AI-generated climate futures and persuasion: How storytelling anchors shape audience responses

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Generative artificial intelligence is increasingly used in environmental advocacy to visualize negative climate futures and mobilize public action. However, such threatening yet fictitious images may draw attention to the persuasive intent of the message sender, thereby undermining persuasion. Employing verbal anchoring theory, we examine whether storytelling anchors can mitigate this risk. We conducted two experiments (total $N = 1{,}825$) in which participants viewed AI-generated images of negative climate futures accompanied by a verbal storytelling anchor. Study 1 examined *scenario-based storytelling anchors* emphasizing the link between present action and future outcomes. Study 2 investigated *self-referential storytelling anchors* connecting the depicted future to personal experience. Across both studies, storytelling anchors increased narrative involvement, which reduced psychological reactance and enhanced perceived trustworthiness of the sender, thereby increasing willingness to support climate action. The findings underscore the critical role of verbal text in shaping responses to AI-generated climate imagery.

Keywords: visual imagery; generative artificial intelligence; verbal anchoring; storytelling; climate action