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The Most Difficult Thing in the World:

A Socio-Cultural Perspective on Putting Pro-Environmental Thoughts into Action

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#### Abstract

Although there is now a broad consensus that climate change is happening and a risk to society as we know it, these beliefs have not been commensurate with behaviors that are needed to address the climate crisis. This review discusses why this dissociation exists, focusing on sociocultural differences in the strength of the link between environmental beliefs and environmental action. Certain social contexts (i.e., collectivistic, lower SES, and religious) foster a stronger sense of personal control compared to their counterparts, and this explains variation in the link between climate change beliefs and pro-environmental behaviors. In sociocultural contexts where a sense of personal control is lower, alternative motives, such as social norms and trust in government, play more central roles in shaping pro-environmental support. A novel socio-cultural perspective is provided to understand why increased climate change beliefs do not necessarily increase support for pro-environmental actions.

# The Most Difficult Thing in the World: A Socio-Cultural Perspective on Putting Pro-Environmental Thoughts into Action

'Thinking is easy, acting is difficult, and to put one's thoughts into action is the most difficult thing in the world (Quote Attributed to Goethe; The Hannah Arendt Center for Politics and Humanities, 2012).'

Whether it is because of the efforts of educators, activists, or the media, or due to the increasing experience people are having with catastrophic climate events, there is now a broad consensus that climate change is happening and a risk to society. Americans who think global warming is happening now vastly outnumber those who deny it is happening (74% vs. 15%), and a majority of Americans (61%) think that climate change is human-caused (Leiserowitz et al., 2023). These views are in line with the consensus of climate scientists (IPCC, 2021) as well as the beliefs of people around the world. A Pew poll taken in 26 countries found that most people in most countries see climate change as a major threat (Poushter et al., 2022).

And while significant changes in policies and individuals' behaviors are occurring, they have not been commensurate with what is needed to address the climate crisis (Hornsey et al., 2016). This suggests that changes in environmental beliefs are not leading to sufficient changes in behavior. Indeed, research indicates that climate change beliefs are weakly related to actions to reduce greenhouse gases. For example, in a U.K. survey, 74% of respondents were fairly certain or extremely certain that climate change was happening, but only 32% were willing to make a behavioral commitment and pay higher taxes to combat climate change (LSE, 2020). In some studies (e.g., Nielsen et al., 2021), pro-environmental attitudes (such as concern about

environmental impact) have a *positive* (albeit weak) relationship to behaviors that lead to a greater carbon footprint.

A great deal of psychological research has explored different factors that promote or attenuate attitude-behavior consistency, focusing on both individual differences (e.g., selfmonitoring) and situational determinants (e.g., attitude accessibility; Glasman & Alberecin, 2006). Beyond these person-level factors that impact attitude-behavior consistency, larger shared social contexts can foster weak or strong relationships between attitudes and behaviors, including the association between climate change beliefs and pro-environmental action.

#### How Do Attitudes-Behavior Associations Differ Across Sociocultural Contexts?

In the last decade, there has been meaningful progress in documenting how the association between climate change attitudes, or climate change beliefs as it is more commonly referred (i.e., believing climate change is happening and feeling concerned about it) and support for pro-environmental actions varies among people who live in different social, structural, and cultural contexts (see Eom et al., 2019 for a review). Studies show that certain sociocultural factors (i.e., national culture and SES) can influence the strength of the association. We have identified these patterns across diverse forms of pro-environmental support, such as self-reported actions, political support, and actual consumer purchases. The national cultural orientation of individualism that prioritizes individual agency over collective agency (Triandis, 1989), for example, strengthens the association, such that people from more individualistic countries have a tighter link between their climate change beliefs and their support for pro-environmental action compared to people from more collectivistic countries (Eom et al., 2016; Ogunbode et al., 2022; Tam & Chan, 2017; see also Lou & Li, 2023). Within a country (the U.S.), those from higher socioeconomic status (SES) backgrounds that foster a greater sense of control (Kraus &

Stephens, 2012) show a stronger link between their climate change beliefs and their climate change actions than those from lower SES backgrounds (Eom et al, 2016; 2018; Kim et al., 2024; Sherman et al., 2022). A similar pattern of results was found with national-level economic prosperity. Self-transcendence value with an emphasis on the welfare of the natural environment (Chan, 2020) predicts pro-environmental behaviors more strongly in more economically prosperous countries than their counterparts. Climate anxiety (Ogunbode et al., 2022) is also a stronger predictor of pro-environmental action in more, compared to less, affluent countries. Religion, which has "ego-dampening" effects (Sasaki & Kim, 2020), exerts theorized impacts such that pro-environmental support is less strongly linked to environmental beliefs among people who are more religious than those who are less religious (Eom et al., 2021a).

Notably, while nationality, SES, and religiosity are clearly distinctive facets of people's lives, these sociocultural factors play similar roles in terms of strengthening or weakening the association between individuals' climate change beliefs and their pro-environmental support. Although each of these sociocultural differences is likely to have its own set of psychological explanations, we aim to identify a common psychological mechanism. These sociocultural factors are all human experiences that socialize individuals to assign greater importance to either their internal states, such as their beliefs and feelings, or their social surroundings, such as others and deities, that may constrain their own goals and wishes (Kim & Lawrie, 2019). That is, certain social contexts (i.e., individualistic, higher SES, less religious) foster a stronger sense of personal control compared to other social contexts (i.e., collectivistic, lower SES, more religious) (Figure 1).



Figure 1. Theoretical Model for Socio-Cultural Moderation and the Role of Sense of Control

Recent studies that tested this idea provide correlational and experimental empirical support. For example, higher SES individuals tend to have a general outlook of a greater sense of control relative to lower SES individuals, and this sense of control, in turn, compels them to act on their own climate change beliefs (Eom et al., 2018). Similarly, more religious people, because of their belief in divine control over the world, act on their own climate change concerns less than people who are less religious (Eom et al., 2021a). We also found direct empirical evidence for a sense of control as a shared psychological mechanism. One study (Sherman et al., 2022) featuring a large panel chosen to be demographically representative of the U.S. examined the joint role of individuals' endorsement of collectivistic values and their SES background. Results show that collectivistic values and SES operate interactively, such that those who are less collectivistic *and* are from higher SES backgrounds show particularly strong associations between their climate change beliefs and pro-environmental action, and this difference is mediated by a sense of personal control. The examination of joint influences of sociocultural factors is still rare in the behavioral sciences. Further investigation of how different aspects of

one's sociocultural experiences impact the attitude-behavior association and other psychological processes will advance a more nuanced understanding of the process of cultural influence.

Taken together, these studies underscore the idea that climate change beliefs and concerns are only a part of the psychology that motivates pro-environmental actions and, moreover, that there are systematic variations in how much they matter across different shared experiences. We next turn our examination of what drives environmental actions to factors other than individual attitudes.

#### If Not Belief, What Drives Pro-Environmental Actions?

In assuming personal beliefs and feelings as the primary basis of human actions, one implicitly assumes that individuals have a high degree of personal control to act in accordance with their internal states. While such an assumption is prevalent in mainstream social psychology and related fields, researchers have identified other reasons for human actions and decision-making. For example, normative influence is one of the most powerful ways to motivate pro-environmental behaviors (Cialdini & Jacobson, 2021; Sparkman et al., 2021). Also, perceived institutional (e.g., utility company or government) environmental responsibility positively predicts individuals' pro-environmental support (van der Werff et al., 2021; see Steg, 2023 for a review). What these alternate predictors have in common is that both processes involve people tailoring their pro-environmental support to be consistent with what they perceive to be the goals of their group. Given that, in the sociocultural contexts that foster a greater emphasis on social surroundings (vs. a sense of personal control), these alternative motives may play more central roles in shaping pro-environmental support.

Research shows that individuals who sense low control seek group-based control (Landau et al., 2015) and, thus, conform to social norms more compared to those who sense high control

(Stollberg et al., 2017), in particular when the norm is about changes (vs. status quo) (Stollberg et al., 2024). Consistently, social norms, relative to climate change beliefs, appear to be a more important predictor for pro-environmental support among people who are more collectivistic or from a lower SES background. What participants perceive as the social norm of pro-environmental behaviors predicts their own pro-environmental behaviors more strongly in more collectivistic cultures than in more individualistic cultures (Eom et al., 2016; Liu & Lapinski, 2024; Saracevic et al., 2022), and among more collectivistic people than among less collectivistic people (Sherman et al., 2022). Lower SES individuals also show a similar pattern of results (Eom et al., 2018), although these results seem to hold only when the reference group of the norm is the ingroup, which is consistent with the group-based control model (Stollberg et al., 2017; see also Sherman et al., 2022 for the discussion).

One important aspect of social groups with shared goals is their institutions, as institutions enable and direct the group to achieve its goals. Governments help nations (ideally) to achieve collective goals such as national defense or pro-environmental infrastructure. For example, a study shows that good governance is positively associated with the acceptance of higher carbon tax, but only among citizens who have high trust in their government (Levi, 2021), suggesting the importance of individuals' willingness to put trust in their institutions. Compensatory control theory (CCT; Landau et al., 2015) posits that when people experience lowered personal control, they rely on external agents, such as government or supernatural agents, to regain a sense of control. Moreover, those who are from socio-cultural contexts that foster prioritization of social goals over personal goals tend to rely on external agents (Gibbs et al., 2023). While religious people do not seem strongly motivated by their own climate change beliefs (Eom et al., 2021a), their pro-environmental support is strongly motivated by religious

stewardship, beliefs that humans have a responsibility to take care of the world that a god created (Eom et al., 2021b; Ng & Eom, 2024; Shin & Preston, 2021; see Eom & Ng., 2023 for review). That is, religious people align their pro-environmental support with what they perceive to be god's commandment rather than their own personal beliefs about climate change.

In the case of collectivism, the value itself is a reliable predictor of compliance behaviors. People from more collectivistic cultures and people who hold more collectivistic values are more likely to wear masks during the COVID-19 pandemic crisis (Leong et al., 2022; Lu et al., 2021). Collectivism, both at the country level and individual level, also predicts greater support for environmental protection (Hornsey et al., 2016; Lou & Li, 2022; Noll et al., 2020). Notably, one of the reasons for collectivistic people to engage in pro-environmental policy support (e.g., willingness to pay higher taxes for pro-environmental purposes) may be their trust in government (i.e., their perceptions that governments are competent and benevolent) (Leong et al., 2022). Taken together, whereas socio-cultural factors that modulate individuals' sense of control (i.e., collectivism, lower SES, and religion) decrease the importance of their personal climate change beliefs, these factors increase the relative importance of external influence in individuals' proenvironmental decision-making and behaviors.

#### What are the Implications and Future Directions?

The present review provides a novel socio-cultural perspective to understand why increased climate change beliefs do not necessarily increase support for pro-environmental actions. This body of work is a reminder that climate change beliefs are not the only important predictor of pro-environmental support. Although we fully recognize the importance of education to increase the correct understanding of climate change, increasing climate change beliefs alone will fall short of increasing necessary actions. The reality is that the vast majority of humans are

collectivistic, religious, and/or low SES (Henrich et al., 2010) and that different interventions are likely to be differentially effective for people who vary across these dimensions (see Vlasceanu et al., 2024). Thus, the assumption of the primacy of personal belief rooted in the Western conception of the self and psychology (Markus & Kitayama, 1991) needs to be questioned.

It is important to note that people from contexts that foster a lower sense of control are similarly as, and sometimes even more, pro-environmental than people from contexts that foster a higher sense of control. As described above, collectivism is a reliable predictor of greater pro-environmental support. High-SES individuals produce more GHG emissions than lower-SES individuals (Nielsen et al., 2021). Religiosity, too, positively predicts some pro-environmental support across the world (Zemo & Nigus, 2020) and in the U.S. (Eom et al., 2021a). Clearly, the weak association between climate change beliefs and pro-environmental support within these sociocultural contexts is not a hindrance to pro-environmental support.

We argue that it is time to develop diverse strategies that befit socio-cultural diversity. Our research suggests a few specific approaches. First, there should be more attention given to a sense of control and empowerment. Given that climate change beliefs are widely shared at this point in time, one way to translate these beliefs into pro-environmental support is to increase the sense of personal control as a general outlook in life. When lower SES individuals are experimentally reminded of times when they had control over an event (unrelated to environmental issues), they are more likely to act on their own climate change beliefs (Eom et al., 2018). Thus, personal empowerment may be one key ingredient in connecting increased climate change beliefs with greater pro-environmental support.

At the same time, it is important to recognize that there are other reasons than personal attitudes that motivate people to act in societally beneficial manners. In particular, collectivistic

or religious people are generally more pro-environmental, and this is probably not due to their personal convictions but due to their sense of civic or religious duty. Given that coping with climate change inherently requires collective and organized efforts and curtailing individuals' consumptions and lifestyles, fostering a sense of belonging and social connection is necessary. In fact, some climate researchers have recently noted that the "focus on climate change denial is counterproductive" (Bretter & Schultz, 2023). The focus on climate change denial overstates the proportion and importance of climate deniers (see also Sparkman et al., 2022), and it polarizes society when constructive engagement across society is needed. Although it is a daunting task in the current fractured societies, efforts should be made to highlight common goals and identities, or at least to utilize a group identity-based sense of duty that is consistent with the environment (e.g., stewardship belief in religion) as a lever to increase pro-environmental actions (Hayhoe, 2021).

Beyond psychologists' theoretical understanding of the process, the issue of climate change requires a pragmatic approach. That is, ultimately, what the world needs is action (see Lange et al., 2023 for a related discussion), not belief. The present review offers some alternative perspectives to better appeal to the diverse world population. According to Goethe, acting is difficult but not as difficult as putting thoughts into action. Perhaps it is time to make the task easier by moving beyond thoughts and focusing on action.

#### References

- Bretter, C., & Schulz, F. (2023). Why focusing on "climate change denial" is counterproductive. *Proceedings of the National Academy of Sciences*, *120*(10), e2217716120. <u>https://doi.org/10.1073/pnas.221771612</u>
- Chan, H. W. (2020). When do values promote pro-environmental behaviors? Multilevel evidence on the self-expression hypothesis. *Journal of Environmental Psychology*, 71, 101361. <u>https://doi.org/10.1016/j.jenvp.2019.101361</u>

Cialdini, R. B., & Jacobson, R. P. (2021). Influences of social norms on climate change-related behaviors. *Current Opinion in Behavioral Sciences*, *42*, 1-8.

https://doi.org/10.1016/j.cobeha.2021.01.005

- Eom, K., Kim, H. S., Sherman, D. K., & Ishii, K. (2016). Cultural variability in the link between environmental concern and support for environmental action. *Psychological Science*, 27(10), 1331–1339. https://doi.org/10.1177/0956797616660078
- Eom, K., Kim, H. S., & Sherman, D. K. (2018). Social class, control, and action: Socioeconomic status differences in antecedents of support for pro-environmental action. *Journal of Experimental Social Psychology*, 77, 60-75. https://doi.org/10.1016/j.jesp.2018.03.009
- \*Eom, K., & Ng, S. T. (2023). The potential of religion for promoting sustainability: The role of stewardship. *Topics in Cognitive Science*, *15*(3), 480-499.

https://doi.org/10.1111/tops.12641

This article discusses how religious, theistic stewardship promotes pro-environmental support among religious individuals, addressing how religious stewardship belief may shape cognitions and emotions that lead to motivation to engage in pro-environmental action. The article also discusses potential ways of leveraging religious stewardship in messaging and communications for behavioral change toward sustainability.

Eom, K., Papadakis, V., Sherman, D. K., & Kim, H. S. (2019). The psychology of

proenvironmental support: In search of global solutions for a global problem. *Current Directions in Psychological Science*, *28*(5), 490-495.

https://doi.org/10.1177/0963721419854099

- Eom, K., Saad, C. S., & Kim, H. S. (2021a). Religiosity moderates the link between environmental beliefs and pro-environmental support: The role of belief in a controlling god. *Personality and Social Psychology Bulletin, 47*(6), 891-905. https://doi.org/10.1177/0146167220948712
- Eom, K., Tok, T. Q. H., Saad, C. S., & Kim, H. S. (2021b). Religion, environmental guilt, and pro-environmental support: The opposing pathways of stewardship belief and belief in a controlling god. *Journal of Environmental Psychology*, 78, 101717.
  <a href="https://doi.org/10.1016/j.jenvp.2021.101717">https://doi.org/10.1016/j.jenvp.2021.101717</a>
- Gibbs, W. C., Kim, H. S., Kay, A. C., & Sherman, D. K. (2023). Who's in control? A cultural perspective on the process of compensatory control. *Social and Personality Psychology Compass. 17*(2), e12722. https://doi.org/10.1111/spc3.12722
- Glasman, L. R., & Albarracín, D. (2006). Forming attitudes that predict future behavior: a metaanalysis of the attitude-behavior relation. *Psychological Buletin*, 132(5), 778. <u>https://doi.org/10.1037/0033-2909.132.5.778</u>
- Hayhoe, K. (2021). *Saving us: A climate scientist's case for hope and healing in a divided world.* Simon and Schuster.
- Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world?. *Behavioral and Brain Sciences*, 33(2-3), 61-83. http://doi:10.1017/S0140525X0999152X

Hornsey, M. J., Harris, E. A., Bain, P. G., & Fielding, K. S. (2016). Meta-analyses of the determinants and outcomes of belief in climate change. *Nature Climate Change*, 6(6), 622-626. https://doi.org/10.1038/nclimate2943

Intergovernmental Panel on Climate Change (IPCC). (2021). Climate change in

data. https://www.ipcc.ch/report/ar6/wg1/resources/ climate- change- in- data/

\*Kim, H. S., Eom, K., Panzone, L., & Sherman, D.K. (2024). Why Do I Act for Environment?

SES Moderates the Relationship Between Climate Change Beliefs and Sustainable

Actions. Motivation Science. https://doi.org/10.1037/mot0000343

This research shows that socioeconomic status (SES) influences how strongly individuals' climate change beliefs are associated with their actual pro-environmental behaviors. Looking at online fundraising and consumer behaviors, the studies found that participants' education level strengthens the association.

Kim, H. S. & Lawrie, S. I. (2019). Culture and motivation. In D. Cohen & S. Kitayama (Eds.)

Handbook of Cultural Psychology, 2<sup>nd</sup> Edition (pp. 268-291). NY: Guilford.

Kraus, M. W., & Stephens, N. M. (2012). A road map for an emerging psychology of social class. Social and Personality Psychology Compass, 6(9), 642-656.

https://doi.org/10.1111/j.1751-9004.2012.00453.x

Landau, M. J., Kay, A. C., & Whitson, J. A. (2015). Compensatory control and the appeal of a structured world. *Psychological Bulletin*, *141*(3), 694-722.

https://doi.org/10.1037/a0038703

Lange, F., Berger, S., Byrka, K., Brügger, A., Henn, L., Sparks, A. C., ... & Urban, J. (2023).
 Beyond self-reports: A call for more behavior in environmental psychology. *Journal of Environmental Psychology*, 86(101965), 101965.

https://doi.org/10.1016/j.jenvp.2023.101965

Leiserowitz, A., Maibach, E., Rosenthal, S., Kotcher, J., Lee, S., Verner, M., Ballew, M., Carman,
 J., Myers, T., Goldberg, M., Badullovich, N., & Marlon, J. (2023). *Climate Change in the American Mind: Beliefs & Attitudes, Spring 2023.* Yale University and George Mason
 University. New Haven, CT: Yale Program on Climate Change Communication.

\*Leong, S., Eom, K., Ishii, K., Aichberger, M. C., Fetz, K., Müller, T. S., Kim, H. S., &

Sherman, D. K. (2022). Individual costs and community benefits: Collectivism and

individuals' compliance with public health interventions. PLoS One, 17(11), e0275388.

https://doi.org/10.1371/journal.pone.0275388

This research examines the relationship between collectivism and adherence to public health recommendations. Beyond finding a positive association between collectivism and willingness to comply with public health recommendations, the study identifies trust in government as a psychological explanation for why collectivism predicts actions to benefit the public.

Levi, S. (2021). Why hate carbon taxes? Machine learning evidence on the roles of personal

responsibility, trust, revenue recycling, and other factors across 23 European

countries. Energy Research & Social Science, 73, 101883.

https://doi.org/10.1016/j.erss.2020.101883

Liu, R. W., & Lapinski, M. K. (2024). Cultural influences on the effects of social norm appeals.

Philosophical Transactions of the Royal Society B, 379(1897), 20230036.

https://doi.org/10.1098/rstb.2023.0036

London School of Economics and Political Science. (Jan, 2020). The public's climate change views: Strong beliefs but low salience. <u>https://blogs.lse.ac.uk/politicsandpolicy/uk-</u>climate-change-views/

Lou, X., & Li, M. W. L. (2022). The mediating role of self-enhancement value on the relationship of power distance and individualism with pro-environmental attitudes:

Evidence from multilevel mediation analysis with 52 societies. Society for Cross-

*Cultural Research*, *56*(5), 445-466. <u>https://doi.org/10.1177/10693971221093122</u>

\*Lou, X., & Li, L. M. W. (2023). The relationship of environmental concern with public and

private pro-environmental behaviours: A pre-registered meta-analysis. European Journal

of Social Psychology, 53(1), 1-14. https://doi.org/10.1002/ejsp.2879

This is a pre-registered meta-analysis that evaluated the magnitudes of the correlations of environmental concern with public and private pro-environmental behaviors in different sociocultural contexts. They report that national individualism and internal control strengthen the correlation between environmental concern and public behaviors.

Lu, J. G., Jin, P., & English, A. S. (2021). Collectivism predicts mask use during COVID-19. *Proceedings of the National Academy of Sciences*, *118*(23), e2021793118.

https://doi.org/10.1073/pnas.2021793118

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98(2), 224-253. DOI:10.1037/0033-295X.98.2.224

- Ng, S. T., & Eom, K. (2024). Religious stewardship and pro-environmental action: The mediating roles of environmental guilt and anger. *Psychology of Religion and Spirituality*, 16(3), 263-271. <u>https://doi.org/10.1037/rel0000499</u>
- Nielsen, K.S., Nicholas, K.A., Creutzig, F. et al. (2021). The role of high-socioeconomic-status people in locking in or rapidly reducing energy-driven greenhouse gas emissions. *Nature Energy 6*, 1011–1016. <u>https://doi.org/10.1038/s41560-021-00900-y</u>
- Noll, B., Filatova, T., & Need, A. (2020). How does private adaptation motivation to climate change vary across cultures? Evidence from a meta-analysis. *International Journal of Disaster Risk Reduction*, 46, 101615. <u>https://doi.org/10.1016/j.ijdrr.2020.101615</u>

Ogunbode, C. A., Doran, R., Hanss, D., Ojala, M., Salmela-Aro, K., van den Broek, K. L., ... & Karasu, M. (2022). Climate anxiety, wellbeing and pro-environmental action: Correlates of negative emotional responses to climate change in 32 countries. *Journal of Environmental Psychology*, 84, 101887. https://doi.org/10.1016/j.jenvp.2022.101887

Poushter, J., Fagan, M., & Gubbala, S. (2022). Climate change remains top global threat across 19-country survey. *Pew Research Center*. https://www.pewresearch.org/global/2022/08/31/climate-change-remains-top-global-

threat-across-19-country-survey/

- Saracevic, S., Schlegelmilch, B. B., & Wu, T. (2022). How normative appeals influence proenvironmental behavior: The role of individualism and collectivism. *Journal of Cleaner Production*, 344, 131086. <u>https://doi.org/10.1016/j.jclepro.2022.131086</u>.
- Sasaki, J. Y., & Kim, H. S. (2021). The ego dampening influence of religion: evidence from behavioral genetics and psychology. *Current Opinion in Psychology*, 40, 24-28. <u>https://doi.org/10.1016/j.copsyc.2020.08.007</u>
- \*\*Sherman, D. K., Updegraff, J. A., Handy, M. S. \*, Eom, K., & Kim, H. S. (2022). Beliefs and social norms as precursors of environmental support: The joint influence of collectivism and socioeconomic status. *Personality & Social Psychology Bulletin, 48*(3), 463-477.

https://doi.org/10.1177/01461672211007252

This research shows that collectivism and SES jointly moderate the strength of beliefs about climate change and perceived descriptive norms in predicting environmental support and that this interaction was explained by sense of control. For descriptive norms, norms predicted action most strongly for those high in collectivism and high in SES. These findings demonstrate the importance of examining multiple sociocultural characteristics together to understand the factors that drive action.

- Shin, F., & Preston, J. L. (2021). Green as the gospel: The power of stewardship messages to improve climate change attitudes. *Psychology of Religion and Spirituality*, 13(4), 437-447. http:// doi:10.1037/rel0000249 ISSN 1941-102
- Sparkman, G., Howe, L., & Walton, G. (2021). How social norms are often a barrier to addressing climate change but can be part of the solution. *Behavioural Public Policy*, 5(4), 528-555. <u>https://doi.org/10.1017/bpp.2020.42</u>
- Sparkman, G., Geiger, N., & Weber, E. U. (2022). Americans experience a false social reality by underestimating popular climate policy support by nearly half. *Nature Communications*, 13, 4779. https://doi.org/10.1038/s41467-022-32412-y
- Steg, L. (2023). Psychology of climate change. Annual Review of Psychology, 74(1), 391-421. https://doi.org/10.1146/annurev-psych-032720-042905
- Stollberg, J., Fritsche, I., & Jonas, E. (2017). The groupy shift: Conformity to liberal in-group norms as a group-based response to threatened personal control. *Social cognition*, *35*(4), 374-394. <u>https://doi.org/10.1521/soco.2017.35.4.374</u>
- Stollberg, J., Fritsche, I., & Jonas, E. (2024). To change, but not to preserve! Norm conformity following control threat only emerges for change norms but not for status quo norms. *Self* and Identity, 1-21. <u>https://doi.org/10.1080/15298868.2024.2399869</u>
- Tam, K.-P., & Chan, H.-W. (2017). Environmental concern has a weaker association with proenvironmental behavior in some societies than others: A cross-cultural psychology perspective. *Journal of Environmental Psychology*, 53, 213–223. https://doi.org/10.1016/j.jenvp.2017.09.001

- The Hannah Arendt Center for Politics and Humanities, Bard College (2012, April 10). Johann Wolfgang von Goethe on Thinking. <u>https://hac.bard.edu/amor-mundi/johann-wolfgang-von-goethe-on-thinking-2012-04-10</u>
- Triandis, H. C. (1989). The self and social behavior in differing cultural contexts. *Psychological Review*, *96*(3), 506-520. https://doi.org/10.1037/0033-295X.96.3.506
- van der Werff, E., Steg, L., & Ruepert, A. (2021). My company is green, so am I: The relationship between perceived environmental responsibility of organisations and government, environmental self-identity, and pro-environmental behaviours. *Energy Efficiency*, 14(5), 50. https://doi.org/10.1007/s12053-021-09958-9
- Vlasceanu, M., Doell, K. C., Bak-Coleman, J. B., Todorova, B., Berkebile-Weinberg, M. M., Grayson, S. J., ... & Lutz, A. E. (2024). Addressing climate change with behavioral science: A global intervention tournament in 63 countries. *Science Advances*, 10(6), eadj5778. <u>https://doi.org/10.1126/sciadv.adj5778</u>
- Zemo, K. H., & Nigus, H. Y. (2021). Does religion promote pro-environmental behaviour? A cross-country investigation. *Journal of Environmental Economics and Policy*, 10(1), 90-113. <u>https://doi.org/10.1080/21606544.2020.1796820</u>