Bright shiny garbage: Video content shown to low-income children is characterized by higher flicker

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Abstract

We use a computer vision model to examine inequities in the quality of videos shown to children from different socioeconomic backgrounds. This work is foundational to understanding the origin of divergence in children's cognitive development. We use our model to quantify visual salience across three categories of children's media: ad supported, paid, and educational public television. We find that ad-supported media contains significantly higher levels of flicker, a feature of visual salience linked to disrupted processing and worse learning outcomes (Essex et al., 2022; Shepherd & Kidd, 2024). These results represent the first to quantitatively demonstrate a difference in the quality of media shown to low- versus high-income children. These findings confirm that children from low-income families are watching more visually salient content and thus more at risk for the potential harms this type of content poses.

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