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Multimodal Dynamics of Explaining the Mechanisms of Global Warming

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Abstract: Human communication is a complex multimodal behavior that is deeply embedded within our environment. From narrative monologues (Dale, 2014) to dyadic task performance (Paxton, Abney, Kello, & Dale, 2014), recent efforts have sought to identify multimodal signatures of different types of communication. We extend these efforts in the current project by investigating the multimodal signatures of learning about a pressing but publicly controversial issue: global warming. Here, we explore how personal political stances and previous scientific understanding affect patterns of multimodal behavior (i.e., language use and gaze patterns) when participants are asked to learn about and then describe the mechanisms behind global warming (Ranney et al., 2013). Quantifying understanding – and exploring how personal traits affect that understanding – is not only vital to better describing communication dynamics overall but may also shed light on emerging efforts to educate the public on important scientific concerns.