# What Mongolian Nomads Teach Us About the Digital Future

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People who pack up and transport their house twice a year become choosy about their possessions. I recently traveled among the nomads of Mongolia for two weeks and had a chance to inspect their belongings. I was there to photograph their traditional practices, which were more intact than I expected. Along the way I discovered the Mongolians may have a few lessons for the future of digital culture.

The population of Mongolia is 3 million. Half of them live in the capital city of Ulaanbaatar, which may be the least green city in the world. Drab Soviet apartment blocks cram a town without parks, lawns, or trees. The other half of Mongolians live in deeply rural areas. An abrupt boundary at the edge of the city marks the end of the concrete and the beginning of the infinite grasslands that stretch to the horizon.

For the next 600 miles in any direction there is not a single fence on this treeless lawn. The cropped grass wraps the contours like a green rug. This uninterrupted carpet is marred by very few paved roads, and fewer electrical lines. It is perhaps the most primeval landscape on the planet: wide open plains of nothing but grass, rock, and sky.

The wildness is a deception. Scattered in nearly every vista of Mongolia are the round white tents of nomads. We know these tent houses as yurts; they call them *ger* (pronounced *gair*). They are the primary home to about 1 million nomads. Today's nomads retain a lifestyle relatively unchanged from that of their forebears in important ways. Living as I do—in a world teeming with smartphones and Wi-Fi, smart TVs and self-driving cars—it is a remarkable thing to travel among them.

The nomads are herders and typically own about 1,000 animals—mostly sheep and goats, but cows, horses, dogs, camels, and yaks as well. You could think of them as ranchers who move their ranch seasonally. They set up their ger in spring for maximum summer pastures, then they move it again for winter feeding. This movement is not north to south as might be expected, but from lowlands to highlands, or even from open valley in summer to hidden hilly nook in winter to escape the wind, which is more punishing than the cold.

Nomads subsist almost entirely on the milk and meat of their animals. To the chagrin of vegetarian visitors, mutton (goat or sheep) is served almost every meal. Mutton can be dried to preserve it, so it can be served year round. Nomads don't have gardens, and the nearest shop is usually at least a day away, so vegetables are scarce. In addition to their own meat, they make their own yogurt, butter, cheese, kumiss (fermented beer made from mare's milk), milk tea, and milk sweets, which they eat at all their meals and snacks.

The animals provide more than just sustenance. The herders use the wool from the sheep to make their blankets and, most importantly, to make the thick felt siding for their gers, which keep them warm and dry. There is a direct symbiosis between nomads and their animals. The people rely on the animals to stay alive, and the animals rely on the humans and their dogs to keep the wolves and foxes away from their young. Nomads' traditional culture revolves around the plentitude of the herd and the vastness that fuels their spirit.

Besides livestock, the nomads don't own much. In their gers they have a small wood-burning stove, beds with futons, a dresser or two, some tiny stools. No refrigerator. The walls are hung with embroidered felt blankets. The floor these days is linoleum (which can be rolled up on moving day). They may have a rifle for hunting and plastic tubs for water and kumiss.

The ger itself is handmade from branches and wool, except the door, which needs wooden planks. The entire contents of the structure—and house itself—can be packed up and moved in a few hours. Once on this trip I watched nomads start to dismantle ger, but then got distracted by conversation. When I turned my attention back to the ger packing, I found I'd missed the whole performance.

I followed another husband and wife team who disassembled their ger in a high wind. Wordlessly they removed the items inside into a pile on the grass. Then they carefully folded each layer of felt. Because of the wind, they often had to do this twice. Soon the ger's accordion walls and braced roof were a shoulder-high stack of fabric and sticks. Then it was all wrapped in a tarp from the floor.

Often the whole bundle plus furniture is loaded onto camels, but for those families without camels, like this one, the compressed ger was hauled onto a borrowed Russian truck. The truck rumbled slowly down the valley rocking over the prairie. At the end, there was just a circle of faded grass where the ger had stood.

Nomads seem to love being outside among animals. The sister of my Mongolian guide graduated from college and then married a nomad. They live seven hours from the nearest paved road. They have no appliances, no vehicle, no cell service. Just a ger and a lot of livestock.

When I asked my guide why her sister gave up almost all the trappings of modern life, she mentioned freedom, fresh air, animal spirits—the usual answers ranchers give. And the Mongolian herders are ranchers, just more self-reliant than settled ones, for better and worse. (The worse:

When winter is particularly fierce, up to half their flock can die.)

My driver took me to a relative's ger, a herding family two days away on dirt roads. When we pulled up, a leashed eagle was perched on a tripod out front. Eagles are used to hunt fur and meat in these parts; this one was resting, hooded. My driver motioned for me to enter the ger. Out of reach of cell service, they had no idea we were coming.

When I opened the door and ducked through the short opening, I saw a full table set with dozens of dishes of snacks. At first the two women inside paid me no heed while they scurried to the kettle. Waving me onto a stool, they immediately poured me a bowl of slightly salty milk tea and urged me to snack on the milk sweets. I appeared to be no intrusion.

I had already learned that the center of a ger is almost a public place. Anyone can enter a ger without knocking. And the table is always set with dishes of food, ready for visitors. Sit in a ger long enough, and soon a parade of people will appear. Sure enough, within minutes women from neighboring gers entered and squatted on stools.

They decided we needed lunch. We had brought some onions and carrots with us. These were added to the lamb they carved off a leg hanging on the wall; a pot was boiling on the central stove. On the perimeter of the ger hung fur pelts (fox and lynx). There was a clock. Next to it hung a two-string guitar, the traditional Mongolian instrument. There were plastic jugs with fermenting milk. While we waited for the stew to cook, one of the neighbor women took out a mobile phone, selected a game, and let her son play with it.

While nomads mostly rely on their DIY tech, three modern technologies have become common on the steppe. The first, of course, is the mobile phone. But mobile coverage in Mongolia is very spotty. Most people carry a phone, but it may not work at their ger. To get reception they often need to travel to a nearby mountaintop or head into a village.

They use their phones to order supplies, get market prices for their meat, or talk to their kids in school. (Nomad kids board in dormitories in towns during the school year.) And like everyone else on the planet, they have a bit of music and games loaded for fun. Where mobile coverage is lacking I've seen nomads use walkie talkies to connect with neighbors or even to coordinate a roundup of livestock. If they have coverage, they use their phones while on horseback.

Far more ubiquitous than mobile phones are solar LEDs. Every ger has its panels and batteries. The panel (usually one) is simple, tied to a pole, which can be rotated by hand every now and then to follow the sun. It will power a single LED light bulb, perhaps charge a phone and a shortwave radio. Less commonly it will power a TV with a satellite dish. Having a cheap, steady light all night makes a huge difference: It extends evenings, makes cooking more convenient, and reduces toxic smoke in the home. I did not see a ger without solar.

The third nearly ubiquitous technology in nomad lands is one of the most underappreciated transformative technologies in developing countries. Nearly every family owns a cheap motorcycle. A motorcycle functions as a substitute pack animal/bus/truck. They can carry more than a pony. Rural folk will overload them to a ridiculous degree, piling more on them then you'd ever dare put into your pickup truck. Forget about millions to engineer a road. Motorcycles can follow a footpath than no jeep or 4x4 could traverse, allowing them to penetrate the most gnarly boonies for almost nothing.

I have seen motorcycles reach the summits of mountain passes that I could barely reach on foot, and elsewhere in the world reach the depths of tangly jungles that defy rationality. They are inexpensive to run, and a new Chinese 150 cc may only cost $350. For a nomad, a motorcycle means the difference between making it to town for supplies (and a phone call) once a week versus once a month. Out on the vast plain, small motorcycles—even more than mobile phones—provide true connection to the rest of the world.

What may be most distinctive thing about traditional Mongolian nomad life is what's not in the ger. No refrigerator, no running water, no toilet, no air-conditioning, no wine cooler, no microwave, no radiant floor heating, no Amazon Alexa. Instead there is a leather bag made from a sheep's skin that is used to churn butter. The older the bag gets the more supple and better it gets. There is a goat stomach that serves as the container for cheese.

All of these things, including firewood and cow dung for fuel, are provided by the environment. Like other nomads around the world, Mongolian nomads are quick to leave old stuff behind, so they carry only the essentials. That means they tend to leave a trail of trash behind them. In the old days that refuse was 100 percent biodegradable, but not so today. Still, when you disperse your waste thinly (including your bodily waste), all is OK.

The overall nomadic stance is this: I need to carry little to nothing because the environment will provide all I need. I will grab a stick to make a tool and once used, I discard it. If I need the tool again, I'll get another stick. I consume on demand. I leave behind the unneeded. Call it the nomadix age.

There is a lesson here about our collective digital future. Obviously we aren't headed to a time when we sleep on the floor of a tent under hand-wrung felt blankets (except at Burning Man), but we are headed to a future where we may own and carry less while depending on the environment to provide more.

I think we'll cruise through the future with empty pockets. I won't need to carry my phone because I should be able to lift up any screen anywhere and have it immediately became my tool, my screen. It recognizes me from my face, voice, heartbeat, and transforms itself into my phone interface. When I am done, I leave that screen where it was. To read a book I pick up any screen. To travel, I pick any car. To use a power tool, I summon it online and it's in my hand within 30

minutes. And when I travel, why should I drag clothes around? In a nomadix future, the hotel or Airbnb will provide my favorite clothes when I arrive and recycle them when I depart. The environment, if it is rich and well-cared for and understood, shall provide.

Traditional Mongolian nomads have relied on the open plains and wide valleys to provide most of what they need, enabling them to reduce their ownership to a bundle that can be loaded on two camels or a Russian jeep. To be clear, their meager collection of possessions—their poverty—is usually not by choice. Like most people in the world they wish they owned more. When useful things become cheap and portable and sustainable enough, they grab them. Today, with the additional goals of living longer, educating their children, and having more enjoyment, they've added three technologies to their short list of possessions. They get a signal from the air, energy from the sun, and a motorcycle from China. And they can still pack up and move everything in a hour.

The number of nomads in Mongolia is decreasing. They, or rather their children, are moving into Ulaanbaatar to become digital nomads. Instead of herders they will become interface designers and AI experts. They will join the rest of the world in creating a smart environment, a liquid ecosystem that will provide neo-nomads with services, goods, products, utilities that they don't desire to carry or or need to own. Like their forebears on the steppes, they'll have only to reach for a tool to find it.

They'll access the tool's benefits and then move on to the next spot. That smart environment may be an always-on mixed reality overlaid with instant delivery and immediate printing, a dense ecosystem of transportation, rapid custom manufacturing, and constant communication at a planetary scale. The nomadix environment does not exist yet, but the vintage culture of the Mongolian nomads is a hint of what it might be.

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