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Studies have found that an individual's genes account for about 30 per cent of whether or not that person becomes a leader in his or her profession. PHOTO: BLOOMBERG

GENES AFFECT HOW WE BEHAVE, INTERACT WITH OTHERS AND DEVELOP AT THE WORKPLACE

Wearing our genes to work



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Are we pre-programmed to love our work? Or to be leaders? Studies in the field of genetics have found that many psychological characteristics can be inherited, and certain genes or groups of genes — known as constellations — are associated with specific behaviours.

For example, genes can affect an individual's approach to risk-taking, political allegiances, social popularity or even the number of sexual partners he or she seeks.

A common method for assessing the influence of genes is through observational studies of twins. Research has shown that even when twins are raised apart from early childhood, their levels of job satisfaction in adulthood follow very similar paths, indicating a strong genetic influence.

So how does our genetic make-up influence how we behave, interact with others and develop at work?

Studies have shown that genes play a significant role in our adaptation to the world around us and our approach to social attainment — in other words, how we perceive our position in society.

If we consider a particular job or position within a company as a representation of the job holder's social attainment, then we can consider job satisfaction as an outcome of this.

Here, genes can play several roles in affecting both psychological and physiological characteristics, in turn shaping behaviours and personalities that affect job attainment as well as an individual's own perception about the job they hold.

In one study we conducted, we examined the effect of two genetic markers, commonly associated with personality traits such as neuroticism, self-esteem, novelty-seeking and impulsivity.

The two markers we focused on were variants of the neurotransmitters dopamine and serotonin.

Dopamine is a chemical that helps control the brain's reward and pleasure centres as well as regulating movement and emotional responses. It enhances feelings of enjoyment derived from activities such as sports.

People who carry a particular variant of dopamine receptor gene, known as dopamine DRD4 7R, tend to be more novelty-seeking, hyperactive, risk-taking and have lower levels of conscientiousness — characteristics that tend to negate job satisfaction. Indeed, our study found that individuals with high levels of DRD4 7R tend to have lower job satisfaction.

Moreover, dopamine's tendency to make individuals more impulsive also has an indirect impact on job satisfaction because of its effect on pay.

Impulsive people tend to be less dependable and less achievement-oriented — characteristics that tend to lead to lower job performance, lower pay and, hence, ultimately lower job satisfaction.

The second genetic marker we looked at, serotonin 5-HTTLPR, regulates a variety of brain functions and is widely believed to be a key influence on feelings of well-being and happiness as well as a foundation of many emotional disorders. It is found in all of us in either short or long variants.

We observed that people with the short variant of the gene, and hence weaker emotional regulation, tended to feel less satisfied with their job than those with the long variant. Indeed, people with the long variant tended to be sensitive to positive information and insensitive to negative information, leading to higher levels of job satisfaction.

So how do genes affect whether or not we become leaders in our professions?

Studies have found that an individual's genes account for about 30 per cent of whether or not that person becomes a leader.

Our research focused on identifying the specific genetic markers that predispose people to leadership. One such marker is the dopamine neurotransmitter DAT1, known to regulate arousal, motivation and reward behaviours.

A particular variant of this marker, known as DAT1 10-repeate allele, is related to rule-breaking and risk-taking. Those with high levels of this variant tend to be more predisposed towards leadership.

Individuals who take risks and "bend the rules" are better suited to exploring uncharted territories — they learn new things, stretching their abilities and skills, which in turn become capabilities for the basis of leadership. Mr Philip Yeo, chairman of SPRING Singapore, is one example of one who is seen as a maverick who broke rules to redirect Singapore's focus from traditional fields to biomedical science.

A rule-breaker also fuels an impression of being powerful and charismatic, qualities that further contribute to an emerging leadership role.

While there are favourable associations with the DAT1 10-repeate allele, there are also detrimental effects of this genetic variant as well.

People with this marker variant are prone to hyperactivity, poorer attentiveness and impaired responses. They can also be more impulsive and exhibit symptoms of attention deficit hyperactivity disorder (ADHD), compromising their ability to regulate their behaviour — something that one would expect leaders to have.

Being an effective leader depends not only on genes, but also on the environment and how an individual's personality relates to that environment.

As managers, we cannot assume that if the work environment is changed to improve performance, all employees will respond similarly and benefit from that change. Personality characteristics associated with genetic make-up play an important role.

However, by better understanding how genetic variants affect our personality and approach to work, firms can look at adopting more flexible management practices and working cultures. Short of genetically screening employees, employers who see tell-tale signs of hyperactivity and lower attention span in employees may appreciate the possibility of genetic make-up influencing their personality and behaviour. For instance, an employee with DAT1 gene might be given short projects one at a time that fit with his or her tendency towards a short attention span, while providing a work environment that encourages initiative and mild risk taking. For others, a more multitasking job nature may be more suited.

Customising workplace practices is good for employees for learning, development and leadership potential. As employee well-being is improved, so will firm performance and organisational effectiveness.

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