

## **Engaging Diverse Audiences with Climate Change: Message Strategies for Global Warming's Six Americas**

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### ***Abstract***

*Global climate change is viewed from a variety of perspectives by Americans, with some dismissing the danger, some unaware of its significance, and still others highly concerned and motivated to take action. Understanding these diverse perspectives is key to effective audience engagement: Messages that ignore the cultural and political underpinnings of people's views on climate change are less likely to succeed.*

*In this chapter, we describe Global Warming's Six Americas – six unique audience segments that view and respond to the issue in distinct ways. We describe the beliefs and characteristics of each group and discuss methods of effectively communicating with them in light of: (1) the pro- or counter-attitudinal nature of messages on the issue for each group; (2) their willingness to exert cognitive effort to process information on the issue; (3) their propensity for counter-arguing and motivated reasoning; and (4) the communication content they say they most desire and, hence, would be most likely to process and accept.*

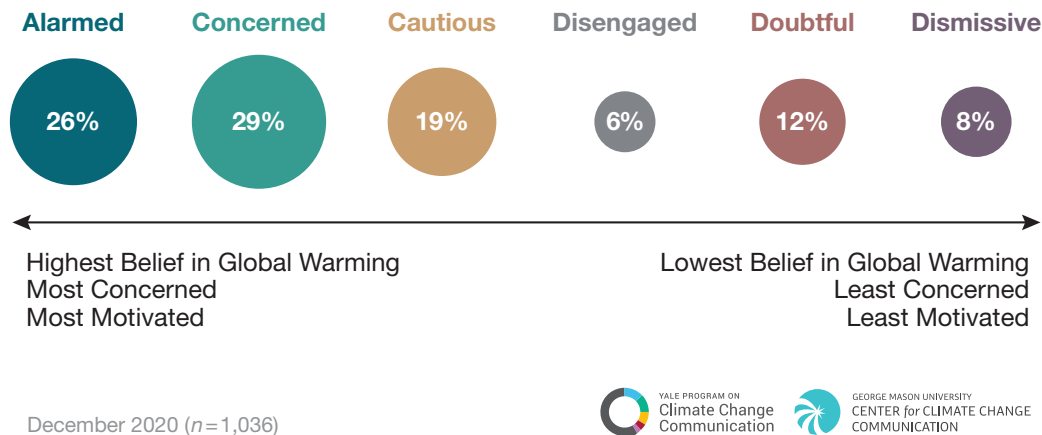
### ***Introduction***

Global climate change is a threat of the gravest magnitude to human societies and natural ecosystems – a threat recognized by virtually the entire climate science community. Among Americans, however, it remains a divisive issue, viewed from multiple perspectives: Some dismiss it as a hoax, some are uninterested and know little about it, and others are worried and motivated to address the threat.

To build public understanding and engagement with the issue, climate communicators must recognize and respond to these varied points-of-view: Messages are unlikely to be effective if a diverse population is treated as a homogeneous mass, ignoring the diversity of opinion, the cultural and political underpinnings of these opinions, and the informational needs and interests of sub-groups within the population.

In this chapter, we discuss climate communication strategies in light of the information-processing propensities of *Global Warming's Six Americas* – six unique audience segments that perceive and respond to the issue in distinct ways. The Six Americas range across a spectrum of concern and issue engagement, with segments that accept and reject the threat of climate change at the ends of a continuum, and those that are less certain and less engaged in the middle (Figure 1). At one end of the spectrum are the *Alarmed*, who are very concerned about the issue and support aggressive action to reduce it; at the other end are the *Dismissive*, who do not believe it is a problem, and are likely to see it is a hoax. Between these two extremes are four groups – the *Concerned*, *Cautious*, *Disengaged* and *Doubtful* – with lower certainty and issue engagement.

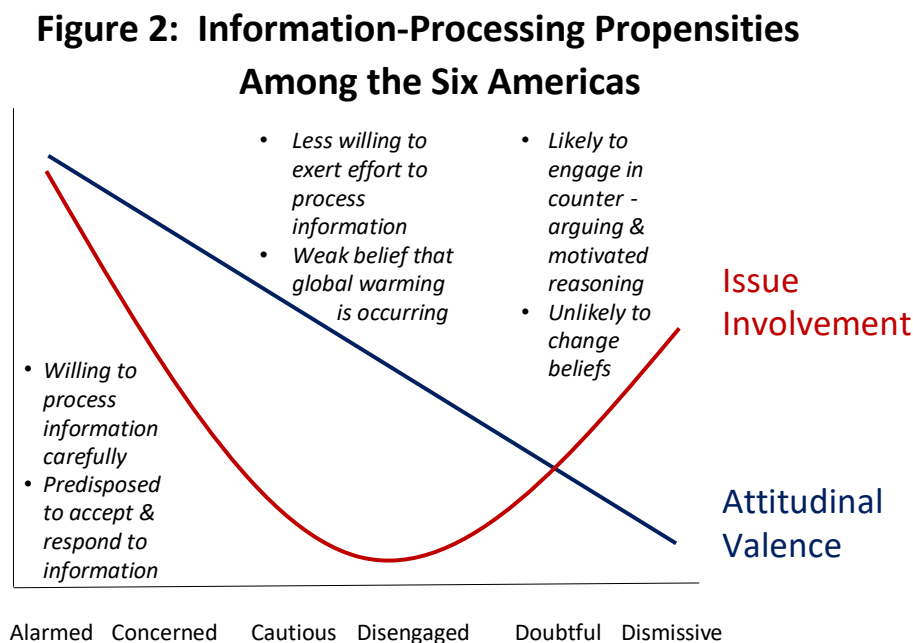
**Figure 1: Global Warming's Six Americas**



The segments are strongly associated with a range of characteristics, including climate and energy policy preferences; political ideology and party identification, cultural values; political efficacy, and consumer and political behavior (see Maibach et al., 2009,

2011; Leiserowitz et al., 2012, 2013; Roser-Renouf et al., 2015, 2016b). A variety of climate communicators – government agencies, non-governmental organizations, companies, media organizations, science museums, zoos, and aquaria – have used this information to select target audiences, and tailor communication and educational content.

Publications describing the segments have been largely descriptive, detailing the beliefs, behaviors, and characteristics of each group. The framework is not merely descriptive, however: Two theoretical dimensions that underlie the Six Americas – *attitudinal valence* and *issue involvement* (Figure 2) – link the segmentation to well-developed literatures on persuasion, information-processing, science and risk communications, and opinion leadership, suggesting a wealth of communication strategies for reaching and engaging the Six Americas.



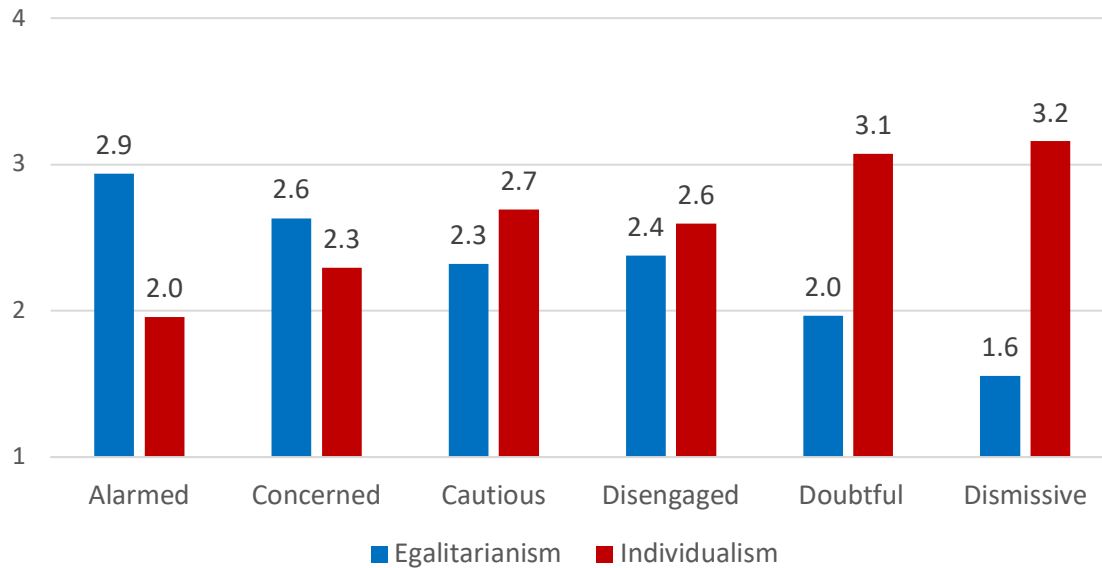
Attitudinal valence is defined here as *the inclination to accept or reject the science of climate change*, and is assessed by several key beliefs: Human-caused climate change is happening, harmful and solvable; and scientists agree on its reality and human-causation. These

beliefs have been shown to predict support for national action on the issue and for mitigation policies, as well as political and consumer activism (Ding et al., 2011; Roser-Renouf et al., 2014, 2016a; van der Linden et al., 2015, 2019).

Issue involvement refers to *cognitive and affective issue engagement*, and is assessed in terms of the amount of thought devoted to the issue and attitudinal certainty. Both the *Alarmed* and *Dismissive* think about the issue and are certain of their opinions, but the *Alarmed* understand and accept the key facts about climate change, and are predisposed to accept messages that are consistent with the science, while the *Dismissive* reject these facts and are predisposed to reject and counterargue these same messages.

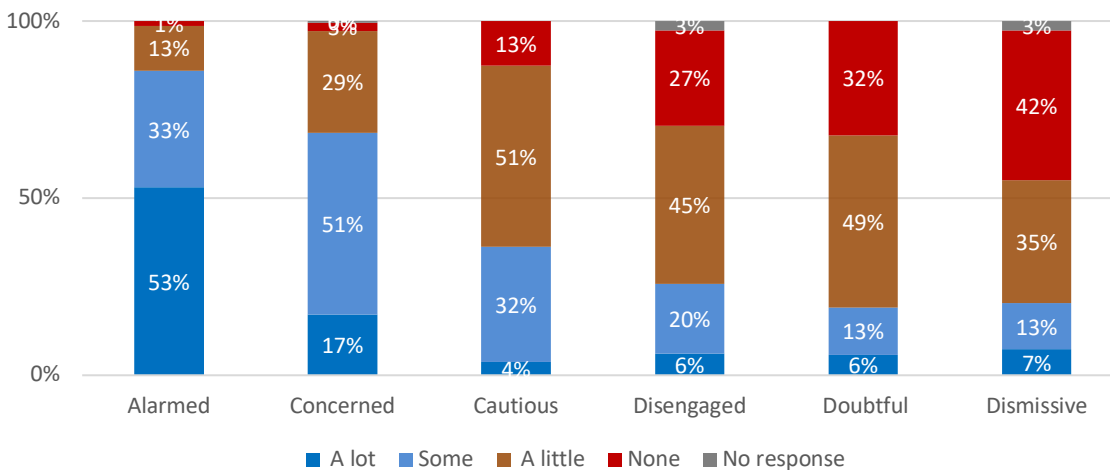
The remaining segments – the *Concerned*, *Cautious*, *Disengaged* and *Doubtful* -- currently comprise about two-thirds of the U.S. population. They have lower issue involvement and greater uncertainty regarding the reality, dangers and causes of climate change; they differ from each other in their levels of uncertainty, predispositions to accept or reject climate science, cultural values (Figure 3), media use, attention paid to information about global warming (Figure 4), and demographics. These differences have implications for the information the groups are interested in learning (Figure 5), the communication channels most likely to reach them, and the communication strategies that are most likely to engage them.

**Figure 3: Cultural Values of the Six Americas**



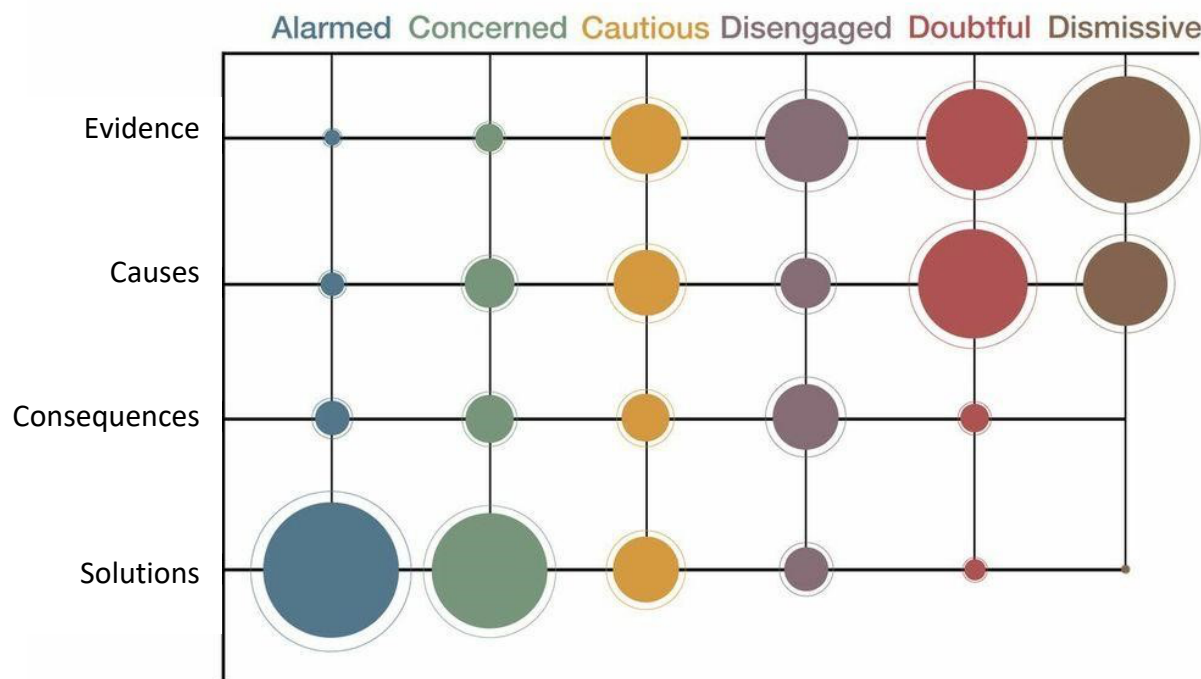
*Caption: The Six Americas differ in the weight they ascribe to egalitarian values – i.e., equal opportunity, a more equal distribution of wealth, and governmental protections for vulnerable minorities and the poor – as opposed individualistic values – i.e., freedom from government intervention in the lives of individuals and in business. Source: Yale/George Mason; June 2017; unweighted n=1,248*

**Figure 4: Attention Paid to Global Warming Information**



*Source: Yale-George Mason, Apr. 2012, unweighted n=1,008*

**Figure 5: Nature of the one question respondents would most like to pose to a climate scientist**



*Caption: The Six Americas are interested in learning different types of information about global warming, with the skeptical segments most interested in information about the evidence for and causes of global warming, the concerned segments interested in information about action to mitigate climate change, and the uninvolved segments varying widely in their questions. Source=Yale/George Mason University, May 2011; unweighted n=1,010; Figure credit: Ian Barin.*

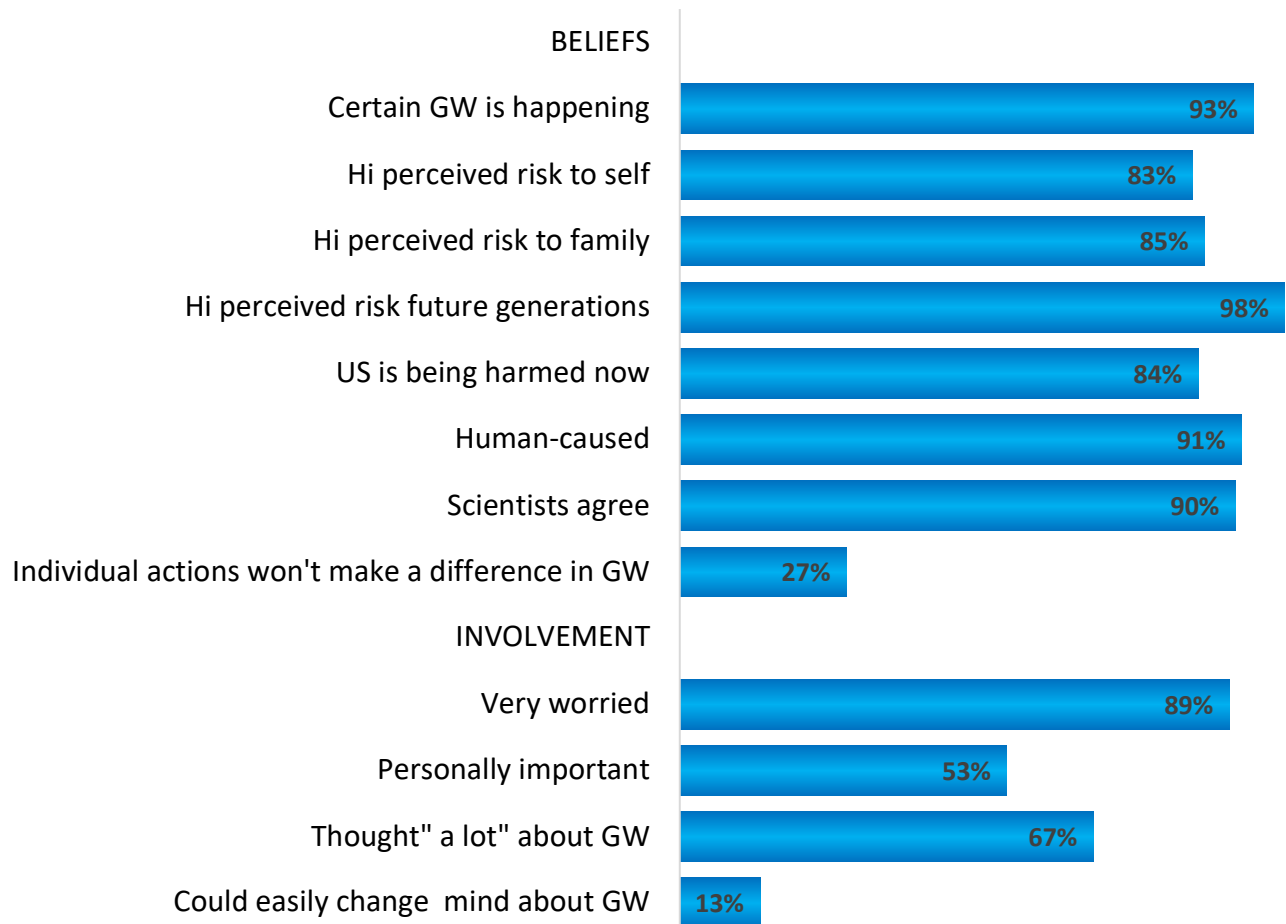
## Involved Publics with Positive Climate Change Attitudes

### *The Alarmed*

**Key Beliefs & Issue Involvement:** Most *Alarmed* hold all five key beliefs: They are certain global warming is happening, understand that global warming is human-caused and that most scientists think that global warming is happening; they believe that they, their families and future generations are at risk. They are highly involved with the issue: nine out of ten are very

worried, and two-thirds report having thought “a lot” about global warming, three times as many as any other segment. For the *Alarmed*, global warming is a real and urgent threat.

**Figure 6: The Alarmed**



*Note: See Appendix for item descriptions; source: Yale/George Mason University, April 2020, unweighted n=1,029; and April 2019, unweighted n=1,291.*

**Characteristics:** The *Alarmed* have a higher proportion of liberals and Democrats than any other segment. Just over half identify as liberal, compared to about 30 percent of the *Concerned* and a quarter of all Americans; close to two-thirds are Democrats. The *Alarmed* are the most egalitarianism segment, and the least individualistic. They are not all liberal Democrats,

however: a plurality say they are middle-of-the-road moderates, and one in ten are Republican or lean toward the Republican party.

The *Alarmed* are more educated than the national average – close to half have a bachelor’s degree or higher, compared to a third nationally. They tend to be younger, female, and people of color. A third are Millennials and a quarter are Hispanic.

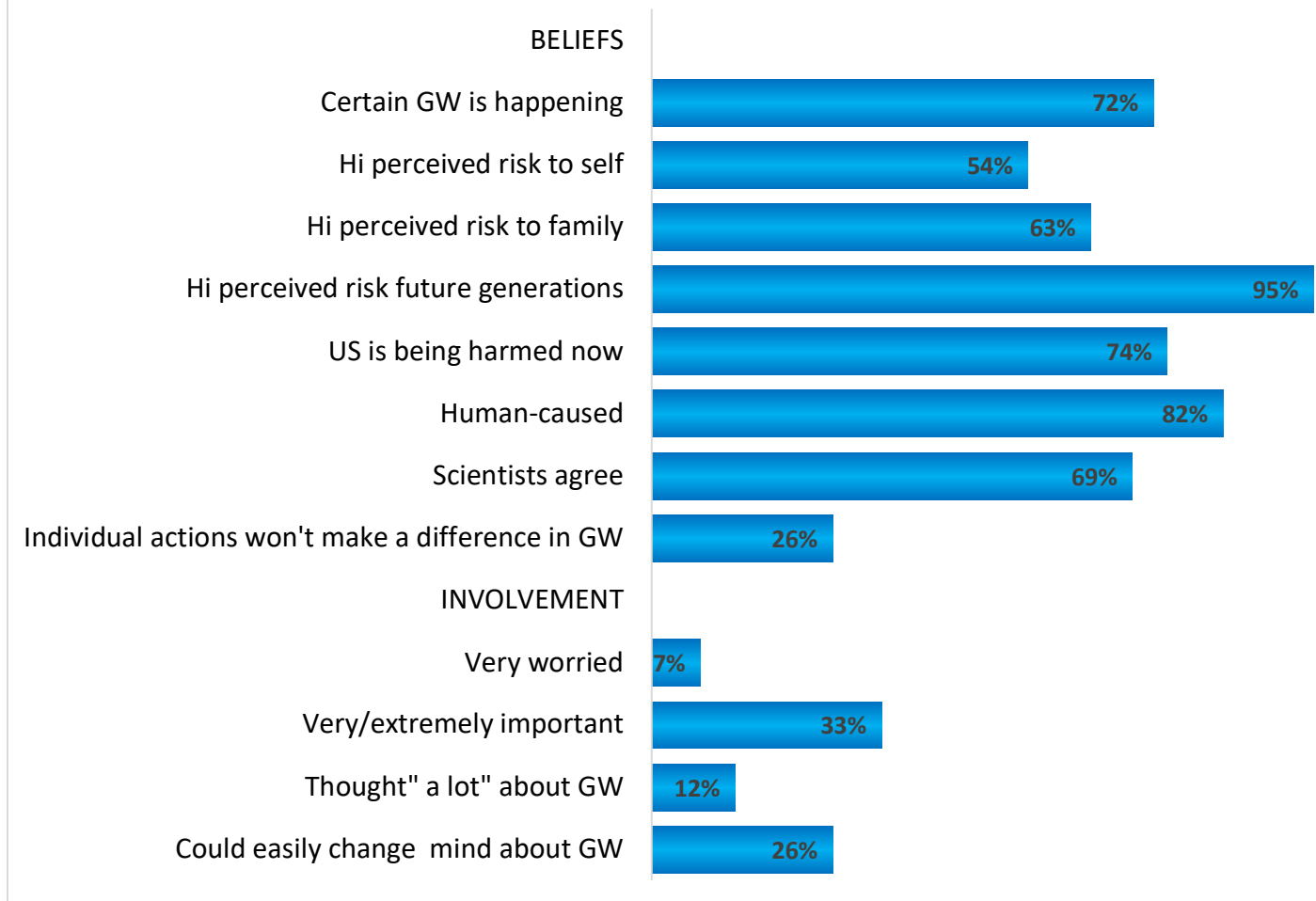
***Informational Needs and Media Use:*** Since the *Alarmed* are already convinced of the reality, danger and human-caused nature of climate change, they are the most likely to report an interest in learning about the individual and national actions that would reduce the threat. They are very attentive to global warming news – close to three-quarters follow environmental news, compared to 37 percent nationally. They are more likely to follow news about politics, science, and technology than any other segment.

### ***The Concerned***

***Key Beliefs & Issue Involvement:*** On many measures, the *Concerned* are midway between the *Alarmed* and the less-engaged middle segments. The *Concerned* are less likely than the *Alarmed* to espouse some of the key beliefs on the issue, such as certainty that human-caused global warming is happening and that they are at risk. They are, however, higher than all segments other than the *Alarmed* on each of the key beliefs. The largest difference between the *Concerned* and *Alarmed* is the proportion reporting high levels of involvement with climate change: Only seven percent of the *Concerned* are very worried about climate change, compared to 89 percent of the *Alarmed*, and only 12 percent report having thought “a lot” about climate change, compared to 67 percent of the *Alarmed*.



**Figure 7: The Concerned**



*Note: See Appendix for item descriptions; source: Yale/George Mason University, April 2020, unweighted n=1,029; and April 2019, unweighted n=1,291.*

**Characteristics:** The *Concerned* are less politically left-leaning than the *Alarmed*, but more liberal than the remaining segments. They value egalitarianism over individualism, but are closer to the national averages than the *Alarmed*. Demographic distributions of the *Concerned* – gender, ethnicity, education, age and income – are close to national averages, although they are slightly more likely to be younger and female.

***Informational Needs and Media Use:*** Like the *Alarmed*, the *Concerned* are most likely to say they'd like to learn what the U.S. and they themselves can do to reduce global warming; these proportions are lower than for the *Alarmed*, however, and they are more likely than the *Alarmed* to want to know whether global warming is happening, and how experts know it is happening. Although two-thirds report paying at least “some” attention to information about global warming, the proportion paying “a lot” of attention (17%) is much lower than among the *Alarmed* (53%). Their media use habits are similar to national averages, except they are more likely to follow environmental news.

### ***High Involvement Communication Strategies***

The goal of strategic communication with highly involved audiences should be motivating action, particularly consequential actions like political advocacy. Even among the *Alarmed*, political advocacy is not the norm; e.g., less than a third have contacted an elected official about global warming over the past year.

***Systematic Information Processing:*** Dual-processing theories such as the Elaboration Likelihood Model suggest that high-involvement audiences like the *Alarmed* and *Concerned* will be receptive to complex, information-rich messages, including relatively high-level science and policy content (Petty, Brinol & Priester, 2009); these messages may be delivered via print media, which require greater processing effort. Because messages to these audiences will likely be processed effortfully, message content is more likely to be remembered, and effects are more likely to be long-lasting in guiding subsequent behavior (Petty et al., 2009). A caveat is that it becomes more important to use strong, logically sound arguments for action, since weaker arguments are more likely to be detected, and may lead to a potentially *lower* level of behavior change than if no message had been received (Petty et al., 2009).

*Efficacy:* The *Alarmed* and *Concerned* tend to have high levels of concern about climate change, but lower levels of efficacy with regard to solving it: A quarter of these segments' members believe that individual action on climate change won't make a difference. Hence, communicators should focus on building efficacy to complement the groups' high risk perceptions to motivate them to take action.

Several forms of efficacy are relevant for climate change: Response efficacy – the belief that responses to the threat will be effective in reducing it; self-efficacy – the belief that one is capable of taking these actions; and collective efficacy – the belief that one's group is capable of acting effectively together (Bandura, 1986). Much evidence suggests that people who feel both threatened and capable of taking threat-reducing action are more likely to take action (Witte & Allen, 2000), and meta-analysis shows that threatening information only promotes behavior change when efficacy is also high (Peters, Ruiter & Kok, 2013).

An additional strategy with the *Alarmed* is tapping their potential to act as opinion leaders, thereby reaching less involved people who are more likely to be influenced interpersonally than through the mass media. Rather than trying to communicate with all people directly, climate communicators can instead promote opinion leadership among the *Alarmed*, encouraging them to discuss the issue with their friends and family more frequently (Nisbet & Kotcher, 2007). Targeting those *Alarmed* who are already opinion leaders – i.e., people who are well-connected socially and who frequently give advice or have their advice sought out by those they are connected to – is particularly desirable. These people can use personal influence within their social networks to create a larger overall effect than if the communicator had tried to reach the same audience directly.

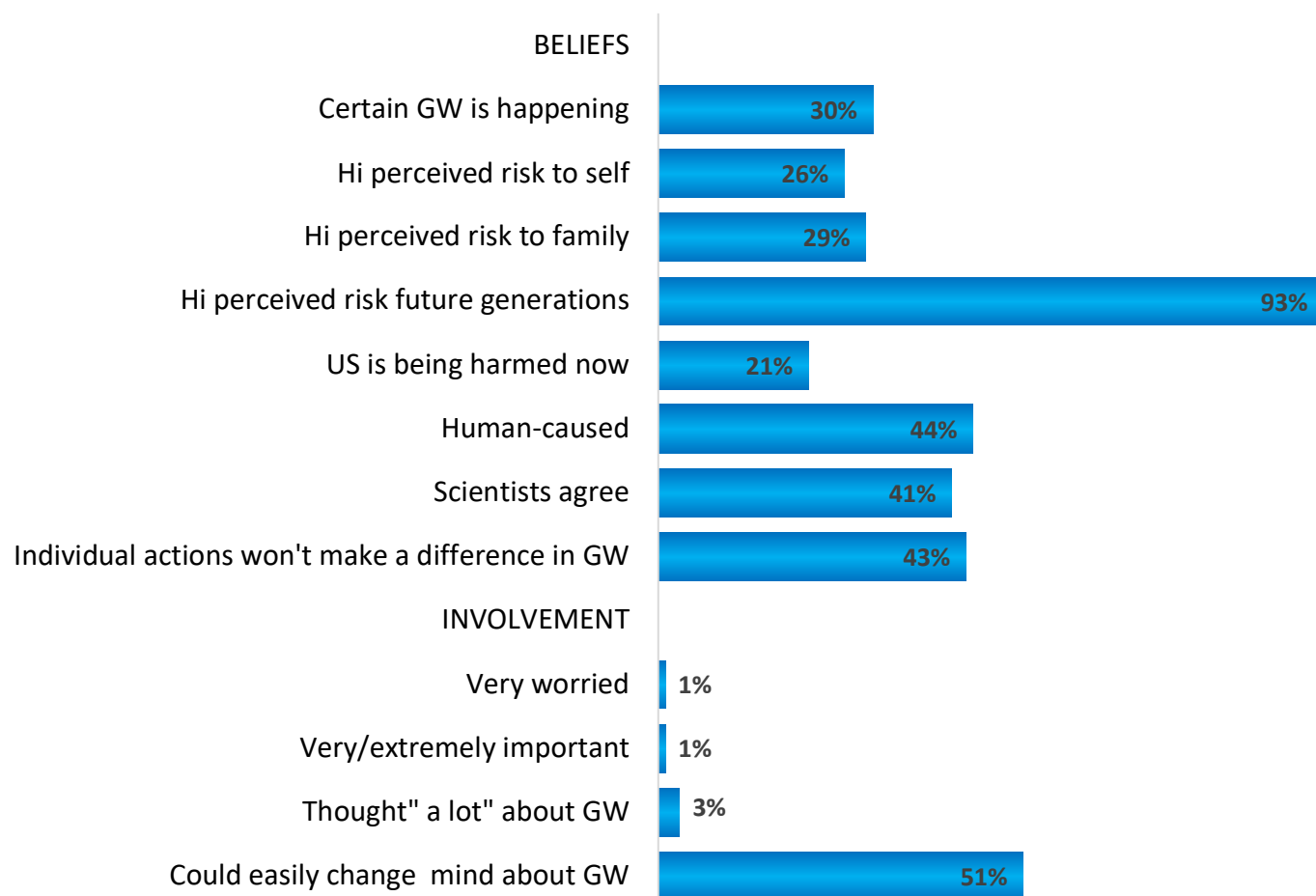
The ideal opinion leader is one who is both a role model for helpful behaviors and who explicitly communicates about why the behaviors are helpful (Venkatraman, 1989). Members of the *Alarmed* and *Concerned* segments are more likely than others to talk about global warming, and are more likely to engage in behaviors designed to reduce carbon emissions, making them good candidates for this type of leadership.

### **Low Involvement Publics**

#### ***The Cautious***

***Key Beliefs & Issue Involvement:*** The *Cautious*, simply put, have low issue involvement. They're more likely to believe climate change is happening than not, but less than a third are certain; over 90 percent understand that future generations are at risk, but only a quarter believe they are personally at risk. Almost none view the issue as personally important. Global warming is far from their minds – to them, it's a problem for people in the future.

**Figure 8: The Cautious**



*Note: See Appendix for item descriptions; source: Yale/George Mason University, April 2020, unweighted n=1,029; and April 2019, unweighted n=1,291.*

**Characteristics:** In some ways, the *Cautious* are the least distinctive segment. Their levels of egalitarianism and individualism match national averages; close to half are moderates, and their ethnicity and incomes match national averages. They are, however, distinctive on several dimensions: two-thirds are Republicans. They tend to be over 35 and male, and only a quarter have a college degree, compared to a third nationally.

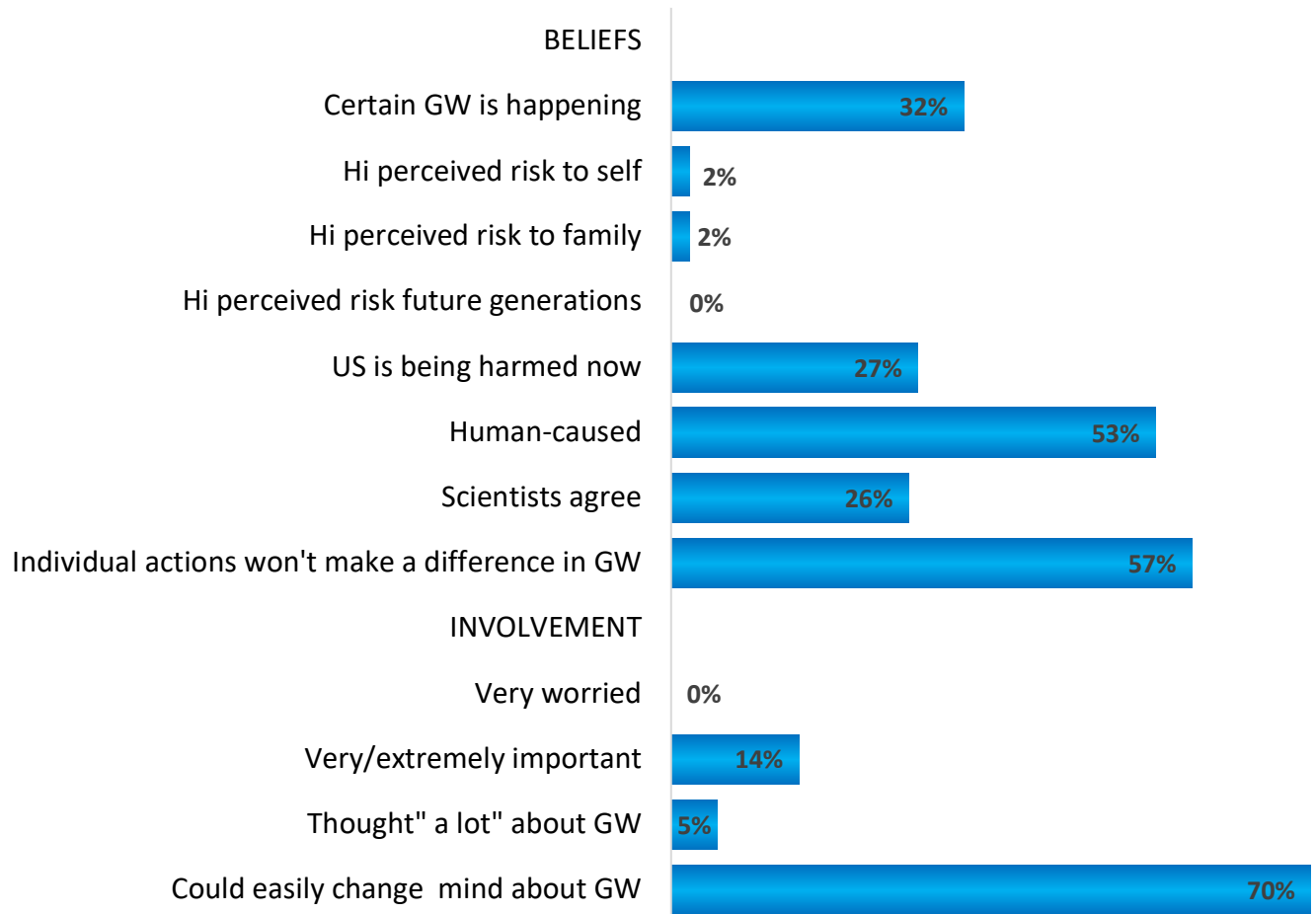
***Informational Needs and Media Use:*** The top questions that the *Cautious* have about climate change are whether it is real and how scientists know it is human-caused. They're unlikely to encounter the answers, however: Close to 70 percent say they pay little or no attention to global warming information.

While they report average levels of media use, they pay less-than-average attention to news, and three-quarters say they follow environmental news “a little” or “not at all.” Hence, reaching them through informational channels may be challenging.

### ***The Disengaged***

***Key Beliefs and Issue Involvement:*** The *Disengaged* are the least likely to have given the issue of global warming any thought. On questions with a “don't know” response option, they overwhelmingly choose this response – e.g., in April 2020, almost all said they don't know how much global warming will harm them, their family, or future generations. While one third said they are certain that global warming is happening, 70 percent also said they could easily change their minds on the issue. None are very worried. If pressed, however, they are inclined to believe that global warming is somewhat dangerous: When no “don't know” response option is offered, 27 percent of the *Disengaged* say Americans are being harmed now.

**Figure 9: The Disengaged**



*Note: See Appendix for item descriptions; source: Yale/George Mason University, April 2020, unweighted n=1,029; and April 2019, unweighted n=1,291.*

**Characteristics:** The *Disengaged* have lower socio-economic status than other segments: They are least likely of the segments to have a college degree, and a third have not graduated from high school. They have the lowest incomes. About 60 percent are women, and more than a quarter are African-American.

They tend to be politically moderate, or have no party identification and many are uninterested in politics; they have the lowest proportion of registered voters. Their levels of egalitarianism and individualism are about equal and similar to national norms.

***Informational Needs and Media Use:*** The *Disengaged* say they need more information on global warming, but are unlikely to seek it. They are high television viewers, watching more entertainment programming than other groups, but less news and public affairs. They pay the least amount of attention to national politics of the six segments, and three-quarters say they pay little or no attention to global warming information.

### ***Low Involvement Communication Strategies***

Reaching and engaging audiences that are uninterested in an issue begins with the recognition that no matter how important we believe our message to be, audience members are unlikely to pay attention if understanding the content requires cognitive effort – hence, we must turn to methods that are not effortful. These include message strategies that:

- Require only peripheral/heuristic information processing, e.g., visual imagery, humor, and attractive or highly credible sources;
- Promote positive social norms by demonstrating that climate-friendly behaviors are popular, respected and common;
- Show rather than tell what is happening, thereby triggering automatic information processing;
- Personalize the threat by showing impacts on places that are physically close or emotionally significant (such as national parks), and on people with whom the audience identifies;
- Generate involvement through the use of narratives.



These communication strategies apply to all segments, in that we are all influenced by social norms, we all become emotionally engaged with compelling narratives, are drawn to attractive sources, and process visual information effortlessly and instantly. They are, however, particularly applicable to the *Cautious* and *Disengaged* because these groups lack the drive to pay attention that characterizes involved segments.

Barriers communicators face with low involvement audiences are motivation and ability, two prerequisites for deep information processing: Three-quarters of the *Disengaged* and 44% of the *Cautious* say they have difficulty understanding global warming news; over half of the *Disengaged* and more than a third of the *Cautious* say they don't like to read or hear about the topic (Table 1). Note, however, that these barriers exist across all six segments, with close of a quarter of the *Alarmed* saying they have difficulty understanding, and majorities of the *Doubtful* and *Dismissive* saying they don't want to read or hear about the issue. Either barrier can be sufficient to halt information processing, and the challenge for communicators is to create content that will draw audiences in and be simple to understand.

**Table 1: Ability and Motivation Barriers**

	Alarmed	Concerned	Cautious	Disengaged	Doubtful	Dismissive
"I have difficulty understanding news reports about global warming."	23%	39%	44%	77%	35%	19%
"In general, I don't like to read or hear anything about global warming."	10%	28%	37%	59%	57%	72%

*Note: Cells show the proportions that agree with each statement; source: Yale/George Mason, June 2011; n=1,043*

While the use of attractive, credible sources and humorous messages may generate the short-term engagement typical of peripheral/heuristic message processing, such effects tend to be short-term and unstable; hence, communicators may wish to employ additional strategies in reaching the *Cautious* and *Disengaged*.

*Narratives:* Because neither segment attends to global warming news, narratives may be an effective way of reaching them – particularly the *Disengaged*, with their high use of entertainment programming. Narratives foster involvement with a story and characters, and prior issue involvement is unnecessary for drawing the audience's attention. Memory of narrative content tends to be high, allowing educational content to be conveyed, and studies find that the persuasive effects of fiction can be as high as for non-fiction if the individual has become absorbed in the story (Green & Brock, 2000). An empathic response to story characters fosters acceptance of their values and beliefs, at least in the short-term, and some evidence suggests that absorption decreases counter-arguing and increases message acceptance (Slater & Rouner, 2002).

*Social Norms:* Another strategy that may be effective with low involvement audiences is the promotion of positive social norms, which can influence both attitudes and behaviors (Cialdini & Trost, 1998). Greater normative influence has been found among low-involvement audiences (Petty & Brinol, 2012).

Social influence works for three reasons: (1) people wish to maintain a positive self-image, both in their own eyes and in the eyes of others; (2) there are social rewards for conforming to group norms; and (3) when people are uncertain of the acceptable and/or appropriate perspective on issues and behaviors, the views and actions of others can be a helpful guide. Such influence occurs at a largely unconscious level through peoples' observation of the

actions of others (descriptive norms), and through learning what respected others expect us to do (injunctive norms).

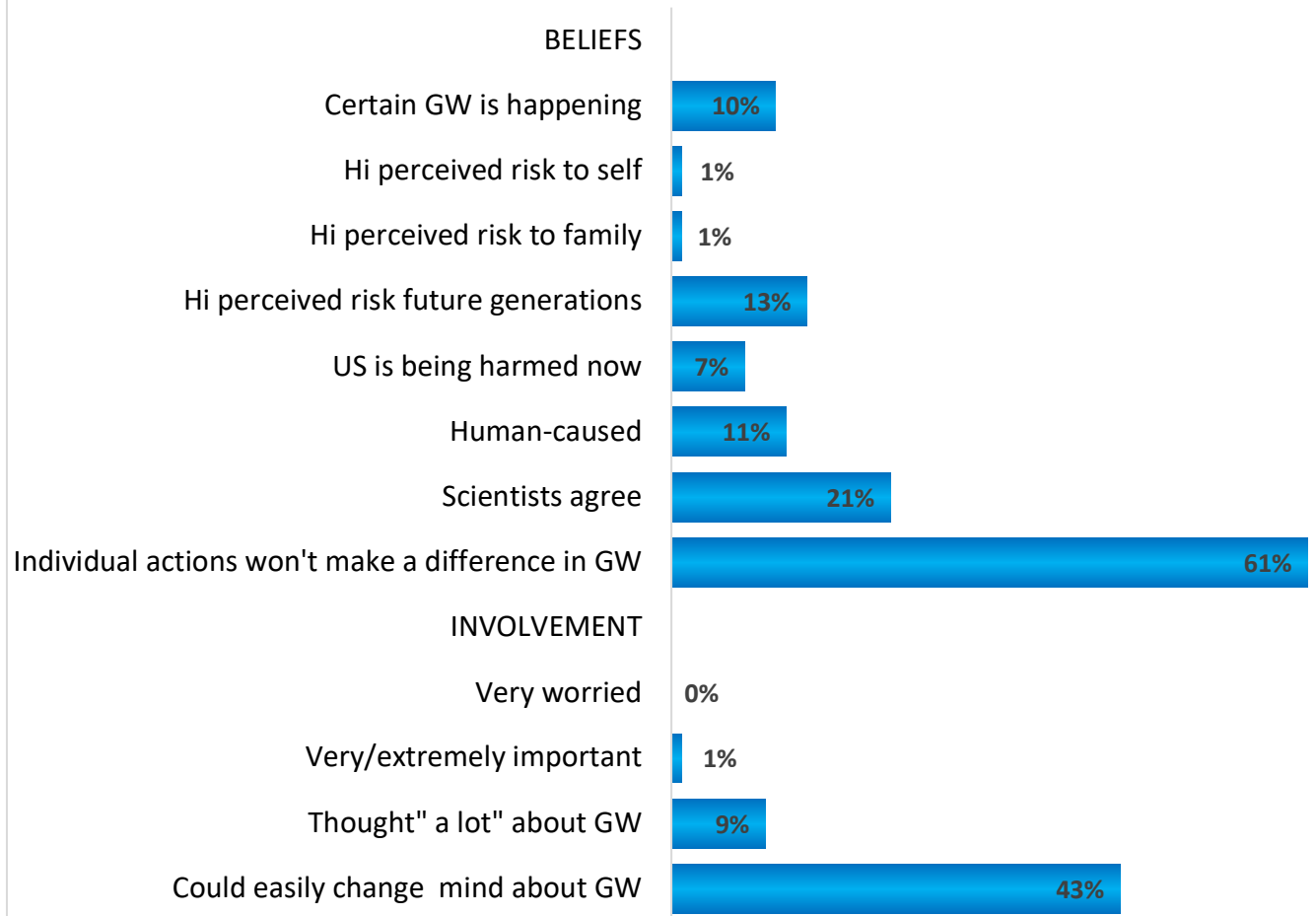
Sometimes environmental communicators unwittingly use descriptive norms to promote behaviors they wish to extinguish by stating how prevalent undesirable behaviors are. If possible, a better approach is to emphasize the desirable attitudes and actions that are widespread, growing in popularity, and characteristic of admired individuals. Maintaining consistency between descriptive and injunctive norms is an important component of effective norm messaging: This behavior is widespread *and* socially approved (Cialdini, 2003).

### **Involved Publics with Skeptical Climate Change Attitudes**

#### ***The Doubtful***

***Key Beliefs & Issue Involvement:*** The *Doubtful* have similar levels of issue involvement to the *Concerned*, but low acceptance of the key beliefs. Only one in ten is certain global warming is occurring or human-caused, and they view it as a very low risk. None are worried about global warming, and eighty percent are unaware of the scientific consensus. Although they do not actively think a lot about climate change on a daily basis, they are moderately certain of their views, with the majority saying they could not easily change their minds. The *Doubtful* have concluded that climate change is not an important issue, but are not strident in their views.

**Figure 10: The Doubtful**



*Note: See Appendix for item descriptions; source: Yale/George Mason University, April 2020, unweighted n=1,029; and April 2019, unweighted n=1,291.*

**Characteristics:** The *Doubtful* are politically conservative; fewer than five percent identify as liberal, while 70 percent say they are conservative. Party identification skews strongly Republican. Among the segments, the *Doubtful* are the second lowest in their level of egalitarianism, and second highest in their levels of individualism. They have the highest proportion of non-Hispanic Whites of the six segments, and they're more likely to be older males.

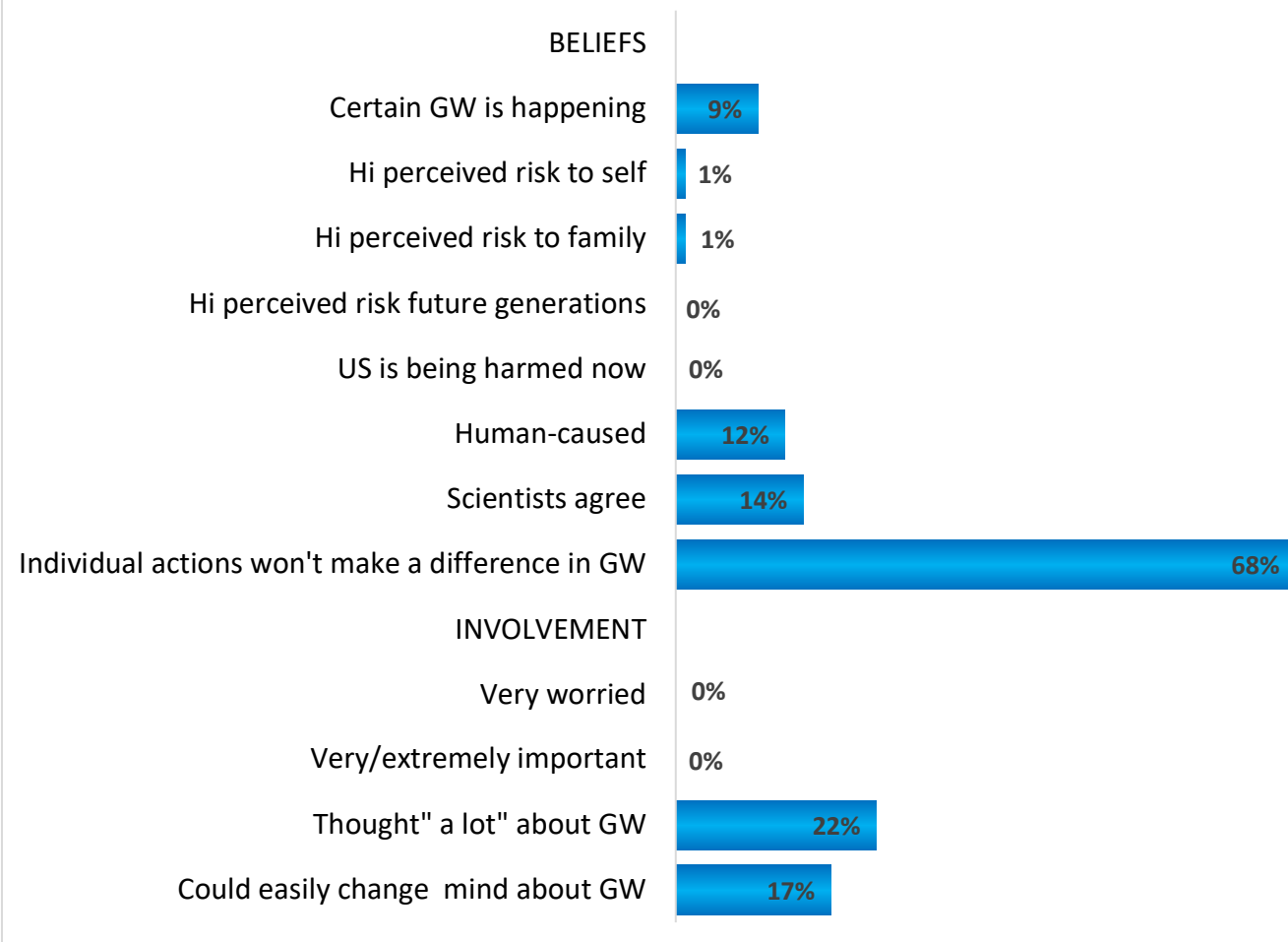
***Informational Needs and Media Use:*** The *Doubtful* would most like to know how scientists know that climate change is real – the proportion with this question is twice the national average. They are unlikely to attend to the topic, with only six percent saying they pay a lot of attention to global warming information. Few follow environmental news, but they do pay an average amount of attention to news about politics.

### ***The Dismissive***

***Key Beliefs & Issue Involvement:*** The *Dismissives* are the inverse of the *Alarmed* – strong issue partisans, but with a diametrically opposed position. Their beliefs about global warming are not very different from the *Doubtfuls*, but they are distinct on several dimensions: The Dismissive do not perceive *any* risk from climate change, while some *Doubtful* acknowledge that future generations may be harmed and people in the U.S. are being harmed now. A mere 14 percent are aware of the scientific consensus on climate change, compared to 90 percent of the *Alarmed* and 56 percent nationally.

Most importantly, the *Doubtful* and *Dismissive* are distinguishable by *Dismissives*' higher levels of issue involvement. While climate change is a greater presence in the everyday thoughts of the *Alarmed* – they are three times more likely to think "a lot" about climate change than *Dismissives* (67% vs. 22%) – *Dismissives* are the least likely of any segment to say that they could change their minds on the topic.

**Figure 11: The Dismissive**



*Note: See Appendix for item descriptions; source: Yale/George Mason University, April 2020, unweighted n=1,029; and April 2019, unweighted n=1,291.*

**Characteristics:** More than 70 percent of the *Dismissive* are somewhat or very conservative. Sixty percent identify as Republicans, with only 3 percent Democrats, and their cultural values are the least egalitarian and the most individualistic of any segment.

Demographically, they are more likely to be White than the national average, and two-thirds are male. The *Doubtful* and *Dismissive* are the oldest of the six segments, with an average age of over 50.

***Informational Needs and Media Use:*** The question *Dismissives* would most like answered is how climate scientists know that climate change is real; they are very unlikely to ask about anything else. *Dismissives* pay more than average attention to political news, but less attention to news about the environment, science and technology. Unlike other segments (including the *Doubtful*), the *Dismissive* are unlikely to trust scientists on climate change.

### ***Counter-Attitudinal Communication Strategies***

Hard-to-reach audiences such as the *Doubtful* and *Dismissive* can be engaged by adopting non-confrontational approaches, and by framing messages in ways that are consistent with their values. Directly challenging their beliefs is likely to trigger counter-arguing, rather than persuasion, in a process of motivated reasoning (Kunda, 1990). Thus, counter-attitudinal messages are likely to be rejected, while pro-attitudinal messages are accepted.

The *Dismissives'* high issue involvement means their inclination toward biased processing is strong. Any mention of climate change may result in a “boomerang effect” (Hart & Nisbet, 2012), in which an attempt at persuasion results in attitude change in the opposite direction than desired, due to counterarguments generated by the message recipient.

The likelihood of biased processing is lower among the *Doubtful*. Though skeptical, they hold their attitudes and beliefs about climate change less fervently, spend less time and energy thinking about climate, and are less likely to have the motivation to closely scrutinize climate change communication. Emphasizing scientific agreement on the reality of climate change may help the *Doubtful* become less skeptical, as the consensus message has been shown to facilitate acceptance of climate change among Republicans (van der Linden et al., 2015).

Non-confrontational communication involves understanding and acknowledging the underlying motivational structures beneath expressions of climate skepticism. Individuals

develop their understanding of societal issues with reference to their underlying cultural values (Kahan & Braman 2006), and the moral values of liberals and conservatives differ (Graham, Haidt & Nosek, 2009). Climate change is perceived by some conservatives as a threat to the values of individualism and respect for the established order that mark political conservatism in the United States (Kahan et al. 2011).

Climate messaging is typically framed in terms of moral values central to liberals – harm and fairness; rarely are messages framed referencing the conservative values of group loyalty, purity/sanctity, and respect for authority. Republicans and conservatives respond more positively to messages asserting that action on climate is patriotic, that it shows respect for authority, and that it preserves the sanctity of nature (Wolsko et al., 2016).

Conservative sources presenting free-market solutions can also increase skeptics' responsiveness: Trust in a fictive climate change scientific expert increased among those with individualistic and hierarchical values when that expert advocated nuclear power (as opposed to government regulation) as a policy solution (Kahan et al. 2011). Similarly, descriptions of free market solutions to climate change increased Republicans' willingness to acknowledge that climate change is real, overcoming their "solution aversion," i.e., their readiness to reject climate science because they perceive that its solutions conflict with their values (Campbell & Kay, 2014). Health frames may also work with these segments (Myers et al., 2012), along with conveying personal experience with climate for the Doubtful (Myers et al., 2013)."

## **Discussion**

While theory and prior research can guide decisions about communication strategies appropriate for publics with different beliefs and issue involvement, real-world communication



involves audiences containing multiple publics. This challenge may be addressed in several ways:

(1) Digital marketing tools and examination of the channels most used by particular segments permits targeting to some extent: The *Alarmed* are unlikely to watch Tucker Carlson, or the *Dismissive*, Rachel Maddow. Building opinion leadership among the *Alarmed* may be best accomplished through specially focused channels, such as environmental magazines, email newsletters, and social media postings by environmental, scientific and social action organizations. A strategy employed by a number of organizations is to ask those who have signed a petition or made an online donation to repost the original request they received on Facebook or to email it to their friends and families, encouraging them to act as opinion leaders, fostering interpersonal (although mediated) communication, and broadening the original message's impact.

(2) Reaching low-involvement segments is likely to require the use of channels that have a broad, mass audience. Low involvement strategies are most likely to be effective in these channels, as they have demonstrated efficacy across audiences.

(3) Messages should be layered, including both efficacy-building and threat content. The low involvement publics need to be taught the danger posed by climate change, but placing too much emphasis on the threat may lead to defensive avoidance and despair among the *Alarmed* and *Concerned*, who already understand the threat and are fearful. It has sometimes been suggested that threat information should be dropped altogether – that the audience has heard enough about the threat and positive, efficacy-building messages are sufficient. A meta-analysis finds, however, that both risk perceptions and efficacy beliefs are necessary to motivate action (Peters et al., 2012).

There remains a gap between these communication strategies and the actual crafting of effective messages. For example, an experimental effort to engage *Dismissives* using a national security frame backfired: Although national security is prized among the *Dismissive*, a short essay attributed to a general concerning the national security threat posed by global warming resulted in anger, rather than persuasion (Myers et al. 2012). *Dismissives* simply did not believe this to be the case, and the essay may have fostered counter-arguing, resulting in backlash effects. By contrast, a public health frame was more effective, across all six segments.

### **Conclusion**

The time window within which we can act to prevent the most serious impacts of climate change is closing. Understanding the differences in people's uses of and responses to climate messaging can help communicators motivate the multiple audiences of the Six Americas to respond appropriately.

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## Appendix 1: Measures of Key Beliefs & Issue Involvement

*Figures 6 through 11 show the proportions of respondents with the following beliefs:*

1. *Certainty that global warming is happening:* “Extremely sure” or “very sure” global warming is happening.
2. *Risk Perceptions:*
  - *Amount of harm:* They, their families and future generations will be harmed “a great deal” or “a moderate amount.”
  - *Timing of harm:* People in U.S. are being harmed now.
3. *Human Causation:* “Assuming global warming is happening,” it is caused mostly by human activities.
4. *Scientific Agreement:* Most scientists think global warming is happening.
5. *Efficacy:* Low efficacy is indicated by agreement with the statement, “The actions of a single individual won’t make any difference in global warming.”
6. *Worry:* Very worried about global warming.
7. *Personal importance:* Very or extremely important personally.
8. *Prior Thought:* Have thought “a lot” about global warming before today.
9. *Opinion Certainty:* Low certainty is indicated by agreement with the statement: “I could easily change my mind about global warming.”

## **Appendix 2: Global Warming's Six Americas Segments within Demographic & Political Groups**

### **Tables & Figures:**

1. Age
2. Age Cohorts, as Defined by Pew
3. Gender
4. Race/Ethnicity
5. Education
6. Income
7. Religion
8. Region with the U.S.
9. Political Party
10. Change in Political Party, 2014-2020

Data are from on a nationally representative survey of 1,036 American adults, aged 18 and older, conducted in Dec., 2020, as part of the *Climate Change in the American Mind* research partnership between George Mason University and Yale University. Data have been weighted to match national benchmarks.



<b>Table 1: Age</b>				
	<b>18-29</b>	<b>30-44</b>	<b>45-59</b>	<b>60+</b>
Alarmed	32%	25%	21%	26%
Concerned	29%	28%	29%	30%
Cautious	17%	19%	20%	18%
Disengaged	6%	9%	6%	3%
Doubtful	11%	11%	12%	14%
Dismissive	4%	7%	10%	9%

<b>Table 2: Age Cohorts</b>					
	<b>iGen (1997-)</b>	<b>Millennials (1981 - 1996)</b>	<b>Generation X (1965 - 1980)</b>	<b>Baby Boomers (1946 - 1964)</b>	<b>Silent (1928 - 1945)</b>
Alarmed	30%	27%	25%	28%	15%
Concerned	31%	29%	29%	28%	32%
Cautious	19%	20%	19%	17%	23%
Disengaged	2%	8%	9%	3%	5%
Doubtful	16%	10%	10%	14%	14%
Dismissive	2%	6%	8%	9%	11%

These are Pew's generation designations.

<b>Table 3: Gender</b>		
	<b>Male</b>	<b>Female</b>
Alarmed	23%	29%
Concerned	31%	27%
Cautious	21%	17%
Disengaged	3%	9%
Doubtful	14%	10%
Dismissive	8%	8%

<b>Table 4: Race/Ethnicity</b>				
	<b>White, Non-Hispanic</b>	<b>Black, Non-Hispanic</b>	<b>Other, Non-Hispanic</b>	<b>Hispanic</b>
Alarmed	23%	29%	39%	29%
Concerned	27%	33%	33%	34%
Cautious	19%	17%	17%	19%
Disengaged	6%	8%	4%	7%
Doubtful	16%	9%	5%	6%
Dismissive	10%	2%	2%	6%

Table 5: Education				
	Less than high school	High school	Some college	Bachelor's degree or higher
Alarmed	20%	20%	27%	32%
Concerned	22%	31%	25%	34%
Cautious	25%	18%	20%	16%
Disengaged	17%	8%	4%	2%
Doubtful	12%	14%	14%	10%
Dismissive	5%	7%	11%	6%

Table 6: Income					
	Less than \$25,000	\$25,000 to \$34,999	\$35,000 to \$49,999	\$50,000 to \$74,999	\$75,000 to \$99,999
Alarmed	20%	30%	30%	24%	21%
Concerned	31%	25%	31%	31%	28%
Cautious	16%	21%	16%	23%	19%
Disengaged	12%	6%	5%	8%	9%
Doubtful	16%	17%	11%	8%	14%
Dismissive	5%	1%	7%	6%	10%

**Table 7: Religion**

	Catholic	Protestant (non- Evangelical)	Evangelical/ Born-Again	Other Christian	Other, non- Christian	Agnostic/ Atheist
Alarmed	27%	24%	14%	21%	36%	44%
Concerned	28%	32%	26%	33%	27%	32%
Cautious	18%	18%	20%	22%	13%	11%
Disengaged	6%	6%	7%	5%	4%	2%
Doubtful	14%	10%	19%	11%	13%	5%
Dismissive	7%	9%	13%	8%	7%	5%

**Table 8: Region within the U.S.**

	New England	Mid- Atlantic	East- North Central	West- North Central	South Atlantic	East- South Central	West- South Central	Moun- tain	Pacific
Alarmed	25%	24%	26%	23%	34%	14%	24%	23%	26%
Concerned	37%	25%	34%	23%	27%	23%	33%	25%	32%
Cautious	20%	24%	13%	15%	16%	27%	18%	21%	19%
Disengaged	2%	5%	5%	9%	6%	13%	6%	6%	7%
Doubtful	9%	15%	13%	23%	9%	15%	12%	9%	11%
Dismissive	7%	8%	8%	8%	7%	7%	7%	15%	5%

**Table 9: Party Identification**

<i>Generally speaking, do you think of yourself as a...</i>	<b>Republican</b>	<b>Democrat</b>	<b>Independent</b>	<b>Other</b>	<b>No party/not interested in politics</b>
Alarmed	8%	40%	26%	33%	24%
Concerned	21%	35%	33%	24%	22%
Cautious	24%	13%	18%	16%	23%
Disengaged	8%	4%	5%	0%	16%
Doubtful	25%	5%	9%	10%	12%
Dismissive	14%	2%	9%	17%	4%

**Six Americas Distribution Within Political Parties,  
2015 & 2020**

