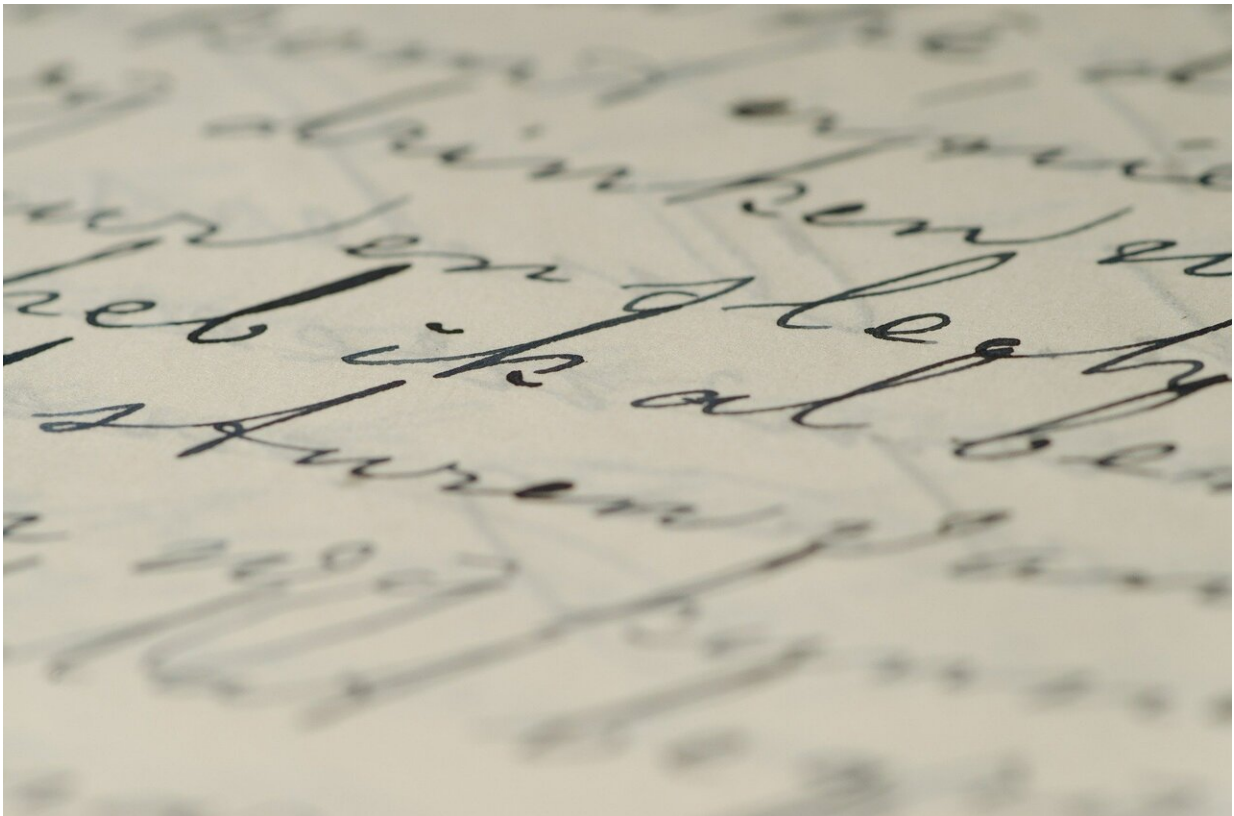# Changes in writing style provide clues to group identity

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Credit: Pixabay/CC0 Public Domain

Small changes to people's writing style can reveal which social group they "belong to" at a given moment, new research shows.

Groups are central to human [identity](#), and most people are part of multiple groups based on shared interests or characteristics—ranging from local clubs to [national identity](#).

When one of these group memberships becomes relevant in a particular situation, behavior tends to follow the norms of this group so that people behave "appropriately".

The new study—by the University of Exeter, Imperial College London, University College London and Lancaster University—demonstrates that group normative behavior is reflected in a person's writing style.

It also shows that assessing writing style can reveal—with an accuracy of about 70%—which of two groups affected a person while they were writing a particular piece of text.

To demonstrate their method, researchers studied how people who are parents and feminists change their writing style when they move from one identity to another on anonymous online forums such as Reddit, Mumsnet and Netmums.

"People are not just one thing—we change who we are, our identity, from situation to situation," said Dr. Miriam Koschate-Reis, of the Department of Psychology and the Institute for Data Science and Artificial Intelligence, both at the University of Exeter.

"In the current situation, many people will need to switch between being a parent and being an employee as they are trying to manage home schooling, childcare and [work commitments](#).

"Switches between identities influence behavior in multiple ways, and in our study we tracked which identity was active by focussing on language.

"We found that people not only change their writing style to impress their audience—they change it based on the group identity that is influencing them at the time.

"So, when we asked people in an experiment to think about themselves as a parent, their language patterns reflected this."

The study avoided "content" words (a parent might mention "childcare" for example) and focussed on stylistic patterns including use of pronouns, "intellectual" words and words expressing emotions.

Commenting on the possible uses of the new method, Dr. Koschate-Reis said: "We are currently focussing on mental health.

"It is the first method that lets us study how people access different group identities outside the laboratory on a large scale, in a quantified way.

"For example, it gives us the opportunity to understand how people acquire new identities, such as becoming a first-time parent, and whether difficulties 'getting into' this identity may be linked to postnatal depression and anxiety.

"Our method could help to inform policies and interventions in this area, and in many others."

Group identities have been found to affect thoughts, emotions and behavior in many settings—from work contexts to education to political activism.

Research is ongoing to understand how much control we have over switches between different identities—most of which are thought to be triggered by the social context.

Dr. Koschate-Reis said it might be possible to manipulate the cues that trigger an identity switch by going to a location associated with the identity.

For example, students might find it easier to write in an "academic style" when they are in the library rather than the local coffee shop.

More information: Miriam Koschate et al, ASIA: Automated Social Identity Assessment using linguistic style, *Behavior Research Methods* (2021). DOI: 10.3758/s13428-020-01511-3

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