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Food Writing Across Genres
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Cross-Culture comparison to the tolerance for chili pepper:
Can people learn how to love spicy food?

When birds forage in the jungles of South America, they may find a kind of fruit: they are small and red, they have a round, elongated or conical shape; they grow in an upright position on the plant; and they are easily plucked from the calyx. This kind of fruit is stimulated for mammals, whereas mammals have tended to avoid them. However, birds can't actually taste the spiciness. Birds eat the whole red fruit and fly to somewhere else, north or south. The seeds won't be digested by birds but will travel to somewhere else by birds' pooping. Birds never know, their breakfast, the red fruits will be propagated everywhere in America, they will be domesticated, artificial selected and traded by local culture. The red fruits, which humans call hot pepper, chili, or capsicum, eventually were spreaded to all parts of the world.

Humans, unlike birds, can feel the stimulus provided by hot pepper. Some individuals enjoy them, while others despise and shun them. Nowadays, we can see that different nations have varied preferences for spicy foods. Although reasons behind the difference may become more and more unclear, thanks, in part, to the rapid globalization of international cuisines, tracing why people on the earth have different tolerance and love to hot pepper is valuable and interesting.

We may have an assumption that the preference of the irritation on the tongue is genetic. It is plausible that physiological variations between regular spicy food users and non-users are causing disparities in spicy food tastes and consumption. Non-users of spicy meals were expected to be more sensitive to mouth tactile, oral thermal, and pressure discomfort than frequent users. However, a study by Mary-Jone and Mattes [1] found that physiological responsiveness to a variety of non-spicy noxious stimuli was similar between regular spicy food users and non-users, with only responsiveness to oral thermal heat differing, indicating that environment may be more important than physiological sensitivity in driving the desire to consume spicy foods. During their study, they also found that non-users would report no early exposure to spicy foods, whereas regular spicy food users would report consuming spicy foods since childhood.It implies that experience is a better predictor of spicy food liking than innate sensory response or personality qualities and that it is the major attribute separating frequent users from non-users. We can make an interesting assumption here, which is, people learned how to love spicy foods. Furthermore, all food we eat today may be environmental not genetic, people can be taught to love all food.

Chili pepper, or its original name, capsicum, is native to tropical zones of the New World, having originated in South America in the highlands of Bolivia or in the mountains of southern Brazil,

where eleven wild species are found.[2] Botanists and historians believe that, besides the effort of birds, the pre-Hispanic distribution of Capsicum as a domesticated plant was probably the result of bartering. This type of trade network existed in Mesoamerica since the Preclassic period (2500 BCE-200 CE) and chili seeds and dried chili peppers could easily have been exchanged. People probably took some plants and seeds with them on their travels and then exchanged them with other groups. When the Spaniards arrived in the New World at the end of the fifteenth century, capsicum had already been domesticated for thousands of years, and had spread out from its center of origin. According to the fact that chili peppers easily adapt to new surroundings and environmental conditions, capsicum can adapt to very different conditions from those of their original habitat. In the 15th century Christopher Columbus sailed in search of peppercorns, but found chillies instead. The first European encounter with the chili occurred on New Year's Day 1493 when Columbus wrote in his journal that "the pepper which the local Indians used as a spice is more abundant and more valuable than either black or melegueta pepper."[3] The Portuguese may have taken the chili they discovered in Brazil to Africa or back to Portugal. Jean Andrews, the author of numerous books on chilis, has determined that the Portuguese were producing chilis in West Africa, from the Senegal River to the delta of the Niger River, after obtaining seeds from an unknown Spanish source in the West Indies.[4] Later the Portuguese took them to Asia, where they spread like wildfire. Now they are indispensable ingredients in any respectable kitchen. We can find that the new world enjoys the oldest history of chili pepper, which indicates that people in North America may have built up the earliest tolerance and preference for this extreme stimulation. The rapid expansion and acceptance of spicy chili peppers across the world, on the other hand, demonstrates that individuals outside of North America, who had never touched the ingredients previously, acclimated to and embraced the scorching sensation on their tongue very soon.

Spice use dates back to at least 6000 years ago in human history.[9] Spices are mentioned in the Bible, and we know they were popular in the ancient Greek and Roman eras. According to Tamil literature, the Greeks in India swapped money for extremely huge sacks of black pepper. The Romans were extremely fond of black pepper, as evidenced by the fact that it appears in virtually all of the recipes in Apicius' fourth-century a.d. Roman cookbook, which was most likely authored in the first century. Although spice commerce fell with the collapse of the Roman Empire, it resurfaced centuries later. People's preference for spices, such as black pepper, ginger, nut- meg, cloves, and cinnamon, may have aided the spread of chili pepper in medieval times, and trade routes constructed for spice commerce between Europe and the East give favorable circumstances for the spread of chili pepper. Before chili became the item of trade in Europe, the yearly imports of black pepper into Europe were around two million pounds; by 1506 that amount had increased to three million pounds, and by 1570, it had increased to almost six million pounds. Because demand grew and commodity prices soared, the price of black pepper remained high during this era.[6] The chili was brought to Europe about the same period, although it is unknown whether it contributed to decreased spice prices. According to L'Écluse, gardeners and housewives in Castile utilized the chili, either dried or pickled, as a substitute for black pepper[7] . Chili is not only considerably more piquant than black pepper but it can also be produced reasonably easily in temperate areas, unlike spices, which can only be

grown in the tropics. If black pepper's principal purpose in the spice trade was due to its piquancy—as evidence suggests—then chili would have been a perfect, low-cost alternative.8 The new alternative ingredient, clearly, is much more pungent than black pepper. Even though Europe was the first region in the world to introduce chili peppers, their diet is relatively moderate, compared with the pungency provided by chili. If people can be taught to eat spicy food, then I believe that, over time, diet habits evolved in the same way that biology did: It is not the strongest of the species that survive, but the one most responsive to change.

In the world today fourteen culinary cultures can be characterized as highly piquant.[6] When I compare those places to the areas that are heavily involved in the spice trade, I am startled by the disparity. None of these culinary cultures are in Europe. With the exception of its early introduction into Spain and Portugal, minor use in southern Italy, and metamorphosis into paprika in the Balkans and Hungary (and, of course, Spain), the chii is virtually nonexistent in European food. In fact, while no European cuisine today is particularly spicy, the cuisines of the countries that were home to many of the spice trade commodities, namely West Africa, Algeria, Tunisia, Ethiopia, Yemen, the Indian subcontinent, Thailand, Indonesia, and the Sichuan region of China, continue to use hot spices (in addition to the chili). We can clearly notice that, it would be insufficient to describe a region's preference of chilies only via the chronology of introduction.

Scientists already proved that culture could play an important role on the variability among spicy food preferences.[10] However, culture is a very broad topic, formed for a variety of causes. Climate and weather, as well as geographical boundaries, previously governed human, plant, and animal movement. They have shaped how civilizations have grown and spread over the world. More than just a culinary stereotype, people who live in hot areas tend to prefer hot, spicy foods whilst those who live in milder climes prefer blander fare.

The popularity of chilies in hot climates may be due to humans adjusting to their surroundings by utilizing the qualities of chilies. Plants have evolved several chemical weapons to fight their adversaries, which range from bacteria and fungus to herbivorous insects and grazing animals. According to Paul Sherman, evolutionary biologist and lead author of the *BioScience* study, our ancestors learned through trial and error to co-opt such defenses for their own advantage in the millennia before modern refrigeration, accessing the pharmacopeia of antioxidant, antibacterial, and antiviral substances to shield themselves against germy miscreants. [11] "Throughout recorded history, food-borne bacteria like Clostridium, Escherichia, Listeria, Salmonella, and their toxins have been severe health issues, and they still are," Sherman says. Sherman and colleague Jennifer Billing combed through 93 traditional cookbooks from 36 different countries worldwide, looking for meat-based recipes (meat spoils faster than vegetables) in use for at least five generations, finding out that spice use is less about culinary aesthetics and more about food poisoning prevention (thus predating electrical refrigeration). [12]“A Darwinian view of gastronomy,” Sherman sums up, “helps us understand why ‘some like it hot.’”

Chinese cuisine is rich and diverse, varying in style and taste from region to region. There are a number of distinctive styles from different regions that contribute to the whole of Chinese cuisine, and of these there are eight specific culinary traditions that are recognized throughout

Chinese society. These eight culinary cuisines are Anhui, Cantonese, Fujian, Hunan, Jiangsu, Shandong, Szechuan and Zhejiang. Shandong cuisine is represented in the cuisine of my hometown. I grew up in a northern coastal city of China, Qingdao. People in my home city enjoy fresh and salty food with a lot of seafood dishes. Although spicy food is not a typical flavor in Shandong cuisine, I have many opportunities to experience it at restaurants. My parents enjoy spicy foods as well, and they always use hot pepper while preparing noodles and pork. Until I arrived in Sichuan, I felt I was an "expert" at eating spicy cuisine. I was just too sure of myself to order "regular spicy" in their restaurant, and my tongue, throat, and stomach were on fire. I discovered that the tones of people in those two places had a considerably higher tolerance and a low pungency sense. Sichuan and Hunan cuisines, in contrast to Shandong cuisine, are known for their fiery and spicy meals. However, prior to the Pre-Columbian exchange, Chinese spicy food obviously didn't include the use of Andean chilies. They had other ways of introducing kick (Sichuan peppercorn, wasabi, ginger, etc.) but it didn't include the chilies that Sichuan and Hunan food all use today. Additionally, from a historical perspective, in Sichuan province, spicy foods were not as popular as they are today before the Qing Dynasty (A.D. 1644-1912). Locals liked sweet dishes throughout the Tang and Song Dynasties (A.D. 618-1279)[13]. With the development of spice commerce between Europe and the East and the spread of chili pepper, chilies gradually replaced other spices. Transferred from sweet dishes to one of the most spicy cuisines in the world, food in Sichuan demonstrates that people's adaptability to spicy cuisine may result in endless possibilities depending on the surroundings.

We learn how to survive, we learn how to eat, we learn how to love food. People sometimes overlook this and assume that we are born with a limited palate and are scared to try new foods. In capsaicin-loving societies such as Mexico, for example, parents must raise their children to accept and eventually appreciate five-alarm cuisine. The concern is whether future societies will continue the ritual if such a burn is no longer required to protect us. If we accept Sherman's opinion, a Darwinian view of gastronomy, to explain our love for spicy food, then with the continuation of current food safety, it may be possible to anticipate why our grandchildren many millennia from now will not feel this way. There is another possibility, which is that when people find that chili has more good features than only keeping food fresh, we may be able to use this dish in richer ways to keep this culinary culture alive.

Word Cite

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3. Quoted in Andrews, The Pepper Trail, 9.

4. Ibid., 15. At this crucial juncture, just when you want the details, Andrews presents her conclusion “without going into all the details.”

5.

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