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Strength of conviction won't help to persuade when people disagree

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Summary: If you disagree with someone, it might not make any difference how certain they say they are, as during disagreement your brain's sensitivity to the strength of people's beliefs is reduced, finds a study led by UCL and City, University of London and published in *Nature Neuroscience*.

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FULL STORY

If you disagree with someone, it might not make any difference how certain they say they are, as during disagreement your brain's sensitivity to the strength of people's beliefs is reduced, finds a study led by UCL and City, University of London.

The brain scanning study, published in *Nature Neuroscience*, reveals a new type of confirmation bias that can make it very difficult to alter people's opinions.

"We found that when people disagree, their brains fail to encode the quality of the other person's opinion, giving them less reason to change their mind," said the study's senior author, Professor Tali Sharot (UCL Psychology & Language Sciences).

For the study, the researchers asked 42 participants, split into pairs, to estimate house prices. They each wagered on whether the asking price would be more or less than a set amount, depending on how confident they were. Next, each lay in an MRI scanner with the two scanners divided by a glass wall. On their screens they were shown the properties again, reminded of their own judgements, then shown their partner's assessment and wagers, and finally were asked to submit a final wager.

The researchers found that, when both participants agreed, people would increase their final wagers to larger amounts, particularly if their partner had placed a high wager.

Conversely, when the partners disagreed, the opinion of the disagreeing partner had little impact on people's wagers, even if the disagreeing partner had placed a high wager.

The researchers found that one brain area, the posterior medial prefrontal cortex (pmPFC), was involved in incorporating another person's beliefs into one's own. Brain activity differed depending on the strength of the partner's wager, but only when they were already in agreement. When the partners disagreed, there was no relationship between the partner's wager and brain activity in the pmPFC region.

The pMFC is known to be involved in decision-making, and helps to signal when a decision should be changed.

The researchers say that the tendency to ignore the strength of opposing beliefs may generate polarisation and facilitate the maintenance of false beliefs.

First author Dr Andreas Kappes (City, University of London) said: "Our findings could help make sense of some puzzling observations in domains including science and politics."

"For instance, over the last decade climate scientists have expressed greater confidence that climate change is human-made. Yet, the percentage of the population that believe this notion to be true has dropped over the same period of time. While there are complex, multi-layered reasons for this specific trend, such examples may be related to a bias in how the strength of other's opinions are encoded in our brains."

Professor Sharot added: "Opinions of others are especially susceptible to the confirmation bias, perhaps because they are relatively easy to dismiss as subjective. Because humans make the vast majority of decisions -- including professional, personal, political and purchase decisions -- based on information received from others, the identified bias in using the strength of others' opinions is likely to have a profound effect on human behaviour."

Story Source:

Materials provided by **University College London**. *Note: Content may be edited for style and length.*

Journal Reference:

1. Andreas Kappes, Ann H. Harvey, Terry Lohrenz, P. Read Montague, Tali Sharot. **Confirmation bias in the utilization of others' opinion strength**. *Nature Neuroscience*, 2019; DOI: 10.1038/s41593-019-0549-2

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