

Water-scarce cultures value long-term thinking more than their water-rich neighbors do

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Water is the world's most valuable natural resource. Although a human can survive weeks or even months without food, going as little as three days without water could spell the end. The effects of water scarcity

aren't limited to immediate survival situations, however. Recently published research in *Psychological Science* suggests that cultures from water-scarce environments tend to be more likely than cultures from water-rich areas to value long-term thinking and to scorn short-term indulgence.

"Individuals from historically water-scarce climates tend to be more long-term oriented and less indulgent," said Hamidreza Harati (The University of Queensland) in an interview. "Even in modern environments with easy access to water, cultural responses shaped by historical [water scarcity](#) still influence individuals' decision-making processes."

Harati and Thomas Talhelm (The University of Chicago) reached this conclusion after carrying out four studies on water scarcity, long-term orientation, and indulgence.

The first study focused on a "natural test case" of 331 [undergraduate students](#) from two cities in Iran: water-scarce Yazd and water-rich Shiraz. When surveyed about their values, participants from Yazd rated themselves more than twice as high for long-term orientation (e.g., by agreeing more with the statement "Persistent efforts are the surest way to results") than participants from Shiraz. Students from water-rich Shiraz, on the other hand, rated themselves almost twice as high for indulgence (e.g., by rating themselves higher for valuing "keeping time free for fun" than for "having few desires").

Participants also responded similarly when asked about the values of an average person from their city. These differences remained significant when the researchers controlled for participants' gender, age, marital status, and economic status.

Harati and Talhelm also found that water-scarcity-based [cultural differences](#) were reflected in people's behavior. In a second study of 182

job applicants, the researchers found that applicants from water-scarce Yazd were twice as likely to apply for a stable position at an established company than for a flexible role at a start-up. Participants from water-rich Shiraz, by comparison, were slightly more likely to apply for the start-up position.

The researchers observed similar short-term effects in an experiment in which they tasked 211 students at the University of Tehran with reading the abstract from one of two fictional scientific studies that made predictions about changes in the availability of water from 2022 to 2032. Students who read the abstract that predicted a severe water shortage reported having a stronger long-term orientation than those who read the abstract that predicted a surplus. Students in the control condition, who completed the survey without reading any abstract, had responses that fell between those of the other two groups. Students who read the abstract that predicted a water shortage also reported being less indulgent, but this was not statistically significant.

Finally, to explore how these findings might apply across cultural contexts, Harati and Talhelm analyzed how the availability of fresh water in 87 countries between 1962 and 2014 correlated with national scores for each population's long-term orientation and indulgence. Numerous ongoing and historic conditions—including average temperature, economic development, population density, frequency of natural disasters, corruption, agriculture, religion, disease risk, and war—can influence a country's cultural values. However, when Harati and Talhelm controlled for these factors, fresh water per capita remained a significant predictor of a nation's long-term orientation and indulgence.

"The results add to the growing field of ecological psychology, which posits that the environment plays a role in shaping people's psychology," Harati and Talhelm wrote. Focusing on understudied regions like the cities of Shiraz and Yazd in Iran also contributes to a broader

understanding of cultural differences, underscoring the importance of including diverse samples and cultural perspectives in [psychological research](#), Harati told APS.

Future research on [water](#) scarcity and culture could help address climate change by identifying more effective policies and other interventions to encourage sustainable behaviors, Harati added.

"There is emerging evidence that groups that value the long term are already investing more in green strategies to fight the biggest environmental threat to our future—climate change," the researchers wrote. "The cultural value that helped humans adapt to environmental threats of our long-term past might help us adapt to the world's biggest environmental threat of the future."

More information: Hamidreza Harati et al, Cultures in Water-Scarce Environments Are More Long-Term Oriented, *Psychological Science* (2023). [DOI: 10.1177/09567976231172500](https://doi.org/10.1177/09567976231172500)

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