

ARTICLE

Climate change skepticism as a psychological coping strategy

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Abstract

This article explores current sociological scholarship on climate skepticism and, drawing on recent literature in social psychology and behavioral science, presents an argument for future research on the relationship between emotion, information aversion, and climate denial. We extrapolate and unite these disconnected bodies of scholarship to argue that strong emotions such as fear may drive climate change skepticism and denial among some adherents. By partnering the scholarship outlined above with advances in research on conspiracy ideation, we argue that climate change skepticism and denial is, at least in some cases, a form of an exaggerated ostrich effect, whereby adherents are so driven to avoid learning about a specific problem; they actively seek to construct an alternative, safer, narrative. Given this predisposition, attempting to challenge such skepticism with information is counterproductive. As such, this paper presents alternative possibilities for communicating research findings on climate change.

1 | INTRODUCTION

A substantial body of sociological research over the last three decades has examined patterns of climate change skepticism among the general public in the United States and around the world. This research has explicated political orientation, race, gender, and religion, as consistent individual-level predictors of attitudes towards climate change, where individuals who are politically right-leaning, white, male, and evangelical tend to report greater skepticism about climate change (McCright, Marquart-Pyatt, Shwom, Brechin, & Allen, 2016; Pew Research Center, 2014).

Additionally, a growing body of research examining the effects of contextual factors on views about climate change has shown mixed results on how economic development, vulnerability to climate-related risks (e.g., exposure to droughts, hurricanes, sea-level rise, and other natural disasters), and exposure to long-term variations in climate

trends affect skepticism regarding climate change among the general public (McCright et al., 2016). Furthermore, the industrial sector and the U.S. conservative movement have engaged in “organized denial” of climate change in order to mobilize and defend the industrial capitalist system (McCright et al., 2016). This implies a strong political pressure for Republican-identified individuals to present as skeptical about climate change.

In spite of these advances in climate scholarship, many researchers have overlooked the role of emotion in climate change skepticism and denial. Research in finance, medicine, and social psychology presents critical insights that can be applied to the issue of climate change skepticism. For example, extant scholarship finds that, when strong emotions such as fear are present, people develop a form of information aversion wherein they resist learning new information that may be useful to prevent future negative outcomes (Galai & Sade, 2006; Ganguly & Tasoff, 2016; Karlsson, Loewenstein, & Seppi, 2009). This phenomenon of information aversion has been dubbed the “ostrich effect,” as people metaphorically “put their heads in the sand” to avoid uncomfortable information. Additionally, strong emotions such as fear and anxiety are highly correlated with conspiratorial thinking (Grzesiak-Feldman, 2013; Sullivan, Landau, & Rothschild, 2010).

While the role of emotion in climate skepticism is understudied, research suggests that fear around climate change causes apathy and inaction among certain populations who do believe in global warming (Lertzman, 2015; Norgaard, 2011; Stoll-Kleeman, O’Riordan, & Jaeger, 2001). In other words, the problem is overwhelming to some such that it becomes paralyzing—as the concept of the ostrich effect suggests.

This article explores current sociological scholarship on climate skepticism and, drawing on recent literature in social psychology and behavioral science, presents an argument for future research on the relationship between emotion, information aversion, and climate denial. We extrapolate and unite these disconnected bodies of scholarship to argue that strong emotions such as fear may drive climate change skepticism and denial among some adherents. By partnering the scholarship outlined above with advances in research on conspiracy ideation, we argue that climate change skepticism and denial is, at least in some cases, a form of an exaggerated ostrich effect, whereby adherents are so driven to avoid learning about a specific problem; they actively seek to construct an alternative, safer, narrative. Given this predisposition, attempting to challenge such skepticism with information is counterproductive. As such, this paper presents alternative possibilities for communicating research findings on climate change.

2 | EXTANT RESEARCH ON CLIMATE CHANGE SKEPTICISM

While the U.S. public’s concern about climate change has waxed and waned over the past two decades, polling data have shown a general increase in concern since 2011. Recent data from Gallup (2017) report that the percentage of Americans who worry “a great deal” about global warming has gone up eight percentage points between 2016 (37%) and 2017 (45%) (Saad, 2017a). Furthermore, the category of respondents Gallup identify as “concerned believers” increased to 50%, up from 37% in just 2015 (Saad, 2017b). The remaining two categories, “cool skeptics” and “mixed middle,” have declined in recent years, with the percentage of “cool skeptics” declining to 19% in 2017, from a high point of 28% in 2010 (Saad, 2017b).

While Gallup polling data put the percentage of skeptics between 19% and 28% over the past decade (Saad, 2017b), others have argued that climate change skepticism and denial has held relatively constant over the past decade at approximately 26% (e.g., Jones, Cox, & Navarro-Rivera, 2014). In one comprehensive study of climate change skepticism over time, McCright and Dunlap (2011b) reported an increase in all dimensions of skepticism (i.e., trend, attribution, impact, and consensus) between 2001 and 2010.

Some of the inconsistency in reported percentages of climate change skepticism results from the diversity of methods used to operationalize skepticism, with survey instruments ranging from single-item measures to composite measures, often capturing various dimensions of skepticism (McCright, 2016). Nevertheless, a few consistent patterns have emerged: The percentage of U.S. public skeptical of climate change remains the “smallest global

warming segment," varying between 19% and 28% in the past decade (e.g., McCright & Dunlap, 2011b; Saad 2017), and the levels of climate change skepticism remain higher in the United States than other developed countries such as Germany, Australia, and Britain (McCright, 2016).

The comparatively high level of climate change skepticism in the United States is likely due, in part, to an active and well-funded disinformation campaign aimed at critiquing scientific understanding of the problem and discrediting climate scientists (Dunlap, 2013; Oreskes & Conway, 2010; Powell, 2011). This campaign has been funded primarily by conservative think tanks and fossil fuel-based industries. Specifically, the foundations run by the Koch brothers and ExxonMobil were dominant donors driving anti-climate narratives from 2003 to 2007 (Brulle, 2014). Employing what has been known as the "tobacco model," these entities found and amplified the voices of the (very tiny) minority of scientists skeptical about anthropogenic climate change. Subsequently, conservative politicians and news media (i.e., Fox News) have joined the climate change denial campaign (McKnight, 2010) as the involved foundations have begun to filter monies anonymously through groups such as Donors Trust (Brulle, 2014). Recently, Democratic Senators have shifted tactics to include within congressional debates sociological scholarship on the role of fossil fuel industry in funding and shaping the climate denial narrative (Brulle & Roberts, 2017).

Skepticism regarding climate change has also become a political issue, leading to an increase in the political polarization of the issue. Polarization of attitudes towards science, health, and policy topics has been on the rise among the American public (e.g., Abramowitz & Saunders, 2008; Brewer, 2005; Haltinner & Sarathchandra, 2017). Conservatives, in particular, are becoming increasingly distrustful of science and scientists (Lewandowsky, Gignac, & Oberauer, 2013). Considering the issue of anthropogenic climate change in particular, we see a greater level of conservatives than progressives holding skepticism about the issue (Lewandowsky et al., 2013; McCright & Dunlap, 2011a). The partisan divide in beliefs about climate change is a relatively recent phenomenon, emerging in the late 1990s and becoming most pronounced following the 2008 U.S. presidential election (Dunlap & McCright, 2008). Political polarization is particularly pronounced when looking at media effects whereby Republicans are more likely to dismiss climate change when presented with news about the phenomenon from media they perceive as liberal (Carmichael, Brulle, & Huxster, 2017).

A number of demographic factors correlate with climate skepticism. In the United Kingdom, climate skeptics tend to be older, white, working class, male, politically conservative, and beholden to traditional values (Poortinga, Spence, Whitmarsh, Capstick, & Pidgeon, 2011). In the United States, climate skeptics and deniers tend to be conservative white men (McCright & Dunlap, 2011b) who hold evangelical Christian beliefs and are middle class (Jones et al., 2014). They also tend to hold views in favor of free market principles and against economic regulation (Lewandowsky et al., 2013). Skepticism regarding climate change is also correlated with belief in other conspiracy theories, or adherence to conspiracy ideation (Lewandowsky et al., 2013).

People skeptical about anthropogenic climate change provide a variety of rationales to explain their beliefs. About a third say that they personally have not seen a shift in the weather and that this indicates that climate change is not happening. Eighteen percent argue that temperature varies naturally, and thus, even if there is a shift in global temperature, it does not indicate a marked change in the climate. Twelve percent say that they have seen conflicting or contrary scientific evidence; 5% indicate that they believe news reports on climate change are fake; 4% cite other personal experiences as explanations for their skepticism; 4% hold an alternative scientific theory; and 2% believe that God is in control and that they need not be concerned (Jones et al., 2014). Twenty-two percent of skeptics refused to offer an explanation or did not provide one (Jones et al., 2014).

Research on emotion and climate change skepticism is a nascent field. Current research suggests that some people feel great emotional turmoil when learning or thinking about climate change. Specific negative emotions, including a loss of security, helplessness, and guilt, can drive people to turn away from the problem and prevent them from taking action on the issue even when they believe climate change is a present danger (Norgaard, 2006). Lertzman (2015) terms this phenomenon—of people who are passionate about the environment becoming immobilized as a response to learning about the scope and depth of the problem—"environmental melancholia."

3 | COPING WITH FEAR

Scholarship in the field of social psychology and behavioral economics finds that a significant proportion of people will avoid learning important information—especially about complex topics—if it causes them anxiety or other psychological discomfort (Shepherd & Kay, 2012; Webb, Chang, & Benn, 2013). This is true in many areas of social life: from health care, to financial decision making, to accomplishing personal fitness goals. In the realm of social issues and politics, people have a tendency to ignore complex and uncomfortable information and trust that “the experts” will take care of things (Shepherd & Kay, 2012).

Beginning in the 1980s, psychologists sought to evaluate information avoidance as a behavioral trait. The most popular diagnostic for evaluating these traits is called the Monitor/Blunter Style Scale (MBSS). In psychological literature, “monitors” are those who seek out threats and information about threats, while “blunters” try to avoid or distract themselves from uncomfortable information (Miller, 1979). Early research estimated that approximately one third of people seek to avoid information if the problem is something over which they have no control (Miller, 1979).

Subsequent research has found that a number of social-psychological factors contribute to one's accepting or avoiding uncomfortable or frightening information. These factors include the “nature of the hazard itself,” response efficacy, and self-efficacy. A certain combination of high anxiety and low self-efficacy increases the likelihood of information avoidance in a given situation (Case, Andrews, Johnson, & Allard, 2005, p. 355).

Regarding the area of health care, scholarship shows that certain groups of people are less likely to engage in preventative testing, especially if they are at risk for a particular disease or if that disease is particularly serious (Ganguly & Tasoff, 2016; Panidi, 2015). People who have a greater level of “loss aversion” participate in preventative testing at a lower rate than others because they fear negative outcomes (Panidi, 2015). Comparing behavior regarding screening across several health concerns—“hypertension, diabetes, chronic lung disease, and cancer”—Panidi (2015) also finds that people who perceive themselves as more likely to have a disease are also more likely to avoid screening. This is true even though earlier diagnosis of health problems often leads to more successful and less costly treatment. Additionally, information-averse people are more likely to avoid testing and delay learning about specific health challenges when the diseases are serious (Ganguly & Tasoff, 2016).

In addition to the issue of health care, behavioral economics demonstrates that people also have a tendency to “stick their heads in the sand” to ignore risky financial situations. In fact, people avoid learning about avoidable risks regarding their financial investments, especially during periods of heightened market instability, even if this ignorance results in negative financial consequences (Andries & Haddad, 2017; Galai & Sade, 2006; Karlsson et al., 2009).

Research in social psychology also uncovers a tendency for Americans to intentionally remain ignorant on complex social issues that provoke fear or other uncomfortable emotions. Rather than engage with troubling and complicated information, the anxiety this information causes leads people to seek comfort and, thus, remain willfully ignorant while trusting that the government is taking care of the problem (Shepherd & Kay, 2012). Shepherd and Kay (2012) frame this as a form of information outsourcing: Driven by psychological discomfort, they trust those deemed knowledgeable to sort through the complex data and make proper decisions.

Research specifically focused on emotions and climate change finds similar behavior trends: avoiding the problem and either becoming immobilized (Lertzman, 2015) or shifting trust and responsibility to a larger, perceptively more powerful, entity: scientists. Testing an earlier hypothesis by Downs (1972), Krosnick, Holbrook, Lowe, and Visser (2006) find that, when faced with difficult solutions to social problems—such as global warming—people tend to avoid dealing with the problem. The more information people have about climate change, the less individual responsibility they feel for ameliorating the problem. Further, the more trust an individual has in scientists, the less they feel responsible for preventing climate change and the less they worry about the issue (Kellstedt, Zahran, & Vedlitz, 2008).

Examining the role of emotion in structuring outcomes, Chapman, Lickel, and Markowitz (2017) state that emotion is one integral component of a larger cognitive self-regulatory feedback system, which guides responses to challenging decision-making problems. Rather than a simple lever that can be pulled to reach desired outcomes, emotions

act in concert with “a range of cognitive appraisals of context, the self, and others, as well as (multiple) potential motivational impetuses” (Chapman et al. 2017:851). As such, while some emotional reactions may include immediate responses, others may lead to further information seeking, reappraisal, and rumination. Consequently, the immediate emotion-evoked responses and longer term consequences may or may not be aligned (Chapman et al., 2017). Lertzman (2015) finds that, regarding climate change in particular, a patterning of complex emotions in the face of overwhelming and disempowering information can lead people to behave in ways that appear apathetic even if their passion for resolving the problem remains. Rather, what is reflected in perceptions of apathy is really the existence of social and discursive barriers towards meaningful action.

While the role and mechanisms through which emotions shape behavior are complex, extant empirical evidence does suggest that climate change fits the criteria for information avoidance: Climate change is a complicated issue, with high costs, over which people have little individual control.

4 | CONSPIRACY ADHERENCE AS A PSYCHOLOGICAL COPING TECHNIQUE

It is clear that fear and anxiety can have a profound effect on human behavior and that these feelings, especially partnered with a feeling of being disempowered, can lead to people avoiding information or remaining apathetic about a particular personal or social problem. While this alone might explain the behavior of certain people who are aware of climate change but choose not to think about it or act upon it, it does not comprehensively explain the tendency of some people to actively deny its existence. The final piece of the puzzle is provided by scholarship on conspiracy ideation.

Those who behave in information-averse ways and those who adhere to conspiracy theories share certain psychological profiles. For example, as with information aversion, people who adhere to conspiracy theories tend to feel lower levels of self-efficacy than others (Swami et al., 2014). Among populations with either tendency, the behavior is particularly pronounced in cases with severe or deadly consequences (Newheiser, Farias, & Tausch, 2011).

Like information aversion, conspiracy narratives can serve as a coping mechanism for individuals when they encounter difficult or confusing information. Hofstadter (1965) suggests that conspiracy ideation might be associated with feelings of powerlessness and that conspiracy narratives, in turn, might provide a way for adherents to channel their fear.

On an individual level, conspiracy ideation appears to serve as a psychological tool for adherents. For example, Sullivan et al. (2010) find that people will endow perceived enemies with certain powers to compensate for the adherent's sense of a lack of control within their environment. This may serve to help people feel less overwhelmed by social and environmental problems and increase feelings of empowerment as it centralizes the cause of negative phenomena into a single entity. Conspiratorial thinking can be considered akin to other “religious, social, or political beliefs” that “helps to fill a need for certainty, control or understanding, filling gaps in knowledge and offering a coherent elucidation of difficult events” (Leman, 2007; Swami & Furnham, 2014, p. 223; Whitson, Galinsky, & Kay, 2015).

Indeed, psychological research has found that fear, anxiety, and feelings of powerlessness are highly correlated with conspiratorial or paranoid thinking (Abalakina-Paap, Stephan, Craig, & Gregory, 1999). This is especially true for men (Grzesiak-Feldman, 2007), whom are also more likely to believe in conspiracies more generally. While being fearful and highly anxious can, at times, be a distinct personality trait that contributes to conspiratorial ideation, situational anxiety or fear can also drive people to believe in conspiracies (Grzesiak-Feldman, 2013; Radnitz & Underwood, 2015).

Conspiracy theories, like information aversion, are most likely to emerge regarding issues for which there is real or perceived ambiguity (Miller, 2002; Swami & Furnham, 2014). While there is little disagreement about the reality of anthropogenic climate change among scientists, the perception of such discord is common among the public (Jones et al., 2014).

5 | CONCLUSIONS: STRATEGIES FOR COMMUNICATING SCIENTIFIC FINDINGS REGARDING ANTHROPOGENIC CLIMATE CHANGE

The topic of anthropogenic climate change clearly fits the criteria as a catalyst for the presence of both the ostrich effect and conspiracy ideation: It is a complex problem, difficult for many to understand and over which people feel limited agency or self-efficacy (Dunlap, 2013; Gifford, 2011). Even among people who are passionate about the environment or who believe in anthropogenic climate change, information about the problems affecting the climate can be paralyzing and demoralizing (Lertzman, 2015; Norgaard, 2011). These emotions and feelings are fueled by news reporting which often focuses on the problems of climate change, rather than the ways people can prevent disastrous consequences (Hart & Feldman, 2014). As a result, discussion about climate change evokes deep fear and anxiety, thus triggering those who may be predisposed to be information-averse or conspiracy-oriented in the face of these emotions. It appears as if, in the case of skepticism among climate change, fear-driven “blunters” may not only ignore information that perpetuates their anxiety, but they go so far as to seek comfort in an alternative narrative, a conspiracy theory, which can provide psychological comfort by curbing fear and increasing perceived agency.

Efforts to communicate climate science to the public have focused on making science accessible. Some have tried to communicate information about climate change through the lenses of national security, health, and economic vitality (Nisbet, 2009). Yet, if done without attention to the impacts of fear and materialism, these efforts may actually have a negative effect on motivating change. For example, McDonald, Chai, and Newell (2015) find that making climate change more personal, close, and real may not lead people to believe in it more or get involved in ameliorating its effects. Rather, in many cases, making climate change personal increases an individual's fear and leads to the very avoidance addressed in this paper. Similarly, efforts to have the public view climate change as an economic issue may lead some people to behave in more pro-environmental ways, but the inherent conflict between materialism and environmentalism tends to weaken and limit the impact of this strategy (Markowitz & Shariff, 2012).

Given the role of fear, anxiety, and a lack of self-efficacy in people's tendency to avoid information about complex issues and/or adhere to conspiracy theories, it is clear that communication on climate change must attend to scholarship on emotion. Specifically, communication on climate change needs to avoid the tendency to magnify fear and, instead, focus on increasing feelings of empowerment and other motivating emotions. Attempts to frighten people into believing in and ameliorating climate change will likely backfire. In fact, previous fear campaigns involving complex problems have largely failed to work (Case et al., 2005; Janis & Feshback, 1953; Job, 1988). This is also true of communication regarding climate change: Promoting fear and anxiety tends to increase inaction and skepticism regarding the phenomena (Feinberg & Willer, 2011).

Rather, people are more likely to participate in behavior in favor of the collective good when social problems are constructed as effecting people and, concurrently, pro-social emotions are evoked. In other words, making the issue personal can be effective, if paired with the right motivating emotions. For example, Markowitz and Shariff (2012) argue that it is essential to discuss climate change in a way that makes the victims of climate change both real and similar to one's audience. Making the audience identify with those who have the potential to be most harmed by climate change, particularly members of future generations, and coupling this with the potential for leaving a positive legacy can motivate people to act in self-sacrificial ways to benefit future populations (Wade-Benzoni & Tost, 2009).

In addition to personalizing the narrative, discussion regarding climate change is particularly effective when communication taps into motivating emotions, such as guilt, hope, and pride, as compared with paralyzing ones, such as fear and anxiety. Specifically, scholarship finds that when people feel fear alongside hope and guilt, regret, or self-accountability, they are more likely to act than when feeling fear alone (Ferguson & Branscombe, 2010; Passyn & Sujana, 2006). Even more motivating are positive pro-social emotions such as hopefulness, pride, and gratefulness (Swim & Bloodhart, 2011). This is true for individual-level action (Passyn & Sujana, 2006) as well as collective action (Thomas, McGarty, & Mavor, 2009).

In her work on emotions around climate change, Norgaard (2011) draws on Hochschild's (1983) work on emotion management and “deep acting” to illustrate how social conventions and culture influence the manifestation of emotions.

Hochschild argues that people modify the performance of or experience of emotions to fit societal norms. Thus, in the American context, the expression and experience of emotions regarding climate change are deeply polarized.

The political polarization of climate change has a compounding effect on the emotional performances of people regarding the issue. Climate skeptics—who are more likely to be Republicans—are also more likely to reject government interventions to climate change, viewing them as government overreach and believing in conspiracy stories regarding the climate change hoax (Jacques, 2006). When presented with stories that confirm their perception on climate change, Republicans deepen or solidify their position on this issue. In contrast, when presented with data that challenges their worldview, they quickly dismiss it as biased, especially if it comes from a source they deem as “liberal.” Importantly, however, it may be the case that news sources perceived as more moderate are received and perceived as less biased and may gently influence Republican concerns regarding climate change (Carmichael et al., 2017).

Republicans and Democrats also respond differently to data presented by scientists, with science-based information increasing alarm regarding climate change among Democrats and decreasing worry among Republicans (Carmichael et al., 2017). Political ideology shapes the way people interpret and perceive information regarding climate change (Carmichael et al., 2017; Jacques, 2006).

In reaction to data on climate change, then, climate skeptics recklessly pursue policies that perpetuate climate destruction—what Lifton (2017) calls “the climate swerve”—an illogical set of behaviors in the face of clear and impending dangers. Specifically, climate skeptics shift the narrative away from the dangers of climate change to one focused on conservative values: separating people from the physical world, emphasizing the need for limited government, and maintaining the social status quo in which the economic elites—both as individuals and as nations—exploit and profit from both the land and less wealthy nations (Jacques, 2006). As such, Jacques (2009) suggests that climate skeptics refocus the narrative in four ways: (a) to create stories about wasted public resources used to resolve environmental problems, (b) to fight industrial limits and controls in the name of the environment, (c) to create a contradictory narrative that, if climate change is true, then we need to have a strong economy to deal with it (and thus should curb environmental regulations and see to increase profits), and (d) to frame green movements and policies as harmful to society and progress. In other words, skeptics employ a conservative narrative to contextualize and frame inactions regarding climate change (Klein, 2014).

Effective communication needs to focus on a narrative of hope, empowerment, and personal responsibility. Reframing climate science in terms of benefits of making change—as opposed to the dangers of continuing with the status quo—might be one method of shifting the emotions evoked by this discourse (Markowitz & Shariff, 2012). Another important tactic, particularly in reaching climate skeptics, is to give consideration to the medium for information dissolution and to couch the discourse in conservative values. Per initial trends found by Carmichael et al. (2017), attempting to reach skeptical audiences through news sources viewed as moderate is likely to have a greater impact than those sources viewers may perceive as liberal. Moreover, in order to avoid immediate dismissal by the audience and to influence conservative thinking, the discourse should fit other elements of conservative ideology: free market capitalism, benefits to individual liberties, and economic progress. Additionally, facilitating the identification of the audience with those who have the potential to be directly harmed by climate change, producing a shared identity with this group, and constructing a narrative that touts the potential for leaving a positive legacy may also provide a greater impact.

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REFERENCES

- Abalakina-Paap, M., Stephan, W., Craig, T., & Gregory, W. L. (1999). Beliefs in conspiracies. *Political Psychology, 20*, 637–647.
- Abramowitz, A., & Saunders, K. (2008). Is polarization a myth? *Journal of Politics, 70*, 542–555.
- Andries, M., & Haddad, V. (2017). Information aversion. Working paper no. 17–779. Toulouse School of Economics.

- Brewer, M. (2005). The rise of partisanship and the expansion of partisan conflict within the American electorate. *Political Research Quarterly*, 58, 219–230.
- Brulle, R. (2014). Institutionalizing delay: Foundation funding and the creation of U.S. climate change counter-movement organizations. *Climatic Change*, 122(4), 681–694.
- Brulle, R., & Roberts, J. (2017). Climate misinformation campaigns and public sociology. *Contexts*, 16(1), 78–79.
- Carmichael, J. T., Brulle, R. J., & Huxster, J. K. (2017). The great divide: Understanding the role of media and other drivers of the partisan divide in public concern over climate change in the USA, 2001–2014. *Climatic Change*, 141(4), 599–612.
- Case, D., Andrews, J., Johnson, J., & Allard, S. (2005). Avoiding versus seeking: The relationship of information seeking to avoidance, blunting, coping, dissonance, and related concepts. *Journal of the Medical Library Association*, 93, 353–362.
- Chapman, D., Lickel, B., & Markowitz, E. (2017). Reassessing emotion in climate change communication. *Nature Climate Change*, 7, 850–852.
- Downs, A. (1972). Up and down with ecology: The 'issue-attention' cycle. In D. Proress, & M. McCombs (Eds.), *Agenda setting: Readings on media, public opinion, and policymaking* (pp. 27–34). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Dunlap, R. (2013). Climate change skepticism and denial: An introduction. *American Behavioral Scientist*, 57, 691–698.
- Dunlap, R., & McCright, A. (2008). A widening gap: Republican and Democratic views on climate change. *Environment*. September–October.
- Feinberg, M., & Willer, R. (2011). Apocalypse soon? Dire messages reduce belief in global warming by contradicting just-world beliefs. *Psychological Science*, 22, 34–38.
- Ferguson, M. A., & Branscombe, N. R. (2010). Collective guilt mediates the effect of beliefs about global warming on willingness to engage in mitigation behavior. *Journal of Environmental Psychology*, 30, 135–142.
- Galai, D., & Sade, O. (2006). The 'ostrich effect' and the relationship between the liquidity and the yields of financial assets. *The Journal of Business*, 79, 2741–2759.
- Ganguly, A., & Tasoff, J. (2016). Fantasy and dread: The demand for information and the consumption utility of the future. *Management Science*. Permalink: doi:<https://doi.org/10.1287/mnsc.2016.2550>, 63, 4037–4060.
- Gifford, R. (2011). The dragons of inaction: Psychological barriers that limit climate change mitigation and adaptation. *American Psychologist*, 66, 290–302.
- Grzesiak-Feldman, M. (2007). Conspiracy thinking and state-trait anxiety in young polish adults. *Psychological Reports*, 100, 199–202.
- Grzesiak-Feldman, M. (2013). The effect of high-anxiety situations on conspiracy thinking. *Current Psychology*, 32, 100–118.
- Haltinner, K., & Sarathchandra, D. (2017). Tea party health narratives and belief polarization: The journey to killing grandma. *AIMS Public Health*, 4, 557–578.
- Hart, P. S., & Feldman, L. (2014). Threat without efficacy? Climate change on U.S. network news. *Science Communication*, 36, 325–351.
- Hochschild, A. (1983). *The managed heart: Commercialization of human feeling*. Berkeley, CA: University of California Press.
- Hofstadter, R. (1965). *The paranoid style in American politics, and other essays*. New York: Knopf.
- Jacques, P. (2006). The rearguard of modernity: Environmental skepticism as a struggle of citizenship. *Global Environmental Politics*, 6(1), 76–101.
- Jacques, P. (2009). *Environmental skepticism*. Burlington, VT: Ashgate Publishing.
- Janis, I., & Feshback, S. (1953). Effects of fear-arousing communications. *The Journal of Abnormal and Social Psychology*, 48, 78–92.
- Job, R. F. (1988). Effective and ineffective use of fear in health promotion campaigns. *American Journal of Public Health*, 78, 163–167.
- Jones, R., Cox, D., & Navarro-Rivera, J. (2014). Believers, sympathizers, & skeptics. Public Religion Research Institute and American Academy of Religion. Retrieved from: <https://hazdoc.colorado.edu/bitstream/handle/10590/2921/C023108.pdf?sequence=1>
- Karlsson, N., Loewenstein, G., & Seppi, D. (2009). The ostrich effect: Selective attention to information. *Journal of Risk and Uncertainty*, 38, 95–115.
- Kellstedt, P., Zahran, S., & Vedlitz, A. (2008). Personal efficacy, the information environment, and attitudes toward global warming and climate change in the United States. *Society for Risk Analysis*, 28(1), 113–126.
- Klein, N. (2014). *This changes everything: Capitalism vs. the climate*. New York, NY: Simon and Schuster.
- Krosnick, J., Holbrook, A., Lowe, L., & Visser, P. (2006). The origins and consequences of democratic citizens' policy agendas: A study of popular concern about global warming. *Climate Change*, 77, 7–43.

- Leman, P. (2007). The born conspiracy. *NewScientist*, 195, 35–37.
- Lertzman, R. (2015). *Environmental melancholia: Psychoanalytic dimensions of engagement*. New York, NY: Routledge.
- Lewandowsky, S., Gignac, G., & Oberauer, K. (2013). The role of conspiracist ideation and worldviews in predicting rejection of science. *PLoS One*, 8(10), e75637. <https://doi.org/10.1371/journal.pone.0075637>
- Lifton, R. (2017). *The climate swerve*. New York, NY: The New Press.
- Markowitz, E., & Shariff, A. (2012). Climate change and moral judgement. *Nature Climate Change*, 2, 243–247.
- McCright, A. (2016). Anti-reflexivity and climate change skepticism in the US general public. *Human Ecology Review*, 22, 77–108.
- McCright, A. M., & Dunlap, R. (2011a). The politicization of climate change and polarization in the American public's views of global warming, 2001–2010. *The Sociological Quarterly*, 52, 155–194.
- McCright, A. M., & Dunlap, R. (2011b). Cool dudes: The denial of climate change among conservative white males in the United States. *Global Environmental Change*, 21, 1163–1172.
- McCright, A. M., Marquart-Pyatt, S. T., Shwom, R. L., Brechin, S. R., & Allen, S. (2016). Ideology, capitalism, and climate: Explaining public views about climate change in the United States. *Energy Research & Social Science*, 21, 180–189.
- McDonald, R., Chai, H. Y., & Newell, B. (2015). Personal experience and the 'psychological distance' of climate change. *Journal of Environmental Psychology*, 44, 109–118.
- McKnight, D. (2010). A change in the climate? The journalism of opinion at news corporation. *Journalism*, 11, 693–706.
- Miller, S. (1979). Coping with impending stress: Psychophysiological and cognitive correlates of choice. *Psychophysiology*, 16, 572–581.
- Miller, S. (2002). Conspiracy theories: Public arguments as coded social critiques. *Argumentation and Advocacy*, 39, 40–56.
- Newheiser, A., Farias, M., & Tausch, N. (2011). The functional nature of conspiracy beliefs. *Personality and Individual Differences*, 51, 1007–1011.
- Nisbet, M. (2009). Communicating climate change: Why frames matter for public engagement. *Environment*, 51, 14–23.
- Norgaard, K. M. (2006). 'People want to protect themselves a little bit': Emotions, denial, and social movement nonparticipation. *Sociological Inquiry*, 76, 372–396.
- Norgaard, K. M. (2011). *Living in denial: Climate change, emotions, and everyday life*. Cambridge, MA: MIT Press.
- Oreskes, N., & Conway, E. M. (2010). *Merchants of doubt*. New York, NY: Bloomsbury.
- Panidi, K. (2015). Ostrich effect in health care decisions. SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2932181
- Passyn, K., & Sujan, M. (2006). Self-accountability emotions and fear appeals: Motivating behavior. *Journal of Consumer Research*, 32, 583–589.
- Pew Research Center. (2014). Beyond red and blue: The political typology. Retrieved from: <http://assets.pewresearch.org/wp-content/uploads/sites/5/2014/06/6-26-14-Political-Typology-release1.pdf>
- Poortinga, W., Spence, A., Whitmarsh, L., Capstick, S., & Pidgeon, N. (2011). Uncertain climate: An investigation into public scepticism about anthropogenic climate change. *Global Environmental Change*, 21, 1015–1024.
- Powell, J. L. (2011). *The inquisition of climate science*. New York, NY: Columbia University Press.
- Radnitz, S., & Underwood, P. (2015). Is belief in conspiracy theories pathological? *British Journal of Political Science*, 47, 113–129.
- Saad, L. (2017a). Global warming concern at three-decade high in U.S. Retrieved from: <http://news.gallup.com/poll/206030/global-warming-concern-three-decade-high.aspx>.
- Saad, L. (2017b). Half in U.S. are now concerned global warming believers. Retrieved from: <http://news.gallup.com/poll/207119/half-concerned-global-warming-believers.aspx>.
- Shepherd, S., & Kay, A. (2012). On the perpetuation of ignorance. *Journal of Personality and Social Psychology*, 102, 264–280.
- Stoll-Kleeman, S., O'Riordan, T., & Jaeger, C. (2001). The psychology of denial concerning climate mitigation measures. *Global Environmental Change*, 11, 107–117.
- Sullivan, D., Landau, M. J., & Rothschild, Z. K. (2010). An existential function of enemyship: Evidence that people attribute influence to personal and political enemies to compensate for threats to control. *Journal of Personality and Social Psychology*, 98, 434–449.
- Swami, V., Coles, R., Stieger, S., Pietschnig, J., Furnham, A., Rehim, S., & Voracek, M. (2014). Conspiracist ideation in Britain and Austria: Evidence of a monological belief system and associations between individual psychological differences and real-world and fictitious conspiracy theories. *British Journal of Psychology*, 102, 443–463.
- Swami, V., & Furnham, A. (2014). Political paranoia and conspiracy theories. In J. Prooijen, & P. Lange (Eds.), *Power, politics, and paranoia* (pp. 218–236). Cambridge, UK: Cambridge University Press.
- Swim, J. K., & Bloodhart, B. (2011). Affective responses to climate change. *Claremont Symposium on Applied Social Psychology*.

- Thomas, E., McGarty, C., & Mavor, K. (2009). Transforming 'apathy into movement': The role of prosocial emotions in motivating action for social change. *Personality and Social Psychology Review, 13*, 310–333.
- Wade-Benzoni, K. A., & Tost, L. (2009). The egoism and altruism of intergenerational behavior. *Personality and Social Psychology Review, 13*, 165–193.
- Webb, T., Chang, B., & Benn, Y. (2013). 'The ostrich problem': Motivated avoidance or rejection of information about goal progress. *Social and Personality Psychology Compass, 7*, 794–807.
- Whitson, J., Galinsky, A., & Kay, A. (2015). The emotional roots of conspiratorial perceptions, system justification, and belief in the paranormal. *Journal of Experimental Psychology, 56*, 89–95.

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How to cite this article: Haltinner K, Sarathchandra D. Climate change skepticism as a psychological coping strategy. *Sociology Compass*. 2018;e12586. <https://doi.org/10.1111/soc4.12586>