

The Silent Digits: Right-Digit Neglect in Audio Numerical Magnitude Perception

Ruixi Wang

Fudan University

Qian Xu

Fudan University/Fudan University

Dengfeng Yan

NYU Shanghai

Cite as:

Wang Ruixi, Xu Qian, Yan Dengfeng (2026), The Silent Digits: Right-Digit Neglect in Audio Numerical Magnitude Perception. *Proceedings of the European Marketing Academy*, 55th, (132964)

Paper from the 55th Annual EMAC Conference, Bath, United Kingdom, June 2-5, 2026



The Silent Digits: Right-Digit Neglect in Audio Numerical Magnitude Perception

Abstract

Consumers increasingly encounter numerical information through auditory channels. This research examines how presentation modality alters numerical magnitude perception. While visual presentations show left-digit effect, auditory presentation creates right-digit neglect: consumers disproportionately anchor on left (initial) digits while neglecting right (sequential) digits, leading to round-down processing. Five studies (N = 7489) provide converging evidence. A field experiment shows right-digit neglect increases real purchase behavior for auditorily presented discount prices. Number recall tasks provide process evidence, confirming that auditory presentation enhances left-digit encoding while degrading right-digit processing. Controlled experiments show the effect is stronger when left digits differ between compared numbers (amplifying perceived differences) but weakened when right digits carry diagnostic value (causing underestimation). These findings advance understanding of how individuals process numbers across modalities and provide practitioners with strategic guidance for optimizing numerical communication.

Track: Consumer Behaviour