



## LIFESTYLE

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## Extraverts use words which have positive, pleasant emotions

By ANI

The finding highlights the need for stronger linguistic indicators to be developed for use in online personality prediction tools, which are being rapidly adopted by companies to improve digital marketing strategies.



**Washington:** A study by a team of Nanyang Technological University, Singapore (NTU Singapore) psychologists has found a link between extraverts and their word choices.

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Today, marketing companies use predictive algorithms to help them forecast what consumers want based on their online behaviours. Companies are also keen to leverage data and machine learning to understand the psychological aspects of consumer behaviour, which cannot be observed directly but can provide valuable insights about how to improve targeted advertising.

For example, an 'extravert consumer' might be attracted to marketing messages that match their personality, and retail brands could then choose to target such consumers by using more extraverted and creative language to advertise their products.

However, personality prediction tools available today that are used by marketing firms are not entirely accurate due to a lack of theoretically sound designs.

Principal investigator of the study, Associate Professor Lin Qiu from the Psychology programme at the NTU School of Social Sciences said, "Current machine learning algorithms for personality prediction can seem like a black box – there are many linguistic indicators that can be included in their design, "This may lead to biases and overfitting, an error affecting the performance of the machine learning algorithms. This begs the question – how should we create robust and accurate personality predictions?"

The study found a correlation between extraverts and their tendency to use certain categories of words. The results showed a small strength of the relationship between extraversion and the use of "positive emotion words" and "social process words."

Positive emotion words are defined by psychologists – using text analysis tools – as words that describe a pleasant emotional state, such as 'love', 'happy', or 'blessed', or that indicate positivity or optimism, such as 'beautiful' or 'nice'. Social process words include words containing personal pronouns except 'l', and words showing social intentions, such as 'meet', 'share' and 'talk'.

"This is the first time a relationship has been established between extraverts and their tendency to use the two categories of words. As it is a small correlation, we believe that stronger linguistic indicators are needed to improve machine learning approaches, amid rising interest in such tools in consumer marketing," Assoc Prof Qiu said.

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