Using Knowledge-based Media Frames to Drive Civic Engagement through Climate Change Memes

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Abstract. Communicating the urgency of the climate crisis is the need of the hour. Climate communication is a field that develops communication strategies based on public perceptions, beliefs, worldviews and values surrounding climate change. While key climate communicators (government organizations, NGOs, activists and scientists) have used social media to communicate about the warming climate, much of the behavioural science literature has studied how affect-based framing and networks within social media affects climate engagement. The use of non-textual contents (such as memes) and the role of cognitive factors (such as knowledge of cause, consequence and impacts of climate change) are under-studied. The current study will methodologically replicate media frames from Jang & Hart (2015) onto 25 Twitter-based climate change memes into the following categories: existence, evidence, cause, consequence and action regarding climate change. Inter-coder reliability will also be assessed. An online experiment will be used to gauge the predictive role of the different types of memes, as a climate communication tool on intention to engage in climate activism. Assuming a small to moderate effect size of $d = .2$, we aim to recruit a university-based sample of $N = 305$ to accurately measure variance in engagement predicted by 5 variables with assumed $\alpha = .05$, $\beta = .8$. Accounting for attrition or incompletion rates of 20%, our minimum projected sample size will be $N = 366$. We will use a one-way ANOVA to explain the variance. The study will identify effective strategies for climate communication that drive engagement.

Keywords: Climate Communication, Media Frames, Climate Change, Social media.