Assessing the value of audiobooks using a willingness-to-wait paradigm.

Carolyn McGettigan¹, Amrita Bains¹², Hannah Jones², Victor Rosi¹, & Saloni Krishnan²
¹ Psychology and Language Sciences, UCL; ² Department of Psychology, Royal Holloway University of London

Background
Using a willingness-to-wait paradigm informed by the decision science literature, Bains et al. (2023,npj Science of Learning) measured fluctuations in readers’ enjoyment across a set of book synopses. They found that when readers reported greater enjoyment of a text, they were more likely to understand its content, and more likely to take on a temporal cost to find out more about the book.

We modified Bains et al.’s paradigm to test whether their findings generalise to audiobook listening (Expts 1 & 2), and additionally measure the impact of the reader’s voice on enjoyment and motivation (Exp 2).

Method
Participants
All participants were aged 18-50 (Expt 1: 86 pts,mean 35.7 years, 38 female, 48 male; Expt 2: 80 pts, mean 36.0 years, 35 female, 45 male) with no self-reported hearing difficulties or cognitive impairments. All were native speakers of English who had spent most of their life before 18 in the United Kingdom. Recruited via Prolific and rewarded at a rate of £3/hr.

Materials
Audiobook excerpts: Twenty excerpts from the Reading Agency “Quick Reads” selection, each divided into two parts (~30-40 seconds per part).

Reader voices:
All audiobook reader voices were generated from text using voice cloning technology (elevenlabs.io) applied to recordings of English speakers from the VCTK database (Yamagishi et al. (2019)).

• Experiment 1: A single female-sounding voice, rated as 55/100 for pleasantness in a pilot study (N=30 listeners).

• Experiment 2: Two female-sounding voices, rated HIGHER (72/100) and LOWER (46/100) for pleasantness in a pilot study (N=30 listeners).

A further male-sounding voice was used in 2 vigilance trials instructing the listener to press the digit 2 or 5. All sound files were amplitude normalised (EBU R 128) and converted to MP3.

Task Structure
Participants completed the experiment in Gorilla Experiment Builder.

Results
Data were processed and analysed using R in RStudio (Version 2022.07.2). All participants passed the in-task vigilance checks. Three participants (1 in Expt 1; 2 in Expt 2) who chose to wait on all 20 trials were excluded (in line with Bains et al. (2023)).

Experiment 1:
Greater audiobook enjoyment predicts more accurate comprehension and willingness to wait

Experiment 2:
A more pleasant reading voice is associated with greater audiobook enjoyment

Conclusions
• We show – in 2 independent participant groups - that relationships between enjoyment, comprehension and motivation when reading books are replicated when listening to audiobooks.

• We further find that that sound more pleasant-sounding voices are associated with greater audiobook enjoyment.

• Ongoing work is harnessing voice cloning technology to investigate whether familiar voice identities may further enhance audiobook enjoyment.

• Our findings suggest that the choice of voice identity for audiobooks / storytelling can impact engagement with books, with implications for education and learning.