

When Do We Lose Our Taste For The New?

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Despite my best efforts to ignore him, Paul, my fresh-out-of-college administrative assistant's music, was getting on my nerves. The problem wasn't his work, which was superb. It was his taste in music.

Shortly after his arrival at my neurobiology lab, his CD player started blasting something horrendous by whatever group twenty year olds were listening to. But that wasn't what bothered me. What bothered me was the way he kept switching what he listened to.

One day it would be Sonic Youth for hours, and the next day late Beethoven. Irish folk music would give way to Gregorian chants, and then to Shostakovich, John Coltrane, big band hits, Yma Sumac, Puccini arias, Philip Glass, and klezmer classics.

He was spending the paychecks from his first real job on a methodical exploration of different types of music, giving them a careful listening, and forming opinions -- hating some of the stuff, loving the process. What was irritating was how open-minded he was, how amenable to novelty.

He was like that in every respect. He had a beard and longish hair until, one day, he came into the lab with a bald pate. "I thought it would be interesting to try out this appearance for a while -- see if it changes the way people interact with me," he explained.

In his time off, he would spend a weekend at a film festival of Indian musicals, just for the experience. He'd pour over Melville, then Chaucer, then contemporary Hungarian realists.

All this was more than irritating. It was depressing, because it made me reflect on my own narrowing. At the age of forty, I listen to music constantly, but I can't remember the last time I listened to a new composer. And while I love all Mahler's music, I now seem to listen only to the same two symphonies of his.

The same goes for reggae: it's always the same trusted tape of Bob Marley's greatest hits. And if I'm going out to dinner I'm more and more likely to order my usual favorites.

How did this happen? When did it become so important to have familiar ground underfoot? For many people, that question would lead to some heavy soul searching. Being a scientist, I decided to avoid this by studying the subject. A quick survey revealed that this all too familiar tendency had been ignored in the scientific literature.

Though there is research into why highly creative people tend to become less creative over time, no one knows why, as we age, we start buying those "best of" anthologies advertised on late night television. I figured I could at least get a better fix on the phenomenon, but I needed some data.

I wanted to test whether there were any clear cut maturational time windows during which we form our cultural tastes, are open to new experience, even gravitate to it for its own sake. In particular, I wanted to determine whether there was a consistent age at which such windows of openness slammed shut.

As a CD of Wagner highlights played on ukulele boomed outside my office, I decided to try to figure out when we form our musical tastes, and when we stop being open to most new music.

My research assistants and I called radio stations that specialize in the music of various periods: contemporary rock, the "Stairway to Heaven" seventies stations, the fifties doo-wop stations, and so on.

In each case, we posed the same two questions to the station manager: When was most of the music that you play first introduced? And what is the average age of your listeners?

After more than forty phone calls around the country, a pattern became clear; not a lot of seventeen-year-olds were tuning in to the Andrews Sisters, not a lot of Rage Against the Machine was being played in retirement communities, and devotees of sixty nonstop minutes of James Taylor were starting to wear relaxed-fit jeans.

This can be stated more precisely: Most people are twenty years old or younger when they first hear the popular music they choose to listen to for the rest of their lives.

When we combined those results with a measure of how variable the data were, we figured out that if you are more than thirty-five years old when a style of popular music is introduced there's a greater than ninety-five per cent chance that you will never choose to listen to it. The window has closed.

Next, I turned to the sensory realm of food. Psychologists have long studied gustatory novelty in laboratory animals, trying to understand how they choose their food, correct a dietary deficiency, or avoid a toxin. For wildlife zoologists,

too, these issues have started to arise particularly when, as a result of habitat degradation, an animal population is forced into a new ecosystem.

The anthropologist Shirley Strum studied a troop of wild baboons in Kenya after a group of farmers forced them off their native grounds, and watched the animals learn what plants in their new home were good to eat.

The laboratory and the field studies show the same thing: animals normally shy away from novel foods, and when they finally do get hungry enough to try something new the youngsters are the ones most given to exploration: they're most likely to make a discovery, and most open to changing their behavior when they see that someone else has.

Does the pattern apply to us? To pursue the time-window strategy I used with the radio stations, I needed a type of food that, by Middle American standards, was truly anomalous and that had been introduced during a recent, identifiable time. I thought about pizza or bagels, but both had been too pervasive for too long.

There was the shift in Chinese-restaurant food from chop suey Cantonese to spicy Szechuan, but it was hard to identify any clear transition point. Sushi worked, however. Little pieces of raw fish served with horseradish and bits of vegetable carved to look like flowers. Here was something that probably remains a bit off-putting to the pot-roast crowd living near the amber waves of grain.

Returning to our phones, my research assistants and I called sushi restaurants throughout the Midwest: from Omaha, Nebraska on down to Eden Prairie, Minnesota. When was sushi first introduced into your town? How old is your average non-Asian customer?

In a number of instances, the news that some neurobiology professor wanted information for a survey generated consternation. We also stumbled on what was apparently a nasty feud in Bloomington, Indiana, over which of two sushi places had opened first. But fifty restaurants later we had uncovered a fairly clear pattern.

The typical non-Asian Midwestern sushi patron had been less than twenty-eight years old when sushi first arrived in town, and among townspeople who were older than thirty-nine at that time the odds were greater than ninety-five per cent that they would never touch it. Another window closed.

Emboldened further, I looked into one more window. I live near the Haight district in San Francisco, and thanks to this proximity I was dimly aware that what is currently outrageous in fashion has changed since my peers and I were affronting our elders by wearing jeans to high school. Here, surely, was another realm amenable to the time-window approach.

Tattoos wouldn't fill the bill, because they have been around for a long while and because their connotations have shifted. Pierced ears for men don't work, either, and for much the same reason: sixty-year-old Republican assemblymen can get away with earrings these days.

Soon I had entered the world of tongue studs and navel and genital rings. Retreating to my office, I let my research assistants handle all those phone calls on their own: When did you first start offering this type of body piercing in your town? How old is your average customer?

At these establishments, the news that a neurobiologist wanted information prompted not one raised eyebrow, pierced or otherwise. Thirty-five data points later, we had a remarkably clear answer. The average tongue-stud wearer was eighteen or younger when that sociopolitical deconstructionist fashion statement, or whatever it is, arrived on the scene.

And if you were older than twenty-three at the time, the odds are ninety-five percent that you have passed up tongue studs altogether, probably just trying instead to get a hairdo like Jennifer Aniston's.

NOW we had some major scientific discoveries on our hands: for at least one particular fashion novelty, the window of receptivity essentially closed by age twenty-three; for popular music, it closed by thirty-five; for an alien food type, by thirty-nine.

These findings seemed reminiscent of work that had been done regarding creativity, where, in study after study, age has emerged as a leading factor. The profession of mathematics, for instance, is built almost entirely upon the creative breakthroughs of wunderkinder, and studies of other creative professions show a less extreme version of the same pattern.

Count the number of melodies per year from a composer, poems from a poet, original research findings from a scientist, and, on the average, you'll find a decline after a certain, relatively youthful peak.

These studies also indicate that over time the great creative minds not only are less likely to generate something new but are less open to someone else's novelty - the same phenomenon I was seeing in the sushi bars.

Think of Einstein, in his later years, fighting a rear-guard action against quantum mechanics, or of Alfred Mirsky as the last major figure in cell biology to reject the idea that DNA was the molecule of heredity.

As the physicist Max Planck once observed, established generations of scientists never accept new theories; they die first. In some cases, the closing mind of a

former revolutionary rejects what should have been the logical extension of his revolution.

Consider Martin Luther, who spent his final years helping to crush the peasant uprisings galvanized by his own youthful work. There's a consistent trend emerging here.

As we age, all of us - the senior scientist flailing against his errant disciples, the commuter twiddling with the radio dial for a familiar tune - become less open to someone else's novelty.

What can this be about? The psychologist Dean Keith Simonton has shown that the decline in creativity and openness among great minds isn't predicted by age so much as by how long people have worked in one discipline. Scholars who switch disciplines seem to have their openness rejuvenated. What matters most isn't chronological age but "disciplinary" age.

There are a number of ways you might try to account for this effect. Maybe it's that the same old stodgy tricks seem fresh and original in the new discipline. Maybe it's that an aging individual who is a high achiever in one discipline and switches to another is unusually open to novelty in the first place.

Or maybe changing disciplines truly does stimulate the mind to regain some of its youthful openness to novelty. As the neuroscientist Marian Diamond has shown, environmental stimulation can make more elaborate neuronal connections in the adult brain.

An alternative explanation finds support in Simonton's recent work. Novel discoveries in a field are, pretty much by definition, the ones that overturn the entrenched ideas of the intellectual elites. The reason that these gray eminences become reactionary is simply that they have the most to lose in the face of novelty.

But I don't think any of this tells us much about the narrowing of taste. When it comes to picking a radio station for the drive home, our investment in the status quo isn't what's preventing us from listening to music popular with kids twenty years younger than we are. And the eminence idea doesn't tell us much about why old animals are unwilling to try new foods.

You might think that the explanation was neurological - that some novelty center in our brain starts to atrophy with age, losing neurons left and right. In fact, though, in most brain regions there isn't any dramatic neuron loss as we get older. With extreme age, there is a loss of connections between neurons, causing neuronal networks of communication to weaken.

That probably has something to do with why it's more difficult for us to absorb new information and apply it in a novel way as we age, while our ability to recall facts and apply them in the habitual way remains intact.

But it doesn't explain the declining appeal of novelty: I don't think most folks holding out for a good, thick steak do so because they have trouble understanding the raw-fish paradigm of sushi.

The real problem with the neurological approach, however, is that there is no such thing as a novelty center in the brain, let alone sub-areas for fashion, music, or food which age at different speeds.

Maybe getting a grip on the phenomenon requires shifting the emphasis. In Tracy Kidder's "Old Friends," a nursing-home resident says about his forgetful roommate, "Heard only twice, Lou's memories could seem monotonous. Heard many times, they were like old friends. They were comforting."

I've been asking why; as we get older, novelty becomes unappealing. Maybe we need to try to understand why repetition becomes appealing.

There's a stage of childhood in which kids become mad for repetition, taking pleasure in the realization that they are mastering rules. Maybe the pleasure at the other end of life is the realization that the rules are still there - as are we.

Given that aging contracts our neural networks and makes our cognition more repetitive, it would be a humane quirk of evolution if we were reassured by that repetition.

As Igor Stravinsky lay dying, he repeatedly banged his ring against the metal railing of his hospital bed, startling his wife each time. Finally with a touch of irritation, she asked why he was doing that, since he knew she was still there. "But I want to be sure that I still exist," he replied.

Why, really, does it matter whether people are open to novelty in their cultural and social choices? Does society really need more eighty-year-olds with tongue studs eating raw eel? Is it a crime if I keep listening to that Bob Marley tape?

There may even be some advantage for social groups if their aging members become protective archivists of their cultural inheritance, instead of constantly jettisoning the old in order to soak up the new.

The physiologist Jared Diamond has argued that part of the success of Cro-Magnons was that they lived about fifty per cent longer than Neanderthals did, and so when some rare ecological catastrophe hit there was a substantially greater chance that someone would be old enough to remember the last time that it happened and how they got out of the mess then.

Perhaps, in my old age, if there's a locust infestation that devastates food stores at my university I'll be able to save the youngsters by my recollections of which wild plants behind the Student Union are safe to eat, along with an ancillary lecture about how reggae isn't what it used to be.

But as I hang up the lab coat and actually reflect on some of this, I find it a little dispiriting. When I see the finest of my students ready to run off to the Peace Corps and minister to lepers in the Congo - or teach some kid in the barrio just outside the university how to read - I remember that, once, it was easier to be that way.

An open mind is a prerequisite to an open heart. And then there's simply the impoverishment that comes with this closing of the mind to novelty and glorying in repetition, as years of cultural exploration are likely to give way to banging on a hospital-bed railing.

What a shock to discover that at the age of forty you've already been dipped in bronze and placed on a mantelpiece - that there are already societal institutions like oldies radio stations, whose very existence affirms the fact that you are no longer where culture is.

If (as my administrative assistant assures me) there's a rich, vibrant world out there, it shouldn't be just for twenty-year-olds to explore for exploration's sake.

Whatever it is that fends us off from novelty, I figure maybe it's worth putting up a bit of a fight, even if it means forgoing Bob Marley's greatest hits every now and then.