

By studying twins, psychologist researches proactivity in the workplace

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Both environmental and genetic factors influence employee proactivity, according to the latest research from a Kansas State University psychology professor. Credit: Kansas State University

A Kansas State University psychological sciences professor is using twin studies to understand the nature versus nurture debate of the workplace: Do genetic factors or environmental factors influence employee proactivity?

His answer: The interaction between the genetic and environmental factors determines why some employees are more proactive than others.

"It's more like nature and nurture rather than nature versus nurture," said Wendong Li, assistant professor of psychological sciences in the College of Arts & Sciences. "It is the reciprocal relationship between people's dispositions and their work experiences that can make them more or less proactive. In addition to dispositional factors, such as genetic endowments, they also are affected by co-workers, supervisors and the type of organization and culture of the company where they work."

In his latest research, Li also has found that environmental factors more likely determine how much money proactive employees earn, while genetics more likely determine a proactive employee's job satisfaction.

Li takes an unconventional approach in his research and applies molecular genetics, such as the use of DNA, to the field of organizational psychology. His latest research uses a nationwide database of identical and fraternal twins to piece together influences from environmental factors and influences from [genetic factors](#).

"If the similarity between identical twins is larger than the similarity between fraternal twins, it is a very good indication that genetic factors may play a role," Li said.

Through such analyses, Li found that about 40 percent of the differences among individuals could be attributed to their distinct genetic makeup, while 60 percent of the differences could be attributed to environmental factors.

Li's research has recently appeared in the *Journal of Applied Psychology* and he was featured in a recent interview published in *The Industrial-Organizational Psychologist*, which is the journal for the Society for

Industrial and Organizational Psychology.

Li's research is important for helping organizations understand how to encourage employee proactivity.

Proactive employees are valuable because they do not wait for change to come to them, but rather make long-term plans, strive to achieve goals and make things happen, Li said. They persevere through obstacles and barriers until they achieve these goals.

Proactive people also are more likely to be leaders and to earn more money, Li said. Leadership positions give proactive people more control and the ability to change and make their work environments better.

"For proactive people, their jobs become their crafts—they craft the job demands, job control and the relationships with their co-workers and supervisors," Li said. "As agents of the environment, proactive people often become leaders in high-level positions in the company. As a result, they often earn more money, which can make them happier."

Li said proactive employees are extremely valuable in helping organizations face uncertainty and independence in today's fast-paced work environment.

"If organizations want to survive, they need proactive employees who can go above and beyond the call of duty to instigate work changes, make long-term plans and show perseverance to achieve long-term plans," Li said.

Organizations cannot use only standard management practices, Li said, but need to encourage employees to be proactive. For example, when employees see a mistake or an inefficient practice, organizations should encourage employees to proactively think about how to correct it, he

said.

"A far-reaching implication of research on proactivity and genetics is that it can greatly benefit organizations to use an alternative management practice and to offer more tailored, individualized treatments for employees," Li said. "These employees will be more motivated and will be happier in their jobs. Otherwise, they will craft their jobs one way or another, which might undermine organizations' interests."

Li also has been recognized by Human Resources MBA as one of the 30 most influential industrial and organizational psychologists today. The organization recognized Li because of his research on the interaction between individual and [environmental factors](#) that promote proactivity.

Provided by Kansas State University

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