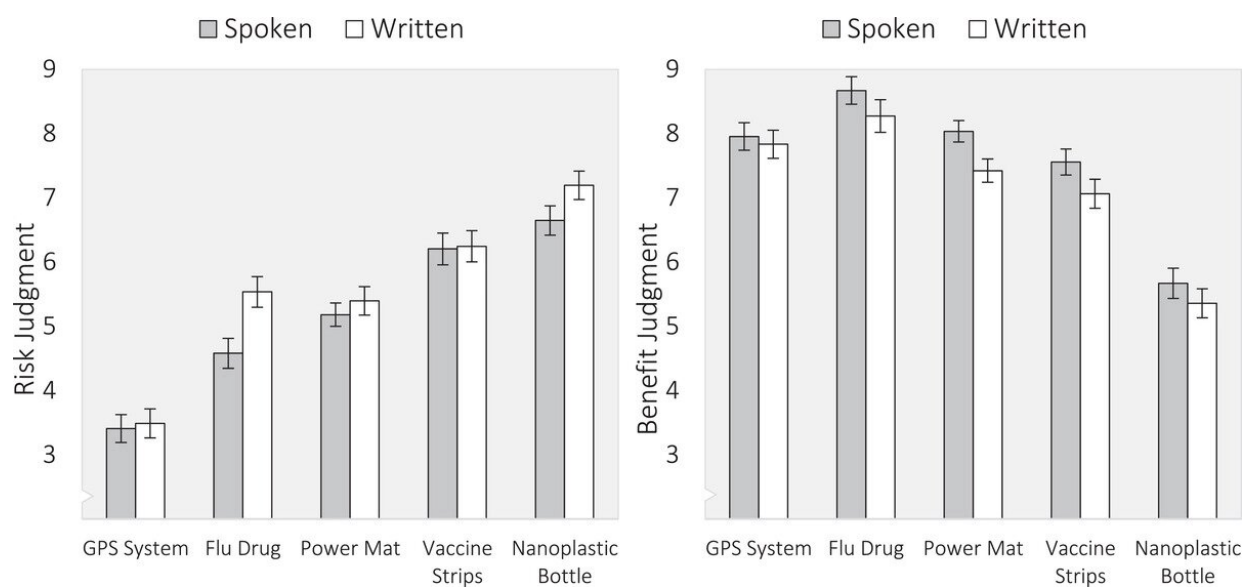


Spoken descriptions of new technologies provoke more positive attitudes than written ones

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Mean risk and benefit judgments by technology and modality (Study 1). Error bars represent standard errors of the mean. Credit: *Risk Analysis* (2022). DOI: 10.1111/risa.13917

People react more positively to new technologies when hearing spoken descriptions of them than when the identical information is written down, a new study finds.

In a study that could have implications for the use of voice assistant

technology, researchers including Professor Janet Geipel from the University of Exeter Business School challenged the assumption that the modality in which information is communicated—whether it is in written or spoken form—has no impact on our judgment and choice.

The study saw around 1,000 participants take part in three experiments in which they were randomly assigned to either read or hear identical information detailing the advantages and disadvantages of new technologies, including vaccine strips, nanotechnology in food packaging, a new flu drug, power mat chargers and GPS systems.

They were then asked to evaluate those technologies' risks and benefits.

The researchers found that the perceived benefits outweighed the risks when the participants heard about a new technology than when they read about it.

In the second experiment, the researchers added questions designed to evaluate the participants' gut emotional reaction to the new technology (e.g., How much do you like/dislike it? Is it good or bad?).

They found that hearing about the technologies induced more positive feelings in the participants and that these feelings caused the increase in perceived benefits compared to when the read about the technologies.

The researchers in their third experiment supplied participants with information about more familiar technologies: GM food, nuclear energy and pesticides.

They found that different from novel technologies, spoken and written information about familiar technologies prompted the same [emotional responses](#) and that perceptions of risk and benefit were unaffected. This shows that modality influences the perception of novel technologies but

not of familiar ones.

The study provides evidence that form of language is more fundamental to judgment and [decision-making](#) than has previously been assumed, and contributes to the understanding of the relationship between language and thought more generally.

According to lead author Professor Janet Geipel, Lecturer in Consumer Behavior and Decision Making at the University of Exeter Business School, the findings could have a range of practical implications and could help ease public hesitancy about the digital transformation of society.

"The importance of this should be evident for surveys and [opinion polls](#), so for example using a voice or a written survey to conduct a poll on the acceptance of the much-debated 5G technology could increase public acceptance of the technology," said Professor Geipel.

"To give another example, the NHS in the UK can now provide [health information](#) through Amazon's Alexa, giving people the choice of either asking their voice assistant for advice on a new medication for example, or reading the information for themselves on the NHS website.

"Our findings mean that patients who receive information about a new medication via their voice assistant system would likely view the medication more favorably."

"Language modality influences risk perception: Innovations read well but sound even better," co-authored by Professor Janet Geipel from the University of Exeter Business School, Professor Constantinos Hadjichristidis and Professor Lucia Savadori from the University of Trento and Professor Boaz Keysar from the University of Chicago, is published in *Risk Analysis*.

More information: Janet Geipel et al, Language modality influences risk perception: Innovations read well but sound even better, *Risk Analysis* (2022). [DOI: 10.1111/risa.13917](https://doi.org/10.1111/risa.13917)

Provided by University of Exeter

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