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ScienceFaces

NUS prof studies link between genes and work

He hopes to uncover how a person's genes affect behaviour at work and leadership skills

Samantha Boh

Our genes determine how we look, influence how we behave, and affect how likely we are to suffer from certain diseases.

Could there also be genes that determine whether we succeed?

That is one of the questions Associate Professor Song Zhaoli from the National University of Singapore's Business School hopes to answer.

While Prof Song is a business professor, he has a bachelor's degree in optics, a branch of physics which studies the behaviour and properties of light.

After obtaining that, he did his master's in statistics and industrial and organisational psychology, and a doctorate in human resources and industrial relations.

"I have my roots in science, hence I have a tendency to go back to science to find explanations," he said.

He is on a quest to uncover how a person's genes affect behaviour in the workplace, for instance, how well someone leads a team and how satisfied he is at work.

BORN THAT WAY

As parents, we sometimes have the tendency to assume that their behaviours can be changed easily. My experience and studies have shown that natural tendencies can be hard to change.

ASSOCIATE PROFESSOR SONG ZHAOLI, on his two children and how they differ in terms of outlook and other tendencies.

The last decade has seen mounting interest by scientists and doctors to understand how genes predispose humans to obesity, cancer and other health conditions, as well as their tendency to exhibit antisocial behaviours.

However, shedding light on the genes and biological mechanisms that affect organisational behaviour is still very much in its infancy.

"I want to try to understand the biological foundations of all these behaviours," said Prof Song, 46.

Since 2008, he has done research into genetic markers such as the dopamine transporter gene, DAT1, which is associated with motivation, and serotonin transporter gene, 5-HTTLPR, which is associated with emotion.

In 2015, his study on how genes affect leadership was published in social science journal The Leadership Quarterly.

His study found that people with the 10-repeat allele variant of DAT1 were more likely to engage in adolescent mild rule-breaking behaviour, which is positively associated with leadership.

However, the variant gene was also linked to a less proactive personality, which in turn made a person less likely to be a leader. The contrasting results show the complexity of the subject, said Prof Song.

Associate Professor Song Zhaoli stressed that the impact of genes on behaviour must be considered together with environmental factors. ST PHOTO: MARK CHEONG

He has also studied the 7-repeat allele variant of the dopamine D4 receptor gene, DRD4, which previous studies have linked to attention deficit hyperactivity disorder and risk taking.

Prof Song published a paper in the Journal Of Applied Psychology last year on how it interacted with early life environmental factors to influence job change frequency in adulthood.

The study found that the positive relationship between higher family socio-economic status and educational achievement with lower frequency of involuntary job changes, was stronger for individuals with more DRD47R alleles.

But one thing that Prof Song stresses is that the impact of genes on a person's behaviour must be considered together with environmental factors.

How much certain genes influence a person is affected by the environment.

"You will not get the full picture if you look at them separately," said Prof Song.

Asked if his findings so far can be used to change behaviour, Prof Song said it is still a "long shot".

"We are at a very early stage to explore the linkage... Where can we implement these findings? It's hard to tell," he said.

"We do need more concrete results – to say, hey we repeated the studies and the results say the same thing."

His research has, however, already impacted a very intimate part of his life – the parenting of his 14-year-old son and 12-year-old daughter with his wife, a senior research associate at Duke-NUS Medical School.

Prof Song feels that his children are complete opposites in terms of their outlook on life, patience levels and so on.

"As parents, we sometimes have the tendency to assume that their behaviours can be changed easily. My experience and studies have shown that natural tendencies can be hard to change," he said.

While he tries to nudge them towards certain behaviours, he said that it is important not to make it seem like they are being treated differently.

The same goes for effective management, he said.

"You can have individual treatment but, under that, you must have consistent rules."

samboh@sph.com.sg