education and consumer awareness between the years of 1996 and today, would have the same results. This is one of the main questions I will be answering in my thesis and proving the answer to be yes. Additionally I will disprove Moorman's theories on why the NLEA was infective and debunk her opinions on what measures should be taken to increase nutrition education by analyzing and relating the simultaneous manipulative marketing efforts and brand brainwashing strategies and their effects on choice empowerment, consumption, and health awareness.

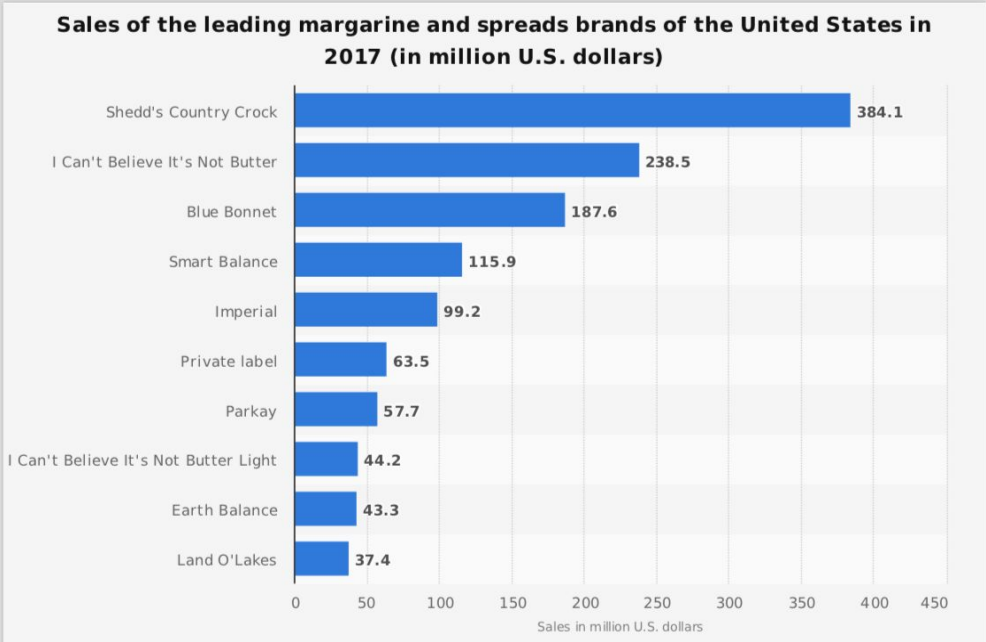
Methodology

In order to prove that between the years of 1996 and today shoppers have little to no increased knowledge of how to read nutrition labels, I reviewed nutrition labels in correlation with their health claims. Simultaneously, with the proof that most shoppers do not know how to validate claims or properly read nutrition labels, together with statistics containing the most frequently purchased products and brands, I was able to prove how food corporations manipulate our education of nutrition. I also did a literature review of different education programs in low income schools to assess what was both effective and ineffective in promoting an overall healthier lifestyle and better understanding of a well balanced nutritional diet.

Results and Discussion

To this day, the assumption of nutrition knowledge and the brand loyalty resulting from the perception of "choice entitlement" still exists. There are a myriad of examples to backup the claim that there has been very little change to the food labelling and nutrition education system, one of which is represented by America's favorite brand of butter. Figure 4 portrays the number one selling margarine and spread within the United States in 2017 (Grocery Headquarters).

Figure 4



Shredd's Country Crock, a brand under the corporation Unilever's umbrella, remains the top choice for butter with 30% more consumers than any other brand. Country Crock butter has always claimed to have a "fresh taste," but on their most recent packaging also have a "NEW simpler recipe" (shown in Figure 5). In addition to the marketing and nutrition claims, there is also have a vibrant picture depicting a sunny farm further validating the consumer thought and view that this is a "fresh" product. Next to the bottom bolded label of "Calcium", there is an additional statement of "With Vitamin D." On the back, but a lot of times listed on the front of the package there are some labels in bold stating

"Gluten Free," "0g Trans fat per serving," "No Partially Hydrogenated Oils," and "No Cholesterol per serving".

In the 2016 study, "Most Desirable Nutritional Attributes" 63% of consumers ages 18-65 said that they are inclined to purchase foods labeled "Good Source of Calcium" (PR Newswire 2016). This helps us partly understand why certain consumers would be inclined to purchase Country Crock margarine, or any other product labeled with a "Good Source of Calcium." However when looking at the ingredients on the back of the container, we can see that there about ten or so ingredients, four of which are either lengthy and or difficult to pronounce. From a marketing aspect this looks like a pretty healthy purchase. It is not only fairly priced and cost effective, but seemingly full of vitamins and calcium-two nutritional positive words. It also is free of trans-fat and partially hydrogenated oils. In a FDA study conducted in 2014, 9 in 10 adults admitted that they had heard of Saturated Fat and Trans fat, but only a quarter of those aware of either fats could tell whether they had a positive or negative effect on health and risk of heart disease (FDA Health and Diet Survey 2014).

As the average consumer, and one of the 63% of shoppers most likely to purchase a product labeled as a "Good Source of Calcium" looking for something fresh and natural (probably without preservatives), calcium and vitamin enriched, free of trans fats (even though I have no idea what they are), and no cholesterol. Buying Country Crock seems pretty nutritional and the label seems to help the consumer understand certain aspects of their diet and health that

Figure 5

they are never sure of. Except in this instance, the consumer is completely wrong and absolutely fooled. First of all this product is highly processed and the furthest thing from "fresh." Mono and diglycerides are food additives commonly used in processed foods as a texture enhancer. They are created from partially hydrogenated oils and or animal fat and in theory may transfer a small amount of trans fat into the product. Potassium sorbate is a chemical additive used as a preservative in a wide range of foods that the FDA administration deems as generally safe when used in small amounts. (Brown 44). Natural Flavor, not to be misunderstood with being natural, is flavor isolated and formulated (most likely in a lab) from the varieties of foods in which they are found, and then added back to foods to enhance flavor or maintain flavor consistency (Packard 65). Depending on your definition of natural, these flavors reintroduced back to the food as flavoring agents, typically are more artificial than they are natural. Last, but not least, is the misleading claim of "no cholesterol." Currently there is no legal definition created by any existing organization for what the claim "No Cholesterol" must mean (Brown 36). A product labeled no or low cholesterol may still contain saturated fats that raise blood cholesterol and therefore is misleading when also labeled "no fat." The 1.5 grams of Saturated fats found in the butter may raise cholesterol, or in high consumption lead to risk of heart disease (Scrinis 1), something an average shopper would never know judging from this label.

The main consumption drivers for food purchases are availability, cost, knowledge, and convenience. (Wansink 91). The knowledge portion derives from the understanding of nutrition labels a confirmatory information bias for example; we read and believe what confirms what we want to believe and do. I think this is a very crucial reason for why we allow food corporations to

manipulate much of what we understand and buy. I would also argue that this notion stems from Albritton's false sense of "consumer choice entitlement."

This "entitlement" is depicted no better than in the minds and consumer choices of the gatekeepers of the families, the ones who do the actual food shopping and meal planning. They make the decisions on which products are appropriate and/or desirable for their little Janey or Johnny (Schor 208). They're also most likely the busiest people in the family. Increasingly, the majority of lower to middle income families have working mothers and fathers. The average household meal planner/purchaser is not going to have time to think twice about nutrition labels and nutrition/health claims, which of course corporations knew.

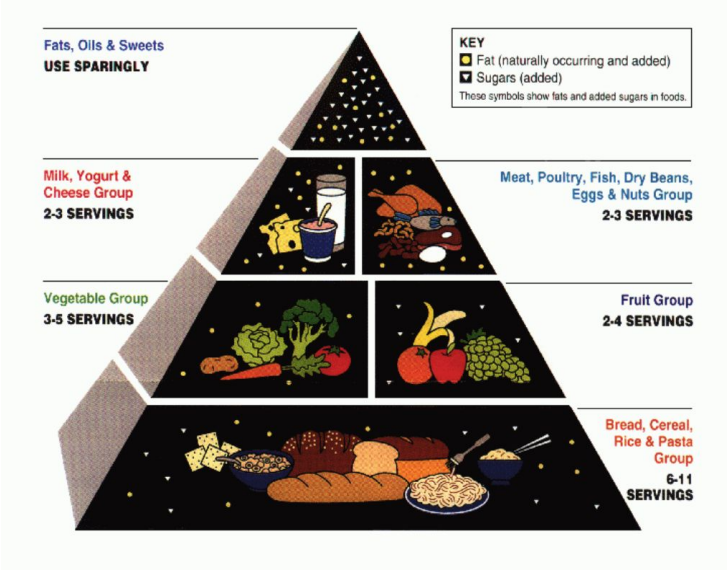
Another vital component leading to consumer manipulation that corporations conjointly recognized during the early 2000's was not only the vulnerability of consumers with their lack of accurate understanding and education of nutrition (shown in studies from previous years in Figures 1, 2, and 3), but the susceptibility of children to gain awareness to brands and stimulating imagery (Albritton 173). A study used by Albritton from 2006 estimated that children under 14 influence as much as 47% of the US household spending (172). With the overall boom of technology and increased variety of readily available media platforms which reach children, a new and important "tween" marketing category was born. For the first time, food industry marketers were able to overturn the traditional "gatekeeper model" and shift their influence to use children as they keys that now opened the gate to specific purchasing decisions (Schor 209).

According to one estimate, marketers and advertisers spent more than $15 billion directed at children in 2004, compared with only $100 spent on television advertising total in 1983 (Albritton 173). The importance and understanding of nutrition was being further masked by

ingenious marketing schemes and precise product placement. As one marketing expert said, "Corporations are trying to establish a situation where kids are exposed to their brand in as many different places possible throughout the course of the day or the week, or almost anywhere they turn in the course of their daily rituals" (Linn 94).

Due to the general shift of wealth from the public to the private sector during this time, most public schools were suffering enormously from underfunding and looked for financing opportunities from the private sector. These options became readily available as corporations were more than willing to provide ads and education materials free of charge. For corporations this meant an opportunity to ingrain more brand imagery within examples and even influence the general standard of a healthy meal. For example, "Schor reports that 'a Kellogg's breakfast curriculum presents fat content as the only thing to worry about when choosing breakfast food." (Albritton 176). Ultimately this tactic would engrain certain perceptions, whether accurate or inaccurate, about brands and basic nutrition ideologies in the children's mind from a young age.

Figure 6

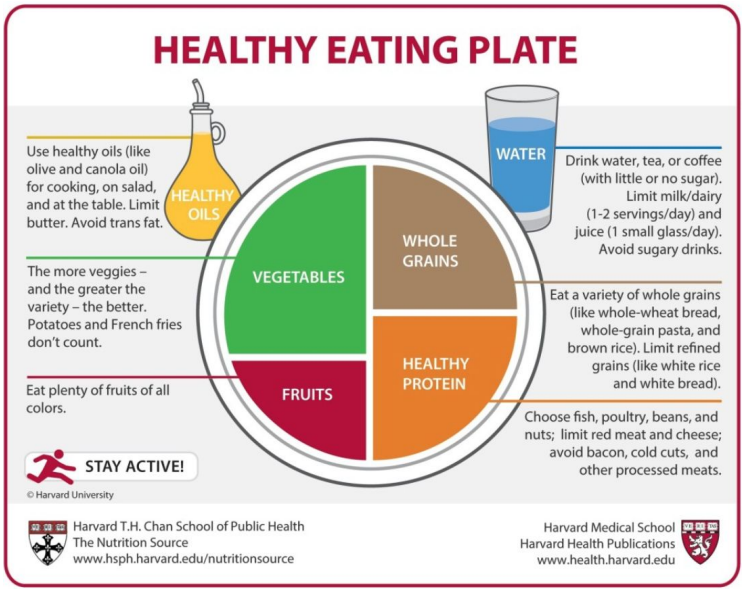


Circling back to the overall effectiveness or ineffectiveness of the NLEA, the idea that the brands are single-handedly undermining nutrition is not very hard to believe. With their minds in their early stages of development children are eager to learn and absorb whatever

information is placed in front of them. Thus when faced with the task of choosing a breakfast meal, why would children not be prone to choosing Frosted Flakes, a sponsor of programming on PBS and a now familiar "nutritious brand" within their textbook. Prior to this corporation-take-over, students had little to no previous withstanding nutrition education. At the very most they may have taken

a home-economics class and or briefly learned about the food pyramid in their biology course. This image (shown in Figure 6), of the USDA's original 1992 Food Pyramid provides little justification for not consuming foods such as cereals or other packaged brand-named breakfast items and almost no evidence for verifying the self-proclaimed nutritional values within those food products. This icon that symbolized and provided for a majority of the nutrition standards and education nationwide, in actuality implied inaccurate health claims and assumptions across the board. Even before its release, the Pyramid was a source of controversy criticized by nutritionists and public health officials as an "exercise in jurisdictional malfeasance." Released anyway a year later with little to no changes from its critiques , by 2004 the Pyramid was widely accepted as the most effective way to illustrate nutritional information (Perelman 70).

Figure 7



Perhaps consider using Harvard, School of Public Health's, "healthy plate model as a comparison to the food pyramid shown in Figure . This model was introduced in 2011 with a much more detailed description of how to maintain a healthy diet. To start the plate visual is much easier to understand versus the pyramid, in which the hierarchy of foods could be easily misleading. The plate better displays that vegetables should be the most consumed thing in a healthy diet which the pyramid does not at all suggest. The healthy plate also gives examples which grains, proteins and oils are healthy and which should be limited, something the pyramid also does not specify. My favorite part in particular of the healthy eating plate is the water cup that is included, and the suggestions for coffee/tea intake, and the advice to limit sugary drinks. Additionally the plate does not include sugar at all as something that should be consumed, unlike the pyramid which lists an area for sugar.

With this knowledge of what a balanced diet looks like (Figure 7), versus the only knowledge of what most people know to be a healthy diet (Figure 6), we can now understand

Figure 8

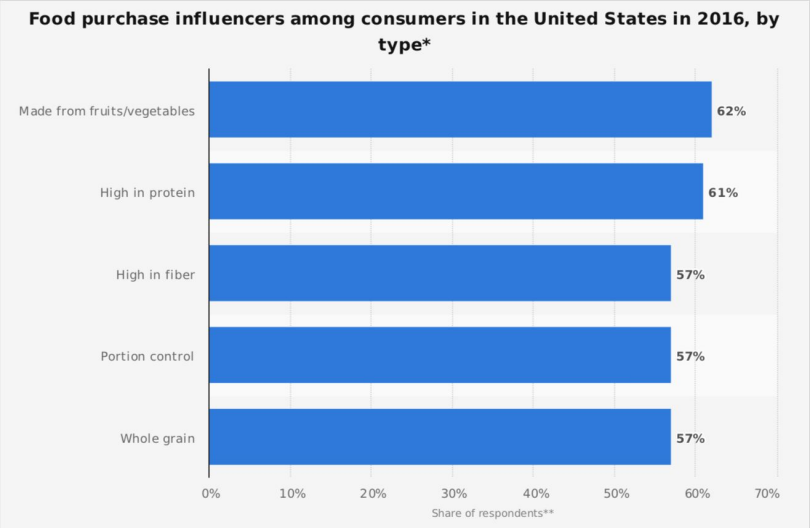
average consumer decision. Cereal is one of the most common instances where labels misguide the consumer. Parents with little nutrition

education have little reason to not purchase Mini-Wheat® cereal and Strawberry Pop-Tarts®, products their children have seen advertised on TV and in their school books, by Kellogg's®. When the average shopper picks up a package of Pop-Tarts® and scans the front of the box they'll read: "200 Calories, 1.5 g of saturated fat, 170 mg sodium, 16 g of sugars, and the nutrition claim above the picture of fresh looking ripe strawberries stating "baked with real fruit." When continuing down the cereal aisle and picking up Mini-Wheats®, the average consumer will also read "excellent source of fiber & made with 100% Whole Grains, "190 calories, 0g of sat fat, 0 mg of sodium, and 11 grams of sugar." Based on their education and perception of a "healthy diet," they have no further reason to deem it unhealthy for them or their children. On the package there is also a Kellogg's reward stamp that the parent can also send into school with their child. Right there, in those decisions, are prime examples of how corporations have not only used labels to manipulate nutrition and purchasing choices, but additionally "brand-wash" consumers into aiding that manipulation and ensuring the consumption of their products. It has already been proven earlier that there is over 50% chance that the average consumer has no knowledge of types of fat or an understanding of what saturated fat even means. According to a different study (shown in Figure 10) conducted by Nielsen in 2016, there is over 50% chance that labels containing "made from fruit/vegetables," "high in fiber," and contains "whole grain" will additionally influence the average purchaser's decision. When a typical shopper, representing over half the people studied, sees these labels they will most likely validate the food

Figure 9

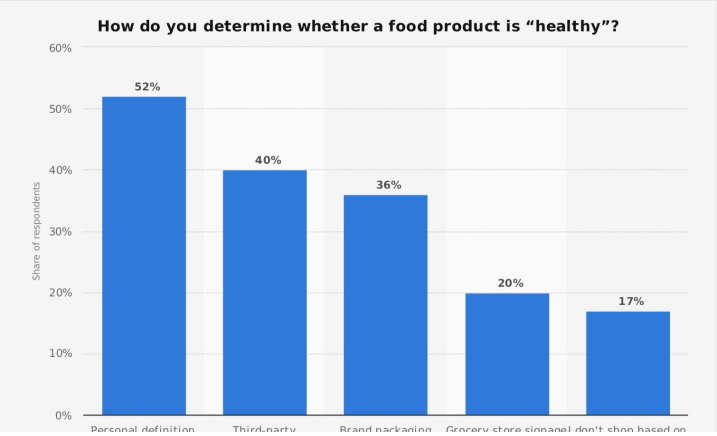
as being “healthy.” The dilemma arises when the consumer attempts to determine what is healthy. Figure 11 concludes that as of 2015, 52% of consumers use personal definition and ingredients analysis to deem a food as healthy, and 36% use brand packaging claims.

Figure 10



The 62% of people looking for important nutrition claims on packaging such as “made with fruits/vegetables” are the same average consumers using those claims to aid their food purchases and deem their products as “healthy” Additionally if the other 52% of average shoppers are referencing their personal definitions of health to analyze the ingredients in the cereal products, they are still able to deem the products as nutritious. The average consumer’s only current knowledge of nutrition and health guidelines are shown in the Food Pyramid in Figure 6. If the average purchaser were in fact to reference it, as 52% of consumers do, they would see grains and cereals in largest row at the bottom of the triangle, with fruits and vegetables in the second largest row right above it. This knowledge presented by the USDA symbolizing “national nutrition standards,” would lead them to believe that Pop-Tarts® and most cereal products, especially containing real fruits were pretty healthy.

Figure 11



When analyzing the ingredients of the Pop-Tart® against the nutrition label and nutrient claims, the consumer would first off not be able to understand the names and meanings of the several food additives and dyes listed such as Sodium Acid Pyrophosphate, Gelatin, Monocalcium Phosphate, Yellow 6, Red 40, and Blue 1. Furthermore they would not be able to pick out the four different types of sugars added and listed as some of the primary ingredients: Corn Syrup, High Fructose Corn Syrup, Dextrose, and Sugar. In fact when seeing 11 grams of sugar listed on the front of the package, the average consumers have no way to even understand the context of how much that is regarding their daily allotted intake. This is because the Nutrition Label lists the daily value percentages for every category but sugar. Thus I would make the claim that the majority of the 52% of people, from the study shown in Figure 11, are not actually validating the health of the product with their personal definition and nutrition education, but yet their "choice entitlement" and mere assumption that they are making the best purchasing decision based on the health claims they want to see and the ingredients they want to believe exist to verify those claims (Wansink 91).

This example how average shoppers purchase and perceive cereal symbolizes the average corporate manipulation of nutrition understanding, almost replacing the underlying values of nutrition with branding. Looking back at Schor's analysis, The Consumer Child and the Corporate Parent, noted in this paper's introduction, we can begin to envision the evolution of children's acute awareness of branding. Food companies have become increasingly active not only in marketing but also in funding university based scientific studies for particular food products and related nutrients. On the average these studies are found more likely to publish favorable findings for the nutrient or food under investigation, thereby lending support for the

industry sponsor's products. The more favorable studies may have then been used as scientific substantiation to support a food company's submission to regulatory agencies for approval for health claims. They may also be referred to directly in advertisements for food products, such as the example of Unilevel and margarine discussed previously (Scrinis 213).

All of this combined with previous statistics on the billions of dollars spent on marketing within schools and elsewhere can explain how we've become so distanced from our foods, their true sources, and real nutritional values. The increased production and consumption of processed foods over time has caused us to shift our understanding of these foods and associate their origins more so with a supermarket or package, rather than a place in the earth (Kirshenmann 216). However the success of recent marketing and brand awareness initiatives have moved us further to visualize and connect foods to brands more than anything else.

I would argue that there is a pendulum for how we understand and perceive food. On one end would be a connection with food where we see it in correlation with its roots and how it was grown. When we think of food we think of it in its purest form and value it in its most natural state. With the industrialization of food the pendulum would then move to the center. I believe this part of the scale to be where we see food as packages. We have distanced ourselves with where the food has come from and see the food for how it is presented on the package. Lastly on the complete other end of the pendulum, the place where I believe the average consumer now lives, would be where we see the food only as brands. We have completely lost touch with the food or food production process itself and make purchasing decisions based on brands. When we shop we value brands over ingredients and allow corporations to manipulate what we want to eat.

Further Implications

Using this theory as a guideline I will now re-address concerns, such as Christine Moorman's, with the ineffectiveness of the NLEA in relation with the failed nutrition programs initiated within schools and societies in attempt to improve widespread health issues by implementing nutrition education programs that incorporate the concepts of the NLEA.

According to the BMJ (British Medical Journal 2012), studies indicated that policies promoting consumption of fruits and vegetables, whole grains, nuts, and fish, and reduce intake of animal fats, trans fats, and sodium could prevent millions of premature deaths. The World Health Organization also stated that reduced salt intake in food and replacement of trans-fat with polyunsaturated fat (better fats) would not only be highly cost effective but cheap (Hawkes 27). Governments had already begun implementing food policies to encourage healthier eating since the WHO's Global Strategy was adopted in 2004. The main approach was providing information for consumers, taking steps in setting school food standards, nutrition labelling, fruit and and vegetable promotion, and in later years, food taxes. Hawkes claims "Since consumers have been placed in the driving seat of the modern food system, they need to be educated in its workings and the foods it produces and provided with the skills to choose wisely" (28). This statement although very accurate and recognitory of necessary nutrition education goals, left the "how" portion open ended.

The most popular proposal to increase nutrition awareness and implement a better understanding of the NLEA within schools was a nutrition class taught by nutritionists or teachers who had been trained by nutritionists. Hawkes and Moorman, marketing researchers and nutrition researchers alike all remained positive that taking these measures to implement nutrition education programs within schools would have positive outcomes for overall health.

However the programs studied and published in the British Medical Journal and the Journal of School Health proved otherwise.

Miles Ciliska and Balch Contento performed similar systematic reviews of the effectiveness of community based interventions to increase fruit and vegetable consumption (British Medical Journal). Six of the interventions in this study sample were targeted at school aged children. One of the largest was the child and adolescent trial for cardiovascular health study. Third grade students received an extensive intervention (15-24 1 hour lessons with family and food service activities) versus a non intervention control group. The post-test with a 24 hour recall showed no differences between the intervention and control group in total servings of fruits, vegetables, or fruits and vegetables combined. There was also no significant difference between cardiovascular risk factors including obesity, blood pressure and serum lipids.

In 2015 using a less assuming approach to the problem, Pamela Porter examined and studied various nutrition programs implemented across 22 different schools in New York City (The Journal of School Health). Her research involved recording and transcribing interviews with 21 members of the 22 schools, and re-sorting the results into groupings highlighting similar themes and experiences. The most successful approaches involved the integration of nutrition into the general curriculum (not just as a separate education entity), building a culture within the school that mirrors healthy living, and spreading the education across all grades that may make the education an “expected” part of a child’s school experience. Additionally sample quotes from teachers and faculty of the most successful nutrition programs mentioned implementation of “farm market” and “garden.” The least mentioned and less effective tactics were the not as hands on approaches to nutrition programming (Porter 28).

Similar results were shown in another research on the implementation and outcome of "Brighter Bites" (Journal of School Health). An initiative designed to send healthy fruits and vegetables home with students ended up having an influential impact on the children and adults as well. Most parents reported that the plan was effective in influencing the entire families eating habits. Parents reported that even after the program was over they continued to purchase the same fruits and vegetables, ones they typically never would have bought before. One parent also reported "When the children take the initiative and they want to participate in the cooking, they feel happy and especially when they want to eat it" (Sharma 291).

Programs in schools were proven significantly more effective when they do not just "teach the children" but help them "live what they learn." (Porter 27). Hawkes and Moorman failed to consider any solutions that would empower children to make better choices. I believe the only way to help people get back to a place where they care about nutrition and can see food for more than brands is to connect them to the roots of their food. The consumer "entitlement" and false sense of confidence that disconnected us so far from our nutritional values can be put back into motion, however this time backwards. If we take the reverse approach that lead us in the first place to this end of the food awareness pendulum, only then will we be able to swing back.

Empowering children by allowing them to experience food education through growing their own vegetables and helping prepare their own foods, is the only way to remove the highly stimulating and persuasive visuals of the influences of branding. This also one of the only ways to improve the future education of nutrition on a larger scale. The same way that corporations assume brand empowered children can impact family purchasing decisions and increase

consumption of highly processed foods, is the same way that health empowered children can impact families' nutrition awareness and promote healthier food choices.

Conclusion

In the documentary "The Kids Menu", Delani is a six year old student attending a nutrition education enriched elementary school. In an interview conducted at the school with Delani and her mother, Delani's mother re-tells astonishing stories of how her six year old has impacted her families' nutrition awareness. Delani was not only able to change her own mother's opinion about nutrition and food consumption by bringing home healthy recipes for smoothies and meals, but she was also empowered enough by her healthy lifestyle to emotionally turn down a trip to McDonalds.

To compare Delani's passionate feelings towards McDonald's with the opposite devoted feelings of the little boy from Schor's story, we can feel more at ease that there is hope. There is a possibility that children can break away from the brand and corporate manipulation with implementation of specific nutrition education programs. The empowerment and sense of fulfillment that comes from "doing it yourself" nutrition, runs deeper than any synthetic satisfaction that corporate brand imagery and choice can provide. Now we just need to figure out the best ways execute these nutrition empowerment programs on a larger scale and create more Delani's in the world.

References

Albritton, Robert. "AGRICULTURE, FOOD AND THE FIGHT FOR DEMOCRACY, SOCIAL JUSTICE, HEALTH AND SUSTAINABILITY." *Let Them Eat Junk: How Capitalism Creates Hunger and Obesity*, Pluto Press, London; New York, 2009, pp. 200–211. *JSTOR*, www.jstor.org/stable/j.ctt183pbv8.12.

Albritton, Robert. "CORPORATE POWER, FOOD AND LIBERAL DEMOCRACY." *Let Them Eat Junk: How Capitalism Creates Hunger and Obesity*, Pluto Press, London; New York, 2009, pp. 182–198. *JSTOR*, www.jstor.org/stable/j.ctt183pbv8.11.

Albritton, Robert. "FOOD, MARKETING AND CHOICE IN THE UNITED STATES." *Let Them Eat Junk: How Capitalism Creates Hunger and Obesity*, Pluto Press, London; New York, 2009, pp. 165–181. *JSTOR*, www.jstor.org/stable/j.ctt183pbv8.10.

Atkinson, Richard L., and Susan A. Nitzke. "School Based Programmes On Obesity: Increase Knowledge About Nutrition But Do Not Change Eating Habits By Much." *BMJ: British Medical Journal*, vol. 323, no. 7320, 2001, pp. 1018–1019. *JSTOR*, JSTOR, www.jstor.org/stable/25226931.

BARTLEY, TIM, et al. “THE MAKING OF CONSCIENTIOUS CONSUMERS: Individual and National Patterns.” *Looking behind the Label: Global Industries and the Conscientious Consumer*, Indiana University Press, 2015, pp. 37–59. *JSTOR*, www.jstor.org/stable/j.ctt16gznzj.6.

Bradley, Dondeena. “Further Examining the Impact of the NLEA on Nutrition.” *Marketing Science*, vol. 31, no. 5, 2012, pp. 738–739., www.jstor.org/stable/41687959.

Bradley, Dondeena. “Further Examining the Impact of the NLEA on Nutrition.” *Marketing Science*, vol. 31, no. 5, 2012, pp. 738–739., www.jstor.org/stable/41687959.

BROWN, JUDITH E. “The Inside Story of Nutrition.” *Everywoman’s Guide to Nutrition*, NED - New edition ed., University of Minnesota Press, 1991, pp. 27–56. *JSTOR*, www.jstor.org/stable/10.5749/j.ctttsmh3.7.

Burk, Marguerite C. “Some Analyses of Income-Food Relationships.” *Journal of the American Statistical Association*, vol. 53, no. 284, 1958, pp. 905–927. *JSTOR*, JSTOR, www.jstor.org/stable/2281960.

CASHORE, BENJAMIN, et al. “The Emergence of Non-State Market-Driven Authority.” *Governing Through Markets: Forest Certification and the Emergence of Non-State Authority*, Yale University Press, New Haven; London, 2004, pp. 3–30. *JSTOR*, www.jstor.org/stable/j.ctt1npqtr.6.

Chan, Tat Y. “Estimating a Continuous Hedonic-Choice Model with an Application to Demand for Soft Drinks.” *The RAND Journal of Economics*, vol. 37, no. 2, 2006, pp. 466–482. *JSTOR*, JSTOR, www.jstor.org/stable/25046252.

DELGADO, MELVIN. “Food Industry Practices.” *Social Justice and the Urban Obesity Crisis: Implications for Social Work*, Columbia University Press, New York, 2013, pp. 93–99. *JSTOR*, www.jstor.org/stable/10.7312/delg16008.10.

De Wit, Cary. “Food-Place Associations on American Product Labels.” *Geographical Review*, vol. 82, no. 3, 1992, pp. 323–330. *JSTOR*, JSTOR, www.jstor.org/stable/215355.

Dubé, Jean-Pierre. “Multiple Discreteness and Product Differentiation: Demand for Carbonated Soft Drinks.” *Marketing Science*, vol. 23, no. 1, 2004, pp. 66–81. *JSTOR*, JSTOR, www.jstor.org/stable/30036657.

Dunn, Rob. “Everything You Know about Calories Is Wrong.” *Scientific American*, vol. 309, no. 3, 2013, pp. 56–59. *JSTOR*, JSTOR, www.jstor.org/stable/26017986.

Gold, Abby, et al. “Classroom Nutrition Education Combined With Fruit and Vegetable Taste Testing Improves Children's Dietary Intake.” *Journal of School Health*, Wiley/Blackwell (10.1111), 11 Jan. 2017, onlinelibrary.wiley.com/doi/10.1111/josh.12478/full.

Grocery Headquarters. "Sales of The Leading Margarine and Spreads Brands of The United States in 2017 (in Million U.S. Dollars)." *Statista - The Statistics Portal*, Statista, www.statista.com/statistics/188760/top-margarine-spread-butter-blend-brands-in-the-united-states/, Accessed 9 Apr 2018

Grossman, Michael, and Robert Kaestner. “Effects of Education on Health.” *The Social Benefits of Education*, edited by Jere R. Behrman and Nevzer Stacey, University of Michigan Press, Ann Arbor, 1997, pp. 69–124. *JSTOR*, www.jstor.org/stable/10.3998/mpub.15129.7.

Harris Interactive. "How Important Is The Factor 'natural' When Purchasing Foods and Beverages?*." *Statista - The Statistics Portal*, Statista, www.statista.com/statistics/308623/us-consumers--rating-of-natural-when-buying-foods-and-beverages/, Accessed 9 Apr 2018

Harvard University. “Healthy Eating Plate & Healthy Eating Pyramid.” *The Nutrition Source*, 24 Aug. 2017, www.hsph.harvard.edu/nutritionsource/healthy-eating-plate/.

Hawkes, Corinna. “Food Policies for Healthy Populations and Healthy Economies.” *BMJ: British Medical Journal*, vol. 344, no. 7857, 2012, pp. 27–29. *JSTOR*, JSTOR, www.jstor.org/stable/23231928.

HOLDREGE, CRAIG, and STEVE TALBOTT. “We Label Orange Juice, Why Not Genetically Modified Food?” *Beyond Biotechnology: The Barren Promise of Genetic Engineering*, University Press of Kentucky, 2008, pp. 42–56. *JSTOR*, www.jstor.org/stable/j.ctt2jcjkm.8.

IFIC. "Over The past Year, When Making Decisions about Buying Packaged Food or Beverages, Have You Ever Considered Whether or Not They Contain The Following?*." *Statista - The Statistics Portal*, Statista, www.statista.com/statistics/245017/consideration-of-food-components-in-the-us/, Accessed 9 Apr 2018

IFIC. "Which of The Following, If Any, Are Reasons Why You Consider The Fat Content of The Foods and Beverages You Buy?." *Statista - The Statistics Portal*, Statista, www.statista.com/statistics/245032/consumers-reasons-for-considering-fat-content-in-foods-and-beverages/, Accessed 9 Apr 2018

Jacoby, Jacob, et al. “Consumer Use and Comprehension of Nutrition Information.” *Journal of Consumer Research*, vol. 4, no. 2, 1977, pp. 119–128. *JSTOR*, JSTOR, www.jstor.org/stable/2488718.

Kearney, John. “Food Consumption Trends and Drivers.” *Philosophical Transactions: Biological Sciences*, vol. 365, no. 1554, 2010, pp. 2793–2807. *JSTOR*, JSTOR, www.jstor.org/stable/20752979.

KIRSCHENMANN, FREDERICK L. “Food as Relationship.” *Cultivating an Ecological Conscience: Essays from a Farmer Philosopher*, edited by Constance L. Falk, University Press of Kentucky, 2010, pp. 214–225. *JSTOR*, www.jstor.org/stable/j.ctt2jchq3.26.

KWAN, SAMANTHA, and JENNIFER GRAVES. “FAT AND FOOD POLITICS.” *Framing Fat: Competing Constructions in Contemporary Culture*, Rutgers University Press, 2013, pp. 70–93. *JSTOR*, www.jstor.org/stable/j.ctt5hjch4.8.

Label Insight. "How Do You Determine Whether a Food Product Is “healthy”?." *Statista - The Statistics Portal*, Statista,

www.statista.com/statistics/633234/factors-us-consumers-use-to-determine-the-healthiness-of-a-food-product/, Accessed 9 Apr 2018

Label Insight. "When a Food Brand Claims to Be “healthy” or “nutritious,” How Do You Verify That Claim?." *Statista - The Statistics Portal*, Statista, www.statista.com/statistics/633235/methods-us-consumers-use-to-verify-healthy-claims-made-by-food-brands/, Accessed 9 Apr 2018

Ladd, George W. “On Some Measures of Food Marketing Services.” *Journal of the American Statistical Association*, vol. 56, no. 293, 1961, pp. 65–69. *JSTOR*, JSTOR, www.jstor.org/stable/2282331.

Levine, Susan. “EPILOGUE: Fast Food and Poor Children.” *School Lunch Politics: The Surprising History of America's Favorite Welfare Program*, Princeton University Press, 2008, pp. 179–192. *JSTOR*, www.jstor.org/stable/j.ctt7pfp8.14.

Moorman, Christine, et al. “Unintended Nutrition Consequences: Firm Responses to the Nutrition Labeling and Education Act.” *Marketing Science*, vol. 31, no. 5, 2012, pp. 717–737., www.jstor.org/stable/41687958.

Nielsen. "Food Purchase Influencers among Consumers in The United States in 2016, by Type*." *Statista - The Statistics Portal*, Statista, www.statista.com/statistics/590024/food-purchase-influencers-us-consumers-by-type/, Accessed 2 May 2018

Packard, Vernal S. “Food Flavor.” *Processed Foods and the Consumer: Additives, Labeling, Standards, and Nutrition*, NED - New edition ed., University of Minnesota Press, 1976, pp. 60–78. *JSTOR*, www.jstor.org/stable/10.5749/j.cttttnc3.6.

Porter, et al. “Why and How Schools Make Nutrition Education Programs ‘Work’.”*Journal of School Health*, Wiley-Blackwell. 350 Main Street, Malden, MA 02148. Tel: 800-835-6770; Tel: 781-388-8598;

Fax: 781-388-8232; e-Mail: Cs-Journals@Wiley.com; Web Site: Http://Www.wiley.com/WileyCDA, 31 Dec. 2017, eric.ed.gov/?id=EJ1163140.

Pratt, Jeff, et al. “Farming and Its Values.” *Food for Change: The Politics and Values of Social Movements*, Pluto Press, London, 2014, pp. 24–46. *JSTOR*, www.jstor.org/stable/j.ctt183p5b3.6.

Pratt, Jeff, et al. “Food Activism.” *Food for Change: The Politics and Values of Social Movements*, Pluto Press, London, 2014, pp. 165–184. *JSTOR*, www.jstor.org/stable/j.ctt183p5b3.12.

Price, Cayla, et al. “Nutrition Education and Body Mass Index in Grades K-12: A Systematic Review.” *Journal of School Health*, vol. 87, no. 9, 2017, pp. 715–720., doi:10.1111/josh.12544.

PR Newswire. "Distribution of The Most Desirable Nutritional Attributes for Healthy Beverages among Consumers in The United States in 2016, by Type ." *Statista - The Statistics Portal*, Statista, www.statista.com/statistics/658925/distribution-most-desirable-features-healthy-drinks-us-by-type/, Accessed 9 Apr 2018

Schor, Juliet B., and Barbara Ehrenreich. “The Viacom Generation: THE CONSUMER CHILD AND THE CORPORATE PARENT.” *At the Heart of Work and Family: Engaging the Ideas of Arlie Hochschild*, edited by Anita Ilta Garey and Karen V. Hansen, Rutgers University Press, 2011, pp. 206–216. *JSTOR*, www.jstor.org/stable/j.ctt5hj88d.22.

Schott, Willem, and Adrienne Cachelin. “Promotion vs. Education in Choosing ‘Real Food.’” *Consilience*, no. 17, 2017, pp. 182–195. *JSTOR*, JSTOR, www.jstor.org/stable/26188787.

Scrinis, Gyorgy. “Functional Foods: Nutritional Engineering, Nutritional Marketing, and Corporate Nutritionism.” Nutritionism: The Science and Politics of Dietary Advice, Columbia University Press, 2013, pp. 191–214. JSTOR, www.jstor.org/stable/10.7312/scri15656.11.

Seley, Jane Jeffrie. “Question of Practice: A Sugar Is a Sugar Is a Sugar?” *The American Journal of Nursing*, vol. 100, no. 11, 2000, pp. 81–81. *JSTOR*, JSTOR, www.jstor.org/stable/3522271.

Sharma, Shreela V., et al. “Lessons Learned From the Implementation of Brighter Bites: A Food Co‐Op to Increase Access to Fruits and Vegetables and Nutrition Education Among Low‐Income Children and Their Families.” *Journal of School Health*, Wiley/Blackwell (10.1111), 5 Mar. 2017, onlinelibrary.wiley.com/doi/10.1111/josh.12497/full.

Smith, Matthew. “‘Food Just Isn’t What It Used to Be.’” *An Alternative History of Hyperactivity: Food Additives and the Feingold Diet*, Rutgers University Press, 2011, pp. 68–86. *JSTOR*, www.jstor.org/stable/j.ctt5hjg45.9.

Timmer, C. Peter. “Structural Transformation as the Pathway to Food Security.” *Food Security and Scarcity: Why Ending Hunger Is So Hard*, University of Pennsylvania Press, 2015, pp. 75–113. *JSTOR*, www.jstor.org/stable/j.ctt13x1n9v.7.

WANSINK, BRIAN. “Conclusion: Looking Backward and Speeding Forward.” *Marketing Nutrition: Soy, Functional Foods, Biotechnology, and Obesity*, University of Illinois Press, 2005, pp. 185–196. *JSTOR*, www.jstor.org/stable/10.5406/j.ctt1x74kd.20.

WANSINK, BRIAN. “If It Sounds Good, It Tastes Good.” *Marketing Nutrition: Soy, Functional Foods, Biotechnology, and Obesity*, University of Illinois Press, 2005, pp. 33–44. *JSTOR*, www.jstor.org/stable/10.5406/j.ctt1x74kd.8.

WANSINK, BRIAN. “Leveraging Food and Drug Administration Health Claims.” *Marketing Nutrition: Soy, Functional Foods, Biotechnology, and Obesity*, University of Illinois Press, 2005, pp. 139–149. *JSTOR*, www.jstor.org/stable/10.5406/j.ctt1x74kd.16.

Dalmeny, Kath. “Marketing Targets Children.” *BMJ: British Medical Journal*, vol. 328, no. 7432, 2004, pp. 169–169. *JSTOR*, JSTOR, www.jstor.org/stable/41708632.

WANSINK, BRIAN. “Managing Consumer Reactions to Food Crises.” *Marketing Nutrition: Soy, Functional Foods, Biotechnology, and Obesity*, University of Illinois Press, 2005, pp. 121–136. *JSTOR*, www.jstor.org/stable/10.5406/j.ctt1x74kd.15.

WANSINK, BRIAN. “Nutrition Knowledge That Matters.” *Marketing Nutrition: Soy, Functional Foods, Biotechnology, and Obesity*, University of Illinois Press, 2005, pp. 13–20. *JSTOR*, www.jstor.org/stable/10.5406/j.ctt1x74kd.6.

WANSINK, BRIAN. “Targeting Nutritional Gatekeepers.” *Marketing Nutrition: Soy, Functional Foods, Biotechnology, and Obesity*, University of Illinois Press, 2005, pp. 73–82. *JSTOR*, www.jstor.org/stable/10.5406/j.ctt1x74kd.11.

WANSINK, BRIAN. “The De-Marketing of Obesity.” *Marketing Nutrition: Soy, Functional Foods, Biotechnology, and Obesity*, University of Illinois Press, 2005, pp. 85–99. *JSTOR*, www.jstor.org/stable/10.5406/j.ctt1x74kd.12.

Waugh, Frederick V., and Kenneth E. Ogren. “An Interpretation of Change in Agricultural Marketing Costs.” *The American Economic Review*, vol. 51, no. 2, 1961, pp. 213–227. *JSTOR*, JSTOR, www.jstor.org/stable/1914486.

“American Heart Association Endorses Foods.” *BMJ: British Medical Journal*, vol. 300, no. 6723, 1990, pp. 489–489. *JSTOR*, JSTOR, www.jstor.org/stable/29707009.

“Distribution of Food.” *Journal of the Operations Research Society of America*, vol. 3, no. 1, 1955, pp. 129–130. *JSTOR*, JSTOR, www.jstor.org/stable/166742.

“Label Protects Shopper.” *The Science News-Letter*, vol. 72, no. 4, 1957, pp. 52–52. *JSTOR*, JSTOR, www.jstor.org/stable/3938501.