Cultural tightness does not predict action on the collective threat of climate change

We applaud Michele J Gelfand and colleagues on their analysis of cultural tightness–looseness in relation to COVID-19.[1] Their work provides an informative and, given the reported effect sizes, compelling demonstration that countries with greater cultural tightness have fewer COVID-19 cases and deaths than culturally looser countries do. The authors also propose an interesting corollary to their results, stating that: "The results suggest that tightening social norms might confer an evolutionary advantage in times of collective threat." and that "Social norm interventions will be critical for helping groups to tighten norms [...] to deal with future collective threats.". These statements raise an intriguing and important possibility. Cultural tightness might offer a compelling explanation for variations in, and be a potential vector for influencing, national action on another collective threat: national climate change mitigation. We tested this possibility.

Using Gelfand and colleagues' cultural tightness measures, we performed a simple exploratory examination of any potential relationship between cultural tightness and per-capita CO_2 emissions (a critical long-lived climate forcer[2]) drawn from the International Energy Agency's Atlas of Energy. By itself, cultural tightness was not a significant predictor of per-capita CO_2 emissions (r=0·008, p=0·954). Paralleling Gelfand and colleagues' Model 1, the inclusion of covariates for GDP per capita, income inequality, percentage of migrants, governmental efficiency, and population density did not alter these results; cultural tightness did not significantly predict per-capita CO_2 emissions (r=0·002, p=0·427). We excluded population-specific (per capita CO_2 emissions already normalises for population) and COVID-19-specific indices, such as testing rates, from this analysis. Incorporating additional controls—such as authoritarianism, individualism, cold stress, heat stress, and rain stress—produced similar results; cultural tightness remained non-predictive of per-capita CO_2 emissions (r=0·003, p=0·366).

Why might cultural tightness be a significant predictor of successful national action for some collective threats (eg, COVID-19), but not others (eg, climate change)? Three plausible explanations come to mind. First, individuals might perceive greater volition in combating the spread of COVID-19 than in combating climate change, which individuals often report feeling relatively helpless to address.[3] Social pressure mechanisms seem to be more effective at motivating collective action when the constituent individual actions seem both achievable and likely to meaningfully contribute to combating the collective threat. Second, the answer could lie in the perceived temporal proximity of the collective threat. Climate change differs from many other collective threats in that the consequences are typically perceived by the public to be relatively distant in the future.[3,4] In truth, climate change is already associated with decreases in life expectancy[5] and increases in mortality rates.[6] However, these effects often occur via indirect pathways (eg, heat stress), and individual deaths are usually not directly attributable to climate change per se. By contrast, COVID-19 is a temporally proximal threat, with immediate, perceptible consequences. COVID-19 directly causes clearly attributable deaths. Cultural tightness might be less associated with climate change mitigation than with effective COVID-19 responses because the greater temporal proximity of the COVID-19 threat facilitates more effective deployment of social pressure mechanisms (such as social shaming for rule and norm breaking) for promoting norm and rule compliance, which are key mechanisms of action proposed by Gelfand and colleagues for cultural tightness to effectively regulate collective behaviour.[1] Third, the long standing polarisation of climate change attitudes along entrenched sociopolitical lines[7] can make current views on climate change more intractable than attitudes toward action on COVID-19. Such attitudes could limit the effectiveness of cultural tightness to affect norm and rule compliance for climate change due to embedded rifts in worldview resulting in individuals prioritising the salience of group, rather than societal, norms.[7]

Although social norm interventions designed to increase the cultural tightness could be promising pathways for the tackling of some temporally proximal threats,[1] particularly in cases where individual-level actions appear to meaningfully address the threat, other strategies might be required to improve societal action

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on temporally distant collective threats, such as climate change. Promising strategies include the emphasising of scientific consensus information,[7] pre-emptively counteracting climate change misinformation in the general public,[8] and the improvement of public support for scientific inquiry.[9,10] Cultural tightness might also act as a moderator in these relationships, by serving as an important social vector for improving the transmission of scientific consensus information, interventions to pre-emptively counteract disinformation, and support for scientific inquiry among social groups. Further climate change research could benefit from considering the role that cultural tightness can play in the effectiveness of climate change communication interventions and science communication more broadly.

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