How East and West think in profoundly different ways

(Image credit: Getty Images)

By David Robson 19th January 2017

Psychologists are uncovering the surprising influence of geography on our reasoning, behaviour, and sense of self.

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As Horace Capron first travelled through Hokkaido in 1871, he searched for a sign of human life among the vast prairies, wooded glades and threatening black mountains. “The stillness of death reigned over this magnificent scene,” he later wrote. “Not a leaf was stirred, not the chirping of a bird or a living thing.” It was, he thought, a timeless place, straight out of pre-history.

“How amazing it is that this rich and beautiful country, the property of one of the oldest and most densely populated nations of the world… should have remained so long unoccupied and almost

as unknown as the African deserts," he added.

This was Japan's frontier – its own version of the American 'Wild West'. The northernmost of Japan's islands, Hokkaido was remote, with a stormy sea separating it from Honshu. Travellers daring to make the crossing would have then had to endure the notoriously brutal winters, rugged volcanic landscape and savage wildlife. And so the Japanese government had largely left it to the indigenous Ainu people, who survived through hunting and fishing.

All that would change in the mid-19th Century. Fearing Russian invasion, the Japanese government decided to reclaim the country's northland, recruiting former Samurai to settle Hokkaido. Soon others followed suit, with farms, ports, roads, and railways sprouting up across the island. American agriculturists like Capron had been roped in to advise the new settlers on the best ways to farm the land, and within 70 years the population blossomed from a few thousand to more than two million. By the new millennium, it numbered nearly six million.

Story continues below

Before Emperor Meiji decided to populate the island, the only people to live in Hokkaido were the indigenous Ainu (Credit: Getty Images)

> *Our thinking may have even been shaped by the kinds of crops our ancestors used to farm*

Few people living in Hokkaido today have ever needed to conquer the wilderness themselves. And yet psychologists are finding that the frontier spirit still touches the way they think, feel and reason, compared with people living in Honshu just 54km (33 miles) away. They are more individualistic, prouder of success, more ambitious for personal growth, and less connected to the people around them. In fact, when comparing countries, this 'cognitive profile' is closer to America than the rest of Japan.

Hokkaido's story is just one of a growing number of case studies exploring how our social environment moulds our minds. From the broad differences between East and West, to subtle variation between US states, it is becoming increasingly clear that history, geography and culture can change how we all think in subtle and surprising ways – right down to our visual perception. Our thinking may have even been shaped by the kinds of crops our ancestors used to farm, and a single river may mark the boundaries between two different cognitive styles.

Wherever we live, a greater awareness of these forces can help us all understand our own minds a little better.

'Weird' minds

Until recently, scientists had largely ignored the global diversity of thinking. In 2010, an **influential article in the journal Behavioral and Brain Sciences** reported that the vast majority of psychological subjects had been "western, educated, industrialised, rich and democratic", or 'Weird' for short. Nearly 70% were American, and most were undergraduate students hoping to gain pocket money or course credits by giving up their time to take part in these experiments.

The tacit assumption had been that this select group of people could represent universal truths about human nature – that all people are basically the same. If that were true, the Western bias would have been unimportant. Yet the small number of available studies which *had* examined people from other cultures would suggest that this is far from the case. "Westerners – and specifically Americans – were coming out at the far end of the distributions," says Joseph Henrich at the University of British Columbia, who was one of the study's authors.

Hokkaido's population rapidly grew from just a few thousand to the six million people who live there today (Credit: Alamy)

Some of the most notable differences revolved around the concepts of "individualism" and "collectivism"; whether you consider yourself to be independent and self-contained, or entwined and interconnected with the other people around you, valuing the group over the individual. Generally speaking - there are many exceptions - people in the West tend to be more individualist, and people from Asian countries like India, Japan or China tend to be more collectivist.

> *When asked about their competence, 94% of American professors claimed they were 'better than average' – a sign of self-inflation*

In many cases, the consequences are broadly as you would expect. When questioned about their attitudes and behaviours, people in more individualistic, Western societies tend to value personal success over group achievement, which in turn is also associated with the need for greater self-esteem and the pursuit of personal happiness. But this thirst for self-validation also **manifests in overconfidence**, with many experiments showing that Weird participants are likely to overestimate their abilities. When asked about their competence, for instance, 94% of American professors claimed they were "better than average".

This tendency for self-inflation appears to be almost completely absent in a range of studies across East Asia; in fact, in some cases the participants were more likely to underestimate their abilities than to inflate their sense of self-worth. People living in individualistic societies may also put more emphasis on personal choice and freedom.

Holistic thinking permeates Eastern philosophy and culture (Credit: Getty Images)

Crucially, our "**social orientation**" appears to spill over into more **fundamental aspects of reasoning**. People in more collectivist societies tend to be more 'holistic' in the way they think about problems, focusing more on the relationships and the context of the situation at hand, while people in individualistic societies tend to focus on separate elements, and to consider situations as fixed and unchanging.

As a simple example, imagine that you see a picture of someone tall intimidating someone smaller. Without any additional information, Westerners are more likely to think this behaviour reflects something essential and fixed about the big man: he is probably a nasty person. "Whereas if you are thinking holistically, you would think other things might be going on between those people: maybe the big guy is the boss or the father," explains Henrich.

> *Your social orientation can even change the way you see*

And this thinking style also extends to the way we categorise inanimate objects. Suppose you are asked to name the two related items in a list of words such as "train, bus, track". What would you say? This is known as the "triad test", and people in the West might pick "bus" and "train" because they are both types of vehicles. A holistic thinker, in contrast, would say "train" and "track", since they are focusing on the functional relationship between the two – one item is essential for the other's job.

It can even change the way that you see. **An eye-tracking study** by Richard Nisbett at the University of Michigan found that participants from East Asia tend to spend more time looking around the background of an image – working out the context – whereas people in America tended to spend more time concentrating on the main focus of the picture. Intriguingly, this distinction could also be seen in **children's drawings** from Japan and Canada, suggesting that the different ways of seeing emerge at a very young age. And by guiding our attention, this narrow or diverse focus directly determines what we remember of a scene at a later date.

"If we are what we see, and we are attending to different stuff, then we are living in different worlds," says Henrich.

There are no sharp divides between two culture's different ways of thinking, and people in immigrant communities may incorporate both mindsets (Credit: Getty images)

Although some people have claimed that **our social orientation may have a genetic element**, the evidence to date suggests that it is learned from others. Alex Mesoudi at the University of Exeter **recently profiled the thinking styles of British Bangladeshi families in East London**. He found that within one generation, the children of immigrants had started to adopt some elements of the more individualistic outlook, and less holistic cognitive styles. Media use, in particular, tended to be the biggest predictor of the shift. “It tended to be more important than schooling in explaining that shift.”

But why did the different thinking styles emerge in the first place? The obvious explanation would be that they simply reflect the prevailing philosophies that have come to prominence in each region over time. **Nisbett points out** that Western philosophers emphasised freedom and independence, whereas Eastern traditions like Taoism tended to focus on concepts of unity. Confucius, for instance, emphasised the “obligations that obtained between emperor and subject, parent and child, husband and wife, older brother and younger brother, and between friend and friend”. These diverse ways of viewing the world are embedded in the culture’s literature, education, and political institutions, so it is perhaps of little surprise that those ideas have been internalised, influencing some very basic psychological processes.

Even so, the subtle variation between individual countries suggests that many other surprising factors are also at work.

On the front line

Consider the USA, the most individualistic of all Western countries. Historians such as Frederick Jackson Turner have long argued that the expansion and exploration into the west has nurtured a more independent spirit, as each pioneer battled the wilderness and each other for their own survival. In line with this theory, recent psychological studies have shown that the states at the edge of the frontier (such as Montana) tend to **score higher on measures of individualism**. To confirm the “voluntary settlement theory”, however, psychologists would want to examine a second, independent, case study as a counterpoint.

American agriculturists such as William S Clark helped tame Hokkaido. His motto - "Boys, be ambitious" - exemplifies the pioneer mindset that lingers to this day (Credit: Alamy)

It is for this reason that Hokkaido proves to be so fascinating. Like most East Asian countries, Japan as a whole tends to have a more collectivist and holistic mind-set. Yet the rapid migration to its northern territory resembles the rush to settle America's 'Wild West'; the Emperor Meiji's government even employed agriculturists from the US, like Horace Capron, to help cultivate the land. If the voluntary settlement theory is correct, those pioneers should have cultivated a more independent outlook in Hokkaido compared to the rest of the country.

Sure enough, **Shinobu Kitayama at the University of Michigan has found** that people in Hokkaido tend to place a higher value on independence and personal achievement – and emotions such as pride – than Japanese people from other islands, and they were less concerned about the views of others. The participants were also asked to take a social reasoning test, which asked them to discuss a baseball player using performance-enhancing drugs. Whereas Japanese people from other islands were more likely to explore the context – such as the pressure to succeed – the Hokkaido Japanese were more likely to blame the player's personality or a flaw in his moral character. Again, this tendency to blame personal attributes is characteristic of an individualistic society, and much closer to the average Americans' responses.

Germ theory

Another (counterintuitive) idea is that the contrasting mind-sets are an evolved response to germs. In 2008, Corey Fincher (now at the University of Warwick) and colleagues analysed global epidemiological data to show a region's score of individualism and collectivism appear to correlate with disease prevalence**: the more likely you are to get infection, the more collectivist you are**, and the less individualistic. The rough idea is that collectivism, characterised by greater conformity and deference to others, may make people more conscientious about avoiding the behaviours that could spread disease. It has been difficult to prove that the apparent correlations in the real world are not caused by some other factor, such as the relative wealth of the country, but lab experiments offer some support for the idea – when psychologists prime people to feel afraid of disease, they do seem to adopt more collectivist ways of thinking, such as greater conformity to group behaviours.

Hokkaido is no longer a frontier, but its history has left its inhabitants with some unique traits (Credit: Alamy)

But perhaps the most surprising theory comes from the farmyard. Thomas Talhelm at the University of Chicago recently examined **28 different provinces of China**, finding that the thinking orientation appeared to reflect the local agriculture of the region.

Talhelm said he was first inspired by his own experiences in the country. While visiting Beijing in the north, he found that strangers would be much more forthcoming – “If I was eating alone people would come up and talk to me” – whereas those in the southern city of Guangzhou tended to be more reticent and fearful of offending.

This deference to others seemed like a subtle sign of a more collectivist mindset, and so Talhelm began to wonder what might lie behind the two outlooks. The divide did not seem to correlate with measures of wealth or modernisation, but he noticed that one difference could be the kind of staple crop grown in the region: rice in most southern areas, and wheat in the north. “It splits almost neatly along the Yangtze River,” says Talhelm.

Growing rice requires far greater cooperation: it is labour-intensive and requires complex irrigation systems spanning many different farms. Wheat farming, by contrast, takes about **half the amount of work** and depends on rainfall rather than irrigation, meaning that farmers don’t need to collaborate with their neighbours and can focus on tending their own crops.

Compared to other kinds of agriculture, rice farming demands greater cooperation within a community, with intricate irrigation systems spanning many plots (Credit: Getty Images)

> *Americans tend to draw themselves very large*

Could these differences translate to a more collectivist or individualistic mindset? Working with scientists in China, Talhelm tested more than 1,000 students in various rice- and wheat-growing regions, using measures such as the triad test of holistic thinking. They also asked people to draw a diagram demonstrating their relationships to their friends and associates: people in individualistic societies tend to draw themselves as bigger than their friends, whereas collectivists tend to make everyone the same size. “Americans tend to draw themselves very large,” Talhelm says.

Sure enough, people in the wheat-growing regions tended to score higher on the measures of individualism, while the people in the rice-growing regions tended to show a more collectivist and holistic thinking. This was true even at the borders between different regions. “Here are people in nearby counties, but one farms rice one farms wheat – and we still found cultural differences.”

He has since tested his hypothesis in India, which also shows a clear divide in wheat and rice growing regions, with similar results. Almost all the people he questioned are not directly involved in farming, of course – but the historical traditions of their regions are still shaping their thinking. “There’s some inertia in the culture.”

Cognitive kaleidoscope

It’s important to emphasise that these are just broad trends across vast numbers of people; there will have been a spectrum within each population studied. “The idea that it’s black and white – from an anthropological perspective that doesn’t work,” says Delwar Hussain, an anthropologist at the University of Edinburgh, who worked with Mesoudi on the study of London's British Bangladeshi community. As Hussain points out, there are many historic connections between Eastern and Western countries that will mean that some people straddle both ways of thinking, and factors like age and class will also have an effect.

It is now seven years since Henrich published his paper outlining the ‘Weird’ bias, and the response has been positive. He is particularly pleased that researchers like Talhelm are beginning to set up big projects to try to understand the kaleidoscope of different ways of thinking. “You want a theory that explains why different populations have different psychologies.”

But despite the good intentions, further progress has been slow. Thanks to the time and money it takes to probe minds across the globe, most research still examines Weird participants at the expense of greater diversity. “We agree on the illness. The question is what the solution should be.”

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*David Robson is BBC Future’s feature writer. He is **@d_a_robson** on Twitter.*

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