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Understanding Monosodium Glutamate

Exploring food discourse and its social implications

This paper examines some of the mainstream discourse surrounding the substance monosodium glutamate (MSG). While the use of additives and preservatives in foods is of legitimate concern, it is arguable that the substance MSG is poorly understood, and has become vilified despite a lack of sound scientific evidence. Consequently, foods utilizing the flavour enhancer may be deemed inferior and presented in a negative way in mass media. This vilification, it is argued, reinforces food classism and assumptions about race.

INTRODUCTION

Though the discussion of "what to eat" is not new in North America, it has become a progressively hot topic of discussion in the media, on the news, in magazines, and within social networking sites. Popular culture authors such as Michael Pollen and Marion Nestle have encouraged North Americans to question their food sources, and to further examine the legitimacy of the industrialized food system. However, in many cases, media hype about foods and food substances results in the vilification and stigmatization of foods, deeming them inferior both socially and culturally. This vilification, it is argued, reinforces food classism, and reproduces assumptions about race and the cultural practice of food preparation.

The purpose of this paper is to reflect upon mainstream debates on MSG, and to highlight the differing perspectives regarding its effects on health. This paper will first outline a brief history of the creation of MSG, featuring its introduction as a kitchen staple and a mainstay in the industrial agricultural system. Secondly, the paper explores perceptions on MSG, assessing the ongoing debate, and the impacts of the substance on health. Lastly, the paper unpacks the inherent racism entwined within the deliberation of MSG in North America, illuminating the oppressive qualities of the discussion and its consequences.

BRIEF HISTORY OF MSG AND CHINESE RESTAURANT SYNDROME

Despite the plethora of literature—both academic and popular—on the health effects of MSG, there is quite little surrounding how and why the global food system came to use the amounts it does today. By 2007, the world production of MSG was over two hundred million tons (Sano, 2009). One can only speculate that the flavour-enhancing capabilities of the substance is reason alone for such widespread use, especially in processed and packaged foods; however, considering the methods of extraction, one can also deduce that the mass production of the substance may also be an outcome of America's heavily subsidized agricultural industry.

MSG was first derived from a brown kelp commonly used to make broths in Japanese cuisine (Halpern, 2002). Though present naturally in foods in the form of glutamic acid, MSG is an extracted and "free-form" version, which was first produced by Kikunae Ikeda in 1909 (Halpern, 2002). Ikeda, a Japanese chemist, was inspired to derive the substance after reading publications which suggested that the flavour of foods encouraged healthy digestion, and therefore, improved nourishment (Sano, 2009). Ikeda's motivation was to seek out a way to industrially produce glutamate, the savoury flavour found in many Japanese dishes, in order to improve national nutrition and health (Renton, 2005). In line with the new faith in science as an authority of health and nutrition, Ikeda eventually utilized this perception to market the product to bourgeois housewives, inadvertently suggesting to them that if they wanted to serve their families well, they would use only trusted products made by scientists (Renton, 2005; Sand, 2005).

Despite the costs, wealthy Japanese housewives, devoted to their responsibilities of keeping a hygienic, healthy, and safe home, were encouraged to use MSG in their cooking (Sand, 2005). The first decades of the twentieth century were an era in which new kitchen products and condiments began to be heavily introduced in homes, and were endorsed by trusted popular writers in women's journals and newspaper columns (Sand, 2005). Despite the lack of evidence that MSG supported a healthy diet, it became widely used and accepted in Japanese homes (Sand, 2005). Later, with increased production, which made MSG more affordable and readily available, it became more accessible across economic scales (Renton, 2005). By 1920, MSG was widely used by the Japanese public, and further, was introduced in the Japanese colony of Taiwan and throughout the rest of Mainland China (Sand, 2005). The Chinese public was generally apprehensive about the product at first, as many saw Japanese brands in China as an extension of Japanese imperialism (Sand, 2005; Mosby, 2009); however, this perception changed with the manufacture of Chinese labels, and the product became widely accepted and used in both restaurants and home kitchens (Sand, 2005).

Following World War II, MSG became a popular commodity in America as well (Renton, 2005). With increased industrial production of food, the use of MSG in processed foods was a natural evolution, as processed foods were largely bland

and tasteless in comparison to their fresh counterparts (Sand, 2005; Renton, 2005). Initially, MSG was imported in large quantities from Japan where it was mass-produced through the synthesis of corn, wheat, or sugar beets (Sano, 2009). Later, as production methods improved and became more efficient, the American industrial system sought to manufacture MSG, utilizing the country's abundant supply of both corn and wheat (Sano, 2009).

Although MSG became widely accepted by the American industrial food industry, it was still quite foreign to home cooks in its raw form (Sand, 2005). Many well-known household brands such as Campbell's and Swanson utilized MSG and marketed their products to American housewives, as a way to serve their families cost-effective, tasty, nutritious meals (Sand, 2005). However, with the influx of Chinese immigrants to American cities by the 1960s, MSG as a food enhancer became more widely known and associated with the cultural group specifically. A famous article written by a Chinese-American doctor, Robert Ho Man Kwok, entitled "Chinese Restaurant Syndrome," inspired food hysteria and led to a blanket of assumptions regarding unknown "foreign" foods in America (Freeman, 2006). Published in the *New England Journal of Medicine,* Kwok's account was a description of his experienced numbness in the back and neck, heart palpitations, and weakness after eating Northern Chinese cuisine (Kwok, 1968). He labelled the experience "Chinese restaurant syndrome" (CRS), which cemented the idea that Chinese foods were bad for health.

The response to Kwok's account of CRS was monumental, and readers of the journal retorted with their own experiences, ranging from cold sweats, dizziness, and migraine-like reactions (Mosby, 2009; Schaumburg et al., 1968). In response letters, readers not only vilified MSG, but also hypothesized various cooking methods used specifically in Chinese cultural cuisine that might be the culprit of the widespread food reactions felt by consumers of Chinese food in America (Mosby, 2009). The *New York Times* followed the story, further embellishing and mainstreaming the perspective that Chinese cultural cuisine could pose negative health effects if consumed (Mosby, 2009). This prescription led members of the public to adopt the perspective that Chinese foods were inferior in comparison to other types of cultural cuisine, as they needed to rely on special seasonings to enhance their flavour (Freeman, 2006; Renton, 2005). Despite the use of MSG in many American TV dinners and other widely accepted food products, it was inherently associated with Chinese cultural groups and their "substandard" cuisine (Freeman, 2006; Mosby, 2009).

MSG AND HEALTH

Following the hysteria of "Chinese restaurant syndrome," the scientific community engaged in a more thorough investigation of the food additive. Several researchers concluded that exposure to MSG in large quantities could lead to brain lesions,

blindness, and stunted skeletal development (Olney, 1969; Bakke et al., 1978). Psychiatrist John W. Olney reinforced the dangers of MSG through his experiment on lab mice, which resulted in infertility over long periods of exposure to the food additive (Olney, 1969). Though Olney recognized that humans might not have the same reaction to the substance, he warned that women should avoid using the product, as it might bring about complications during pregnancy (Olney, 1969).

However, more recent reports published by the American Medical Association's Council on Scientific Affairs and the European Scientific Committee for Food have indicated that MSG is safe when "consumed at levels typically used in cooking and food manufacturing" (Meadows, 2003, p. 35). The researchers argue that MSG becomes a problem when over 3g are consumed per meal (Meadows, 2003). According to a study cited by Michael Freeman (2006), a typical Chinese dish from a restaurant could contain MSG amounts from 10 to 1500 milligrams per 100-gram portion. In comparison, aged cheeses such as Parmesan can contain approximately 1200 milligrams of MSG, and prepared tomato sauces may contain any amount from 20 to 1900 milligrams (Freeman, 2006, p. 483). Although it is true that a Chinese meal may contain slightly more MSG than an Italian meal, as Freeman (2006) outlines, there is still inconclusive scientific evidence that the flavour enhancer, in fact, leads to ill health or diet-related sickness.

The earlier findings published by Olney have since become irrelevant to the scientific community, for the tests that led to the aforementioned results involved injecting small rodents with amounts of MSG far greater than any one person would consume at any given time (Meadows, 2003; Williams & Woessner, 2009). Subsequently, the United States Food and Drug Administration (hereinafter USFDA) has deemed MSG "Generally Recognized as Safe" (GRAS), as it has yet to be scientifically proven to be harmful to health (USFDA, 2012). Several USFDA-sponsored tests and independent studies have demonstrated that MSG is harmless, and claim that there is little need for concern, despite receiving ongoing reports of illness in relation to the consumption of the substance (USFDA, 2012; Jinap & Hajeb, 2010; Walker & Lupien, 2000; Williams & Woessner, 2009). In some cases, MSG has even been promoted as a healthy seasoning alternative for people who require a limited sodium intake for heart reasons (Fernstrom, 2007; Renton, 2005).

Nonetheless, many food activists and public health practitioners continue to challenge the rhetoric of safety, and take issue with USFDA-sponsored scientific research as evidence to support GRAS labelling. Increasingly, many wish to address the ways in which the industrialized food system uses an abundance of food additives and inputs to enhance the flavours of cheaply produced, pre-packaged, and processed foods. The distrust is arguably legitimate, given the fact that labelling systems often fail to offer transparency and coherent information about food products and are being increasingly utilized by industry to promote nutrient-low and calorie-rich foods, while often marketing them as "natural" or "healthy" (Benalt,

2005; Mosby, 2009; Rutkow, Vernick, Hodge, & Teret, 2008). It is a common argument that food labelling fails to indicate sufficiently the processes that food undergoes before appearing on store shelves, and that scientific jargon can easily confuse consumers, rendering it difficult to make educated choices (Rutkow et al., 2008). In the case of MSG, it is often found in variation, and may be labelled as hydrolyzed milk or vegetable proteins, autolyzed yeast extract, or textured protein (Renton, 2005). It is a prominent ingredient in nutritional yeast and products made with "yeast extracts" such as Marmite or Vegemite (Renton, 2005). In sum, MSG is an ingredient difficult to avoid, even for the dourest and most observant consumer.

FOOD RACIALIZATION AND NUTRITIONISM IN AMERICA

Although the debate over the health impacts of MSG has subsided in recent years, what resonates today is the way in which the discussion has been overtly racialized. Ian Mosby (2009) articulates that the debate of MSG went far beyond the scientific community and influenced the opinions of the public to a significant degree. As Mosby outlines, in 1969 the New York City Health Department went as far as to single out Chinese food manufacturers and vendors, issuing warnings against "excessive use of MSG" in foods, though without specification of what constitutes "excessive," and with no evidence that patrons were actually negatively effected by the foods sold through these venues (p.145). Despite the use of processed foods and additives in other establishments, Chinese food restaurants were the main target of such surveillance. Even today, "No MSG" signs hang in the windows of most Chinese food restaurants in North America to deter distrust from potential patrons.

Though there remains no conclusive evidence that MSG has any impact on health, positive or negative, the implications of the discourse itself are numerous. As Melanie Du Puis (2007) highlights, the question of "how to eat" remains deeply imbedded in American culture. Similar to how she describes the American fear of "germs and calories," the focus on "health" equally shapes the hierarchy of edibles, contributing to an elitism surrounding food. As we have seen, the classification of Chinese cuisine as somehow inferior resonates, and its connection with MSG is still deeply embedded in understandings of the cultural cuisine. Understandings of MSG are therefore racialized in a very specific way, and Chinese cuisine is indiscriminately classified and prescribed a position in a class-based culinary order.

George Scrinis (2008) argues that by reducing foods down to one or two qualities, whether positive or negative, the wealth of their collective attributes are subsequently overlooked. Through the debate on nutritional claims, we reduce those foods to poorly understood chemical elements rather than engaging with them on a more holistic level (Scrinis, 2008). The vilification of MSG, it may be argued, overlooks the whole of ingredients used in a dish, consequently maligning the properties of the foods in their entirety. The abundance of vitamins and minerals, or the varying cultural attributes that the meal offers as a whole, are

disregarded. The implication of this "nutritionism," as Scrinis defines it, is that agency is then removed from eaters, cooks, homemakers, and providers, and authority is placed in the hands of distant food "experts." Scientists, doctors, dieticians, and other elite figures are relied upon to determine how society should or should not eat, and "dietary salvation" depends on guidance from those in a position of authority (Pollan, 2008, p. 28).

CONCLUSION

Although the scope of this short paper does not allow for the identification of the full effects of consuming MSG, examining the debate has revealed that the discourse surrounding food and health is often entwined with assumptions of race. It should be recognized that although there may be legitimate reason to question the use and reliance of poorly understood substances, one should be aware of the implications of classifying foods, and recognize the inherent judgment and condemnation that comes with certain assumptions. Though the discussion around MSG and its impacts on health has subsided in recent years, the assumption that Chinese food contains MSG in abundance still resonates largely without question.

The objective of this paper goes beyond the examination of the history of the substance and its use in restaurants and the industrial system, but aims to encourage self-reflexivity of one's understanding of food and health, and to question inherent notions of race and cultural cuisines. As Du Puis (2007) articulates, "we have historically made diet part of the struggle over social deservingness"; we should recognize that "our dietary status games are not a solution"; rather, they in fact "contribute to inequality" (p. 43).

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