

Using Social Science to Improve Social Impact: Communication Strategies for Experience Designers

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Abstract

This paper explores the intersection of strategic communication, social impact, and experience design in addressing interconnected and complex social issues that pose challenges to understanding and collective action. It emphasizes the need for data-driven communication strategies to navigate the complexities of these crises and generate action. Leveraging insights from social science research, the paper highlights the importance of tailored strategic communication that acknowledges and addresses the diverse motivations shaping individuals' thoughts, emotions, and actions toward social issues. Drawing upon research from the Yale Program on Climate Change Communication, the paper examines population segmentation based on beliefs and attitudes toward climate change issues in the United States. These population segments are utilized to develop targeted communication strategies most likely to appeal to individuals' needs and desires. Finally, the paper identifies opportunities for further research, including the development of communication strategies for other social impact issues and the exploration of evaluation methods for assessing the social impacts of design interventions.

Category: Design for Social Impact **Keywords:** social impact, climate crisis, strategic communication, design justice, social justice, activism

1 Introduction

Today we live in an age of polycrises—multiple concurrent crises that are interconnected in ways that amplify their pain points and make them difficult to disentangle. The crises we face today are often interconnected on a global scale, exhibiting long delays between cause and effect, and intertwined with various political, social, and economic factors. The complex nature of each crisis often gives rise to a sense of intractability. We need new communication tools to help us understand the complexity of our modern world and take collective action toward solving these crises.

At its very core, experience design is about creating environments that improve the human experience, whether it is helping people find their way, communicating important information, fueling a dialogue be-

tween inhabitants of the space, or simply creating a sense of place. As Social Impact becomes increasingly important for Experience Designers to engage in and aspire to, they have begun to investigate how strategic communications meant to inspire action can be integrated into the practice of placemaking.

To generate social impact, strategic communication must be customized to address the diverse motivations that shape individuals' thoughts, emotions, and actions in response to social issues. By leveraging insights from social science, designers gain a deeper understanding of the attitudes and behaviors exhibited by the general public, equipping them with tools to create impactful experiences. Drawing upon social science research allows designers to effectively address collective action problems, such as climate change, by shaping perceptions, fostering engagement, and driving action.

In this paper, research from the Yale Program on Climate Change Communication is examined, investigating population segmentation based on beliefs and attitudes toward climate change issues in the United States. This research identifies distinct audience segments that allow communicators to gain valuable insights into the preferences and needs of individuals. Recommended communication strategies for different populations follow an overview of the existing research; these strategies can help designers effectively inspire collective action for positive change.

2 Existing Research

Since 2008, researchers at Yale and George Mason University have conducted nationally representative surveys that investigate public climate change beliefs, risk perceptions, and policy support, as well as the underlying psychological, cultural, and political factors that influence them (Maibach 2008). The original 2008 data was utilized to conduct a segmentation analysis to identify different audiences within the American public that each responds to climate change differently. This research, spanning 36 measures of global warming beliefs, preferences, and behavior, identified what has since become known as “Global Warming’s Six Americas” (Leiserowitz 2011). The Yale Program for Climate Change Communication has since periodically updated its analysis, providing insights into the relative proportion of each population segment and their individual beliefs. The latest Six Americas report, published in December 2022, segments the population into six groups:

- **The Alarmed** are convinced that the identified problem is real, serious, and urgent; they also strongly support immediate government policies to remedy the issue.
- **The Concerned** have a similar attitudinal valence to the Alarmed, but are separated by a lower issue engagement—they typically place the issue at a lower priority and are thus less likely to support immediate action.
- **The Cautious** haven’t decided yet on the facts; they are typically willing to be engaged on the issue but need some convincing.
- **The Disengaged** are, as their name suggests, broadly disengaged from the issue at hand and rarely think about it or act on it.
- **The Doubtful** lie further on the spectrum of attitudinal valence and generally doubt the factual merits of the issue.

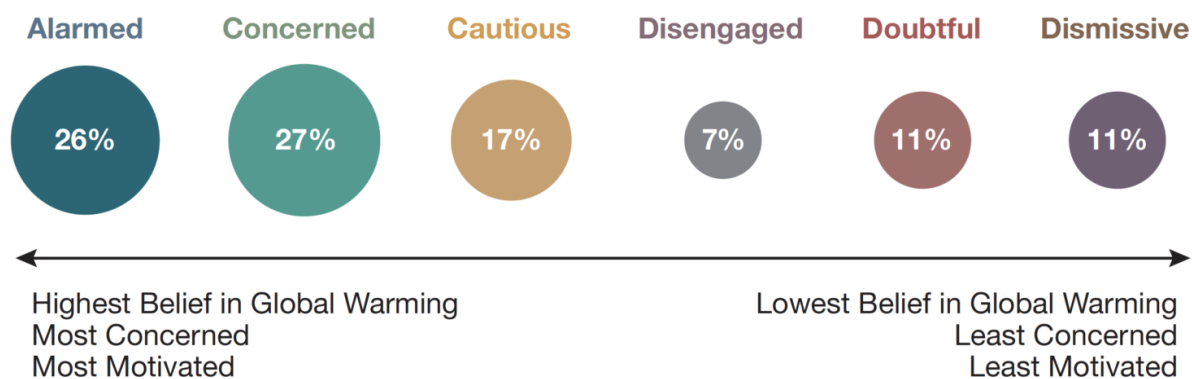
- **The Dismissive** strongly do not believe the facts of the issue at hand, strongly oppose action by governmental bodies, and often support conspiracy theories and other propaganda.

3 Communication Strategies

To fully leverage the Six Americas report, it is important to understand the two key dimensions underlying the segmentation—attitudinal valence and issue involvement. Attitudinal valence represents the emotional or affective aspect of an individual's attitude toward climate change and measures how strongly an individual accepts or rejects the scientific facts. Issue involvement measures the personal relevance or importance an individual gives climate change, as well as their attitudinal certainty around it. High issue involvement implies that individuals are deeply interested, knowledgeable, and emotionally invested in climate change, actively seeking information, and likely to participate in discussions or actions related to global warming. Conversely, low issue involvement suggests a lack of personal relevance or concern, resulting in less attention, knowledge, and engagement.

These two metrics can provide substantial insights into population segments. For example, both the Alarmed and Dismissive think about climate change frequently and have strongly held beliefs about the matter (high issue involvement). However, the Alarmed understand the key facts about climate change (high attitudinal valence), while the Dismissive reject facts and messages consistent with science (low attitudinal valence). The remaining population segments have low issue involvement but varying attitudinal valences.

By understanding the underlying metrics, Experience Designers can develop effective communication strategies that are most likely to elicit action from each population segment.



December 2022
(n = 1,085)



Figure 1. Summary of Global Warming's Six Americas. Image courtesy of Yale Program on Climate Change Communication.

4 Strategy: Know Your Audience

The most important strategy is to know your audience. While this is a truism of general public communication, it is crucial for communicating the realities of climate change. A recent study concluded that over 80% of Americans underestimate the prevalence of support for major climate change mitigation policies and overall climate concern by more than a factor of two (Sparkman 2021). While 66–80% of Americans support these policies, Americans estimate the level of public support to be between 37–43% on average. What this research makes clear is, despite the truism, most designers *do not* know their audience.

The Six Americas report confirms the general support for climate change mitigation policies, with 70% of the population having a positive attitudinal valence (belonging to the Alarmed, Concerned, or Cautious segments). Only 22% of the population rejects climate change science (the Doubtful and Dismissive), while only half of those in this margin are actively engaged against climate policies.

However, these figures represent national averages and should not be solely relied upon for targeting specific audiences, as attitudes toward climate change can exhibit significant variations across different locales and regions (Howe 2015). The Yale Program for Climate Change Communication provides several tools that can be used to identify more local trends in climate opinions. The first tool is the Yale Climate Opinion Maps,¹ which summarizes trends in climate opinions at the national, state, county, and congressional district levels. A second tool is the Six Americas Super Short Survey (SASSY),² which uses four questions to quickly align an individual to one of the six population segments. The ability to hyper-localize trends through a survey is particularly beneficial for experience designers, as it allows them to account for the demographic variations among visitors that may diverge from more general trends. This consideration is especially relevant due to self-selection bias, where individuals who choose to participate in specific physical spaces, such as university buildings or office buildings, may exhibit different attitudes and preferences regarding climate policy. By acknowledging and addressing this bias, experience designers can ensure that their communication strategies and designed experiences are attuned to the specific demographics and perspectives of the visitors in those spaces.

A primary challenge for designers is to help break down the communication barriers so that audiences understand that their desire for positive social change is not a minority opinion.

5 Strategy: Break the False Social Reality

Climate change, like many social impact issues, is a collective action problem. This requires individuals to recognize the problem as a threat and to engage in coordinated actions to create major social change. Underestimating public support for climate change action counterproductively affects both aspects of collective action. Individuals rely on social responses to accurately identify and perceive threats; if individuals believe that the general public doesn't see climate change as a threat, then they themselves are less likely

¹<https://climatecommunication.yale.edu/visualizations-data/ycom-us/>

²<https://climatecommunication.yale.edu/visualizations-data/sassy/>

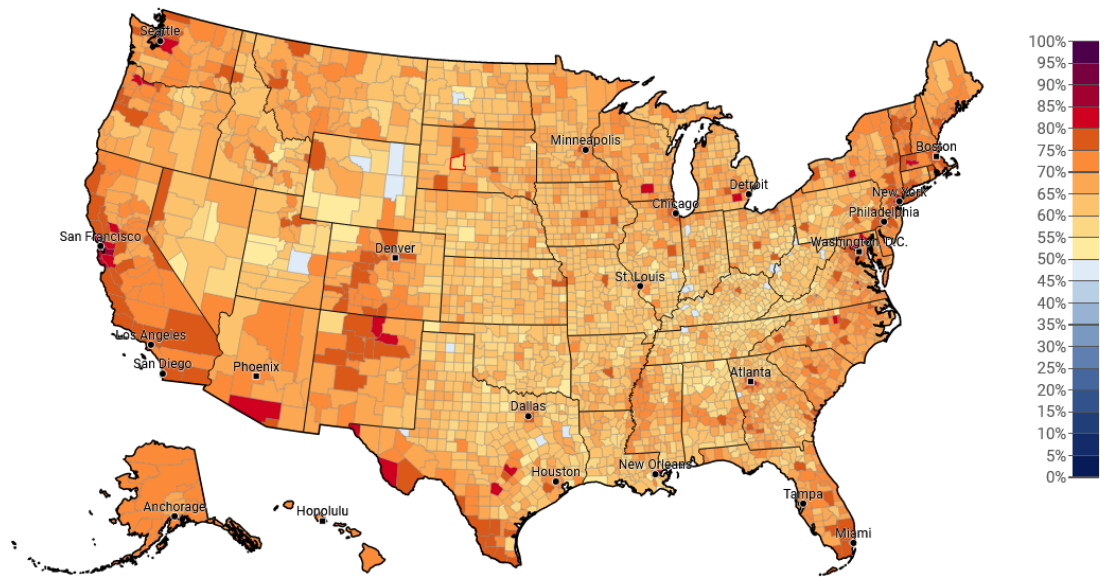


Figure 2. Example opinion map showing county-level public support for the statement “Global warming is happening.” Image courtesy of Yale Program on Climate Change Communication.

to view it as a threat (Frantz 2009). Similarly, individual actions alone are insufficient—long-lasting structural changes require a coordinated effort. Individuals are less likely to act when they perceive that others aren’t acting in concert with their own individual actions (Fischer 2011). It is clear from the research that most Americans live in a false social reality where they dramatically underestimate each other’s support for action, which helps to reinforce the notion that collective action faces an uphill battle. A primary challenge for designers is to help break down the communication barriers so that audiences understand their desire for positive social change is not a minority opinion, and that their individual actions are, in fact, part of a larger coordinated action meant to create long-term structural and social change.

6 Strategy: Focus on Actions

A key interpretation of this research is that in their work, designers must communicate that most of us are aligned on the reality of the climate crisis—therefore, our public communications should not be focused on conveying the facts of climate change. The majority of Americans agree that global warming is happening (72%), will harm future generations (71%), and is caused by human activity (57%)—there’s no further need to debate the scientific merit of action on climate change.

When we look at the audience segments, the Alarmed are eager to know what individual and collective actions they can take to help reduce global warming. These are the members of the population that are the most engaged on this issue. They have the highest belief in global warming and are the most motivated to take action—they are extremely likely to take concrete actions if designers/communicators engage with them about the next step to take. The Concerned are less liberal and less engaged than the Alarmed but still believe that action must be taken—just not as urgently as the Alarmed believe. By placing actions front and

center and making them easy to complete, designers can engage the Alarmed and the Concerned segments of the population.

There is a widespread misconception that the most impactful actions are necessarily political ones. However, data suggests that this is far from the truth. Political actions, such as candidate support, political donations, and positions on legislative issues, are deeply intertwined with several other issues due to the structure of our political systems. Voters generally vote based on various factors, and research shows that climate change is a relatively low priority for most (Leiserowitz 2022). While four out of ten voters acknowledge that climate change is a very important issue, only 4% of voters chose it as their top priority, and it ranked the 24th most important issue out of 29 possible issues overall.

Another challenge is the rapid rate at which circumstances change, and the desired action might change. Experience designers creating experiences for the built environment frequently design environments that will last 10 years or longer, meaning that references to specific political actions, such as legislation, may fall out of date and become irrelevant quickly.

Instead of political action, it is recommended that designers encourage their specific audiences to join local non-partisan groups focused on mobilizing their communities on climate issues. This serves a two-fold purpose: first, by connecting our audiences to a larger organization, we help connect them to other individuals who share their interest in collective action; second, this allows local groups to organize individuals based on the current needs of the overall movement. In short, designers can be most effective when they collaborate with existing organizations to amplify their voices and mobilize individuals.

7 Strategy: Focus on Locality and Urgency

Six Americas has shown that the most successful strategy for converting Concerned and Cautious members into action is to focus not on the facts but on the issue's urgency. These two segments (44% of the population) are convertible in that they have weak issue engagement, with a weakly held attitudinal valence—they believe and support the facts of climate change (albeit weakly), and they are very weakly engaged with the issue and unlikely to take action.

A large proportion of these population segments believe that climate change is real but simply don't believe that the problem will affect them personally. A common view amongst these individuals is that climate change is a problem that will affect the developing world the most (in another place) or that it will affect future generations negatively (in another time)—but since they won't be impacted, there isn't an urgent need for action. This view of climate change as a distant problem lacking personal relevance is the belief that needs to be directly addressed.

Designers should structure their narrative to emphasize that climate change is an urgent and widespread issue. This means shifting the narrative to focus less on long-term impacts (such as long-term weather patterns or changes to sea levels) and instead focusing on short-term impacts on human lives and property. As these audiences are typically less engaged with climate change, it is important to focus on simple, short, and clear messaging that is repeated often to ensure that these impacts are conveyed.

8 Strategy: Ignore the Dismissive

The Dismissive are a unique audience that rejects climate change as an issue of concern. They have both a strong attitudinal valence, firmly rejecting scientific claims about global warming, and a strong issue engagement that makes them extremely certain in their views and very likely to propagate their views to others. The Dismissive are the most likely group to spread propaganda and misinformation related to climate science.

Given these factors, the best strategy for most designers seeking to create social impact is to ignore this group. As of the latest Six Americas report, the Dismissive only comprise 8% of the population—a small enough percentage that they are unlikely to serve as a major obstacle to structural change. Six Americas research has shown that communicating climate change to the Dismissive can even cause a backlash, further antagonizing them and entrenching their opinions. It is best not to address these population segments that reject climate science.

9 Future Work

Success in strategic communication is not marked by the production of an object or the completion of a project, but through observation, feedback, and assessment over the long term. Feedback is a critical requirement of design for social impact in that it measures success not based on what the designer thinks has been accomplished but on the user's needs, experiences, and responses. Designing for social impact must be measured both by the immediate gains—does the designed system function as planned—as well as the changes that occur when people engage in real time and space with those systems and how change is created.

As this is an emerging field of study, there may be room to examine what a successful case study would comprise. The social impacts we are asking to measure relate to chronic, systemic issues that require long-term impact studies to draw any significant conclusions. This is a large shift in evaluation for most Experience Designers, and how one can properly plan the evaluation of the social impacts of their work is an open question that merits further research in the field.

There is also substantial work that could be done in developing communications strategies for other social impact issues with perception gaps—disparities in how they perceive the beliefs of the American public and what the public believes. Recent research has shown that, like climate change, several other intensely debated social issues possess perception gaps of over 20% (More In Common). While this research shows the existence of a perception gap, it does not segment the population into functional groups based on their attitudinal valence and issue engagement and thus does not propose novel communication strategies. The development of communication strategies for a variety of other social impact issues is a clear topic of research where collaboration could occur between designers and social scientists.

10 Conclusion

In conclusion, the convergence of strategic communication, social impact, and experience design provides a powerful framework for addressing the interconnected and complex challenges of our modern world.

The need for new communication strategies that navigate the intricacies of these interconnected systems is evident, and leveraging insights from social science research proves invaluable in creating tailored communication strategies. By understanding the diverse motivations that shape individuals' responses to social issues, designers can develop experiences that generate social impact and inspire collective action.

The examination of population segmentation research, particularly in the context of climate change attitudes, highlights the importance of understanding attitudinal valence and issue involvement for effective communication. Designers can utilize this knowledge to identify distinct audience segments, gain insights into their preferences and needs, and craft targeted strategies that resonate with different populations. It is crucial to recognize the significance of knowing your audience, focusing on concrete actions, and emphasizing locality and urgency in driving meaningful change.

Ultimately, the design for social impact is an ongoing journey that requires continuous learning, adaptation, and collaboration. By harnessing the power of strategic communication, social science research, and experience design, we can create transformative experiences that empower individuals, inspire collective action, and contribute to positive change on a global scale. Through interdisciplinary efforts, we can forge a path toward a more sustainable, inclusive, and equitable future.

Resources

- Fischer, Peter, et al. "The Bystander-Effect: A Meta-Analytic Review on Bystander Intervention in Dangerous and Non-Dangerous Emergencies." *Psychological Bulletin*, vol. 137, no. 4, 2011, pp. 517–537, <https://doi.org/10.1037/a0023304>.
- Frantz, Cynthia M., and F. Stephan Mayer. "The Emergency of Climate Change: Why Are We Failing to Take Action?" *Analyses of Social Issues and Public Policy*, vol. 9, no. 1, 2009, pp. 205–222, <https://doi.org/10.1111/j.1530-2415.2009.01180.x>.
- Howe, Peter D., et al. "Geographic Variation in Opinions on Climate Change at State and Local Scales in the USA." *Nature Climate Change*, vol. 5, no. 6, 2015, pp. 596–603, <https://doi.org/10.1038/nclimate2583>.
- Leiserowitz, Anthony, et al. "Global Warming's Six Americas: A Review and Recommendations for Climate Change Communication." *Current Opinion in Behavioral Sciences*, vol. 42, 2021, pp. 97–103, <https://doi.org/10.1016/j.cobeha.2021.04.007>.
- Leiserowitz, Anthony, et al. "Politics & Global Warming, April 2022." Yale University and George Mason University. New Haven, CT: Yale Program on Climate Change Communication.
- Maibach, Edward W., et al. "Identifying Like-Minded Audiences for Global Warming Public Engagement Campaigns: An Audience Segmentation Analysis and Tool Development." *PLoS ONE*, vol. 6, no. 3, 2011, <https://doi.org/10.1371/journal.pone.0017571>.
- Sparkman, Gregg, et al. "Americans Experience a False Social Reality by Underestimating Popular Climate Policy Support by Nearly Half." *Nature Communications*, vol. 13, no. 1, 2022, <https://doi.org/10.1038/s41467-022-32412-y>.