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On the Origin of Tepees

Why Some Ideas Spread While Others Go Extinct

Written by Jonnie Hughes

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On the Origin of Tepees

Why Some Ideas Spread While Others Go Extinct

Jonnie Hughes



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The New World



The Great Indoors

Ads and I stand by, powerless, as Kenny G murders 'The Girl from Ipanema'. We're in a lift with two men, one woman, and a toddler. The vista flashes before us, alternating glimpses of a vast interior space glittering with delights and touched-up I beams at close quarters. The elevator is fast enough to make us all feel a little sick, and the woman next to us groans.

We're travelling within the bowels of the Mall of America (the MOA), the most visited enclosed shopping centre in the world. There are more than 230,000 square metres of retail space within these walls. Twelve thousand people work here. It has over five hundred shops. There can't

be much on Earth that you can't buy in this wondrous room. There is a shop here that sells just beads, and another that sells just slippers. There's a dedicated remote-control helicopter shop, a 'Wallet World', a beanbag furniture store that sells 'the security of a stuffed animal with the functionality of a pillow – It's a pillow and a pet. It's a Pillow Pet' – and a shop that sells only the things people would need if they wanted to give up smoking. You couldn't count the number of different things for sale in this building. The diversity, the tiny differences between each different item – it's mind-blowing. And if you don't want to buy stuff, the MOA boasts a comedy club, an eighteen-hole crazy golf course, a staged wedding each night that you can buy tickets to, a shark tank that you can swim in, and a theme park complete with roller-coasters and log flumes – all of it under one roof.

What sort of people would need such an overzealous interior? The answer: Minnesotans. Ads and I are standing inside an inside, inside Minnesota. And Minnesota is a place in which being inside matters. This state suffers five months of snow and temperatures of between -50°C in winter and 46°C in summer. If you want to live a full life in Minnesota (and Minnesotans do, I assure you), you have to build yourself a haven from the Great Outdoors. Your own little world. A Great Indoors.

The lift pings, the doors open, and the other people shuffle out. Ads and I follow them into towering cloisters lined with purchasing opportunities, and discover that even at 10:00 AM, the mall is full of people of every description, shuffling, gazing, buying.

The Mall of America must be the preferred habitat of my species. There are probably tens of thousands of us in this room. If an ecologist ever stumbled upon a species as large as we are, in such a swarm, they'd have to conclude that they had discovered the species' hotspot, its idealized niche: a patch of the planet that just happens to satisfy all the needs of that particular living thing, fully and completely. Home Sweet Home. And they'd be right. The MOA does satisfy all of our needs. It's warm and dry. It has a superabundance of food and water. There are no natural predators here, and it's largely disease-free. It's the perfect place for a rather weird naked ape from tropical East Africa.

In genetic terms, we are all (roughly) East African. Our species, *Homo sapiens*, evolved there ten thousand human lifetimes ago, and although there have been some minor tweakings and additions since then, our

gene pool, the totality of all our human genes, has remained (roughly) the same ever since. 'Human evolution is over,' says Professor Steven Jones, a leading geneticist at University College, London. After 5.8 million years of madcap, inexplicable evolution in which our brain inflated faster than an airbag in a head-on collision, our bout of natural selection seems to have come to an abrupt end with the advent of the 'caveperson' in East Africa two hundred thousand years ago. Which means that, in genetic terms, Ads and I, and all the Minnesotans in this mall, *are* cavepeople. We may feel thoroughly modern, but our bodies are out-of-date by two hundred thousand years. If a genuine antique cavewoman entered The Gap right now and had the wherewithal to start flipping through the jeans next to me, I wouldn't bat an eyelid. She would look (roughly) the same as the other modern cavewomen in the shop. I could have children with that antique cavewoman, our DNA would be that similar. So what's going on? Why do we cavepeople appear to be frozen in time?

Sandwich Selection

Ads and I gravitate towards the food court; we forgot to have breakfast this morning. I know, as Roseanne once said, 'that's a special kind of stupid,' but hey, we just flew in from Heathrow yesterday, so our clocks are off. I stand there, identical to all the other cavepeople, looking up at the options. No hunting or gathering for us anymore; we can do the money-for-goods swap that cavepeople do nowadays, and walk away with a hot, steaming quesadilla. Or shall I go for the bagel? It's healthier. (As if that's ever really mattered to this caveman: two hundred thousand years on, my Stone Age desires for protein, salt, and sugar still rule.)

Natural selection may no longer be happening to us, but it *is* happening to the sandwiches in the food court.* Every time one of us makes a choice, the sale is made, the stock runs low, and the manager makes a mental note to order more next time. The popular choices – those 'selected for' – will be reordered (will *reproduce*) and grow in number over time. The dried-up specials that the manager thought were 'worth a try' – those 'selected against' – will not be reordered (will fail to reproduce) and will eventually become locally, if not globally, extinct. Over

*Because human choice is involved, this is technically known as artificial selection, but bear with me.

the weeks and months, people's selections dictate the sandwich 'species' composition of the food court community.

But as well as selecting *between* species, food court natural selection works *within* species. Sift through the pile of supposedly identical tuna melt panini and you'll find some that are slightly older: The tuna looks a bit too brown. There are some with a huge piece of raw onion sticking out; not good for the breath. One has clearly been dropped and hastily reassembled. These individuals are 'less fit' than the younger, onion-meek, tidy ones. If tuna panini are sufficiently abundant – if there are more tuna panini than tuna panini choosers – the 'selection pressure' will be sufficient to ensure that the less fit individuals remain in the fridge. A good manager will spot the problem and complain to the supplier: 'Don't give me brown tuna, easy on the onion, and don't repack a sandwich unless you do it carefully.' Over time, the population of tuna melt panini will adapt. Their 'average fitness' will increase. In the human world, we call this process 'quality control', but outdoors, in the wild, it is natural selection.

So how come our quality is no longer controlled? How is it that our two-hundred-thousand-year-old cavepeople bodies are never selected against, no matter how much metaphorical onion is hanging out of our metaphorical panini? How did we absent ourselves from biological evolution?

Remember the naked mole rat? It also managed to sidestep natural selection. How? It tucked itself away in a world of its own making, a perfect little 'indoors' with a constant temperature and humidity year round. A safe place where cruel nature can't get at it, where there is no 'survival of the fittest' to worry about. Well, we do that, too. We live indoors, only we go one step further: we take our *indoors* into the *outdoors*.

We don't huddle in the dark in a never-changing bunker. We venture out across the globe to deserts and mountain ranges and islands and Minnesota. We go to these extremely dissimilar places – places in which a naked tropical ape has no place being – and do something magical: instead of adapting to suit the local environment, we *adapt the local environment to suit us*. No matter where we are on Earth, we can fashion *Home Sweet Home*. The Mall of America is just the start of it. Outside here there are tens of thousands of farms and shops and public buildings and homes supplying everything we need: warmth, water, food, shelter, a lack of

predators, the near-absence of disease. It's like we're forever living in an idealized East Africa, an East Africa that only ever means us well. And because we're always living in the best of all possible East Africas, our antique caveperson bodies never have any quality-control issues. Our 'manager' never has cause to complain.

It all seems too good to be true, and if you're like me, a skyhook sceptic, the natural response is that it must be. I don't believe in magic. This 'miraculous' power must be a conjuring trick. So what are we doing when we build Home Sweet Home in Minnesota? What's the trick?

Little Lars on the Prairie

This time, Ads and I use the stairs that border the enormous atrium in the middle of the mall, the home of the Nickelodeon Universe. I try to relax and enjoy the spectacle of an indoor Spongebob Squarepants roller-coaster, but I'm cross because I've been in the States for less than twenty-four hours and I've already ruined one pair of trousers. I knew I shouldn't have gone for that tuna panini.

A Barnes and Noble sucks us off the lower cloister; bookshops have a tractor beam effect on me. Inside, near the Local History section, a couple starts talking to their children in a strange language, and this takes me totally by surprise. Ads and I had the distinct impression that we would be seeing only Americans in Minnesota. Yet here are people, deep in the mall, speaking an exotic tongue. The language is guttural but not unpleasant. A melody loops around the words, and as the mother speaks, I join her children and patiently watch her lips move, entranced. When I realize that they are all now staring at me, I glance back at the shelves, notice the numerous books on Scandinavian immigrants, and the whole thing comes together. They must be speaking Swedish or Norwegian. They *are* Americans – *Scandinavian* Americans.

Over a quarter of the people in this mall will have Scandinavian ancestry. Norwegians, Swedes, Icelanders, Finns, and Danes began coming to Minnesota as early as 1825, three decades before it was officially a state. They left Europe because it had become a place of political unrest, bad harvests, and religious intolerance. Upon landfall in the busy East, grabbing land in the Far West seemed the only option. Naturally enough,

these people from the North of Europe gravitated towards the North of the US. At that time, Minnesota was the most *northern* and *western* you could get: a cold, forested wilderness sparsely populated by French fur trappers, woodland Indians, and the results of their occasional union, the *Métis*. Fur was big business back then, and the young United States resented Britain, because it had a tight control on the trade: a grasping hand that came down from the North, stole the pelts from the backs of American animals, and retreated again to get rich. As an act of intent, the US government built a castle, Fort Snelling, where the Minnesota River meets the Mississippi River, only eight miles from where I am now. The immigrant Scandinavians hurriedly gathered around this northwest outpost.

Minnesota was much less habitable in the early nineteenth century, before there were nice, warm interiors to hide in. Starting from scratch in a place like this was tough. However, there were some advantages to the location: the falls just above the fort were a superb source of power for timber mills, and the wide river just below the fort marked the highest navigable point on the Mississippi. Within a few years, a milling industry had been set up on the falls to process the trees as they were taken down, and a river port had budded on the banks downstream. By the middle of the century, the mills had given birth to the town of Minneapolis, and the port had become St Paul, together the Twin Cities of Minnesota.

As the woodland fell, the Scandinavians set up farms on the prairies. As the mills turned from timber to flour, the settlers fed them with grain. To their great fortune, they had happened upon a young, rich soil that had been laid down only as the glaciers retreated, ten thousand years before. It was as productive as any in North America. The good soil began to burst with wheat, and Minneapolis became the world's largest flour milling plant. Its prosperity drew successive Scandinavians from their homelands, especially Norway. In the century after 1825, one third of Norway emigrated to the US. With the exception of Ireland, no single country ever emptied a larger percentage of its population into America. Minnesota filled up with Vikings, people perfectly equipped to conquer a wild land that spends up to five months of the year below freezing.

But in what way were they perfectly equipped? True, they had very pale faces, which would have helped them make enough vitamin D

under the dull Minnesota sky,* but other than that, their genes hadn't given them any special tools for their new life in America. Instead, it was their fourteen-thousand-year history in a land of snow and lakes and cold plains and trees that made the Scandinavians fit for Minnesota. Nineteenth-century Scandinavians were born lumberjacks, because they had always been surrounded by forests. They were expert carpenters. They were world leaders in vernacular architecture – the craft of making beautiful, functional buildings out of local materials – because their small, dispersed population in Scandinavia had ensured that the region never fell into the riot of feudalism and the desire for the stone fortresses and flamboyant palaces so characteristic of the rest of medieval Europe. For six thousand years they had been farming lands with a short growing season. They already knew how to raise crops quickly in a poor summer. They unthinkingly built big barns to house their livestock in the winter. They automatically collected the winter manure and added it to their soils. During the cold, dark months, they didn't waste their time; they had a niggling feeling that they ought to be making clothes and tools. Their Viking days had given them long traditions of furriery, leather, and metalwork. To top it all, these new Americans were psychologically and socially buttressed by a deep Lutheran tradition that denied extravagancies and frivolities and promoted hard, simple work; good, solid craft; and a strong, supportive community. They were preconditioned for life in Minnesota. Succeeding in this climate was already routine for the Scandinavians: they'd spent millennia learning how to survive in a place like this.

So it didn't matter that, underneath, they were just naked tropical apes. Within a few decades of arriving in Minnesota, the Scandinavians were safe and warm in this wild, cold place. Just like the naked mole rats, they had succeeded in constructing Home Sweet Home, a perfect little world of their own, an 'indoors' where nature couldn't get at them. But unlike that of the naked mole rats, this shelter was not fashioned from the hard desert soil. It was built out of something, on the face of it, far more fragile: their memories of the things their parents and grandparents had always done.

*Vitamin D is made by the skin with solar power. The light skin of Northern Europeans and northern Asians evolved to compensate for the dullness of their homelands: it let more sunlight through than the original brown skin did.

And there's the magic, right there, hidden in the brains of us humans: a capacity to memorize another human's solution to a problem. This is, to put it mildly, an uncommon talent, and it sets us far apart from all other living things. To demonstrate exactly how, here's a quick survey of Life's approaches to problem solving. (Don't worry. It won't take long. In the 3.5 billion years that Life has been evolving, it has come up with only four of these approaches.) My framework for this venture is the classic playground question 'Why did the chicken cross the road?' Only, here, the question is not 'why' but 'how,' and we'll have to start with something much dumber than a chicken.

The Road to the Ultimate Problem Solver

Scenario: On one side of a road are four creatures: a jellyfish, a sea slug, a chicken, and a human. Each of them will try to solve the problem of crossing the road. I don't know *why* they do it, but I do know *how*:

HOW DID THE JELLYFISH CROSS THE ROAD? (THE 'DARWINIAN' CREATURES)

A jellyfish, one of the world's simplest creatures, is a good example of the first type of living thing that arrived on the Earth, the *Darwinian creature*.* These creatures have only one solution to any one problem: the solution that is hardwired in their coordination systems. Like most animals, the jellyfish is coordinated by nerve cells, or 'neurons', laid out in networks, just like a railway system, so that each piece of track almost touches the next piece of track. When a stimulus is perceived, a nerve impulse, an electrical spark, is triggered at an origin 'station'. It travels down the track at an impressive speed and, upon reaching its terminus, initiates a response that can be only one of two things: the contraction of a muscle (to move the creature) or the release of a hormone (to alter the 'settings' of the creature). When you boil it down, all animals, including us, are restricted to this modest choice of two, which means that all animal coordination is just a question of when to twitch muscles and when to squirt hormones. The key to getting more complex creatures is to give them not more response options but more complex railway systems.

*Plants, fungi, and all those microscopic living things that we can't satisfactorily classify also fall into this first category of creature.