Citizen deliberation at South Carolina's 'Our Coastal Future Forum': Talking through risk related to climate change

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ABSTRACT: Deliberative democracy has increasingly been used as a form of citizen engagement and involvement in risk-related and environmental domains. However, there is much to learn about how citizens talk about and understand risks related to climate change in the context of community deliberative forums, and how deliberation might contribute to productive climate policy solutions. To contribute to this growing body of work, we use the lens of Construal Level Theory (CLT) to analyze transcripts from a large community forum held in the US state of South Carolina. Our analysis reveals a broad range of risk construal from deliberative participants, with many people discussing climate risks as psychologically near despite the longer horizon often associated with climate change. The results suggest that deliberative forums can be useful venues for helping citizens grapple with the myriad risks and construal levels associated with climate change. Rather than simply helping move climate risks 'closer' to people, deliberation might be more useful in allowing people to understand climate risks at multiple levels of psychological distance and leveraging this nuanced understanding to develop potential solutions and mitigation strategies.

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Every four years, a Congressionally mandated review involving climate is released by the U.S. federal government. Also known as the Climate Science Special Report (CSSR), this assessment focuses on climate change science and implications in the United States. (USGCRP, 2017; 2018). The product of hundreds of academic experts and peer-reviewed by the National Academy of Sciences, the CSSR is considered the United States' most definitive statement on climate change science. When the most recent volume was released in 2017, the statement listed several consequences coastal communities could face soon if no action is taken to curb climate change. Coastal regions of the U.S. and other areas of the world will be on the leading edge of climate-change impacts, and present an important context in which to study community deliberation and resilience related to climate.

South Carolina holds 2876 miles of coastline and is listed as an area of concern in the CSSR. Along with the long-standing history of hurricanes, and increasing intensity of hurricanes triggered by climate change (USGCRP, 2017), the South Carolina coast has also been negatively impacted by housing developments, fertilizer pollution, overfishing, and inland industry. In short, the coast of South Carolina is receding, food and economic opportunity are decreasing along with livelihoods of locals, and housing above sea level is quickly disappearing. To facilitate public conversations about the changing coastal landscape, the South Carolina Sea Grant Consortium, in partnership with the College of Charleston and the University of Oklahoma, hosted the Our Coastal Future Forum (OCFF) in October 2017 (AUTHORS, 2019). OCFF was a deliberative forum meant to bring together citizens, natural resource managers, and

technical experts to help "bridge the sometimes-opposing opinions on environmental issues facing coastal South Carolina" (S.C. Sea Grant Consortium). Though deliberation has proven to be a useful model for citizens to discuss controversial topics, and has increasingly been applied in the context of environmental issues (Flynn et al., 2013; Myers et al., 2017; Pidgeon, 2021; Sprain and Reinig, 2018), there is still much to learn about how to best use deliberative democracy to address the complex value-laden problems associated with climate change (Sprain, 2017).

A key component of climate change as a societal issue is the nature of the risks it entails, many of which seem to be distant from American society, either occurring in distant regions of the world or projected to be occurring decades in the future. Coastal communities, on the other hand, represent a notable exception to this by virtue of being on the leading edge of climate impacts. And though deliberation practitioners and scholars are working to deploy deliberative democracy in the climate domain, there has been less attention paid to how people in climate-related deliberations conceptualize and discuss the risks associated with a changing climate. To help address this gap, in this manuscript we use risk communication theory to examine the ways in which people deliberating on environmental issues conceptualize and communicate about various risks associated with climate change in coastal regions, as well as how people received, evaluated, and responded to risk-related information in a deliberative forum. This study utilizes Construal Level Theory (CLT), which focuses on the psychological distance of potential risks, as a lens to qualitatively analyze transcripts from the Our Coastal Future Forum. This analysis provides insight into how risks, both psychologically near and far, related to climate change and coastal well-being are discussed by a community of people living in an area experiencing coastal environmental changes firsthand. Furthermore, this paper improves our understanding of how

deliberative forums help people think through issues related to tangible risks, such as the changing nature of the coastal environment, along with risks that are often debated and seem less tangible, such as climate change.

In the next portion of the manuscript, we briefly review the relevant literature on deliberative democracy and on CLT and risk before posing two research questions. Then we describe the methodology used in conducting a qualitative analysis of transcripts from the OCFF event. Finally, we describe the findings of our qualitative analysis and discuss the implications of those for future scholarship and deliberative practice.

Deliberative Democracy and Risk Perception

Deliberative democracy is an area of scholarship and practice aimed at helping people engage in thoughtful reflection, analysis, and discussion of political or social issues to improve understanding and generate policy recommendations or solutions to address those issues. The use and study of deliberation has been on the rise in recent years, with forums being convened at local, state/provincial, and national levels to address a wide range of topics, from marijuana legalization to electoral reforms to biomedical research (Blacksher et al., 2021; Knobloch et al., 2013; Leighninger, 2013; Liland et al., 2019). In particular, deliberation is proving useful for addressing environmental issues and associated risks (Pidgeon, 2021), though there are important questions still to answer about how deliberation can work when dealing with thorny, complex problems like climate change (Sprain, 2018). In this manuscript, we set out to connect deliberative democracy theory with scholarship in communication and perception of risk to better understand how both of these domains of research can be improved as communities increasingly grapple with risk-related issues and turn to deliberation to help them do so.

Deliberative forums have been used to address a variety of issues, and the purpose of forums can vary substantially. Deliberation can be used as a tool for collective problem solving, a space for individual learning, and as a way to bridge inter-group differences (Leighninger, 2013). The process of deliberation itself is defined by Burkhalter et al. (2002) as "characterized by the performance of a set of communicative behaviors that promote thorough group discussion" (p. 401). Deliberation can be generally defined as a communicative process that encourages group discussion and the consideration of information coming from a multitude of voices and experiences, along with factual evidence, leading to the development of various solutions (Gastil, 2008; Knobloch et al., 2013).

Democratic values are a key element of deliberative forums. Deliberative democratic theory bases itself on the concept that greater participation by average citizens in governance makes for a healthier democracy (Barber, 1984). Though there have been different approaches (see, for example, Fishkin, 2009; Gutmann & Thompson, 2004; Pettit, 2003), the basic premise of deliberative democracy involves citizens having respectful, informed discussion and analysis of public issues and participating in an egalitarian decision-making process (Burkhalter et al., 2002). Though participants may not always act in accordance with the democratic foundation of the theory, forums are generally designed with these ideals in mind and are aimed at helping participants conduct themselves in a democratic matter (Guttman, 2007; Knobloch et al., 2013). The OCFF deliberative forum analyzed in this paper was an event that aimed for such ideals, and was designed and facilitated with the intention of it being a vibrant deliberation in keeping with what scholars have called a "practice-oriented normative theory of deliberation" (Guttman, 2007). Prior analysis of this event has noted that it did well in meeting the practical

implementation of deliberative ideals and helping participants have an open, egalitarian discussion on this challenging topic (AUTHORS, 2019).

As deliberation has become increasingly used by communities and organizations, scholars in this area have begun examining more closely the communicative practices within deliberative forums to better understand how to design and implement future events and to explore what we can learn about human behavior from studying this context (Leighter and Black, 2010; Nabatchi et al., 2012). For example, a recent study of environmentally focused forums noted the ways that people claim the mantle of expertise in an area being discussed, and how those conversational moves can either help or hinder the democratic deliberation of the forum (Sprain & Reinig, 2018). Deliberation scholars are also applying other social science theories to the realm of deliberation, both to help deliberation theory and practice improve and to contribute to these other theoretical domains by expanding the contexts in which they have been applied and tested. For instance, deliberation scholars have applied theories of intercultural communication and intergroup contact to help generate new ideas about making deliberative forums more inclusive and equitable for underrepresented groups (Abdel-Monem et al., 2010; Abdullah et al., 2016).

One such connection between deliberation and other theoretical areas that we see as potentially fruitful is the domain of risk communication. As communities and states are increasingly dealing with risks from environmental threats, it bears asking how well deliberation can do in helping citizens have productive and thoughtful discussions of those threats and ways to eliminate or mitigate them (Pidgeon, 2021; Renn, 1999). Further, how well does our understanding of risk perception, which sometimes leads to rash decision-making (Kahneman, 2011; Klinke, 2021), apply in the context of public deliberation, which is aimed at promoting

thoughtful reflection and well-reasoned discussion? Could deliberative democracy be useful in helping people take far-off risks like climate change more seriously without reaching rash conclusions?

Construal Level Theory and Risk

To examine the ways that risk perceptions are discussed in a deliberative context, we utilize the theoretical lens of construal level theory (CLT), a theory from risk communication and social psychology. CLT examines perception, evaluation, and persuasion due to risks and risk messages, relying on the concept of psychological distance between risks and the people potentially affected by them (Zwickle & Wilson, 2011). How messages are perceived and evaluated are largely shaped by the perceived psychological distance of the risk, or how far or near the risk seems to the subject. The more psychologically distant an object or threat is from an individual, the more abstract it will be thought of, and vice versa. Crucially, people who perceive a risk as more distant and abstract will also discount that risk more than people who perceive it as psychologically close and less abstract, and many studies of CLT examine the utility of making a risk seem closer to subjects to keep them from discounting it. Though CLT research has primarily focused on risk-related messages—how best to warn people of an impending risk, for example, or how to persuade them to take protective action—it may also be useful for understanding why people see some things as risks that are worthy of concern relative to other potential risks, particularly in the context of a deliberative forum.

Psychological distance is illustrated by four domains: temporal, spatial, social, and hypothetical (Fujita et al., 2006; Liberman et al., 2002; Liviatan et al., 2008). Temporal distance refers to time: events that are imminent are perceived or construed as more concrete and at a lower level with more specificity, whereas events that are in the distant future or past may be

seen as more abstract and understood at a more abstract and higher level to people (Trope et al., 2007). Spatial distance is how far away *physically* the event is from the subject who is thinking about the risk. Social distance relates to interactions and relationships within and between in-groups and out-groups: does this risk affect people like the subject, or people who are different from them? Hypothetical distance refers to the perceived probability or likelihood of an event occurring; more probable events have a lower-level or more concrete construal, whereas fewer probable events are construed at a higher level and more abstractly (Trope & Liberman, 2008). The four domains are all interconnected (Bar-Anan et al., 2006), and individuals can shift back and forth between thinking concretely and abstractly throughout the process of building a construal (Zwickle & Wilson, 2013). Psychological distances from potential risks are construed or perceived by individual subjects. Abstract construal, explain Zwickle and Wilson (2011), "causes a person to focus more on its central features;" whereas, "as the psychological distance decreases the risk is construed more concretely, causing an individual to highlight its peripheral and context-specific features" (p. 191). Construal thus shapes cognitive processing routes when people are thinking about potential risks.

Many studies of CLT have focused on risk messages and the potential effects of different levels of construal. For example, studies of temporal distance have shown that framing health messages as closer or lower-level can lead to higher perceptions of the risk of smoking and greater behavioral intention to quit smoking (Kim & Kim, 2018; Kim & Youg, 2019). Another health-related study found that temporally close messages improve respondents' sense of feasibility around protective behavior, but temporally distant messages lead to more desirability beliefs related to those behaviors (Lutchyn & Yzer, 2011). Though many studies focus on one dimension of construal, or on risk construal in isolation from other factors, others have looked at

how this interacts with other kinds of messaging or other communication variables. For instance, one study of health messaging found that emotional frames, such as guilt, can combine with risk construal frames to make more persuasive messages than a construal message alone (Pounders et al., 2019). Kim et al. (2018) combined construal with cultural worldview in studying decision making in response to a marketing message, finding that people in collectivist cultures responded more positively to a temporally close framing. Still other research on CLT has examined how people construe risk in their own communication—such as a study of how the news media and audience members posting on Twitter construe risks associated with terrorism in the aftermath of a terrorist attack (Kwon et al., 2017).

CLT has recently been applied by scholars to the context of climate change, with the aim of encouraging greater citizen concern and action to address the issue. However, the results of this work have been decidedly mixed. For example, one study found that manipulating psychological closeness to climate change can help encourage pro-environmental behaviors, but that separately manipulating construal to a lower level did not have the desired effect, nor did the combination of closeness and low-level construal (Wang et al., 2019). Another study was somewhat more promising, noting that manipulating different levels of psychological distance from climate change can encourage people to rely on different kinds of information when making judgments on climate (Brügger et al., 2016). This suggests that broader approaches than simply "bringing climate change closer" could be useful in encouraging people to be more thoughtful on this issue, and that matching appeals for action to the appropriate kinds of information (higher- or lower-level concerns) would be more fruitful. Scholars who have examined the utility of CLT around climate have concluded that the theory is one useful tool for studying climate opinions, but that the effects of psychological distance and construal level are

nuanced and require careful consideration rather than a kind of silver bullet that can be used to encourage climate action (Brügger et al., 2015; Brügger, 2020).

As deliberative democracy has been increasingly used to help citizens and communities talk about climate change and potential policies to address it, it bears examining how people actually talk about climate risks and the ways they construe those risks during deliberation. Since deliberation is based in thoughtful, reflective discussion that exposes people to a broad range of ideas and arguments on an issue, perhaps deliberative processes can help people examine climate change risks from multiple levels of construal and think more deeply about those risks and potential impacts rather than discounting or downplaying them. Deliberative forums may also offer participants a setting in which they can rethink ways in which climate risks are construed in a manner that helps them shape solutions to address climate-related problems in their own communities.

Research Questions

The OCFF deliberative event exposed participants to a variety of topics related to the changing coastal environment, including flooding, coastal erosion, fisheries management, water quality, and public health. Prior research on this forum has noted that participants talked about potential risks and categorized those in various ways (AUTHORS, 2019). However, the focus in this analysis is the ways that people construed climate-related risks in their deliberative communication, and the things that seemed to bring up risk construal during discussions. Therefore, we pose the following two research questions:

RQ1: In what ways do deliberative forum participants discuss temporal, spatial, social, and hypothetical distances from climate risks?

RQ2: What triggers deliberative forum participants to discuss temporal, spatial, social, or hypothetical distance from climate risks?

By answering these questions, we hope to provide a useful guide for how climate risks specifically, and perhaps environmental risks more broadly, are discussed and construed by participants in deliberative forums, and better understand whether and how deliberation can be useful in helping people make thoughtful decisions on risk-related issues.

Methods

To answer these research questions, we conducted a qualitative thematic analysis of transcripts from the OCFF deliberative event, a large community forum held in Charleston, S.C., in October 2017.[1] The two-day forum brought together 90 citizen participants to discuss climate-related issues in the coastal South Carolina region together with their fellow citizens and subject matter experts. The event aimed to "determine the feasibility of using a deliberative democratic process in coastal resources decision making, particularly when it comes to issues associated with climate change and increasing population" (AUTHORS, 2019). Participants from the coastal counties of South Carolina were recruited by organizers from South Carolina Sea Grant, the primary sponsor of the project. The event included several plenary presentations from experts on topics related to climate change and local impacts for the coastal region, as well as question-and-answer sessions at the plenary level led by a trained deliberative facilitator. Following the presentations, participants were broken into small groups for deliberative discussion, with eight to twelve participants in each of the eight groups. Each group was led by a trained facilitator through two periods of small-group deliberation. Both the plenary and small group discussions

[1] Involvement of participants in the deliberative forum, recording and transcription, and subsequent analysis of transcripts were approved by the College of Charleston Institutional Review Board, IRB-2017-01-18-093153. Participants in the forum provided informed oral consent to participate.

were guided by deliberative principles, and observed by researchers with expertise in deliberation to ensure the process met acceptable standards of public deliberation (Knobloch et al., 2013). All deliberations were recorded and transcribed, save for one period of deliberation for one of the eight groups due to a recorder error. For this study, the qualitative analysis focused on both periods of deliberative discussion for two of the eight small groups, which totaled approximately seven hours of audio (about 3.5 hours per group) or about 1000 pages of transcripts. In the subsection below, we describe the stages of analysis in more detail.

Thematic Analysis

The qualitative, thematic, analysis followed a five-step strategy for thematic analysis derived from LeCompte's (2000) five step strategy for qualitative analysis and Braun and Clarke's (2006) six step thematic analysis strategy. Lecompte (2000) suggests the following steps: (1) tidying up, (2) finding items, (3) creating stable sets of items, (4) creating patterns, and (5) assembling structure. Braun and Clarke (2006), focusing on thematic analysis, suggest the following steps: (1) become familiar with the data, (2) generate initial codes, (3) search for themes, (4) review themes, (5) define themes, (6) write-up. Both strategies were implemented throughout this thematic analysis, though in the description below we primarily focus on the language of LeCompte's (2000) five steps for qualitative analysis. This thematic analysis was also guided by concepts from Construal Level Theory (CLT), as described in more detail below.

Before beginning the analysis, the researchers met to agree upon coding protocol. In these sessions, researchers went over what was meant by each of the stages described by LeCompte (2000) and Braun and Clarke (2006). As part of the training, the two researchers conducted a practice analysis together on a full set of transcripts from one of the groups. This practice analysis is not included in this study's findings. Next, researchers conducted their own

analysis on another set of transcripts from this forum. Researchers exchanged findings for review. All notes that were not agreed upon were discussed in a separate meeting.

After initial training on steps for thematic analysis, the two primary researchers conducted the first four steps: (1) tidying up, (2) finding items, (3) creating stable sets of items, and (4) creating patterns (LeCompte, 2000). Both researchers considered literature on risk distances and CLT throughout the analysis. One of the researchers focused on temporal and spatial construals and the other focused on social and hypothetical construals for the analysis. The first step involved tidying up. In this step, researchers decided to narrow down the transcripts by only analyzing two groups and the two deliberations held by each group , rather than both deliberations for all groups. Furthermore, researchers only searched for initial categories. The initial categories were created following a review of literature on Construal Level Theory. The categories of interest were temporal, spatial, social, and hypothetical level distances. By tidying up, researchers narrowed down the scope of the study and began the process of cleaning data. This step helped researchers to narrow down the scope of the study and begin the process of cleaning data. As a result, out of 1094 pages of transcriptions, researchers narrowed their analysis to 313 pages. The second step, finding items, involved searching for example of the initial categories within the transcripts. Again, this was conducted separately by both of the researchers. At this stage, researchers were not labeling examples, as is often seen in open coding; rather, they were highlighting relevant examples. All examples were highlighted in Microsoft Word documents. The third step calls for the creation of a stable set of items. In this step, theoretically grounded notes were taken (memo taking) on each highlight using the comment function in Word. The fourth step, creating patterns, included the initial creation of

themes by the individual researchers. Themes, which can be thought of as descriptive labels, were created based on memos and highlights in the previous steps.

The final phases of research were conducted in tandem, with both researchers working closely together. To complete the fifth step, assembling structure, researchers combined their findings. Here, the two researchers worked together to connect the new combined themes to examples previously identified in the original text. Examples for each theme were then taken into account with the original research questions and CLT literature. Before finalizing themes, researchers reviewed one another's examples to guarantee there was mutual agreement. Multiple meetings took place where the researchers discussed the creation of final themes. The themes were finally culled down to only include the following two categories: ways of discussing risk construal, and triggers (or things that brought up risk construal in discussion).

Results

The tables below illustrate the final product of the analysis and, more specifically, the fifth step, as discussed in the methods section. Table 1 directly answers the first research question: *In what ways do forum participants discuss temporal, spatial, social, and hypothetical distances from risk?* Here, definitions are provided for each way of discussing risk construal.

Table 1: *RQ1: In what ways do forum participants discuss temporal, spatial, social, and hypothetical distance from risk?*

Way	**Definition**
Immediacy	Discussion about how close or far away the issue is.
Focus On Others	Discussion about how this will impact people in the future.
Efficacy	Discussion about the ability (or inability) to do something about a problem.
Blame	Discussion about whose fault the problem is.
History	Discussion about what has been done in the past.

The theme of Immediacy relates most to how close or far a risk is construed, in reference to time (temporal), space (spatial), to other people (social), or perceived likelihood

(hypothetical). In one example of immediacy, a participant refers to temporal/hypothetical distance from risk, explaining: "Then I guess in the long-term would be hundreds of years depending on how rapid of an increase it is because it migrates back inland…You know, runoff, rivers, and everything else." The long-term solution being discussed, the participant explains, is not an issue for here and now, but for hundreds of years from now.

The issue may also deal with immediacy in terms of space. Participants often recognized that a problem was right at their front door, or visible from their backyard. One participant thinks aloud:

> I think there are a lot of people in the population who don't know what the term ecosystem services means and they don't understand, and people in this area especially. We're surrounded by forests, marshlands, and all sorts of ecosystems, but a lot of people don't make the connection between those environments and then how they are affected. So, I think there's this massive gap in public knowledge that in order to push forward any sort of policies or any sort of actions we really need to fill it so that we have a majority behind those actions.

Even though environmental issues are a local, 'doorstep,' problem, the participant explains that a lot of people do not think about what is happening in their own environment. The participant, like most of the group members, equate the larger problem being information or education-related problems.

Parallels were observed when analyzing social and hypothetical distances of risk. When discussing themes of climate change, participants expressed concern for implications that related to other members of their community. One participant stated:

> It scares me that this resource that we have is being polluted… at a crazy rate, and that changes in temperature in the ocean may cause our shrimp to leave. How many people is that going to put out of jobs? How much would that change Charleston?

Rarely were any members outside of their social circles ever mentioned. This social closeness reinforced statements of unity and consensus that were echoed throughout the forum.

The theme of Focus On Others revolved around whose job it would be in the future to resolve a problem. Unlike blame, in which the problem is caused by another group, the group is not seen to be at fault for the issue. One participant explained that she feels like saying to younger generations, "…here is a problem that my generation created" and "this is what you have to look forward to." Participants also acknowledged that generational gaps are preventing current progress from flowing at a much smoother rate. In discussing children, another participant focused on future family members, saying: "Why is it important? Because I have a child, and he may have children, and, I would like them to have an equal opportunity to be healthy and happy in their world."

The theme of Efficacy brought with it the feeling of defeat for many participants. When discussing preparing students for the future, one person explains: "It feels like an impossible task. I always focus on like what skills I need to give them because whatever information I give them right now is going to change as quickly as they grow up." The participant has an air of defeat, as the task is out of their hands. Another forum member expressed similar sentiments:

> Maybe we need to stop (beach) re-nourishment. I mean, you spend a huge amount of money on it. And for what? You finish the project and a month later you get hit by a hurricane and every bit of sand is back on the ocean.

This participant highlights the constant struggle that coastal communities must fight. Along with being an overall issue of efficacy, the problem of hurricanes is construed as an immediate threat.

The themes of History and Blame were closely related. Though Blame dealt with putting fault on a group of people, such as wealthy homeowners building in marshland, History dealt with what has been done in the past in a specific location. Participants dwelled on what the state of South Carolina and particular cities have done to protect or damage the coast, and how those same actions might continue or change into the future. The concepts of social and spatial distance resounded in this particular theme.

Though most participants were in consensus that implications were felt in their in-groups (i.e., their close social circles), they were often ready to blame people outside of their community for elongating the crisis. A huge divide between urban and rural communities was evident throughout the conversations, which it should be noted took place in the urban center of Charleston (though the forum did include suburban and rural residents from other areas of coastal South Carolina). During one of the discussions, urban participants spent a good chunk of time blaming coastal, rural fishermen, linking their malpractices with increased climate change implications. After a heated interaction, one participant noted this social and spatial divide by calling for more united effort going forward:

> We're saying this is a problem and it needs to be fixed, but you people over there [the coastal residents] with boats are the ones that have to fix it. We're [the inland residents] going to sit here and watch you. That's the problem all the way around. Somebody is always paying a bigger price for the mitigation.

History also came up when discussing past storms, such as Hurricanes Matthew and Irma, as they relate to what might happen in the future. One participant, for example, pointed at

other communities struggling with coastal changes, saying: "Well, look at the cod fishing in New England. Destroyed." Participants drew on these past events to understand what was happening in their own communities.

The second research question was addressed in an additional layer of coding focusing solely on 'triggers,' or the things that seemed to bring risk construal up in conversations. RQ2 asked: *What triggers participants to discuss temporal, spatial, social, or hypothetical distance from risk?* This portion of the analysis yielded three themes: Connection To Self, Problem, and Solution, as seen in Table 2 below. When discussing the triggers, it should be noted that one primary purpose of the sessions was to discuss potential solutions. Interestingly, most of the discussions revolved around a listing of what the climate and environmental problems are—the groups worked together to define problems *and* create a solution to the listed problems.

Table 2: *RQ2: What triggers participants to discuss temporal, spatial, social, or hypothetical distance from risk?*

Trigger	**Definition**
Connection to Self	Discussion triggered by the person's own life experiences and expertise.
Problem	Discussion triggered by naming or listing related problems and groups perceived as causing problems.
Solution	Discussion triggered by naming or listing related solutions.

The theme of Connection To Self often arose in introductions during the morning meetings, along with when discussing problems and solutions. Participants would say, for example, "because I am a teacher…" or a parent, or a fisherman, or someone who has worked with the forestry department in the past. When Connection To Self was present, the associated statement was made followed by a problem they see or a solution from their area of expertise.

It is important to note that social distance played a major role in bringing conversations to the forefront of discussion. When forum participants described possible solutions, they were framed as a collective effort; however, they did not necessarily believe that *all* South Carolinians would take such actions as seriously as them. One participant, for example, called out a wealthy residential area of South Carolina as an obstacle to eventual progress: "Yes, and those are the ones who get away with it and continue to do a practice that is unsustainable, and yet it comes out of our pocket one way or the other sooner or later." This sort of characterization of "us" versus "them" illustrated the far social distance that citizens expressed when coming up with effective, productive resolutions overall.

Discussion

This research illustrates that through a deliberative forum, participants were able to speak about a variety of climate change related topics and relate those to themselves, in addition to working toward potential solutions. Deliberation, which in this case was a facilitated face-to-face public forum with plenary and small-group discussions, seems to offer some promise in helping communities have thoughtful, productive conversations about climate change and work toward potential solutions and mitigation strategies to inform policy makers. Through our qualitative exploration of transcripts from the deliberative forum, we were able to better understand how issues of risk shaped the conversations and ultimately the solution-based outcomes developed by each deliberative group. Our analysis of risk perceptions was guided by the theoretical lens of CLT, which explains that an individual's perception of risk is dependent on the psychological distance of that risk from them, with more distant risks conceptualized in more abstract ways and discounted as a threat more than psychologically close risks (Zwickle & Wilson, 2011).

Each of the four domains of risk distance—spatial, temporal, social, and hypothetical—were noted in these discussions between South Carolina residents grappling with the effects of climate change. For South Carolina residents, the issue of climate change is an issue that they see and interact with regularly. Their location makes the risks of losing beaches, space for housing, and entire fisheries very real, making this risk spatially very near to them. Risks were also temporally close for participants, as many have experienced changes firsthand already. Had a similar forum included only people from other regions where they may not yet be facing imminent threats from climate change, the discussions might have been very different. Recall that CLT research on climate risk has found that construal manipulation is not always effective in encouraging pro-environmental behaviors, but that broader approaches to psychological construal on climate are more productive. Perhaps public deliberations on climate change should ensure at least some participants have first-hand experience with climate risks that they realize are psychologically close to them, allowing for a more thoughtful and nuanced conversation of the potential risks of our changing climate.

OCFF participants often shared a far social construal when discussing risk throughout the forum. Though most participants were motivated by in-groups, such as their family and neighborhoods, to explore resilience strategies, nobody could come up with a one-size-fits-all solution. The far construal, therefore, caused participants to feel as if they were in a current solution-stalemate that is inhibiting any progress. Though they felt stuck at times, participants continued to stress the importance of near social distance. The need to relate to others was a common theme at OCFF, where participants understood and acknowledged the importance of a cohesive, collective effort. Going forward, OCFF participants were more open to dropping social identities that prevented progress, and started addressing problems as “we” rather than “them.”

OCFF participants expressed a near hypothetical distance throughout a majority of their conversation. The looming threat of climate change, in general, caused participants to start speaking in a high-construal (i.e., more concrete) fashion. Initial conversations often revolved around general solutions; however, as the forum progressed, specific industries and businesses started to be included in discussions. Though OCFF participants generally agreed that climate change risks are occurring, it is important to acknowledge that this study focused on participants from a state that is already experiencing implications from this phenomenon. Hypothetical distance could be drastically different in areas that are not experiencing the types of distresses that South Carolina is currently facing (e.g., beach re-nourishment, fishery decline, and water quality issues).

Though they had different opinions, approaches, and solutions towards climate change risk and resilience topics, OCFF participants found that the forum provided an exemplary conversation ground for climate change discussions, reinforcing the claims made by Petts and Brooks (2006) that deliberative forums provide equal ground for citizens and experts to come up with a more cohesive solution:

> I'm also just impressed at how I feel like we started out a little bit on the negative when we were told no politics. Everybody was kind of like, "Oh, how are we not going into it?" But I am really impressed. I was also really impressed how we put it in a positive spin and that there are things for us to do. We're not all doom and gloom and we're wanting to talk to each other and not fight. If it was a different dynamic, we don't know, but it gives me hope.

This may not have been possible in other formats. For instance, without moderators the conversations might have been more polarized or even one-sided, but in this case all participants

were able to contribute. The groups also had specific goals to reach in building suggestions for policy changes and opportunities for action, which likely aided in the overall success of the deliberations. Focus groups without concrete goals may not have discussed specific, workable solutions in the same way that the participants from this group did. Finally, this forum provided a voice to members of the community who might not otherwise have a voice in this topic—providing a sense of efficacy to everyday community members as they worked with people in government and science research.

The mindset of groups evolved through the process of deliberation. Participants in OCFF began to think on a more "collective" level, in which issues were addressed in a more abstract way and incorporated various perspectives. The collective identity concept (Polleta & Jasper, 2001), therefore, began to centralize around the community. For example, narratives, where local businesses were prioritized, surged throughout discussions, and, though participants felt socially distant before the forum, they stressed the need for collective action:

> I think to create change that that method of going into a community and saying, "Here's what we need to do," is never a good way to do it. I think when you initially go into a community with different cultural backgrounds, different traditions, and different ways of thinking you kind of have to come to a solution together. So, working as a community within each separate organization and say, "Hey, what do you think?"

The deliberative model, therefore, should be considered as a possible solution in approaching difficult topics like this one that often lead to unproductive conflict.

This analysis provides an initial exploration of the application of CLT to the context of community deliberation on risk-related issues like climate change. Thematic analysis was chosen as a way for researchers to parse out the large amount of text and begin categorizing what was

there. Additional research on this topic could extend these concepts to additional deliberative events and other forms of community engagement. Researchers might further develop and test the themes laid out here to see how applicable they are to other instances of public discourse. One limitation of this study is that it focuses on a single deliberative forum held in the United States--perhaps further analysis of how citizens discuss risk might reveal different conceptions and construal of risk in different regions of the US and in other nations and cultures.

Conclusion

A common complaint about public policies is that they are not made by the people who are impacted by them most, or that citizen engagement is done in superficial ways that limit public input (Bergmans et al., 2015). Deliberative forums like the Our Coastal Future Forum may allow policy makers to hear first-hand accounts of how a problem impacts a community and make more responsive policy as a result. In this case, the community used a deliberative forum to discuss regional solutions to climate change—an issue that they must cope with on a daily basis. Through a qualitative thematic analysis of deliberative groups at the OCFF forum, this study revealed that participants regularly discussed problems before discussing the solutions, along with relating the problems back to themselves. The deliberative model, therefore, should be considered as a possible route to encourage community reflection on the myriad levels of risk faced due to climate change and citizen-developed strategies to address the existential crisis of anthropogenic climate change across vulnerable populations.

Not only do residents of South Carolina's coast experience the effects of climate change, but they are afraid; they feel vulnerable. One participant said of the economy and ecosystems:

> It scares me that this resource that we have -- that it's being polluted, it's being polluted at a crazy rate, and that the changes in temperature in the ocean may cause our shrimp to

> leave. How many people is that going to put out of jobs? How much would that change Charleston?

If change is not made, the shrimp will one day run out. Jobs will disappear. All that will be left are the shells of mansions in the marshlands once full of life.

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