

How voice technology influences what we reveal about ourselves

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Researchers from University of Miami and New York University published a new *Journal of Marketing* article that examines how voice technology can affect what consumers reveal about themselves.

The study, forthcoming in the *Journal of Marketing*, is titled "Information Disclosure in the Era of Voice Technology" and is authored by Johann Melzner, Andrea Bonezzi, and Tom Meyvis.

We live in an era where [consumers](#) constantly interact with technological devices connected to the internet. Whenever consumers search for [information](#) online, make purchases, or consume videos, music, and other content, they disclose information about themselves. This disclosure has allowed [technology companies](#) to collect [consumer information](#) at an unprecedented scale—which they in turn have monetized directly, mined to identify unmet needs, or used to optimize marketing activities such as segmentation, targeting, and pricing.

Until recently, consumers interacted with technology largely through manual communication, which entails typing or selecting options by clicks or touches. Voice technology (brought about by artificial intelligence) has enabled interactions to also occur through oral communication and consumers increasingly engage with their phones, tables and other devices using their voices.

Melzner explains that "The rapid propagation of [voice technology](#) raises a vital question: Do consumers disclose more or less information about themselves when they interact with technology orally rather than manually? To answer this question, one needs to consider that consumers can disclose information about themselves both verbally, that is, by voluntarily providing information through language, as well as nonverbally, that is, by involuntarily revealing information through vocal paralinguistics and ambient sound."

Verbal Disclosure

The researchers also identify mechanisms that arise from fundamental differences between oral and manual communication. They integrate

these mechanisms into a verbal disclosure decision-making framework illustrating the complex ways in which communication modality can affect consumers' likelihood to disclose information. This modality-dependent framework not only provides impetus for future research, but can be used as a tool by marketers to gauge when and how oral versus manual communication may increase or decrease consumers' likelihood to disclose information verbally.

Nonverbal Disclosure

Oral communication with connected technologies allows one to capture information beyond language in the form of nonverbal disclosures, which are largely absent in manual communication. When consumers speak to connected devices, vocal paralinguage (e.g., the sound of their voice or how something is said) and ambient sounds (e.g., sounds in the current environment and from activities) are inherently captured and reveal information about consumers. The article provides an overview of marketing [relevant information](#) around consumer states (e.g., emotions, [health conditions](#), current activities) and traits (habits, ethnicity, personality, identity) that can be inferred from such auditory nonverbal disclosures. Additionally, it provides an overview of industry patents attesting both to the wide range of information about consumers that can be extracted from [audio data](#) and to industry interest in leveraging such data.

Practical Implications

Of interest to marketers:

- Practically relevant suggestions for marketers to aid them in counteracting processes that reduce consumers' likelihood to disclose information verbally when speaking with connected

devices.

- How vocal paralinguage and ambient sound as new sources of information in oral interactions with connected devices can be used to improve targeting effectiveness, specificity, and context-awareness.

Of interest to policy makers:

- Suggestions for consumer protection measures against mechanisms that may misleadingly increase consumers' verbal disclosure likelihood when speaking to connected devices.
- Privacy challenges of collecting and using information inferred from vocal paralinguage and [ambient sound](#) inherently captured in oral interactions with technology in light of both U.S. and European privacy legislation.

"Our analysis suggests that voice technology can increase, but also decrease, disclosure. From our research, [policy makers](#) can gain a better understanding of how to regulate the collection and use of information disclosed to voice-technology in the interest of consumer welfare. In particular, our analysis calls for higher privacy protections for information disclosed in oral interactions with [technology](#)," says Bonezzi.

More information: Johann Melzner et al, EXPRESS: Information Disclosure in the Era of Voice Technology, *Journal of Marketing* (2022). [DOI: 10.1177/00222429221138286](https://doi.org/10.1177/00222429221138286)

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