That's Disgusting! Or Is It?: The unreliability of disgust and the negative impact that it has on the way we view other cultures based on their ethnic foods

The late celebrity chef and travel documentarian Anthony Bourdain once described natto as "fermented soybeans in a mucilaginous paste...The texture is horrifying, and the flavor is horrifying" (Ram); however, at the time that I first came across natto, I knew nothing about it other than my boyfriend had expressed pleasure at finding it in the breakfast buffet at the Japanese hotel that we were staying at in downtown Los Angeles' Little Tokyo. With an empty stomach and the new day stretching out before me, this hardly seemed a time to experiment with the more unusual looking fare at the buffet, so I spared the natto not even a passing glance as I filled my plate with food that looked familiar to me; the food that no doubt had been set out to accommodate American tastes. It was while we were sitting side by side at a table overlooking a normally bustling street that had not yet woken, our plates in front of us, that my boyfriend made me an intriguing offer. "I'll give you \$1,000 if you eat some of this natto but you can't just eat some, you have to actually like it." Now both he and the natto had my attention. I was understandably skeptical but after some questioning, I was assured of his sincerity. I looked at the pile of sticky looking baby-poop brown beans as he stirred them with his chopstick, watching thin strings form between the beans as they separated. I could feel my nose wrinkling up on its own accord, my lips pressing firmly together as they formed an involuntary frown. The beans looked soft and slimy, like something that had been left out for too long, but it was the multitude of long sticky strands that stretched between the beans and hung off the end of the chop sticks that were giving me the queasies. I imagined those strings sticking to the inside of my mouth, the slime of the beans coating my tongue. As I watched him take a bite, I worried that this

distasteful image would be burned into my brain and cause an unfortunate reaction the next time he kissed me. None the less, I could not let this man that I had become quite fond of think that I was not a good-sport and besides, what if I liked them? Cha-ching! That would be an easy thousand bucks in my pocket! I smiled bravely as I poked the beans with my own chopsticks, suppressing my gag reflex as the beans on his plate vainly attempted to stay connected to the beans on my chopsticks as I scooped up a few to bring them closer to my mouth. I was trying not to breath through my nose, but it was impossible not to catch a whiff of what could be described as the scent of old cheese hidden in dirty sweat socks. "Remember, if you like it, I'll give you a \$1,000," he reminded me. I took a bite and swallowed. I know what you're thinking. I'd already done the hard part so I could have lied and claimed to like them. For a half second I considered it as I washed the strong taste (and hopefully any of those remaining strings of bean guck) down with a swig of green tea. If I lied, though, I would be stuck with that lie for as long as I dated him which would likely mean more natto in my future. My poker face is not that good. I had to admit defeat. He smiled as he told me that it had taken him nine years of living in Japan before he had learned to like natto.

Natto is a common food in Japan that is often served for breakfast. According to an article "Traditional Healthful Fermented Products of Japan" by Yoshikatsu Murooka and Yamshita Mitsuo published in the *Journal of Industrial Microbiology & Biotechnology*, "Approximately three quarters of the Japanese population eat natto at least once a week and half eats natto once every three days on average" (Murooka & Mitsuo 796). In other words, approximately 93 million people in Japan eat these fermented soybeans on a regular basis. While it took my American-born husband (yes, despite the whole natto thing I married him), nine years to acquire a taste for it, his daughter has always enjoyed natto. Like many people

born in Japan, she has eaten it since she was very young; yet Anthony Bourdain and I are not the anomalies for despite its popularity in Japan natto has found itself on many lists of disgusting food. Natto even has a place in Sweden's Disgusting Food Museum among the 80 exhibits of disgusting food. How is it that a food that is a well-loved staple of one culture can be considered disgusting by a great portion of the rest of the world? While this question was generated from my experience with natto, the search for an answer provides interesting insight on the tribal nature of foods and perhaps more importantly, it allows us to exam the role that our human disgust reflex plays in our perception of the foods of other cultures and by extension, the people who eat these foods.

The popularity of natto in Japan is not a fad or a new trend; in fact, like many fermented foods throughout the world, such as pickles, kimchi, kefir, and sauerkraut, natto has been around for centuries. While there appears to be some disagreement of exactly when these fermented soybeans first made their debut, mentions of it go back to at least the 17<sup>th</sup> century. It is believed that natto originated when boiled soybeans were placed in straw for storage. When the beans were removed from the straw a few days later, it was discovered that the beans had changed through fermentation caused by bacteria in the straw. Not only did the fermentation process provide a longer shelf life for the food centuries before modern refrigeration, but it also added nutrition to the beans and made them easier to digest. In their article, Murooka and Mitsuo clarify that natto was used in these earlier times for more than just basic nourishment, as a line of defense against some illnesses. They specify, "food poisoning was more common in Japan and people ate natto in efforts to prevent cholera, typhoid and dysentery" (Murooka & Mitsuo 796). At the end of the 19<sup>th</sup> century, a microbiologist was able to isolate the specific microorganisms from natto to cultivate the needed bacteria *bacillus subtilis* var natto leading to the mass

production and commercialization of natto in the early 20<sup>th</sup> century. Today Natto is typically sold in multi packs of individual serving sized cartons, which each include a vacuum packed serving of natto along with a packet of soy sauce and a packet of spicy mustard. Just as I witnessed it being eaten by my then-boyfriend in Little Tokyo, it is often served over rice sometimes garnished with green onions.

Considering natto's long history and popularity in Japan, how is it that these fermented soybeans trigger a disgust reaction from people all over the world? Dr. Rachel Herz, a neuroscientist who is a faculty member at Brown University and Boston College and who specializes in perception and emotion, succinctly notes in her article "You Eat That? Disgust is one of our most basic emotions—the only one that we have to learn—and nothing triggers it more reliably than the strange food of others" that "The most elemental purpose of the emotion of disgust is to make us avoid rotted and toxic food" (Herz 2). The survival of our early ancestors was dependent on recognizing foods that were safe to consume. Their feelings of disgust helped them to avoid eating that which would make them sick or kill them. On the surface it seems simple enough to assume that a strong adverse reaction to natto is the result of this built-in disgust radar sensing rot and toxicity in a food that is infused with bacteria and left to ferment for a week or more, yet the process of fermentation is not unheard of in other cultures. In fact, nearly every culture produces their own types of fermented foods and beverages.

Despite vast differences in cultures and civilizations throughout history as well as geographical distances, fermentation has been a long-standing solution to the common need that humankind has had to store food for extended periods of time. Whether it is to keep a stocked pantry for times in which food would otherwise be scarce or as a means to bring food on travels such as for nomad people, for soldiers far from home during war, or for explorers, prior to

modern refrigeration, people needed a way to prevent their food from spoiling. This basic human need for food that can be saved beyond its natural shelf life was the source of inspiration for many of the fermented foods that are still consumed today. As a result of the commercialization of these foods, we often do not give much thought to the process involved in creating them. Some fermented foods appear to be more globally palatable than others, or at least popular in large regions across multiple countries and even continents. Chocolate (which is made from fermented cocoa beans), yogurt, beer, wine, and cheese are all examples of fermented foods that are common in some form or another in multiple continents. While individual tastes and preferences may vary and there are certainly people who do not like these foods, most do not recoil in disgust when presented with a chocolate bar or a glass of wine. While the thin filaments that form when stirring a bowl of natto are often cited as part of the gross-out factor, the same type of stringing effect is seen from the cheese when a slice is removed from a pizza that is fresh out of the oven. Contrary to the negative reactions created by the stringiness of natto, the image of hot cheese stretching from a slice of pizza is a positive one that is popularly used in advertising to stoke consumers' appetites for pizza.

For all of the more readily accepted fermented foods, there remain those that are considered an acquired taste, the foods that trigger disgust and revulsion outside the cultures that embrace them. Hakarl, Greenland shark that has been fermented for months and has an extreme ammonia odor and strong taste that has been known to trigger gag reflexes in those unaccustomed to it is easily found in Icelandic stores while it has also been a popular "guest food" in dare type food contests, appears in many top ten lists of gross foods, and has a spot among the exhibits in the Disgusting Food Museum. Also found in the museum is casu marzu, a maggot-infested cheese from Sardinia, stinky tofu from China, and surstromming, a fermented

herring from the museum's home country Sweden, which is known for having such a putrid smell that cans of it are usually opened outside, sometimes in a bucket of water, to reduce the odor. To most of us outside of the cultures, from which these foods come, the foods seem unappealing at best and vomit inducing at worst. If our sense of disgust is to protect us from substances that could cause us harm, then why do we feel disgust over food that is safely eaten by other cultures? Rachel Herz explains, "We learn which foods are disgusting and which are not through cultural inheritance, which is very much tied to geography. One reason that certain foods carry so much local meaning is that they capture something essential about a region's flora and fauna. The same is true of the microbes that make fermented foods possible...the bacteria involved in making kimchee are not the same as those used to make Roquefort" (Herz 2). So, unlike other basic emotions, disgust is one that we acquire not from birth but one that begins to develop when we are toddlers. It is an emotion that we are taught by our parents based on cultural tastes that have developed over generations. The same emotion that is protecting us from spoiled or toxic food will also sway us towards rejecting food that is regionally or culturally unfamiliar to us. Jiayang Fan, a Chinese born American journalist, expands on this idea in her essay "Yuck! What Makes Food Disgusting and Who Gets to Judge?" by considering the evolution of humans, "Like a regional dialect or a style of dress, most food taboos advertise and affirm membership within a group. Humans evolved in tribes, and food taboos helped to define coalitions" (Fan 45). If we acknowledge the close relationship between disgust and cultural food taboos, then the association is made that the disgust we feel towards unfamiliar foods is a means of identifying those that we are culturally connected to from those who are unknown to us. It is part of our primitive nature to feel safer amongst those who are like us. We relate to those who have similar tastes as our own.

In her essay, Fan interviews Andreas Ahrens, the director of The Disgusting Food Museum who has sent her a package containing samples of some of the foods in preparation for their online interview and virtual tour of the museum. Fan spent her early childhood in China, raised by her mother and family who had experienced famine and poverty. Eventually she and her mother immigrated to the United States. Her life experience has taught her that food should not be wasted and that she should eat anything that is served to her. Immigrating to the United States, Fan, initially found much of the food both puzzling and disgusting. She recalls, "To be a new immigrant is to be trapped in a disgusting-food museum, confused by the unfamiliar and unsettled by the familiar looking. The firm, crumbly white blocks that you mistake for tofu are called feta...At a certain point the trickery of food becomes mundane. Disgusting foods become regulars in the cafeteria, and at the dinner table" (Fan 46). This is not to say that she remained disgusted by the American foods that were new to her but that eventually she grew used to the foods as part of her assimilation process. When she approaches the samples of disgusting food that have been sent to her from Ahrens, she is able to overlook the appearance of the more unfamiliar foods and instead recognize similarities in taste or texture to foods that she is familiar with. Additionally, some of the foods are ones that she had eaten as a child. Fan ruminates, "My lack of disgust felt like cheating. The Chinese pidan, for example --- a clay-preserved egg with a swampy blue-green hue --- has been one of my comfort foods since childhood" (Fan 47). Yet, with her close familiarity with some of the foods in The Disgusting Food Museum, some that are childhood comfort foods and some that are currently in her kitchen, Fan experiences mixed feelings. She can understand from a Western perspective why these foods are categorized as they are in the museum while also feeling the pain of self-consciousness to see foods of her Chinese heritage identified as disgusting.

Words matter. The expression "You are what you eat" is one that most of us have heard since childhood with the implication being that if you eat healthy food, you will be healthy and conversely if you eat unhealthy food, you will be unhealthy. If we are not mindful of how we label culturally specific food, do we risk associating that label with those who eat that food? While it seems harmless, in some cases even entertaining, to identify foods as disgusting and to marvel at the elements that make them unappealing, in doing this, we risk viewing those who eat the food to also be disgusting. A simple Google search of racial slurs indicates a number of derogatory terms that originate from cultural or national food preferences. A few examples include a shortened version of the word sauerkraut used against Germans (started by British soldiers during WWI), versions of the words bean or taco used against Mexicans, and various slurs relating to potatoes used against Irish. The dangers go beyond nasty name calling. In her essay, Fan writes about how since the onset of the Covid pandemic she, and other Chinese people that she knows, have received hate mail and been subjected to rude comments from angry strangers who blame the Chinese for the pandemic because of negative views about some foods that are eaten in China. Fan expresses her fear, "Perhaps this is what terrifies me the most about disgust: its ability to weaponize one's gut in service of the outlandish. The idea that all Chinese carry the coronavirus because it could have originated from eating bats is risible" (Fan 48). Fan is providing an example of how disgust that is directed at cultural foods can in turn manifest into disgust towards the people who eat that food, which can become dehumanizing and dangerous. Since the beginning of the pandemic, hate crimes towards Asian people in the US have gone up significantly and similar trends have been seen in other parts of the world because of unproven belief of some that the virus was caused by people in a city in China eating bats.

In considering the relationship between the way we describe food and the way we view the people who eat that food, food writer and recipe developer G. Daniela Galarza wrote an opinion piece for *The Washington Post* last year in which she makes a case to stop calling foods "exotic." Galarza states her concern, "more crucial problem is that in its [exotic's] use, particularly as applied to food, indirectly lengthens the metaphysical distance between one group of humans and another, and, in doing so, reinforces xenophobia and racism" (Galarza). The point that she makes in her piece is that the meaning of the word "exotic" has changed over the last several decades. "Exotic" was once used to describe what was far away and difficult to obtain but we live in a world in which this is no longer the case. Galarza believes that the word exotic brings to mind explorers trekking through jungles or spices brought from the east by Western explorers centuries ago. It is a word that is reminiscent of colonization and of viewing other cultures as less than those of the Western cultures. She demonstrates how Western-centric the word exotic has become when she states, "I can't imagine anyone calling a Big Mac an exotic sandwich, even if, when it was first introduced to countries outside North America, it may have been viewed with skepticism" (Galarza). Galarza's argument against using the word "exotic" when describing food because of the effect that the word has on the cultures that the foods originate from which is similar to the relationship between labeling specific cultural foods as disgusting and how that can impact the way from those cultures are perceived by people outside of the cultures. Galarza is not the only food writer to recognize a correlation between the words used to describe cultural foods and how they can in turn have an impact on how those cultures who originated the food are viewed. Galarza points out in her article that David Tamarkin, digital director of Epicurious, the oldest and one of the most popular recipe websites, is taking on the project of "removing the White American lens" from their online recipes and

articles. In a letter posted on the Epicurious site, Tamarkin writes, "We have inferred (and in some cases outright labeled) ingredients and techniques to be "surprising" or "weird." And we have published terminology that was widely accepted in food writing at the time, and that we now recognize has always been racist" (Tamarkin) Tamarkin is acknowledging that the messaging in the recipes and articles that his company is in the process of correcting is that western food is superior to foods from other cultures because they are different than what people in America and Western Europeans are accustomed to as implied by the descriptors used such as "exotic" and "weird", words which are milder than the word "disgusting!"

Given our innate feelings of disgust and thus avoidance of foods from cultures outside our own, it is not surprising that a sense of unity can be felt when we envision those of other cultures enjoying the foods and beverages that are associated with our culture. In the 1970s, when I was a child, one of the most successful ad campaigns ever was launched. It was for Coca-Cola. In that ad, fresh-faced young adults dressed in clothing meant to represent countries from all around the globe are each holding a bottle of coke as they sing "I'd Like to Buy the World a Coke." The images of the commercial and the words to the song inspired feelings of love, acceptance, and peace (and sold oceans of Coke). Admittedly, even now viewing the commercial on YouTube, I am struck with feelings of sweet nostalgia and goodwill yet this ad hails back to a time when world peace and harmony was interpreted as everyone being the same, everyone enjoying the same beverage, an American beverage. While understandably the purpose of the ad is to promote Coca-Cola, I can't help imagining how interesting it would be to see a similar scene but with the people representing the different countries holding beverages that are unique to their culture. Would the differences be too much? Would the instinct be to think of some of those beverages as gross or disgusting thus disrupt those feelings of unity that were so

well conveyed by those singers all holding the same familiar soft drink? The more important question, I believe is, can we override instinctual feelings of disgust?

While it is understood that the basic purpose of disgust is to protect us from eating food that is unsafe for consumption, it becomes apparent that it is not a reliable protector. Returning to the natto, as it turns out, the only thing that my feelings of disgust protected me from was having a fatter wallet! According to a scholarly review in *Microorganisms* written by Fernanda Guilherme do Prado et al, titled "Fermented Soy Products and Their Potential Health Benefits: A Review" natto is a super food that provides great health benefits to those who eat it on a regular basis. Prado, et al, proclaim, "The consumption of natto has been shown to have an antiaging effect, prolonging life expectancy, due to the metabolites found in natto extracts" (Pardo et al 6). The review specified that because of the metabolites in natto, that natto can help protect against cancer, can improve bone density, and reduce obesity, as well as numerous other health benefits.

In recognizing that disgust is a complex emotion that is not always accurate, and that it is an emotion that can be overcome with logic and information, we can allow ourselves a whole world of new culinary possibilities; more importantly, recognizing the unreliability of our first reaction might allow us to forge a stronger connection with people of other cultures. With a better understanding of my initial disgust reaction towards natto, its appeal in Japan is no longer mysterious to me. Armed with the knowledge of its great health benefits, I decided to give natto another try. Inspired by Jiayang Fan's account of tasting the various samples from The Disgusting Food Museum, I approached the natto beans by looking for familiar textures and flavors. Beans are something that I usually enjoy, so I focused on the soybeans. The softness of the beans was much like those of baked beans. Determined to override my feelings of disgust, I viewed the stringiness that had once repulsed me in a different light by recognizing its similarity

to the stretching strands of melting cheese. Admittedly, as I had in that hotel dining room several years ago, I held my breath to avoid the unpleasant odor as I took a bite. It was not difficult to finish the serving of natto. While I can't say that I have become a huge natto fan (at least not at this point), by putting my disgust in check, I found it much easier to eat than the first time around. Although I did not win the \$1,000 bet that fateful morning in Little Tokyo, it was this introduction to natto that stoked my curiosity about the unreliability of our sense of disgust when it comes to some cultural foods as well as the connection to how we view the people of other cultures. I'd call this a win after all!

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