People tend to believe populations are more diverse than they are

In 12 psychological experiments with a total of 942 participants, 82 per cent overestimated the presence of individuals from minority ethnic groups

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By **Jason Arunn Murugesu**

A stock image of a group of people of a range of ethnicities
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People may subconsciously overestimate the presence of individuals from minority ethnic groups, even if they belong to those groups, which could create illusions of diversity within populations.

"Individuals from the minority group are by definition less frequent," says Rasha Kardosh at the Hebrew University of Jerusalem in Israel. "Therefore, we are more likely to notice them and so are more likely to remember their presence, and so we end up overestimating their presence."

Previous studies suggest people in European countries overestimate the Muslim population in those countries, while people in the US generally overestimate the number

of people from ethnic minority groups in its population.

To uncover why this overestimation may occur, Kardosh and her colleagues carried out 12 psychological experiments with a total of 942 participants.

In one experiment, white people in the US were shown 100 faces, of which 25 per cent were Black people and the remaining 75 per cent were white, for 2 seconds. This was repeated 20 times with different sets of faces. The experiment was then carried out again, but this time 45 per cent of the faces were Black people and the remaining 55 per cent were white.

After both experiments, the participants were asked what percentage of faces they saw were Black people, estimating 43 per cent for the first experiment and 58 per cent for the second.

The researchers then repeated both experiments with Black participants seeing the various faces, who estimated 43 per cent and 56 per cent of the faces were Black people in the first and second experiments, respectively.

"This [overestimation] is something that likely happens to most of us," says Kardosh. "Regardless of if you're in the minority or majority group."

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In another experiment, 32 Jewish Israeli and 30 Palestinian Israeli students at the Hebrew University of Jerusalem were asked to estimate the number of Arab students at the university. The Jewish Israeli and Palestinian Israeli students estimated 31 per cent and 35 per cent, respectively, compared with the actual figure of 9 per cent.

Combining the 12 experiments, overestimation bias affected 82 per cent of the participants, regardless of their own ethnicity.

In another experiment, carried out on 100 students in the US, the participants who overestimated the presence of Black people in college programmes reported being less supportive of diversity-improving plans when asked via a questionnaire.

Overestimation can occur in other contexts too, says Kardosh. Historically, women have been underrepresented in scientific fields, so people may automatically expect to see fewer women in science professions, she says.

Kardosh believes the main way to combat overestimation illusions is to improve the accessibility of diversity data. "Otherwise, people will be basing their decisions on biased impressions," she says.

Her co-researcher Ran Hassin at Columbia University in New York argues more decisive action is required. "Reading this story won't help you fight this bias," he says. "This [overestimation] happens to us automatically, so to fight it you have to be more proactive daily with your judgements."

Martijn Meeter at VU University Amsterdam says the experiments' results are unsurprising. "The main proposed mechanism is so much in line with what we know about memory that it is, in hindsight, hard to imagine why no one thought of [testing this experimentally] before," he says. "Indeed, the frequency of rare events are overestimated, that's why so many people are afraid of airplanes crashing – a vanishingly rare event."

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