True lies: How letter patterns color perceptions of truth

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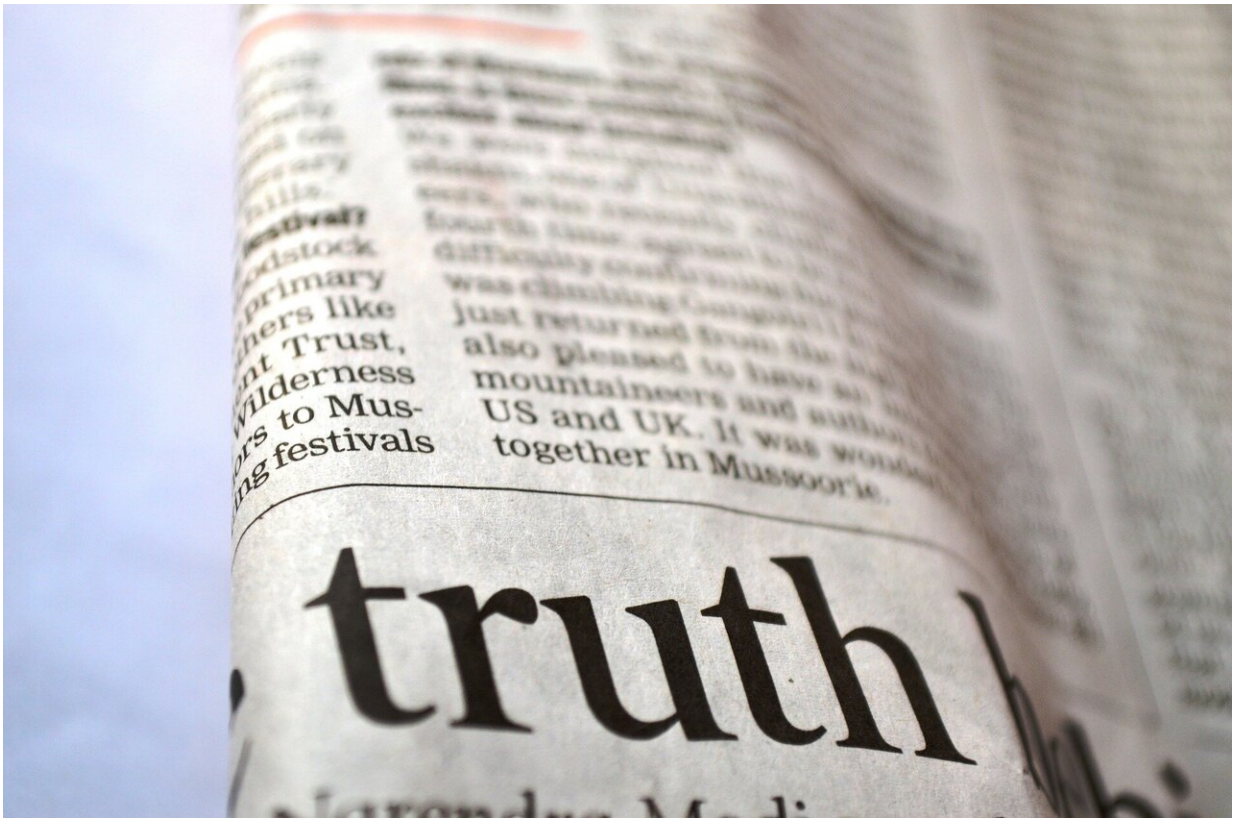

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People today constantly encounter claims such as "Advil kills pain," "coffee prevents depression," or "Hilary promises amnesty" as brands, news outlets and social media sites vie for our attention—yet few people

take the time to investigate whether these statements are true. Researchers have now uncovered one of the subtle psychological variables that influences whether people deem a claim to be true or false: the sequence of the letters.

Based on previous literature, the researchers knew that the brain attempts to organize information in ways that follow familiar patterns and sequences. One of the most universal, well-known patterns is the alphabet, and the investigators suspected that claims with first letters conforming to the arbitrary "ABCD" sequence—such as Andrenogel Increases Testosterone—would be perceived as more truthful. The study is available online in the *Journal of Consumer Psychology*.

"We go about our lives looking for natural sequences, and when we find a match to one of these patterns, it feels right," says study author Dan King, Ph.D., an assistant professor at the University of Texas Rio Grande Valley. "An embedded alphabetic sequence, even if unconsciously perceived, feels like a safe haven, and our brains can make unconscious judgments that cause-and-effect statements following this pattern are true."

To test this "symbolic sequence effect," the researchers conducted an experiment in which one group of participants read 10 claims that followed the natural alphabetic sequence, such as "Befferil Eases Pain" or "Aspen Moisturizes Skin," and the control group read statements that did not conform to alphabetical order, such as "Vufferil Eases Pain" or "Vaspen Moisturizes Skin." Then both groups rated their estimation of the truthfulness of the claims. The truthfulness ratings were significantly higher for the claims that followed an alphabetical order, even if participants could not attribute the source of the feeling of truthfulness.

Then the researchers tested whether they could temporarily alter the brain's pattern recognition process and consequently influence an

individual's perception of a claim's truthfulness. In this experiment, one group of participants watched a short video clip of the alphabet sung normally while another group saw the clip with the ABC song sung in reverse order. Later, the groups rated the truthfulness of 10 claims.

The truthfulness ratings for claims following the reversed alphabetical sequence—such as "Uccuprin Strengthens Heart"—were higher for participants who had heard the alphabet sung in reverse.

The finding suggests that companies may be more likely to convince consumers that a slogan or claim is true if the causal statement follows an alphabetical order, King says. The more frightening implication, though, relates to fake news. Headlines with cause-effect statements that are in alphabetical order may feel more true, even if they are not.

"Consumers need to make evaluations based on fact or experimental evidence rather than whether something feels right," says King. "The alphabet is a random, arbitrary sequence we have learned, and it can play tricks on the brain when it comes to making judgments."

More information: Dan King et al, Symbolic Sequence Effects on Consumers' Judgments of Truth for Brand Claims, *Journal of Consumer Psychology* (2019). DOI: 10.1002/jcpy.1132

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