

FOOD MATTERS

Why Do American Diners Have Such a Limited Palate for Textures?

Complex taste sensations play a crucial role in food around the world — but have long been shunned stateside.

By Ligaya Mishan Photographs by Esther Choi
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A JELLYFISH TASTES of nothing. Maybe a little salt — a trace of the sea, or of how the creature is packed, once wrested from its natural habitat, for preservation (not of its life but of its viability as food). When its bell is prepared as a raw salad, it tastes only of the ingredients it absorbs: a sluice of soy sauce, sesame oil and black vinegar, scattered garlic, a pinch of sugar. What makes it coveted as a dish in some cultures is the texture, which is nothing like jelly at all. The flesh wobbles but doesn't deliquesce; instead, it resists, crunching under the teeth, because a jellyfish is almost half made of collagen, the connective tissue whose braided strands run through skin and bone.

This is a different crunch than you get from sinking your teeth into walnuts, say, or lacy rounds of lotus root tumbled in a wok, or the golden tips of a croissant or sugar torched into a glassine pane atop crème brûlée. And yet an English speaker must flounder for words to delineate these textures, beyond “crunchy” (which some etymologists date back to the late 19th century) and “crispy” (from “crisp,” which originally meant “curly” but came to signify “brittle” in the 16th century). Other languages are more bountiful. The British food writer Fuchsia Dunlop has written about the Chinese distinction between *cui*, a crispness that “offers resistance to the teeth but finally yields, cleanly, with a pleasant snappy feeling” (e.g., scalded goose intestines, stalks of celery), and *su*, “dry, fragile, fall-apart crispness” (e.g., deep-fried duck skin). A 2008 report in the *Journal of Texture Studies* lists 144 Chinese terms for food texture, including even finer gradations of crunchy and crispy: *cui nen*, crisp but tender, like young bamboo shoots and spears of asparagus in spring; *su song*, crisp and loose, like the tangled tendrils of rousong (pork simmered, shredded and dried until sucked of all moisture); *su ruan*, brittle, then soft, like pastry that dissolves at the touch.

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In Japan, such terms number more than 400. “Too many,” a team of Japanese scientists demurred in a paper presented at the 2016 International Conference on Knowledge-Based and Intelligent Information and Engineering Systems, noting that these descriptions are inconsistently used even among native speakers, making translation difficult. Onomatopoeia rules the day: A ruffly strip of well-seethed bacon delivers a clean crack that in Japan is called *kari kari*, as opposed to *shaki shaki* (a gushy bite, as of an apple right off the tree), *saku saku* (a fracture cushioned by richness, as found in buttery cookies and chicharrón — pork skins dropped in hot oil, where they expand like clouds), *gari gari* (a hard crunch, like ice, that taxes the jaw), *bari bari* (the kind of delicate shattering epitomized by a rice cracker) and *pari pari* (the even more evanescent shattering achieved by the sheerest-cut potato chips).



A collection of light and soft items — or, as the Japanese describe them, *fuwa fuwa*, which translates to “fluffy, fluffy” — including, clockwise from left, a stack of

And this is merely crunch. What of the coy half-surrender that the Italians venerate in pasta as “al dente” and the Taiwanese in noodles and boba as “Q” (or “QQ,” if the food in question is exceptionally springy); the restive yolk threatening to slither off a six-minute egg; the seraphic weight of a chiffon cake; the heavy melt of fat off a slab of pork belly, slowly liquefying itself? What of goo, foam, dust, air? What of the worlds that lie between slime and velvet, collapse and refusal, succulence and desiccation?

Not only does English lack a robust vocabulary for food textures but, whether as corollary or coincidence, English speakers also tend to value a narrower range of textures. There have always been differences in what people of different regions eat, based on the flora and fauna supported by local climate and geography. Europe, to which the majority of Americans trace their heritage, is far less biodiverse than Asia, Africa and South America, where what many Americans consider more challenging textures are celebrated, from the viscosity of soups thickened with ogbono (bush mango seeds) in Nigeria to the sponginess of ubre asada (grilled cow udder) in Chile. In a survey by the American sensory scientist Jeannine F. Delwiche conducted at Ohio State University in 2002, respondents considered texture significantly less important than taste and scent in its impact on flavor. Flavor is often conflated with taste, but where taste is quantifiable — corresponding to messages sent to the brain by receptor cells on the tongue when they detect specific chemical components in food — flavor is nebulous: an aesthetic judgment. It is often defined as a confluence of taste, scent and memory, yet other senses intrude. Studies have shown that diners have difficulty identifying flavors when foods are dyed different colors, for example. The eyes lead them astray.

Sound plays a role, too — as a marker of texture. In a 2004 study by the Italian cognitive neuroscientist Massimiliano Zampini and the British experimental psychologist Charles Spence, participants rated the same potato chips as crisper when the frequencies of their splintering were amplified. The louder the splintering — the more it echoes in the skull — the crisper and better we think the potato chip is, the truer to its destiny. After all, a potato chip's entire purpose in life is to be crisp. Here, as with the jellyfish, taste is an afterthought. Texture is all.



A chocolate lava cake with an oozing, molten core. Photograph by Esther Choi. Set design by Jocelyn Cabral

WHEN WE CALL a food crunchy or creamy — arguably the two most craved textures in the United States — we are identifying in part its mechanical properties: how it responds to and deforms itself under an application of force, whether it opposes or capitulates. Crunch registers as a small act of destruction. We feel the teeth breaking through the apple's flesh. Exactly which teeth are engaged may make the difference between gari gari and pari pari; food scientists have posited that crunchiness, which implies density, requires gnashing of the molars at the back of the mouth, whereas the higher pitch of crispness is caused by biting at the front with the incisors.

Liking crunch may have bestowed an evolutionary advantage on early humans, as a marker of freshness in food, showing that it was safe to eat. (If sogginess in a potato chip is failure and disgrace, in other foods it can signal rot and danger.) Our ancestors initially relied on a diet of crunchy raw plants and insects and, when they learned to wrangle fire and cook — which, because it made food easier to digest, led to greater caloric intake with less investment of time and a corresponding increase in brain size — those who were drawn to the crisping and browning that takes place when food is introduced to heat (with the chemical reactions of amino acids and sugars) were “more likely to keep on cooking, thus accruing long-term benefits over evolutionary time,” the American anthropologist John S. Allen writes in “The Omnivorous Mind” (2012).

Perhaps our love of crunch is an artifact of our primal selves. The sound of demolition reaffirms that we are animals, with jaws engineered to tear things apart. There's something decisive about how easily certain foods fracture — how quickly we reduce them to rubble. Creaminess we experience more passively, as a weight on the tongue or a state of flow, judged by speed: how slowly a substance moves, how closely it clings to the spoon. (One factor in this is a particular enzyme in the saliva that

breaks down starches; the more enzyme is present, the quicker the breakdown, which may explain why the same spoonful might be creamy to one person and runny to another.) For our ancestors, such richness may have served as testament to the presence of necessary nutrients and fats. For us, it's a proxy for luxury.



Two foods that crunch and crackle: potato chips, left, and chicharrón (fried pork skins). Photograph by Esther Choi. Set design by Jocelyn Cabral

We could go further and read the dominance of crunchy and creamy in American diners' preferences as metaphor: a sly enactment of the dynamic of conquest and submission, historically a favored American mode of interacting with the other. But sometimes a potato chip is just a potato chip. You can enjoy a good crunch without channeling imperialism. And imperial ambitions have hardly been confined to America. Should we interpret a culture's insistence on devouring every texture as another form of proclaiming dominion, reducing all nonhuman life — everything that is not *us* — to potential food?

The more interesting question is why textures beloved by many cultures came to be shunned by Americans: the prolonged chewiness of tripe; the tendon turned to jelly in a bowl of pho; the thick slickness of okra, leaking its mineral-rich mucilage. These were once common elements of most people's diets; until relatively recently in human history, our ancestors could not afford to be so choosy. Eating was simply a matter of survival, and a group of people living in the same area, with access to the same resources, ate pretty much the same food. As the British social anthropologist Jack Goody has written, the notion of cuisine only arises when members of a group begin to hoard more of those resources and restrict access to them; when hierarchy takes hold.

Traditionally, those at the top of the hierarchy had the most wide-ranging diets, including ingredients that were difficult to procure, sometimes from the ends of empire, and thus expensive and a way to telegraph status. Then industrialization, beginning in England in the mid-18th century, changed the relationship between diners and the sources of their food. In 1820, farm workers were reported to make up around 72 percent of the American labor force; today, according to the U.S. Department of Agriculture, they represent just over 1 percent. An estrangement set in, and with it a dwindling. In the wake of the Second World War, prepackaged, processed food became the standard in many American homes — food stripped of both fuss and complexity, of anything to wrestle with, like a recalcitrant chicken heart or the stretchy, gluey splendor of natto (fermented soybeans). This was food that simply obliged. Gone were the textures of resistance, if you will; the messy ones that call to mind a body's murky interior, that remind us where our food comes from.



A plate of natto — soybeans that have become sticky and gooey through fermentation. Photograph by Esther Choi. Set design by Jocelyn Cabral

YET TODAY AMERICANS are gravitating away from complacency, toward more dramatic sensations in food, from nigh lethally sour candy and the funk of fermentation to ever fiercer chiles and hot sauces. This could be a manifestation of a general social trend toward extremes. Or is it a desire for more — to feel more, know more, be more? Could the tide be turning? The counterculture of the 1960s focused in part on an idea that is now almost mainstream: the need to retreat from the commercialization and corporatization of life, including what we put on our tables and how we nourish each other. In the past decade, the homey meal cooked from scratch has triumphed as an ideal (if not always an achievable one for people with limited resources).

At the same time, knowledge of other cuisines has become a kind of cultural capital. Globalization, while threatening to erase difference by turning everywhere into a market for the same products, has given Americans the boon of greater exposure to foods from around the world. Sometimes these foods have been mocked, as on the television game show “Fear Factor,” which initially ran from 2001 to 2006 (when the now hugely influential podcaster Joe Rogan was its host) and involved forcing contestants to eat the likes of silk moth pupae (a street snack in parts of Asia), the eyeballs of various animals (often reserved for honored guests in other cultures) and buffalo testicles (actually homegrown American cowboy fare, which, when cooked properly, can be wondrously tender).

To be sure, none of these foods have gained a place in the mainstream American diet. But consider that Americans were lured into sushi bars half a century ago by the compromise of the California roll, with its affable mixture of imitation crab and avocado slaked in mayonnaise — essentially evoking a tuna salad sandwich, reconfigured with rice and seaweed — and today clamor for the silkiness of raw fish and the cool, briny custard of sea urchin. What was once a dare is now just a night out. Go ahead and look a little farther down the menu, or submit to the chef’s will. Maybe you will receive a gift: a little plate of what looks like chubby curls of dough, creamy beans or larvae huddled together for warmth. This is shirako, the sperm sacs of cod, soft and milky as oysters. Let them slip on the tongue.

Set design by Jocelyn Cabral. Photo assistant: TJ Elias. Set designer’s assistant: Maggie DiMarco