The Real Power of Food
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On a bright sunny Tuesday morning, I sit down for some breakfast only to realize I am fresh out of apples for my morning cereal. That evening, I head to the supermarket to replenish my kitchen supplies. As I venture around the produce section looking for apples and other fruits, I scour the prices as well as the physical condition of the goods. As I also observe the other shoppers carefully selecting their preferred produce, I begin to notice the different “types” of goods available. The types I am referring to don’t aren’t differences in category, like Gala and Fuji apples. I’m referring to the difference in how the produce was planted, grown, and harvested, more specifically, the distinction between genetically modified (GM) and organic foods. Some of the apples, which are labeled organic, are pricier and bruised, while the apples that aren’t labeled are less expensive and have a glossy shine. At first glance, my eyes are attracted to the low cost and physical appeal of the regular produce. As I bag a few of these apples, I notice a woman in her early thirties place a bag of organic apples into her cart. At that moment, I began to wonder what both of our food selections say about who we are and how they characterize us.

Now, you may be wondering what GM and organic foods have to do with the average consumer and grocery shopping, but before you dismiss this as beyond the realm of your personal world, it is important to know that this connection illustrates what an innocent trip to the market reveals about our deep personal values. Every time we enter a supermarket, we are faced with the same question: GM or organic? While the organic foods are labeled as such, the GM foods are not. While this could throw a loop into the argument, it is precisely this lack of labeling that distinguishes GM foods. Seventy to seventy-five percent of the food we eat has in some way been genetically modified (Bich, Fernandez, and Gabriel 37). So any produce grown through conventional agriculture, which doesn’t necessarily adhere to organic farming practices, usually includes some kind of modification. We can, therefore, eliminate conventional agriculture from the discussion and focus on the fact that most of the foods we readily consume today have been scientifically enhanced. This leaves us with the same two choices: GM and organic.

When we buy one type of food, we are not only buying the product; we are also accepting all the qualities that are associated with its type. We give preference to a particular set of characteristics that comply with the advantages and the disadvantages of either GM or organic foods. For example, the “quality” of organic foods would be...
characterized as natural, environmentally friendly, and costly, while that of GM foods would be enhanced, environmentally costly, and cheaper. Thus, by buying one type or the other, we are unconsciously conveying which set of principles we value more highly. While a simple stop at the store can be innocent enough, our food selections reveal how highly we prioritize health vs. aesthetics or the environment vs. cost, for example. These little unintentional decisions can reveal what is deep inside our soul, possibly information that we aren’t even aware of, and this is what makes this issue all the more alarming. This process exposes food’s true power: the capability of revealing our innermost thoughts about ourselves and the environment through simple decisions like the purchase of a bag of apples.

GM foods and organic foods differ greatly in one specific aspect: how they are produced. Organic plants are grown without chemical toxins such as synthetic pesticides, herbicides, or artificial fertilizers (Stone). Organic animals are raised without any harmful additives like antibiotics or growth hormones and fed through rotational grazing and mixed forage pastures (Gold). However, organic farmers focus not only on the plants and animals themselves but also on environmental conservation by using renewable resources and observing minimal soil and water use. These methods are implemented in order to minimize pollution of the air, soil, and water (Gold).

While organic farming involves a very small degree of human intervention by decreasing the use of manmade additives in nature’s work, genetically modified food production revolves around the complete opposite way of thinking. In contrast to organic foods, genetically modified foods are produced by altering the genes in microorganisms, animals, and plants (Kunkel and Luccia). More specifically, genetic modification involves inserting an isolated gene from one species into another species to produce a certain desired characteristic, such as pesticide resistance. This can enhance the nutritional content or appearance of the product or increase its survival and production rate, depending on the added gene. Both the pros and cons of GM foods and organic foods help inform the consumers of the ethics and principles behind each “quality” in order to weigh their food decision. Therefore, closer examination of these advantages and disadvantages of organic and GM foods is necessary in order to characterize each type.

At first glance, organic foods can be very advantageous to consumers. Since there isn’t a concern about artificial chemicals added to these foods, organic foods are considered safer than their GM equivalents (Kunkel and Luccia). Furthermore, the lack of pesticides helps the environment by reducing the amount of toxins in the air, soil, and water (Stone). Instead of toxins, organic farmers use natural materials for compost. Consequently, this returns more nutrients back to the soil, so the food growing in the soil has more nutrients and antioxidants. Studies have even shown “that organic foods have higher amounts of minerals and some vitamins, less heavy metals, better quality protein, and less nitrates” than foods grown through other methods (Fong). Other studies have found “greater concentrations of every vitamin and mineral researched” and “less pesticide residues, and higher amounts of omega-3 fatty acids” in organic foods (Stone). Additional environmental advantages include soil fertility, increased biodiversity, greater water conservation, and better treatment of animals and nature (Kunkel and Luccia). All of these benefits provide an appealing option that is safer for the environment and healthier to eat than GM foods.

Some consumers believe these nutritional and environmental benefits become apparent in the enhanced flavor of organic foods. Because of the extra effort, time, and farming methods used in organic farming, “organically grown fruit and vegetables are full of flavor, meats are more intense, and grains are heartier” (Stone). In exchange for the better flavor, organic foods cost
more as well, providing economic benefits for small-scale farmers. With this price incentive, smaller farms have the potential to compete with larger, industrial-sized farms by switching to organic food production (Fong). Because larger farming operations value productivity and high yields, they tend to steer away from organic foods. Since organic foods are mainly provided by smaller farms, they have a lower production amount, which in turn increases their market cost. Thus, having the organic food label inherently associates all the benefits of organic production methods—their distinct “quality”—with the food. Purchasing food with this label therefore indicates that the consumer prioritizes issues like the preservation of the environment and the support of the underdog, specifically smaller local farms.

However, organic foods also come with their share of disadvantages, which help define their quality as well. Because of the higher standards required for farming, organic foods can cost 15-20% more than those conventionally grown (Fong). Another part of the high cost comes from the environment-polluting transportation required to bring small quantities of organic foods long distances, arguably reversing their environmental benefits. These high costs also make it hard for everyone to buy them. Since many people don’t have the luxury of choosing the more expensive food option, organic foods create an aura of aristocracy among food shoppers. However, this doesn’t mean the foods themselves are better. In some ways, they are far from it. For example, the sizes of produce and the crop yields are generally smaller, and the produce may be in worse condition compared to longer-sustaining GM foods (Kunkel and Luccia). Also, since organic markets aren’t very efficient in regard to distribution and sales, the physical condition of organic foods at selling time can be much worse than when originally produced (Fong). This can drive consumers away from organic foods towards better-looking GM produce, depending on what the consumers value more: nutrition or appearance.

From an understanding of the advantages and disadvantages of organic foods, we can form its definition of their “quality.” For instance, organic farms use natural compost and fertilizers which are safer for the environment and the people. Because of this careful consideration for nature, the food itself has proven to be healthier for the consumers, from the more nutrient-rich soil and cleaner water runoff. Organic meat is also more natural for the consumer because animals are treated more humanely and without hormones. These advantages come to fruition in terms of taste and flavor. Because organic foods are natural with no artificial additives or growth hormones and can’t weather the extended transport times, the condition at selling time is worse than that of GM foods at selling time. Since so much care is given in preserving nature, this reduces the crop yields and produce sizes and increases food cost for the consumers. Thus, by focusing on the needs of the environment, the consumers have to relinquish some advantages that they may find in GM foods. This ethic characterizes much of what organic food represents: prioritizing the environment. By buying these foods, organic food consumers value the environment and their own health more than they would convenience and aesthetics, despite the high cost.

Now that we have looked at the “quality” of organic foods, let’s turn to genetically modified foods. Since seventy to seventy-five percent of the food we eat has in some way been genetically modified (Bich, Fernandez, and Gabriel 37), there must be some advantages that account for the abundance of these products in the market. Because genetic modifications alter genes in order to promote desired characteristics, proponents of GM foods claim that they can meet certain economic and consumer needs by increasing the amount of food produced, concentrating the nutritional value, and enhancing the appearance of foods. To increase crop yields, for example, scientists from Washington State University, along with
Japanese colleagues, inserted genes from corn crops into rice, hoping to increase rice production around the world, feed the population of rice-producing nations, and stimulate their economies (Bich, Fernandez, and Gabriel 37). This resulted in lower prices for consumers. For better nutrition, researchers at the Swiss Federal Institute of Technology and Institute for Plant Sciences created a strain of rice containing significant amounts of Vitamin A, helping those populations that consume inadequate amounts of the vitamin (Whitman). Scientists have even gone so far as to transform food into edible vaccines by implanting GM vegetables with vaccines to immunize the consumer (Langridge). Not only are edible vaccines easier to ship and handle, but they can also be administered in a much safer and more efficient manner than needle vaccines. GM foods are also manipulated to enhance appearance and durability (Kunkel and Luccia). These artificial enhancements prioritize three of the consumers’ primary concerns: cost, nutrition, and appearance.

These advantages also extend economically to GM farmers. GM food supporters point out that some GM crops are stronger, able to withstand harsher conditions, and resistant to pesticides and herbicides. For example, a gene from cold-water fish can be inserted into crops like tobacco and potato to prevent the seedlings from dying due to cold temperatures (Whitman). By genetically modifying crops to be resistant to certain pesticides, as was tried with B.t. corn, researchers hope to reduce or eliminate the need for pesticides (Whitman). Furthermore, herbicide resistance, as seen in GM soybeans resistant to the herbicide Roundup, is said to reduce herbicide applications and runoff (Whitman). As a result, GM foods can theoretically increase crop adaptability as well as reduce farm costs and labor.

But even though GM foods increase convenience and decrease cost, GM foods have numerous disadvantages as well. Unpredictable allergies can arise by adding genes from common allergens to other foods (Whitman). Genetic enhancements can have an impact on the environment as well, such as unintended harm to other organisms. In the case of B.t. corn, engineered to be pesticide resistant, studies have shown the pollen from B.t. corn to cause a high mortality rate among monarch butterfly caterpillars (Whitman). The irony is that monarch butterfly caterpillars don’t eat corn, but milkweed plants, which some fear become contaminated with the pollen from the GM corn strains, inadvertently killing the caterpillars (Whitman). Further ramifications include the creation of super weeds, which can occur from accidental crossbreeding between weeds herbicide resistant crops (Whitman). When this occurs, these super weeds will also become herbicide resistant, making the weeds harder to manage without increased pesticide application. Another environmental factor is GM foods’ effect on organic farms. When the pollen from GM crops contaminates organic plants, they can’t be sold at full price since they aren’t purely “organic” (Deeneen). As a result of this inevitable effect, GM foods threaten the very existence of organic foods, making it impossible to continue growing both types of food indefinitely. These detrimental effects on the environment play key roles in how GM foods contrast with organic food.

To sum up, we can now begin to determine GM foods’ definition of “quality.” Since GM foods can increase food production, they not only ensure an immediately reliable supply of food for our ever-growing population, but also decrease the general cost for shoppers. This prioritization of people over nature is supported by the advantages GM foods provide farmers: stronger and more readily adaptable crops resistant to pesticides and herbicides, which consequently reduce farm costs and labor. By making GM foods more convenient to consumers and financially wiser for farmers, scientists have to maintain these benefits at the expense of the environment. For example, GM foods can unintentionally harm the environment or other organisms, like with the monarch.
butterfly caterpillars and the creation of new allergens. In exchange for appearance, lower cost, convenience, and possibly better appearance and nutrition, people sacrifice the preservation of nature and the environment. This way of thinking indicates GM food consumers prioritize their immediate needs over nature. By choosing GM foods over organic, GM food shoppers value certain factors like convenience and cost over the health of the planet and perhaps the health of their own bodies.

About a month after my first shopping expedition, I went to the store again in search for more apples. However, this time was different—accompanying me were my mother and aunt. While I expected this trip to be like any other, I quickly realized that I couldn’t be any farther from the truth. My mother and aunt are alike in that they are both sisters, Indians, and physicians, but they are radically different in terms of their opinions and thought processes. My aunt is a health-nut while my mother is more financially pragmatic, and there are obvious differences in their shopping selections that reveal their priorities. When we arrived at the produce section on this shopping trip, I not only participated in the unconscious revelation of my soul, but I witnessed it in action—from both sides of the spectrum! My aunt immediately checked for a bag of organic apples she liked, while my mother’s eyes scoped the unit pricing on the generic apples. At that moment, I finally understood the deeper meaning behind each definition of quality. Food is not just food; food encompasses a set of ideals shared by its consumers. My aunt, who after multiple health problems values health above matters like cost and appearance, often buys organic foods. On the other end of the spectrum, my mother rarely spends a penny without careful consideration, and she considers cost and convenience a bigger priority than possibly saving the environment. These observations parallel what each “quality” of their respective food preferences prioritizes as well, indicating that food reveals more about a person than they may even know themselves. For instance, while a GM food consumer may consciously proclaim their full support for the environment, their actions may prove contradictory and divulge what they really value. Just as our car decisions (gas-powered or electric) or furniture preferences (leather or cotton) subtly indicate where our priorities lie in terms of cost, convenience, and environmental values, our food selections manifest a large part of who we are to the public. By being aware of this unconscious display, we can finally understand what we value and match that accordingly to our conscious opinions, empowering not only ourselves but also our food choices.

Works Cited