Remembering a Nation's Past to Imagine Its Future: The Role of Event Specificity, Phenomenology, Valence, and Perceived Agency

Meymune N. Topcu and William Hirst
New School for Social Research, New York, New York

People are routinely involved in remembering the national past and imagining the national future, especially when making political decisions. These processes, however, have not been explored extensively. The present research aims to address this lacuna. In 2 experiments ($N = 203$), participants were asked to remember and imagine events that involve the United States. Later, they rated these events in terms of phenomenal characteristics, valence, and perceived agency (circumstance, self, other-people, nation). Their responses were also coded for specificity and content. Past and future responses correlated for specificity, phenomenology, valence, and the four domains of perceived agency. Despite this strong correspondence between past and future thinking, there were also differences. Future responses were less specific and more positive than past responses. Moreover, people thought that they themselves and their nation will have more control over their nation's future compared with the control they attributed to themselves and their nation over its past. The bias to be more optimistic about the nation's future was partly explained by this tendency to see the nation as more agentic in the future. Taken together, these results reveal striking similarities and divergences between autobiographical and collective mental time travel. The present research provides an exploration for the newly emerging field of collective mental time travel.

Keywords: collective future thinking, entitativity, perceived agency, phenomenology, valence

Supplemental materials: http://dx.doi.org/10.1037/xlm0000746.supp

"Will the United States be involved in a war next year?" "How will NASA send an astronaut to Mars?" "Who will win the next elections?" We explore in this paper one probable mechanism that people might utilize when trying to answer these and similar questions, though surely it is not the only possibility: People will use their knowledge about their nation's past to serve as elements in the construction of images of their nation's future, what we will refer to as *national mental time travel* (national MTT). Many people believe and act as if national MTT is possible. Political figures embrace it when they evoke the past to shape their public's image of the future, as Trump did when he said that he would "make America great again" and Slobodan Milosevic did when he pointed to the Battle of Kosovo of 1389 to justify the Balkan wars (Kaplan, 1993).

Coined by Tulving (1985), the term *mental time travel* (MTT) refers to a relation between the processes involved in remembering the past and imagining the future. To date, most work on MTT has focused on episodic MTT, that is, using memories of events from the personal past when imaging the personal future (Michaelian, Klein, & Szpunar, 2016; Szpunar, 2010). This research cannot easily be extended to collective MTT. As a result, there is a need to explore national MTT separately. After all, people often do not experience first-hand many of the critical events in a nation's history, whereas by definition, they experience first-hand events captured in episodic memory (Pillemer, 2009). Moreover, as many scholars of collective memory have emphasized, one cannot reduce routinely collective acts of remembering to the principle governing individual acts of remembering, for instance, those involving resilience or repression (Kansteiner, 2002). Even the work on semantic MTT cannot speak directly to the issue of national MTT. Although these studies unsystematically explored time travel of events of national import, the results were not framed in terms of collective memories and collective future thinking (Irish, 2016; Manning, Denkova, & Unterberger, 2013; Race, Keane, & Verfaellie, 2013).

Unfortunately, the research on national MTT is limited, a surprise given its common occurrence. Szpunar and Szpunar (2016) defined it as "act[s] of imagining an event that has yet to transpire on behalf of, or by, a group" (p. 378). There are two possible renderings of this definition. The first would focus on a group's

effort to imagine the future jointly (Michaelian & Sutton, 2017). The second would capture how individuals, even in isolation, employ memories of a collective past to imagine a collective future (see Hirst & Manier, 2008; Merck, Topcu, & Hirst, 2016). This second sense could be viewed as a collective analog to episodic MTT.

There is an emerging literature in psychology on how people remember their nation's past (see Hirst, Yamashiro, & Coman, 2018). In addition, a limited literature on collective future thinking underscores the point we are making: that the relation between episodic MTT and collective MTT is complex. For instance, it establishes that although people may be positively biased about their personal future, they are negatively biased about their nation's future (Shrikanth, Szpunar, & Szpunar, 2018). To date, the extant literature has not, however, probed directly the relation between national future thinking and national remembering.

It is important to note that we view national MTT as a type of collective MTT. There could be various sorts of collective MTT that could involve groups of vastly varying sizes—like families, ethnic groups, or businesses. The factors involved in collective MTT could function differentially for these varying sized groups. Therefore, we prefer to use the more specific term *national MTT* in this research, to underscore that these findings are relevant for nations and may not apply in the same way to other groups.

Given the paucity of relevant literature, the present foray into national MTT does not attempt to advance a complete model. Rather it explores features of remembering and future thinking that could play a role in national MTT, based on the work on episodic MTT. Three features highlighted repeatedly in the episodic MTT literature are specificity, phenomenology, and valence (e.g., D'argembeau & Van der Linden, 2004; Newby-Clark & Ross, 2003; Williams et al., 1996). To this we might add content: One might expect that if remembering and future thinking are related, the content of what is produced should also be related. A fifth feature that has been commented upon, but not explored directly in the episodic MTT literature is perceived agency. Finally, inasmuch as we are discussing groups, in this case, the nation as a group, one might also want to consider *entitativity*. Entitativity refers to the degree to which a group is thought of as a "*real thing*" here meant to refer to the degree to which a nation is thought of as a real thing (Campbell, 1958; Hamilton & Sherman, 1996; Yzerbyt, Judd, & Corneille, 2004). As we will discuss below, there are good reasons for believing that each of these six features could play a role in national MTT. For each, we will ask what their role is in national remembering, in national future thinking, and in the relation between the two.

Content, Specificity, and Phenomenology

Episodic MTT has been documented in a variety of ways, from identifying common brain structures involved in remembering and future thinking (e.g., Addis, Wong, & Schacter, 2007; Szpunar, Watson, & McDermott, 2007) to establishing similarities in the ways or means people remember the personal past and imagine their personal future (e.g., D'argembeau & Van der Linden, 2004; Williams et al., 1996). There has been little work comparing the content of autobiographical memories and prospection to determine the extent that they overlap, but, as noted for national memories and prospections, they should be related. As to the

specificity and phenomenal characteristics, the extant literature suggests that they are related when considering autobiographical memories and prospections (D'Argembeau, Raffard, and Van der linden, 2008; D'argembeau & Van der Linden, 2004; D'argembeau & Van der Linden, 2006; Williams et al., 1996). *Specificity* is assessed by examining the degree to which one can remember/imagine events that happen within a day (see Schacter, Gutchess, & Kensinger, 2009), whereas *phenomenology* is assessed by asking participants to rate, for instance, a memory's or prospection's vividness (D'argembeau & Van der Linden, 2006). In both instances, episodic MTT is characterized by corresponding levels of specificity and phenomenological richness for memories and prospections. This correspondence, however, does not mean that imagining the episodic future is equally specific or phenomenally rich as remembering the episodic past. In fact, it has been consistently found that people's future imaginations are less specific (Anderson & Dewhurst, 2009; Berntsen & Jacobsen, 2008; D'Argembeau et al., 2008) and phenomenally poorer than their memories (D'argembeau & Van der Linden, 2006).

We expect to find similar patterns for national MTT. According to Schacter and his colleagues when mentally traveling in time, people draw "on elements of past experience to envisage and mentally 'try out' one or more version of what might happen" (Schacter, Addis, & Buckner, 2008, p. 40). This process might hold for national MTT as much as episodic MTT. If one can draw upon "specific" or "phenomenologically rich" details from the national past, then one might be able to imagine a "specific" or "phenomenologically rich" national future. As a result, as with episodic MTT, one might expect that past responses should be strongly correlated with future responses in terms of both specificity and phenomenal characteristics.

Are these two features of a memory or a prospection related? That is, will specific memories or prospections also be phenomenologically rich? A specific event is likely to be phenomenally rich when it involves the person directly, in that autobiographical memories are often thought to involve visual imagery (Brewer, 1986). On the other hand, people can, and often do, remember specific historical events without the recollection necessarily forming a vivid image of the event. The circumstances in which one learned of a national event might be vivid, as they are for flashbulb memories (Brown & Kulik, 1977; Hirst et al., 2015), but memories of the event itself might not have an associated image. What image, vivid or not, comes to mind when remembering the Louisiana Purchase? One may remember that it involved the sale of land to the US by France, with the transfer occurring on December 20, 1803, but this propositional content does not have a readily accessible associated image for most Americans. Specificity and phenomenology, then, may be separable when considering national remembering and national future thinking.

Valence

What about valence? As already noted, people are inclined to remember positive events from their personal past and show a similar pattern for autobiographical prospections (Newby-Clark & Ross, 2003; Walker, Skowronski, & Thompson, 2003). For national memories, however, people routinely indicate negative events such as wars as the most important events in world history (Liu et al., 2005; Pennebaker et al., 2006; but see Cyr & Hirst,

2019). This negativity bias is also found in future national events (Shrikanth et al., 2018). The question here is what the relation is between the valence of memories and the valence of prospections. Despite the documented negativity bias, people might still be at least relatively more optimistic about their nation's future compared with its past. It has been consistently demonstrated that people view their personal future as more positive than their personal past (D'Argembeau & Van der Linden, 2006; Newby-Clark & Ross, 2003; Shao, Yao, Ceci, & Wang, 2010), perhaps because they can do nothing about their past, but can influence their future. We want to explore here the generalizability of this inclination: in particular, whether, as is the case for personal events, people imagine their national future to be more positive -or at least less negative- than their national past. People may be able to work to create a better future for themselves (Wilson & Ross, 2001), but can they do so for the nation—and can the nation as a group do so for itself?

Perceived Agency

People may believe that they can influence their future in part because they believe that they have the capacity to intentionally produce change (Bandura, 2006). Because we think of ourselves as agents, we plan, set goals, and elicit actions to affect the outcome of an event. This holds true for both past and future events. As a result, one might expect an intricate connection between perceived agency, remembering, future thinking, and MTT (Bandura, 2006; Bratman, 2000; Emirbayer & Mische, 1998; Kennett & Matthews, 2009).

When it comes to national MTT at least three different types of agents might be considered: self, other, and group. Self-agency refers to one's perception of an individual's ability to act agentically to create or shape an event. Other-agency refers to a similar ability, but now focuses on individuals other than the self. As to group agency, we refer to the agency attributed to a group of people rather than the individuals comprising the group. A long tradition exists in which groups are treated as acting "like a person" and as possessing agency (see List & Pettit, 2011; Tollefsen, 2015, for recent reviews). We do not have the space here to review it. Suffice it to say, people often talk as if a group *intends* (Sherman & Percy, 2010). There could be a number of groups active at the national level, but here we are interested in an all-encompassing group: the nation. When people state that Russia invaded Ukraine or that America waged war against terrorism, they are not speaking metaphorically, but attributing agency to Russia or America. Of course, not all countries evidence a strong level of group agency. Citizens of countries rife with internal conflict, like Libya, may have difficulty attributing agency to their country. The country does not act in a unified manner to achieve a common goal, they would assert. In the same way, even in stable countries, citizens may differ to the extent to which they envision their country as agentive. Many commentators concerned about the current political divisiveness in the United States lament that things can no longer "get done," another way of stating the United States, as an entity, now lacks agency.

A range of questions can be asked when considering agency and national MTT—be it self, other, or group. First, a preliminary, and as yet unaddressed question might be: Assuming that people can assess the level of control they perceive themselves, others, or the nation as a group having over future and past national events, what kinds of assessments might one expect? For self-agency, one might expect that people perceive, at best, only a minimal role that they themselves have in controlling national events—for both past and future. They may vote or demonstrate, but to a large extent, they may feel that these acts to do not substantially affect how events unfold. More plausibly, rather than themselves, people might see at least some "others" as agents for change, both in the past and in the future. An average citizen may not be able to affect change on a regular basis, but the President of the United States, or other political elites might. As to the nation, to the extent that people view it as agentic, then they might also see the nation as controlling, to a degree, both past and future events. The United States, as a reluctant hegemon, became involved in Vietnam in the past and might become involved in North Korea in the future. Thus, we would predict that people would assign higher levels of agency to the nation and to others in shaping past and future events than to the self.

As to the relative contribution of agency in shaping past versus future events, with respect to personal events, people tend to think that they will have more control over personal events in the future compared with personal events in the past (Topcu & Hirst, 2019; Williams & LeBoeuf, 2017). The relevant studies, however, have focused on self-agency and personal events. Is the same true for national events? We ask here whether people tend to attribute greater self- or group-agency to future national events than past national events. We argue that might be the case. The past is already gone, but the future might be perceived to be open to the exercise of control by the self and the nation (Caouette, Wohl, & Peetz, 2012).

Another set of questions might consider the relation between assessments of agency and characteristics of remembering and imagining national events. How much does attributions of self-, other- and group-agency to a past event influence how a national event might be remembered? Is it likely to be more specific, more phenomenologically rich, or more positive or negative as perceived agency increases? How much does such attributions also influence how a future event might be imagined? Will a tendency to attribute agency to a remembered past event lead one to imagine future events that involve similar agents?

Consider valence. We posit that the more an event is shaped by an agent, than by circumstance, especially by a self-agent or a group-agent, the more positive the event might be. Here we assume that agents largely work to achieve a positive outcome. Moreover, we posit that the bias to view the future in more positive terms can be explained by the tendency to attribute greater agency to oneself and one's nation in the future compared with the past. As noted, one can believe in the possibility of changing the future, that is, if there is some one, some agent, influencing the future. The past is, however, what it is. In sum, then, one might expect (a) a correlation between the positivity of valence ratings of an event and the extent to which people perceived an agent shaping the event, (b) a variation in the strength of this correlation depending on whether the agent is the self, other, or the nation as a group, and (c) a greater bias to be more optimistic about the nation's future than the past when people attribute more agency to themselves and their nation in the future compared with the past. A qualitative study by László and his colleagues (László, Ferenczhalmy, & Szalai, 2010) found that in historical textbooks Hungarians are

depicted as more agentive in positive national events, whereas they are depicted as less intentional and less active in negative national events.

As to specificity and phenomenology, both events shaped by circumstance or events governed by an agent can probably be both remembered and imagined in a specific and phenomenologically rich way, for example, both hurricanes and assassinations can be remembered in great detail and quite vividly (Hirst & Phelps, 2016). Therefore, we do not expect to find a direct correlation between the perceived agency of events and the specificity or phenomenal richness with which they are remembered or imagined.

A final set of question might explore whether perceived agency can act as a moderator for national MTT. We consider national MTT when measured in terms of specificity here and discuss national MTT when measured in terms of phenomenology in the section on Entitativity below. Mental time travelers might successfully travel across time if (a) there is an agent (human or nonhuman) that shapes, intentionally or unintentionally, past events of concern to the mental time traveler; and (b) if that agent acts consistently over time. The second criterion is offered because, for instance, other-agents acting in the future might not be the same or at least similar agents as those acting in the past, and, as a result, how one agent shapes past events may have little to do with how another agent influences future events. This second restriction may be difficult to meet when considering other-agents. The President of the United States who signed the Paris Climate Agreement is not the same President who may minimize restrictions on oil exploration in the future. Consistency is more likely when we deal with countries rather than people as agents, in particular, stable countries. The "America" that acted as a reluctant hegemon in the past might be expected to act as a reluctant hegemon in the future.

When two conditions are met, the presence of an agent might make it easier for people to use the specificity of past events to construct future events with similar specificity. For instance, the United States invasion of Afghanistan in response to the attack of September 11, 2001 on American territory, in part because the country would not turn over Osama Bin Laden, might lead one to predict that, if terrorists harbored in Somalia attacked the United States, then the United States would in turn invade Somalia. The specificity of the past event can more strongly guide future thinking and lead to a specific prospection, when one thinks that the United States acts agentically in a consistent fashion over time.

Entitativity

Entitativity is related to group agency, but not synonymous with it. A highly entitative group is thought to have common attributes, history, fate, and purpose (Brewer, Hong, & Li, 2004) and to be endowed with social meaning and a common origin (McGarty, Haslam, Hutchinson, & Grace, 1995). As a consequence, entitativity has two dimensions to it (see Brewer et al., 2004, for a discussion of this point). One captures the *actor-agent* role of high entitative groups. From this perspective, members of entitative groups have shared goals and bind together to undertake collective action. It is this facet of entitative groups that leads to the association between entitativity and group agency.

On the other hand, entitativity might be viewed as varying with a group's possession of shared fixed, inherent, and immutable features or characteristics (Haslam, Rothschild, & Ernst, 2000). The more one believes that a group has such essential features, the higher one would rate its entitativity. It is possible to consider an entity in terms of one of these dimensions of the term and not the other. For instance, for many, the community of people of the same race is thought to possess essential qualities that can be considered without necessarily considering how members of the same race work toward a common goal (Wai-man Ip, Chiu, & Wan, 2006).

In the context of this study we will test whether our measure of group agency is related to the measure of entitativity. If these two are unrelated we will treat entitativity as being informed by a *theory of essentialism* but not by a *theory of agency*. In that case our findings for group agency might not apply to entitativity. We speculate that when entitativity measures a nation's essentialism, entitativity might be related to the phenomenal characteristics of national events.

In many instances, as noted, national memories/projections probably need not possess phenomenological attributes. Indeed, this situation may be quite common, in part, because many national events are usually not experienced first-hand, especially what Manier and Hirst (2008) call distant semantic collective memories. One would, however, expect national events to be phenomenologically rich when the events are, for instance, televised lived, as was the case for the attack of 9/11, or captured in famous paintings or descriptive accounts, as is the case for some more distant events. The authors have a vivid memory for the signing of the Declaration of Independence and, as indicated above, not the signing of the Louisiana Purchase. This difference may arise because of the widespread familiarity with John Trumball's painting, which would guide the way we remember visually the signing of the Declaration of Independence. There is no similar famous painting of the signing of the Louisiana Purchase.

This connection between the presence of cultural artifacts "crystalizing" the past, to use Assmann and Czaplicka's (1995) terminology, and the phenomenological richness of recollections of national past events suggests that historical events from a nation perceived as highly entitative may, in many instances, be more likely to be remembered in a phenomenologically rich manner than a nation perceived as less entitative. The assumption here is that highly entitative countries, with a strong sense of their essential qualities, may have and may continue to create cultural artifacts that capture this essence. As Assmann and Czaplicka (1995) noted, nations construct cultural artifacts to ensure that their identity is preserved over time. We might, therefore, expect a correlation between ratings of entitativity, as a measure of essentialism, and ratings of the phenomenological richness of memories and prospections.

Does entitativity also act as a moderator for national MTT? Given that group agency may have little impact on the phenomenological richness of a memory or prospection, we do not expect that entitativity, in its agentic sense (i.e., if it correlates with group agency), will act as a moderator, when national MTT is measured in terms phenomenology. On other hand, given the possible relationship between entitativity, in its essentialist sense (i.e., if it is uncorrelated with group agency), and phenomenological richness, we might expect that this sense of entitativity may act as a moderator, at least when MTT is measured in terms of phenomenology. That is, entitativity might act as a glue that connects the phenomenological attributes of past and future national events.

Overview

In the present research, then, we explore (a) whether the content, specificity, phenomenology, and valence of remembered national past events and imagined future events are correlated, (b) whether national prospections would be characterized with less specific and phenomenally poorer events than national memories, (c) whether people are more positive about their national prospections than their national memories, despite a negativity bias associated with national events in general, (d) whether people attribute more agency to themselves and their nation for future events compared with past events, (e) if so, whether this tendency explains the positivity bias for future events, that is, is the following expression supported: "because my nation will have more control, the future will be brighter than the past," (f) whether self-, other-, and group-agency moderates national MTT when defined in terms of specificity, (g) whether higher ratings of entitativity is related to phenomenologically richer memories or prospections, and finally (h) whether entitativity moderates national MTT when defined in terms of phenomenology. The present research, then, provides a multifaceted study of different aspects of national MTT.

Experiment 1

To address the issues raised in the Introduction, we asked participants, who were always American, to remember 15 events that occurred in the nation's past and imagine 15 events that might occur in the nation's future. The memories and future projections always spanned 1–50 years into the past and future. We did not use the usual Galton-Crovitz word-cuing technique to solicit memories and future simulations (Crovitz & Schiffman, 1974; Galton, 1879). Rather, we adopted a more open elicitation procedure in that we did not want to limit what participants might potentially offer as a response (see Anderson & Dewhurst, 2009).

After providing national events, participants evaluated each event in terms of phenomenal characteristics, valence, year, and, perceived agency (circumstance, self, other-person, group). These assessments were followed by an entitativity scale and a demographic questionnaire. Later, responses were coded for content and specificity.

Method

Participants. We tested 58 participants, recruited through the web-based recruitment platform, Amazon Mechanical Turk (Buhrmester, Kwang, & Gosling, 2011). They received 7 USD in compensation. Two participants who wrote personal instead of national responses were eliminated. Of the remaining 56 participants, 21 were male, 33 female, and two, nondeclared. 8.9% of the participants were Asian American, 7.1% were African American, 74.5% were White/Caucasian, and 8.9% identified as Other. Age range was 23–59, with an average of 36.31 ($SD = 9.86$).

The data were collected under the supervision of the Institutional Review Board at The New School, in a manner consistent with ethical standards for the treatment of human subjects.

Materials. All materials used in this study and the second study are provided in the online supplemental material.

Past and future tasks. The general form of the instructions was similar to the ones used in Williams et al. (1996). Participants were asked to provide specific events that involve the United states. Specific events were defined as unique events that occur at a particular time and place and that can last a few minutes or hours but not more than a day. Participants were told that the events could be trivial or important. They were also asked to provide as much detail as possible. In the memory task, participants supplied 15 events involving the United States in the past 1–50 years. In the future task, they provided 15 events involving the United States that might occur 1–50 years into the future.

Phenomenal characteristics. Questions were adapted from the Memory Characteristics Questionnaire (Johnson, Foley, Suengas, & Raye, 1988). Participants evaluated each event using eight dimensions that measure different aspects of phenomenal characteristics, namely, sharpness, visual detail, sound detail, vividness, detailedness, comprehensibleness, location clarity, and time clarity (see Table 3), on a Likert-type scale of 1–7. Aggregate scores of phenomenology were calculated by taking the average scores of the 8 questions in our scale, separately for past ($\alpha = .97$) and future responses ($\alpha = .97$).

Time. For each past event participants indicated the year in which the event occurred. For future responses, they indicated the year when they think the event will occur in the future.

Valence. Participants rated the emotional valence of their memory/projection on a seven-point scale ($-3 = Negative$, $0 = Neutral$, $3 = Positive$), as well as, separately, its emotional intensity ($1 = Not intense$, $7 = Very intense$).

Agency. The query for self, other, and what we call *circumstance* agency were similar except the ending: "At the time of this event, how much do you think that the event was caused/might be caused by you/someone else/circumstances beyond anyone's control?" (adapted from Roseman, Spindel, & Jose, 1990). The question for group agency was more detailed: "Some people think groups act as a collectivity. So, it's not an individual or a small set of individuals that act but the group as a whole. Keeping this in mind, at the time of this event how much do you think that the event was caused/might be caused by America as a nation?" Participants used a Likert-type scale of 1–7. After these assessments, we asked participants to list the other people who caused/will cause the event if they think there were/will be any. They could write up to seven people for each response.

Entitativity. The entitativity measure was adapted from Castano, Yzerbyt, and Bourguignon (1999). The measure included seven statements like the following: "Americans have many characteristics in common," "Americans cooperate with each other," "United States has a real existence as a group." Participants indicated their degree of agreement on a 1–7 scale. An aggregate score of entitativity is computed by taking the average of the 7 questions ($\alpha = .91$). This scale provides a measure that combines both the agentic and essentialist qualities of entitativity. We will test whether the measure of entitativity obtained from this scale is correlated with our measure of agency. If it is not, then we will treat the scale as a measure of essentialism: The higher the entitativity score, the stronger the respondent believes that the country possesses essential features or properties.

Design and procedure. Participants first provided responses for the memory and prospection tasks, which were blocked, with the order of the tasks counterbalanced. They then evaluated each response's phenomenal characteristics, valence, time, and perceived agency. Each response appeared at the center of the screen.

Past and future responses were again blocked and counterbalanced. The questions probing phenomenal characteristics, time and agency appeared under each response, with the phenomenology, time, and agency questions blocked and counterbalanced. The order of questions within each block was randomized. Finally, there was the entitativity scale, with the questions randomized, followed by demographic questions about gender, age, occupational status, education and ethnicity.

Results

All data for this experiment and the second experiment (preregistered) is made public through the online platform: Open Science Framework (https://osf.io/atgny/?view_only=52c332672ed34cbc 83e5a1bebb139339).

Data preparation. Adapting from Anderson and Dewhurst (2009), responses were coded for specificity using a scale of 1–3, with 1 standing for categoric (continuous or recurring events that do not have a clear beginning or end), 2 standing for extended (events that start and end in a longer time-period than 24 hr), and 3 standing for specific (events with a specific time and place reference that happen within 24 hr; See Table 1 for examples). The first author and a second coder coded a subsample of randomly selected 20% of responses. There was 90% agreement between coders. After resolving the disagreements, the second coder coded the whole data. Specificity ratings were averaged for past and future responses to have a composite score of specificity (following the procedures of Brown et al., 2013 and Williams et al., 1996).

Aggregate phenomenology, time, valence, emotional intensity, and agency scores were computed by taking the average of the ratings for 15 events across past and future responses (see Table 3 for Ms and SDs). Past specificity was negatively skewed with a skewness of -2.32 ($SE = .319$). Self-agency past and future had skewness scores of 10.02 and 5.8 ($SE = .319$) and kurtosis scores of 17.86 and 7.04 ($SE = .628$). To address these non-normal distributions all analyses are done by bootstrapping (Efron & Tibshirani, 1993) using test statistics with the number of samples set at 1000. In within-subjects comparisons bootstrapped confidence intervals are generated for difference scores (Loftus & Masson, 1994). The bootstrapped confidence intervals are reported whenever relevant. For each variable, participants with z-scores that exceed 3.29 in absolute value (Field, 2013) are treated with caution. The analyses are done with and without these participants and the results without outliers are reported whenever there is a change in significance. Finally, the Benjamini–Hochberg method (Benjamini & Hochberg, 1995) is used to correct for multiple comparisons. The critical value for the false discovery rate is set at

.10. There was no effect of counterbalancing on any of the variables; 95% confidence intervals are reported for t tests throughout the data presentation.

Content. All responses were coded for the content of reported events. A coder (the first author) sorted individual responses into categories, putting similar responses into the same category whenever they seemed to refer to the same theme (e.g., w*ar/military*, *environment*, *financial*, etc.). A new category was added whenever a certain theme was referred to more than 1% of the time. The first author and a second coder coded 20% of the data according to these established categories. Interrater reliability was 72%. This relatively low level of agreement was due to the large number of content categories (13) and the fact that some events could be assigned with more than one content category. To address this problem the coders went over the codings together and specified how these overlapping events would be categorized. After resolving disagreements, the second coder coded the rest of the data. Table 2 presents the 13 categories in the coding scheme, as well as their mean proportions of mention. It should be noted that this analysis is not the central measurement for national MTT. Other analyses, with a much smaller range of coding choices, produced high level of agreement among coders.

Table 2 also presents correlational and difference results. To assess the degree to which participants were likely to offer similar content for memories and prospections, for each participant, we determined the proportion of generated events falling within categories. For each category, we then calculated the Spearman Rank correlations between these proportions for past events and future events. One difficulty in interpreting these correlations is that the proportions were low and, as a result, there were many ties when ranking the values to calculate the correlations. With this in mind, we initially focused our attention on those categories for which at least 10% of the memories fell into these categories. We chose the figure of 10% because that would mean that there was more than one response in the category, on average, in each participant's list. Only four categories met this criterion: *violence/terrorism*, *political/parties*, *cultural*, and *science/technology/space*. When corrected for multiple comparisons, three of the four correlations were significant. When we look at all the categories, regardless of the extent to which they are mentioned, two more categories yielded a corrected significant correlation: *environment* and *sports*. But, as noted, the correlations here might not be meaningful given the limited number of responses in these categories. As to differences in the proportions, participants responded with more *violence/terrorism*, *political party/actor*, and *cultural* related events for the past compared with the future. So, for instance, their memories

Table 1

Examples of Responses for Each Specificity Rating as a Function of Task

Time	Specificity ratings		
	Categoric (1)	Extended (2)	Specific (3)
Past	"Government spending went way out of control"	"The United States was involved in a war in Syria"	"In December 2012, there was a school shooting at Newtown Square, Connecticut"
Future	"The economy will continue to recover"	"I think that NASA will go to Mars and make a reality show about it."	"The United States will elect its first female president in 2020"

Table 2

Proportions for Each Content Category as a Function of Task (Past and Future), and Spearmen Rank Correlations Between Proportions of Past and Future Responses for Each Content Category

Categories	Experiment 1 (N = 56)			Experiment 2 (N = 147)		
	Past M (SD)	Future M (SD)	ρ	Past M (SD)	Future M (SD)	ρ
Violence/Terrorism	**.17 (.10)**	**.05 (.07)**	.19	**.16 (.16)**	**.06 (.08)**	*.21**
Environment	.07 (.08)	.09 (.11)	**.39****	.07 (.10)	.11 (.11)	.13
Financial	**.03 (.05)**	**.09 (.11)**	.05	**.04 (.07)**	**.08 (.10)**	**.23****
Political/Legislative	.06 (.07)	.08 (.10)	.01	**.07 (.10)**	**.12 (.12)**	*.17** (n = 146)
Political/Parties	**.26 (.12)**	**.15 (.10)**	**.40****	.16 (.15)	.14 (.12)	.07
Political/International	.03 (.05)	.05 (.06)	.13	.04 (.07)	.04 (.07)	.11
War/Military	.08 (.07)	.06 (.07)	.23	**.11 (.12)**	**.08 (.08)**	*.19**
Human rights	**.02 (.05)**	**.08 (.10)**	.18 (n = 54)	.05 (.10)	.06 (.09)	**.22****
Sports	.01 (.03)	.01 (.03)	**.35* (n = 53)**	**.06 (.08)**	**.03 (.09)**	**.26****
Cultural	**.11 (.11)**	**.03 (.05)**	**.32* (n = 55)**	**.09 (.12)**	**.01 (.03)**	*.17** (n = 143)
Science/Tech./Space	**.11 (.08)**	**.19 (.14)**	**.30***	**.10 (.11)**	**.16 (.16)**	**.23****
Health	**.02 (.05)**	**.05 (.07)**	.14	**.01 (.04)**	**.04 (.07)**	.04
Energy	—	—	—	**.004 (.02)**	**.02 (.05)**	−.004
Other	**.01 (.02)**	**.02 (.03)**	.18	.02 (.05)	.02 (.05)	.01

Note. Benjamini–Hochberg corrected significant differences and correlations between past and future responses for a content category are boldfaced. Corrected significant correlations for the four categories that were mentioned more than 10% of the time are in italics. Results are reported without outliers when the exclusion leads to a substantial difference in significance.
* $p < .05$. ** $p < .01$.

involved more violence/terrorism related events than their future imaginations. On the other hand, they responded with more *financial*, *human rights*, *science/technology/space*, *health* and other related events for the future compared with the past. Overall, focusing on those categories which yielded a reasonable number of responses, the content of national prospections reflected the content of national memories.

Time. The remembered events were more temporally distant than the imagined ones, $t(55) = 9.464$, $p < .001$, [3.56, 8.39], $d = 0.66$; see Table 3). However, the average number of years events stretched into the past and future correlated, $r = .43$, $p = .001$. That is, participants who remembered more distant past events, on average, tended to image more distant future events, on average. Age correlated with years into the past, $r = .43$, $p = .001$, that is,

Table 3

Means and Standard Deviations for All Variables of Interest and Pearson Correlations Between Past and Future Responses for Each Variable

Variable	Experiment 1 (N = 56)			Experiment 2 (N = 147)		
	Past M (SD)	Future M (SD)	r	Past M (SD)	Future M (SD)	r
Specificity	**2.56 (.26)**	**1.97 (.47)**	**.32***	**2.62 (.32)**	**2.25 (.47)**	**.33****
Phenomenal characteristics	**4.19 (.99)**	**3.71 (1.30)**	**.57****	4.18 (.99)	4.15 (1.19)	**.56****
Visual detail	**4.32 (1.14)**	**3.64 (1.55)**	**.46****	4.39 (1.08)	4.22 (1.33)	**.46****
Sound detail	**3.46 (1.21)**	**2.68 (1.36)**	**.47****	3.34 (1.28)	3.21 (1.48)	**.59****
Dim–Sharp	4.22 (1.02)	4.01 (1.45)	**.55****	4.23 (1.06)	4.36 (1.29)	**.46****
Vague–Vivid	4.22 (1.07)	3.95 (1.42)	**.58****	4.27 (1.03)	4.43 (1.29)	**.49****
Sketchy–Detailed	**4.17 (1.04)**	**3.85 (1.36)**	**.64****	4.22 (1.03)	4.19 (1.27)	**.48****
Confusing–Comprehensible	4.36 (1.06)	4.21 (1.38)	**.63****	**4.24 (1.12)**	**4.49 (1.29)**	**.54****
Location (Vague–Distinct)	**4.50 (1.07)**	**3.65 (1.46)**	**.45****	**4.52 (1.15)**	**4.27 (1.32)**	**.49****
Time (Vague–Distinct)	**4.28 (1.07)**	**3.66 (1.54)**	**.51****	4.26 (1.14)	4.08 (4.04)	**.46****
Valence (Negative–Positive)	**−.72 (.65)**	**.04 (1.16)**	**.30***	**−.64 (1.04)**	**.06 (1.14)**	**.38****
Emotional intensity	**3.87 (1.25)**	**5.09 (1.05)**	**.55****	**3.84 (1.32)**	**5.21 (.98)**	**.48****
Agency						
Circumstance-agency	3.02 (1.16)	3.00 (1.36)	**.70****	2.82 (1.22)	2.90 (1.22)	**.66****
Other person–agency	**4.83 (1.07)**	**4.38 (1.41)**	**.55****	**5.47 (1.10)**	**5.14 (1.02)**	**.57****
Self-agency	**1.27 (.52)**	**1.53 (.66)**	**.44** (n = 53)**	**1.29 (.77)**	**1.80 (1.00)**	**.76****
Group-agency	**3.61 (.89)**	**4.61 (1.20)**	**.40****	**3.51 (1.22)**	**4.65 (1.07)**	**.46****
Number of years	**18.75 (9.64)**	**12.78 (6.45)**	**.43****	**17.68 (9.90)**	**11.17 (7.57)**	**.33****
Entitativity		5.16 (1.09)			4.98 (1.09)	

Note. Boldface indicates a significant difference between past and future responses for that variable. Boldface also indicates the results that are significant after the Benjamini–Hochberg procedure. Results are reported without outliers when the exclusion leads to a substantial difference in significance.
* $p < .05$. ** $p < .01$. *** $p < .001$.

as people got older, they remembered older national events. The correlation between age and temporal distance for future events was not significant, $r = .19$, $p = .156$.

Specificity. Past specificity significantly correlated with future specificity $r = .32$, $p = .017$ (see Table 3), suggesting that national MTT could be measured in terms of specificity. As expected, past responses were more specific than future responses, $t(55) = 9.496$, $p < .001$, [0.46, 0.71], $d = 1.26$ (see Table 3).

Phenomenal characteristics. The correlation between past and future phenomenal characteristics scores was also significant, $r = .57$, $p < .001$, now suggesting that national MTT can also be measured in terms on phenomenology. Moreover, as expected, national memories were phenomenally richer than national prospections, $t(55) = 3.319$, $p = .002$, [0.19, 0.78], $d = 0.45$ (see Table 3). Although the pattern of results appears to be the same for specificity and phenomenal characteristics, these two measures did not correlate with each other for memories, $r = .12$, $p = .36$. The correlation was, however, significant for prospections, $r = .30$, $p = .024$. Although somewhat related for future thinking, our measures of specificity and phenomenal characteristics may be tapping to two separate constructs. This is not surprising given the point that we made in the Introduction: that many national memories or prospections may be quite specific, but not phenomenologically rich, as illustrated by memories Americans might have of the Louisiana Purchase.

Valence. The average valence ratings of past and future responses correlated, $r = .30$, $p = .026$, indicating that participants were more likely to imagine national events for the future with a similar valence that they remembered national events for the past. We tested for the presence of a positivity or negativity bias using a one-sample t test, using the neutral score of "0" as our baseline. For memories, there was a negativity bias, $t(55) = -8.266$, $p < .001$, [−0.90, −0.55], $d = -1.11$; for future responses, the average valence score did not differ from the baseline, $t(55) = 0.274$, $p = .785$, [−0.27, 0.35], $d = 0.03$, indicating there was not a bias (see Table 3). To have a more detailed picture of valence we also report the proportions for the break down of valence responses (see Table 4). These proportions confirm the findings above. Participants overwhelmingly rated past responses as *very negative* (36% of responses) rather than *very positive* (14% of responses). For future responses, however, the proportions of ratings for *very positive* (22%) and *very negative* (22%) were equal.

We also compared past and future valence (see Table 3). As expected, future responses were more positive than past responses, $t(55) = 4.985$, $p < .001$, [0.46, 1.07], $d = 0.67$, revealing a bias to be more optimistic about the national future compared with the national past. The comparison of past and future responses for the break down of valence ratings also confirm this bias (see Table 4). Participants were more likely to rate past events as *very negative* compared with future events, $t(55) = 4.994$, $p < .001$, [0.08, 0.19], $d = 0.70$. Moreover, they were more likely to rate future events as *very positive* compared with past events, $t(55) = 2.884$, $p = .006$, [0.02, 0.13], $d = 0.40$.

When examining emotional intensity (irrespective of valence), we found a significant correlation between past and future responses, $r = .55$, $p < .001$. When participants reported emotionally intense national memories, they were likely to report emotionally intense prospections. Future events were rated as more emotionally intense than past events, $t(55) = 8.245$, $p < .001$, [0.92, 1.51], $d = 1.16$ (Table 3; see Van Boven & Ashworth, 2007 for a similar finding with respect to autobiographical memories).

Agency. Agency scores correlated across past and future responses, regardless of the type of agency (see Table 3). That is, people who perceived past events as controlled by an agent similarly believed that the future could be controlled by an agent. We subjected agency scores to a 2 (task: past and future) × 4 (agency: circumstance, other-person, self, and group) repeated measures ANOVA. The main effect of task is not informative for our interests since it reflects the results for an aggregate score of agency. There was a main effect of agency, $F(3, 165) = 138.274$, $p < .001$, $\eta_p^2 = .71$. Attribution of agency was lowest for the self, followed by circumstances, $t(55) = 10.756$, $p < .001$, [1.31, 1.91], $d = 1.44$, which was in turn followed by group, $t(55) = 6.009$, $p < .001$, [0.74, 1.47], $d = 0.76$, and finally by other-people, $t(55) = 2.469$, $p = .017$, [0.09, 0.89], $d = 0.33$.

The main effect for agency was qualified by an interaction between task and agency, $F(3, 165) = 18.687$, $p < .001$, $\eta_p^2 = .25$. The comparison between past and future responses was significant for self-, $t(55) = -3.497$, $p = .001$, [−0.11, −3.50], $d = -0.46$, group-, $t(55) = -6.363$, $p < .001$, [−1.32, −0.69], $d = -0.85$, and other-person-agency, $t(55) = 2.754$, $p = .008$, [0.12, 0.77], $d = 0.36$ but not for circumstance-agency, $t(55) = 0.108$, $p = .914$, [−0.25, 0.28], $d = 0.01$. People imagined both themselves and their nation to have greater agency in their nation's future

Table 4
Means and Standard Deviations for the Proportions of Valence Responses

	Experiment 1 (N = 56)		Experiment 2 (N = 147)	
	Past	Future	Past	Future
Proportion	M (SD)	M (SD)	M (SD)	M (SD)
Proportion of "3"	**.14 (.11)**	**.22 (.23)**	**.13 (.16)**	**.22 (.22)**
Proportion of "2"	.11 (.11)	.11 (.14)	**.09 (.13)**	**.12 (.14)**
Proportion of "1"	**.08 (.07)**	**.12 (.12)**	**.09 (.12)**	**.12 (.15)**
Proportion of "0"	**.10 (.10)**	**.14 (.13)**	.14 (.14)	.13 (.17)
Proportion of "−1"	.07 (.08)	.08 (.11)	**.09 (.13)**	**.05 (.11)**
Proportion of "−2"	**.14 (.12)**	**.11 (.13)**	**.13 (.14)**	**.09 (.13)**
Proportion of "−3"	**.36 (.18)**	**.22 (.22)**	**.32 (.26)**	**.25 (.23)**

Note. Boldface indicates Benjamini–Hochberg corrected significant differences between past and future responses for that variable.

compared with its past. They, however, imagined that other people will have less agency in their nation's future compared with its past (see Table 3).

The number of different other-person-agents listed for the 15 memory responses ($M = 12.02$, $SD = 7.06$) was higher than the number of different other-person-agents listed for the 15 future responses ($M = 9.73$, $SD = 9.69$), $t(55) = 2,293$, $p = .026$, [0.29, 4.28], $d = 0.31$. Moreover, people did not list the same "other-agents" as driving past and future events. The average number of overlapping agents across past and future responses was only 1.14 ($SD = 1.57$). For instance, a participant listed the following agents for his past responses: "George Bush, Neil Armstrong, NASA, The killer, Nixon, Deep Throat, Senate, Congress, Al Gore." For his future responses, he wrote: "Google, US government, Computer programmers, TV networks, The media, Donald Trump, Terrorists, ISIS, Congress." The only overlap here is "Congress." As this example indicates, participants overwhelmingly wrote nonperson agents, like institutions or groups of people, rather than individuals, even though the question explicitly asked for other individuals involved in the event. For past responses, only an average of 40% ($SD = 0.26$) of all the listed other agents were people. For future responses, the number was much lower, 25% ($SD = 0.36$). The difference between the two was significant, $t(47) = 4.295$, $p < .001$, [0.09, 0.26], $d = 0.62$. People were more likely to list actual people as other-person-agents in the past compared with the future.

Agency and valence. For past responses, the correlations of valence ratings with self-, $r = .30$, $p = .026$ and group-agency, $r = .44$, $p < .001$ scores were positive and significant. In the case of future responses, valence ratings correlated negatively with circumstance-, $r = -.33$, $p = .013$, but not with self-agency or group-agency (respectively, $r = .26$, $p = .051$; $r = .22$, $p = .109$). Thus, participants tended to rate a remembered event as more positive when they viewed their nation and themselves as having more control over that event. There was only a trend for a similar effect for future responses.

We were interested to see whether the difference between future and past agency scores predicted the difference between future and past valence scores, that is, whether people were more likely to assign more positive ratings to future events if they tended to attribute more agency to themselves and their nation in future events. We subjected these difference scores to a standard multiple regression analysis with valence-difference ($M = 0.77$, $SD = 1.15$) as the dependent variable, and self-agency-difference ($M = 0.26$, $SD = 0.56$) and group-agency-difference ($M = 1$, $SD = 1.18$) as independent variables. One multivariate outlier was detected using the Mahalanobis distance, and removing him from the analyses led to a change. Therefore, the results are reported without that outlier. The overall model was significant, $F(2, 52) = 3.964$, $p = .025$, $R^2 = .13$, $R^2_{adjusted} = .10$. Self-agency-difference did not significantly predict valence-difference ($\beta = .06$, $t(53) = 0.425$, $p = .673$, [−0.51, 0.79]), whereas group-agency-difference did ($\beta = .35$, $t(53) = 2.621$, $p = .011$, [0.08, 0.58]). That is, as suggested, when people attribute more agency to their nation in its future compared with its past, they view its future in a more positive light compared with its past. So, relative optimism for the nation's future is at least partly explained by people's tendency to attribute more agency to their group in the future compared with the past.

Agency and specificity. As expected, there were no significant correlations between specificity and agency scores, regardless of the type of agency we examined. As to the moderating effects of agency, as mentioned previously, we found little evidence that the agents that might bring about past events are the same as those that might be thought to play a role in future events. As a result, one might not expect that other-agency should moderate the relation between past and future specificity and this is what we found, $\Delta R^2 = .0003$, $F(1, 52) = 0.018$, $p = .895$. On the other hand, as suggested in the Introduction, a nation may remain fairly stable over time and might be expected to shape both past and future national events. This possibility would especially hold for a country like the United States. Therefore, we tested whether group agency moderates the relation between past and future specificity.

The result was not significant when past specificity ($b = -1.29$, $t(55) = -1.197$, $p = .237$, [−3.45, 0.87]) and group-agency (memory; $b = -1.33$, $t(55) = -1.772$, $p = .082$, [−2.84, 0.18]) were entered in the first step of a stepwise regression analysis, with future specificity the outcome variable. In the second step the interaction term between past specificity and group-agency (memory) was entered ($b = 0.52$, $t(55) = 1.766$, $p = .083$, [−0.07, 1.10]). It explained a marginal increase in variance in future specificity, $\Delta R^2 = .05$, $F(1, 52) = 3.118$, $p = .083$. As Figure 1 reveals, when people attribute greater levels of agency to their group in the past, the connection between their past and future thinking gets marginally stronger in terms of specificity.

We speculated that the moderating effect of group agency might be more robust for the last 10 responses. The first few recollections would likely be overlearned and overexposed historical events, such as the terrorist attack of September 11, whereas the last responses would require a more active role of reconstruction. People might rely on group agency more to use that past to construct the future when an active reconstruction is involved in remembering the past. To test this claim, we conducted the same moderation analysis by using either the first or last 10 responses. When first 10 responses were included in the analyses, the moderation was not significant, $\Delta R^2 = .004$, $F(1, 52) = 0.234$, $p = .630$. When we did the same analyses with the last 10 responses, however, the moderation effect become much stronger, $\Delta R^2 = .06$, $F(1, 52) = 3.947$, $p = .052$. Although these results suggest that participants are more likely to use group agency as a means to imagine the future when they involve in a greater effort of constructing the past and the future, the results need to be further tested given their marginal nature.

Entitativity and phenomenal characteristics. When assigning entitativity ratings to the United States, participants apparently did not treat it as related to group agency, in that the correlations between entitativity ratings and group agency ratings were not significant (past, $r = .16$, $p = .241$; future, $r = .17$, $p = .198$). We consider then that the entitativity score assessed here was a measure of essentialism. In the Introduction, we speculated that for highly entitativity countries—in the essentialist sense—recollections of past national events should be more phenomenally rich, because the essence of a country is in part captured through cultural artifacts depicting, often visually, the nation's past. With this in mind, we correlated the entitativity score with phenomenal characteristics, as well as with specificity ratings. Only correlations involving phenomenology were significant (phenomenal characteristics (past), $r = .40$, $p = .003$; (future), $r = .44$, $p = .001$; specificity (past) $r = -.16$, $p = .243$; specificity (future) $r = .24$, $p = .074$).
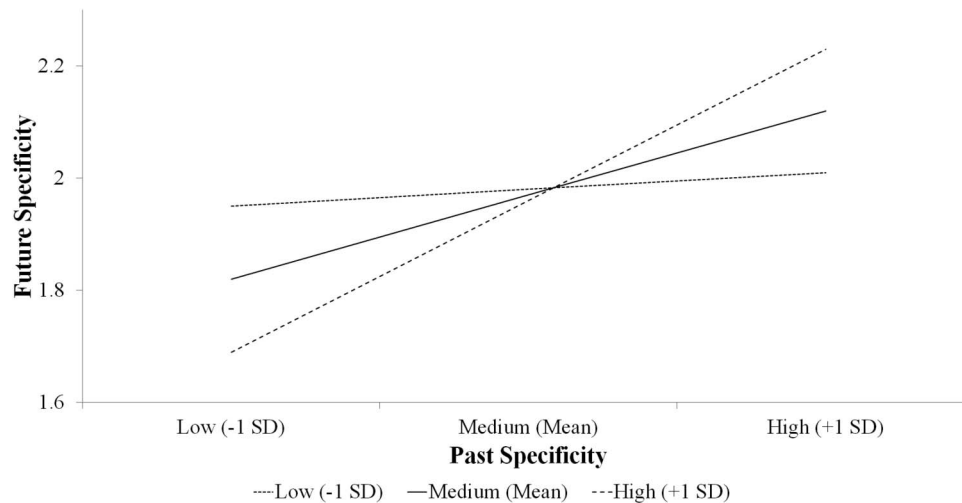
Figure 1. Group-agency (memory) as moderator for the relation between past and future specificity. The relation between past and future specificity is stronger when group-agency (memory) is high compared with when it is low.

Because of the strong correlations between entitativity and phenomenology, we might expect entitativity to moderate National MTT, but only when measured in terms of phenomenal characteristics. In the model, we entered the score on the entitativity scale, as a moderator for the relation between past and future phenomenal characteristics. In the first step, past phenomenal ($b = -1.47$, $t(55) = -2.045$, $p = .046$, $[-2.91, -0.03]$) and entitativity ($b = -1.20$, $t(55) = -2.310$, $p = .024$, $[-2.24, -0.16]$) was entered. The interaction term for past phenomenal and entitativity ($b = 0.38$, $t(55) = 2.976$, $p = .004$, $[0.12, 0.64]$) was entered in the second step. It explained a significant increase in variance in future phenomenal characteristics scores, $\Delta R^2 = .09$, $F(1, 52) = 8.857$,

$p = .004$. As Figure 2 illustrates, when people fail to think of their nation as possessing essential qualities, there is almost no relation between past and future phenomenal characteristics scores. As people see their nation as possessing essential qualities, the correspondence between past and future responses gets stronger in terms of phenomenal characteristics.

Experiment 2

Most of the hypotheses outlined in the Introduction are confirmed by the findings in Experiment 1. We wanted, however, to replicate our results in a second study, with a larger sample size. In
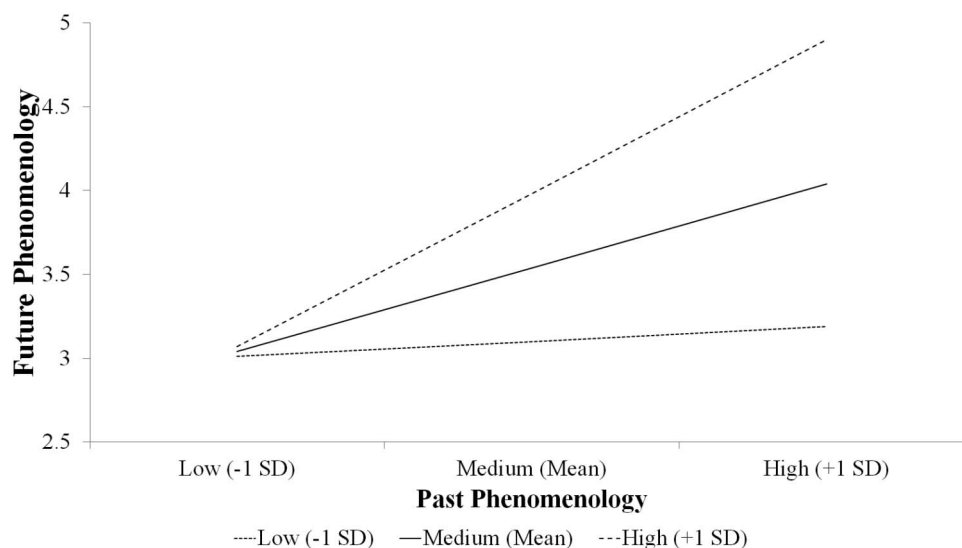

Figure 2. Entitativity as a moderator for the relation between past and future phenomenal characteristics. The relation between past and future phenomenology is stronger when entitativity is high compared with when it is low.

this second study, we also aimed to test whether the moderation effect we found for agency over specificity would be more robust when participants are required to be involved in a more reconstructive effort when remembering the past. It would also be interesting to explore whether political identification might play any role in national MTT. We therefore measured political identity in Experiment 2.

Method

Participants. A priori power analysis (G*Power 3.1; Faul, Erdfelder, Lang, & Buchner, 2007) indicated that to replicate the moderation results for agency in Experiment 1 ($f^2 = .06$ at $\alpha = .05$ and $1 - \beta = .80$), the sample size should be at least 152. Therefore, data was collected from 154 participants using Amazon Mechanical Turk. Seven participants were eliminated due to failure to follow instructions (i.e., writing past instead of future, or personal instead of national responses), leaving a final sample of 147 (47 were male, 96 female, and four nondeclared); 7.5% of the participants were Asian American, 9.5% were African American, 6.1 were Hispanic/Latino, 74.1% were White/Caucasian, and 2.8% identified as Other. Age range was 20–73, with an average of 38.08 ($SD = 11.37$). By the time we discovered that we needed to eliminate several participants, the political context between the first recruitment and what would have been a second recruitment had changed significantly. We feared that the change might be large enough to affect the responses of the participants, particularly in terms of content. We therefore decided to work with the final sample of 147.

Materials.

Past and future tasks. We first determined the most frequently mentioned events among the first five responses in Experiment 1. 9/11 was mentioned by 80% of the participants, Obama's election by 45%, Moon landing by 25%, and Hurricane Katrina by 20%. Since Trump's election was also mentioned frequently (by 32%) among future events, it was also included among the most frequently mentioned five events. With these results in mind, we slightly modified the general instructions for past and future tasks. They were the same as Experiment 1, except that participants were asked to provide 10 events instead of 15 for both past and future tasks, but to not include 9/11, Obama's election, Moon Landing, Hurricane Katrina, and Trump's election among their responses. Most of the participants followed this instruction; only 27 participants included at least one event from the list of events not to be mentioned. The average number of included events among these 27 participants was only 2.1 ($SD = 1.83$). Excluding these participants from the analyses did not lead to a substantial change, so the analyses is done with all participants.

Evaluation of responses. Following the same procedures as Experiment 1, participants evaluated their responses in terms of phenomenal characteristics, time, valence, emotional intensity and agency. Because there was not a noteworthy result for the listed "other-agents" in Experiment 1, to keep the study within an acceptable time frame, in this study we did not ask participants to list the other people involved in the events.

Entitativity and political identity measures. The entitativity measure was similar to that used in Experiment 1, with one difference: the wording of two questions, which now made them reverse-coded items. Three additional questions were included to

measure political identity: the first two questions probed the political party participants identified with in general and the candidate they voted for in the 2016 presidential elections. The last question measured political ideology. Participants placed themselves on a scale from 1 (*extremely liberal*) to 7 (*conservative*). They also had the option not to place themselves on the scale.

Results

Data preparation. To train coders, the first author coded 10% of the responses together with four coders. Next, the data were divided into two and two coders were assigned to each portion. For specificity, interrater reliabilities were 79% and 93% for the two coder groups. For content, interrater reliabilities were 83% and 96%. This content coding here used the revised coding manual discussed in the section on Experiment 1 and, as we had hoped, produced much higher levels of reliability. Since more than 1% of future events were energy-related, a new category for "energy" was added in this study. Disagreements were resolved for both specificity and content.

The procedures for skewness/kurtosis, outliers, and multiple comparison corrections were the same as Experiment 1. Counterbalancing did not have an effect on any variable of interest.

Content. As Table 2 indicates, proportion of responses was generally low. We therefore focused on categories for which at least 10% of the memories fit into this category, as we did in Experiment 1. Three of the four categories that figured in the analyses in Experiment 1, also figured in Experiment 2: *violence/terrorism*, *political/parties*, and *science/technology/space*. To this list, we add *war/military*. Of these four categories, three yielded corrected significant correlations between past and future responses, the exception being *political/parties*. Participants responded with more *violence/terrorism*, *war/military*, *sports*, and *cultural* related events for the past compared with future, whereas they responded with more *environment*, *financial*, *political/legislative*, *science/technology/space*, *health*, and *energy* related events for the future compared with the past. Although some of the results for content differ from Experiment 1, the patterns were largely similar across the two experiments. In particular, as in Experiment 1, focusing on the more frequently mentioned categories, the content of national prospections reflected the content of national memories.

Time. Replicating the results in Experiment 1, the average number of years people mentally traveled into the past and future correlated, $r = .33$, $p < .001$ (see Table 3). Participants were more likely to remember more distant events from the past compared with the future, $t(146) = 7.642$, $p < .001$, [4.82, 8.19], $d = 0.63$. Moreover, age correlated with number of years in the past, $r = .41$, $p < .001$, indicating, once again, that older people tend to remember older events from the national past. As before, age did not correlate with number of years in the future, $r = .09$, $p = .912$.

Specificity. As in Experiment 1, the correlation between past and future specificity was significant, $r = .33$, $p < .001$. In addition, past responses were more specific than future responses, $t(146) = 9.549$, $p < .001$, [0.29, 0.44], $d = 0.79$ (again, see Table 3).

Phenomenal characteristics. Past and future responses correlated in terms of phenomenal characteristics, $r = .56$, $p < .001$. Unlike Experiment 1, past events were not phenomenally richer

than future events, $t(146) = 0.342$, $p = .743$, $[-0.14, 0.20]$, $d = 0.03$ (see Table 3). As in Experiment 1, specificity and phenomenology did not correlate for both past, $r = -.10$, $p = .247$ and future, $r = -.14$, $p = .084$, suggesting that they tap different constructs for national MTT.

Valence. As in Experiment 1, past and future responses correlated in terms of valence, $r = .38$, $p < .001$. The negativity bias we found for past responses in Experiment 1 was also present in this experiment, $t(146) = -7.499$, $p < .001$, $[-0.81, -0.47]$, $d = -0.61$. And, again, no bias was present for future responses, $t(146) = 0.613$, $p = .541$, $[-0.13, 0.24]$, $d = -0.05$ (see Table 3). Moreover, as in Experiment 1, the difference in valence between past and future responses was significant, $t(146) = -6.970$, $p < .001$, $[-0.90, -0.50]$, $d = 0.57$. That is, in both experiments, participants were more optimistic about their nation's future compared with its past. These results are further confirmed by the proportions for the break down of valence responses (see Table 4).

Finally, exhibiting a similar effect as valence, emotional intensity scores correlated for past and future, $r = .48$, $p < .001$. Moreover, participants imagined more emotionally intense events for the future compared with the past, $t(146) = 13.736$, $p < .001$, $[1.17, 1.57]$, $d = 1.13$.

Agency. Past and future responses correlated across the four agency measures (see Table 3). A 2 (Task) × 4 (Agency) mixed ANOVA was conducted. The main effect of agency was significant, $F(3, 438) = 44.462$, $p < .001$, $\eta_p^2 = .75$. As in Experiment 1, participants attributed greater agency to other-people than the group, $t(146) = 11.445$, $p < .001$, $[1.01, 1.43]$, $d = 0.94$. They attributed more agency to the group compared with circumstances, $t(146) = 10.278$, $p < .001$, $[0.99, 1.45]$ $d = 0.85$. And finally, they thought that circumstances were more in control than the self over national events, $t(146) = 14.998$, $p < .001$, $[1.14, 1.49]$, $d = 1.24$.

The main effect for agency was qualified by an interaction between task and agency, $F(3, 438) = 56.579$, $p < .001$, $\eta_p^2 = .28$. As in Experiment 1, the comparison between past and future responses was significant for other-person, $t(146) = 4.098$, $p < .001$, $[0.17, 0.49]$, $d = 0.33$, group, $t(146) = -11.427$, $p < .001$, $[-1.33, -0.94]$, $d = -0.94$, and self-agency, $t(146) = -9.592$, $p < .001$, $[-0.62, -0.41]$, $d = -0.78$, but it was not significant for circumstances agency, $t(146) = -0.903$, $p = .368$, $[-0.24, 0.09]$, $d = -0.07$ (see Table 3). That is, as in Experiment 1, participants thought they their nation and themselves will have more agency in their nation's future compared with its past. On the other hand, they thought that other people will have less agency in the future compared with the past.

Interestingly, in this experiment, age negatively correlated with self-agency future, $r = -.24$, $p = .004$, indicating that younger participants were more likely to attribute greater agency to themselves in their nation's future.

Agency and valence. We correlated valence scores with agency attributions. Valence correlated with self-agency for both past, $r = .33$, $p < .001$ and future responses, $r = .27$, $p = .001$. A similar connection was present for group-agency (past, $r = .28$, $p = .001$; future, $r = .28$, $p = .001$). These results indicate that people are likely to view events as more positive when they think that their group or themselves had/will have more control over the event, replicating the results in Experiment 1 for group agency and suggesting a place for self-agency at best hinted at in Experiment 1.

Using a standard multiple regression analyses, we also tested whether the difference between future and past responses for self- ($M = 0.48$, $SD = 0.60$) and group-agency ($M = 1.10$, $SD = 1.18$) predict the difference for valence ($M = 0.69$, $SD = 1.18$). Two multivariate outliers were detected using the Mahalanobis distance, and removing them from the analyses led to a change; the results are reported without those outliers. The overall model was significant, $F(2, 142) = 4.128$, $p = .018$, $R^2 = .13$, $R^2_{adjusted} = .04$. Self-agency-difference did not significantly predict valence-difference ($\beta = .08$, $t(144) = 0.992$, $p = .323$, $[-0.16, 0.48]$), whereas group-agency-difference did ($\beta = .21$, $t(53) = 2.537$, $p = .012$, $[0.05, 0.37]$). As in Experiment 1, these results indicate that people view their nation's future more positively partly because they think that their nation as a group will have more agency in the future compared with the past.

Agency and specificity. The significant correlations between specificity and agency scores were the ones with group-agency past, $r = -.20$, $p = .017$ and future, $r = -.18$, $p = .025$, self-agency future, $r = -.31$, $p < .001$, and circumstance-agency future, $r = -.18$, $p = .031$. Experiment 1 failed to find any significant correlations. As to the moderating effect of group agency on past-future specificity, which was at best marginal in Experiment 1, there was one multivariate outlier and removing him or her from the analyses led to a change. Group-agency (memory) did not moderate the relation between past and future specificity, $\Delta R^2 = .01$, $F(1, 142) = 2.480$, $p = .117$. Coupled with the marginal results of Experiment 1, the present result suggests that group agency may not play a straightforward role in connecting the past to future events, at least in the present instance.

Entitativity and phenomenal characteristics. Entitativity, again, did not correlate with group-agency past, $r = -.03$, $p = .679$ and future, $r = .06$, $p = .466$. So, it is treated as a measure of essentialism. Replicating Experiment 1, entitativity correlated with phenomenal characteristics scores for past, $r = .20$, $p = .016$ and future, $r = .17$, $p = .043$. However, unlike Experiment 1, entitativity did not moderate the relation between past and future phenomenology, $\Delta R^2 = .008$, $F(1, 142) = 1.743$, $p = .189$. We discuss this difference with the result of Experiment 1 in the General Discussion.

Political identification. Ideologically, 32.7% of the participants identified as a Democrat, 24.5% as Republican, 32.7% as Independent, and 3.4% as something else. When asked about their voting decisions in 2016 presidential elections, 42.9% indicated that they voted for Clinton, 26.5% for Trump, 5.4% for an Independent candidate; 24% said that they did not vote. The mean for the political ideology scale was 3.41 ($SD = 1.69$), indicating that most people placed themselves near the center. When we looked at the break down of ratings, 50.3% placed themselves at the liberal side of the spectrum, 24.8% at the center, and 24.7% at the conservative side.

We checked whether political identity influence the content of events. Voting behavior did not have a significant effect on any of the content categories. Political identification did have an effect on political party/actor, $F(3, 145) = 5.491$, $p = .001$, and environment related events in the future, $F(3, 145) = 3.998$, $p = .009$. Democrats responded with more political party/actor related events (events that directly involved a political actor or a political party) for the future compared with Republicans, $t(91) = 3.460$, $p = .001$, $[0.04, 0.14]$, $d = 0.83$. Democrats also responded with

more environment related events for the future compared with Independents, $t(103) = 3.213$, $p = .002$, [0.03, 0.11], $d = 0.67$. Moreover, political ideology significantly correlated with the proportion of political party/actor related events in the future, $r = -.32$, $p < .001$. As people became more conservative they responded with less political party/actor events in the future.

Next, we tested whether political identity had any influence on all the other variables of interest. After correcting for multiple comparisons, there was no effect of political identification or voting decisions on the tested variables. The correlations between political ideology and test variables only yielded significant results for entitativity, $r = .30$, $p < .001$, and self-agency-difference, $r = -.27$, $p = .001$. Conservative participants were more likely to view their nation as entitative compared with liberals. Interestingly, as people become more liberal they were more likely to attribute greater agency to themselves in their nation's future compared with its past.

These results indicate that political identity does not have a substantial effect on the characteristics of national MTT, other than its effect on the prevalence of political party and environment related events for the future and its effect on the difference score for self-agency.

General Discussion

Future cognition is an inseparable part of our memory system, a claim grounded in part in the strong connection between the way people remember their past and the way they imagine their future (Schacter, Addis, & Buckner, 2007; Suddendorf & Corballis, 2007; Szpunar, 2010). Scholars have recently started to extend the extant research on episodic MTT to the collective domain (Merck et al., 2016; Szpunar & Szpunar, 2016; Shrikanth et al., 2018). The present research contributes to our understanding of collective MTT by studying the ways a variety of factors—some of which have been widely studied in the episodic MTT literature-impact remembering a nation's past, imagining its future, and traveling between a nation's past and its future. In the Introduction, we raised eight main issues.

Content, Specificity, Phenomenology, and Valence

We first wanted to assess the similarity between national memories and national prospections, the assumption being that if national MTT occurs, then the two should be similar. National memories strongly correlated with prospections in terms of content, specificity, phenomenal characteristics, and valence. In particular, in the present study, participants were more likely to imagine specific, phenomenally rich, and positive future national events if their memories of past national events had corresponding levels of these attributes. Moreover, for the frequently mentioned content categories, the content of national prospections reflected the content of national memories. Although our results are correlational and hence limit claims about causality, they do suggest that, to a degree, the reconstructive processes associated with episodic MTT may also be at work for national MTT.

One might argue that the correlations reflect similar response styles rather than a direct connection between remembering the past and imagining the future. To an extent, this concern does not preclude a role for the former in the latter. In fact, previous research revealed that response styles (D'Argembeau & Van der Linden, 2006) and personality characteristics (Quoidbach, Hansenne, & Mottet, 2008) had similar effects on past and future thinking. Researchers presented these findings to lend further support to the idea that similar mechanisms are in play when people remember the past and imagine the future. If remembering is reconstructive, then the style of responding will shape this reconstruction and hence its product, the memory. The remembering and imagining the future are associated because, in a similar way, response style might also influence the construction of an image of the future. Future research could explore how tight this association might be for national MTT. For instance, utilizing a specificity induction procedure (Schacter & Madore, 2016) one can test whether the specificity of memories of past national events can uniquely and directly predict the specificity of future national events.

This initial conclusion does not mean that remembering a nation's past and imagining its future are the same, inasmuch as we observed several relevant differences. We speculated in the Introduction that people would remember their nation's past more specifically than their nation's future, as they do when episodically mentally time traveling (Anderson & Dewhurst, 2009; D'Argembeau et al., 2008). And they did. Moreover, we speculated, and found that national memories were phenomenally richer than their national prospections, although this difference needs to be approached cautiously, in that it was only found in Study 1. Inasmuch as personal memories are consistently phenomenological richer than personal prospections (D'Argembeau & Van der Linden, 2004; D'Argembeau & Van der Linden, 2006), the discrepancy between Studies 1 and 2 underscores that national MTT may be more complex and less straightforward than episodic MTT, at least when defined in terms of phenomenology. People experience the personal past first-hand and, consequently, often can and do remember the personal past in a phenomenally rich way (Brewer, 1986; see also D'Argembeau & Van der Linden, 2004). As a result, one would expect that the phenomenology of personal memory should indeed be routinely richer than the phenomenology of personal prospections. In contrast, people frequently fail to experience a national event first-hand, and, consequently, they may fail to remember a national past event imagistically. Of course, some cultural artifacts, such as famous paintings and movies, may supply images of past national events on which to build phenomenologically rich memories, but we suspect that many national events do not have the requisite associated cultural artifacts.

Another issue raised in the Introduction involved the valence of memories and prospections. To a degree, the present results are consistent with other reports. As documented elsewhere, we found a negativity bias for national memories (Liu et al., 2005; Pennebaker et al., 2006, but see Cyr & Hirst, 2019), which diverges from the robust positivity bias observed for memories of the personal past (Newby-Clark & Ross, 2003; Walker et al., 2003). We did not find the negativity biased reported by Shrikanth et al. (2018) for national prospections. We suspect that the difference between our more equally distributed evaluations and the negativity bias reported by Shrikanth et al. (2018) may reflect differences in the tasks we used. An interesting finding is the relative optimism we discovered for the future. People may view their nation's future in negative or nonpositive terms, but they nevertheless view it more positively than they view their nation's past. This bias has also

been reported for episodic future thinking (Newby-Clark & Ross, 2003; Thomsen, Olesen, Schnieber, & Tønnesvang, 2014; Wenglert & Rosen, 2000). Whether individuals think the future of a nation will be positive or negative, they judge it to be better than what has transpired in the past.

Perceived Agency and Entitativity

A novel contribution of the present research was the inclusion of perceived agency and entitativity as factors in remembering a nation's past, imagining its future, and mentally time traveling from a nation's past to its future. In every act of remembering the past and imagining the future, there is an agent undertaking these actions. Our interest here, however, is not with the person remembering or imagining, but with the agent(s) that give shape to past or future national events. We considered the self, other-people, and the nation as possible agents. Participants did not view the self, but did view others as more in control of national events. They also viewed the nation as a group as exhibiting control. At least in the current instance, in which few constraints were placed on what others participants could involve, the others who shaped past events differed from those who shaped future events. Moreover, when naming the others involved in national events, people were more likely to indicate institutions, such as the congress, the senate, NATO, or NASA, rather than individuals. That is, they focused more on groups rather than individuals as agents when thinking about their nation's past and future, even when instructed to think about other *people*.

Interestingly, people thought that both their nation as a group and they themselves will have more agency in the future than in the past. With respect to self-agency, although the level of control participants attributed to themselves for national events was low, they still thought that there is a greater possibility to control future national events compared with past national events. Such line of reasoning might help account for people's activism, even if the odds seem against the action being effective. In this regard, national MTT was similar to episodic MTT, inasmuch as people also tend to attribute more control to themselves in their personal future compared with their personal past (Topcu & Hirst, 2019; Williams & LeBoeuf, 2017).

As for a similar bias for group-agency, it is consistent with the finding that people experience more collective guilt for their nation's future wrongdoings. After all, the future is more controllable than the now lost past (Caouette et al., 2012). Interestingly, both the role of self- and group-agency might also explain the relative optimism we noted when it comes to future thinking. Self- and group-agency attributions strongly correlated with valence. Moreover, the difference between future and past valence was predicted by the corresponding difference in group-agency. A partial explanation for the bias to be more optimistic for the national future, then, might be that, because people believe that their group will have more agency in the future than the past, they view the future in a more positive light than the past. Group-agency, then, become an important factor to consider when exploring, in particular, the valance of national memories, national prospections, and the relation between the two.

Although a concept related to group-agency is entitativity, in our studies, participants based their ratings on its essentialist sense (Brewer et al., 2004). In the Introduction, we speculated that when

people view their nation in strongly essentialist terms—in the present, one captured by high ratings of entitativity—they should produce phenomenologically rich memories, inasmuch as such nations often create artifacts to ground their essentialism (Assmann & Czaplicka, 1995). As a result, there should be, as there was, a close connection between the entitativity and the phenomenology of past and future events. As people viewed their nation to be more entitative, they remembered and imagined more phenomenally rich national events.

The one issue we raised in the Introduction that did not yield clear results concerned the ways these group factors—that is, group agency and entitativity—might moderate national MTT. When MTT was measured in terms of specificity, neither of these factors acted as moderators. When it was measured in terms of phenomenology, in Experiment 1, when people viewed their nation as entitative the relation between past and future phenomenology got stronger. These results, however, were not replicated in Experiment 2.

There could be several explanations for the failure to replicate and the inconclusive results considering group-agency. First, the moderating effects for entitativity in Experiment 1, for instance, might be due to the specifics of that study. When the design changed slightly in Experiment 2, the effects were no longer there. The second study may have precluded just those events that might have produced the moderating effects found in Study 1. Second, the political circumstances in which the data are collected might account for this difference across studies. These studies probed national events, and people, on average, came up with events that stretched, on average, only 14 years into the past and future. Because of this limited time period one could expect the political climate of the time to play a substantial role in what people remember/imagine and how they remember/imagine it. The first data were collected in May 2016—a few months before the 2016 presidential elections, when the future leadership was uncertain—and the second data were collected in July 2018—approaching the second year of Trump's presidency. These dates correspond to two different political climates. The shift from preelection to Trumpian postelection time frames may account for the higher ratings of other-agency and the lower ratings of entitativity observed in Study 2. These varying effects on agency and entitativity may have interacted with the way people remember and imagine national events to alter the degree to which agency and entitativity could serve as a moderating factor. Third, to establish a moderating effect, we may need to have more control over what events people remember and what they imagine about the future. As it is, the questions are extremely open-ended, making any conclusion about the role of agency and entitativity on national MTT unwarranted at present. Finally, we asked people to rate the agency and entitativity of the United States, which is a stable and well-established country. We might begin to see both agency and entitativity act as a moderator if we undertook a cross-nation comparison rather than the more limited within-nation comparison of the present study. The results concerning moderation should not obscure the major finding here: Two variables that capture attributes of a group—group-agency and entitativity—had marked effects on aspects of remembering a nation's past and imagining its future: group-agency influencing the observed bias to be more optimistic about the national future and entitativity affecting the phenomenology of national memories and prospections.

Conclusion

The present research, then, establishes that national MTT is possible. In some ways, it is similar to personal MTT, given what the extant literature reports about personal MTT. Be it personal or national, mental time travel occurs whether considering specificity, phenomenology, and valence. Moreover, people image the future to be more positive than the way they remember the past, again, whether one considered personal or national MTT. On the other hand, differences arise: For instance, unlike personal memories and prospections, national memories are not necessarily phenomenologically richer than national prospections. To the extent that a strong image can sway judgment, the judgments made on the basis of national memories or prospections may differ in kind from those based on personal memories or prospections. The positivity bias observed in the literature on personal future thinking also does not extend to national future thinking. This finding needs to be balanced, however, with the bias we observed, defined as a future more positive than the past. Interestingly, we found that this bias is based in part on the role of agency in shaping past and future events, especially group agency. The more participants attributed group-agency to their nation for future national events, especially in comparison with past national events, the greater their optimism. Moreover, the phenomenological richness of both memories and prospections depended on another group variable—entitativity. Clearly, when considering the way people remember a nation's past, imagine its future, and travel between its past and future, one needs to take into account both group-agency and entitativity.

The study of national MTT is not only important for the cognitive study of human memory but could also have implications for various areas of social and political psychology. As alluded in the Introduction, politicians usually utilize the national past to move their followers to imagine the national future in a certain way. A deeper understanding of national MTT, then, could help scholars better understand the consequences of political efforts to shape collective memories and collective future thinking. Other areas in which this research might have strong relevance would include group perception and intergroup relations. One might investigate how different perceptions of the collective past and future can feed into contemporary conflicts between groups and how changing representations of the past might shape these conflicts.

In sum, the collective memory of a nation provides the nation with its identity (Hirst et al., 2018; Wertsch, 2002; Wertsch & Roediger, 2008), as does the way citizens of the nation collectively imagines its future. The present work is an attempt to establish a means of unraveling some of the dynamics governing the complex processes underlying the relation between national collective remembering, national collective future thinking, and national collective mental time travel.

References

Addis, D. R., Wong, A. T., & Schacter, D. L. (2007). Remembering the past and imagining the future: Common and distinct neural substrates during event construction and elaboration. *Neuropsychologia, 45,* 1363–1377. http://dx.doi.org/10.1016/j.neuropsychologia.2006.10.016

Anderson, R. J., & Dewhurst, S. A. (2009). Remembering the past and imagining the future: Differences in event specificity of spontaneously generated thought. *Memory, 17,* 367–373. http://dx.doi.org/10.1080/09658210902751669

Assmann, J., & Czaplicka, J. (1995). Collective memory and cultural identity. *New German Critique, NGC, 65,* 125–134. http://dx.doi.org/10.2307/488538

Bandura, A. (2006). Toward a psychology of human agency. *Perspectives on Psychological Science, 1,* 164–180. http://dx.doi.org/10.1111/j.1745-6916.2006.00011.x

Benjamini, Y., & Hochberg, Y. (1995). Controlling the false discovery rate: A practical and powerful approach to multiple testing. *Journal of the Royal Statistical Society: Series B (Methodological), 57,* 289–300. http://dx.doi.org/10.1111/j.2517-6161.1995.tb02031.x

Berntsen, D., & Jacobsen, A. S. (2008). Involuntary (spontaneous) mental time travel into the past and future. *Consciousness and Cognition, 17,* 1093–1104. http://dx.doi.org/10.1016/j.concog.2008.03.001

Bratman, M. E. (2000). Reflection, planning, and temporally extended agency. *The Philosophical Review, 109,* 35–61. http://dx.doi.org/10.1215/00318108-109-1-35

Brewer, M. B., Hong, Y. Y., & Li, Q. (2004). Dynamic entitativity. In V. Yzerbyt, C. M. Judd, & O. Corneille (Eds.), *The psychology of group perception* (pp. 19–29). New York, NY: Psychology Press.

Brewer, W. F. (1986). What is autobiographical memory? In D. C. Rubin (Ed.), *Autobiographical memory* (pp. 25–49). New York, NY: Cambridge University Press. http://dx.doi.org/10.1017/CBO9780511558313.006

Brown, A. D., Root, J. C., Romano, T. A., Chang, L. J., Bryant, R. A., & Hirst, W. (2013). Overgeneralized autobiographical memory and future thinking in combat veterans with posttraumatic stress disorder. *Journal of Behavior Therapy and Experimental Psychiatry, 44,* 129–134. http://dx.doi.org/10.1016/j.jbtep.2011.11.004

Brown, R., & Kulik, J. (1977). Flashbulb memories. *Cognition, 5,* 73–99. http://dx.doi.org/10.1016/0010-0277(77)90018-X

Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science, 6,* 3–5. http://dx.doi.org/10.1177/1745691610393980

Campbell, D. T. (1958). Common fate, similarity, and other indices of the status of aggregates of persons as social entities. *Behavioral Science, 3,* 14–25. http://dx.doi.org/10.1002/bs.3830030103

Caouette, J., Wohl, M. J., & Peetz, J. (2012). The future weighs heavier than the past: Collective guilt, perceived control and the influence of time. *European Journal of Social Psychology, 42,* 363–371. http://dx.doi.org/10.1002/ejsp.1857

Castano, E., Yzerbyt, V. Y., & Bourguignon, D. (1999). *Measuring entitativity.* Unpublished manuscript, Catholic University of Louvain, Belgium.

Crovitz, H. F., & Schiffman, H. (1974). Frequency of episodic memories as a function of their age. *Bulletin of the Psychonomic Society, 4,* 517–518. http://dx.doi.org/10.3758/BF03334277

Cyr, T. G., & Hirst, W. (2019). What's ours is yours: Recall of history for lesser-known countries is guided by one's own national history. *Memory, 27,* 480–494. http://dx.doi.org/10.1080/09658211.2018.1529246

D'Argembeau, A., Raffard, S., & Van der Linden, M. (2008). Remembering the past and imagining the future in schizophrenia. *Journal of Abnormal Psychology, 117,* 247–251. http://dx.doi.org/10.1037/0021-843X.117.1.247

D'Argembeau, A., & Van der Linden, M. (2004). Phenomenal characteristics associated with projecting oneself back into the past and forward into the future: Influence of valence and temporal distance. *Consciousness and Cognition, 13,* 844–858. http://dx.doi.org/10.1016/j.concog.2004.07.007

D'Argembeau, A., & Van der Linden, M. (2006). Individual differences in the phenomenology of mental time travel: The effect of vivid imagery

and emotion regulation. *Consciousness and Cognition, 15,* 342–350. http://dx.doi.org/10.1016/j.concog.2005.09.001

Efron, B., & Tibshirani, R. (1993). *An introduction to the bootstrap*. New York, NY: Chapman & Hall. http://dx.doi.org/10.1007/978-1-4899-4541-9

Emirbayer, M., & Mische, A. (1998). What is agency? *American Journal of Sociology, 103,* 962–1023. http://dx.doi.org/10.1086/231294

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39,* 175–191. http://dx.doi.org/10.3758/BF03193146

Field, A. (2013). *Discovering statistics using IBM SPSS Statistics*. London, UK: Sage.

Galton, F. (1879). Psychometric experiments. *Brain, 2,* 149–162.

Hamilton, D. L., & Sherman, S. J. (1996). Perceiving persons and groups. *Psychological Review, 103,* 336–355. http://dx.doi.org/10.1037/0033-295X.103.2.336

Haslam, N., Rothschild, L., & Ernst, D. (2000). Essentialist beliefs about social categories. *British Journal of Social Psychology, 39,* 113–127. http://dx.doi.org/10.1348/014466600164363

Hirst, W., & Manier, D. (2008). Towards a psychology of collective memory. *Memory, 16,* 183–200. http://dx.doi.org/10.1080/09658210701811912

Hirst, W., & Phelps, E. A. (2016). Flashbulb memories. *Current Directions in Psychological Science, 25,* 36–41. http://dx.doi.org/10.1177/0963721415622487

Hirst, W., Phelps, E. A., Meksin, R., Vaidya, C. J., Johnson, M. K., Mitchell, K. J., . . . Olsson, A. (2015). A ten-year follow-up of a study of memory for the attack of September 11, 2001: Flashbulb memories and memories for flashbulb events. *Journal of Experimental Psychology: General, 144,* 604–623. http://dx.doi.org/10.1037/xge0000055

Hirst, W., Yamashiro, J. K., & Coman, A. (2018). Collective memory from a psychological perspective. *Trends in Cognitive Sciences, 22,* 438–451. http://dx.doi.org/10.1016/j.tics.2018.02.010

Irish, M. (2016). Semantic memory as the essential scaffold for future oriented mental time travel. In K. Michaelian, S. B. Klein, & K. K. Szpunar (Eds.), *Seeing the future: Theoretical perspectives on future-oriented mental time travel* (pp. 389–408). New York, NY: Oxford University Press. http://dx.doi.org/10.1093/acprof:oso/9780190241537.003.0019

Johnson, M. K., Foley, M. A., Suengas, A. G., & Raye, C. L. (1988). Phenomenal characteristics of memories for perceived and imagined autobiographical events. *Journal of Experimental Psychology: General, 117,* 371–376. http://dx.doi.org/10.1037/0096-3445.117.4.371

Kansteiner, W. (2002). Finding meaning in memory: A methodological critique of collective memory studies. *History and Theory, 41,* 179–197. http://dx.doi.org/10.1111/0018-2656.00198

Kaplan, R. D. (1993). *Balkan ghosts: A journey through history*. New York, NY: Macmillan.

Kennett, J., & Matthews, S. (2009). Mental time travel, agency and responsibility. In M. R. Broome & L. Bortolotti (Eds.), *Psychiatry as cognitive neuroscience* (pp. 326–350). New York, NY: Oxford University Press. http://dx.doi.org/10.1093/med/9780199238033.003.0017

László, J., Ferenczhalmy, R., & Szalai, K. (2010). Role of agency in social representations of history. *Societal and Political Psychology International Review, 1,* 31–43.

List, C., & Pettit, P. (2011). *Group agency: The possibility, design, and status of corporate agents*. New York, NY: Oxford University Press. http://dx.doi.org/10.1093/acprof:oso/9780199591565.001.0001

Liu, J. H., Goldstein-Hawes, R., Hilton, D., Huang, L. L., Gastardo-Conaco, C., Dresler-Hawke, E., . . . Kashima, Y. (2005). Social representations of events and people in world history across 12 cultures. *Journal of Cross-Cultural Psychology, 36,* 171–191. http://dx.doi.org/10.1177/0022022104272900

Loftus, G. R., & Masson, M. E. (1994). Using confidence intervals in within-subject designs. *Psychonomic Bulletin & Review, 1,* 476–490. http://dx.doi.org/10.3758/BF03210951

Manier, D., & Hirst, W. (2008). A cognitive taxonomy of collective memories. *Cultural memory studies: An international and interdisciplinary handbook* (pp. 253–262). Berlin, Germany: Walter de Gruyter.

Manning, L., Denkova, E., & Unterberger, L. (2013). Autobiographical significance in past and future public semantic memory: A case-study. *Cortex, 49,* 2007–2020. http://dx.doi.org/10.1016/j.cortex.2012.11.007

McGarty, C., Haslam, S. A., Hutchinson, K. J., & Grace, D. M. (1995). Determinants of perceived consistency: The relationship between group entitativity and the meaningfulness of categories. *British Journal of Social Psychology, 34,* 237–256. http://dx.doi.org/10.1111/j.2044-8309.1995.tb01061.x

Merck, C., Topcu, M. N., & Hirst, W. (2016). Collective mental time travel: Creating a shared future through our shared past. *Memory Studies, 9,* 284–294. http://dx.doi.org/10.1177/1750698016645236

Michaelian, K., Klein, S. B., & Szpunar, K. K. (2016). *Seeing the future: Theoretical perspectives on future-oriented mental time travel*. New York, NY: Oxford University Press. http://dx.doi.org/10.1093/acprof:oso/9780190241537.001.0001

Michaelian, K., & Sutton, J. (2017). Collective mental time travel: Remembering the past and imagining the future together. *Synthese*. Advance online publication. http://dx.doi.org/10.1007/s11229-017-1449-1

Newby-Clark, I. R., & Ross, M. (2003). Conceiving the past and future. *Personality and Social Psychology Bulletin, 29,* 807–818. http://dx.doi.org/10.1177/0146167203029007001

Pennebaker, J. W., Páez, D., Deschamps, J. C., Rentfrow, J., Davis, M., Techio, E. M., . . . Zubieta, E. (2006). The social psychology of history: Defining the most important events of the last 10, 100, and 1000 years. *Psicología Política, 32,* 15–32.

Pillemer, D. B. (2009). "Hearing the news" versus "being there": Comparing flashbulb memories and the recall of first-hand experiences. In O. Luminet & A. Curci (Eds.), *Flashbulb memories: New Issues and new perspective* (pp. 125–140). New York, NY: Psychology Press.

Quoidbach, J., Hansenne, M., & Mottet, C. (2008). Personality and mental time travel: A differential approach to autonoetic consciousness. *Consciousness and Cognition, 17,* 1082–1092. http://dx.doi.org/10.1016/j.concog.2008.04.002

Race, E., Keane, M. M., & Verfaellie, M. (2013). Losing sight of the future: Impaired semantic prospection following medial temporal lobe lesions. *Hippocampus, 23,* 268–277. http://dx.doi.org/10.1002/hipo.22084

Roseman, I. J., Spindel, M. S., & Jose, P. E. (1990). Appraisals of emotion-eliciting events: Testing a theory of discrete emotions. *Journal of Personality and Social Psychology, 59,* 899.

Schacter, D. L., Addis, D. R., & Buckner, R. L. (2007). Remembering the past to imagine the future: The prospective brain. *Nature Reviews Neuroscience, 8,* 657–661. http://dx.doi.org/10.1038/nrn2213

Schacter, D. L., Addis, D. R., & Buckner, R. L. (2008). Episodic simulation of future events: Concepts, data, and applications. *Annals of the New York Academy of Sciences, 1124,* 39–60. http://dx.doi.org/10.1196/annals.1440.001

Schacter, D. L., Gutchess, A. H., & Kensinger, E. A. (2009). Specificity of memory: Implications for individual and collective remembering. In P. Boyer & J. Wertsch (Eds.), *Memory in mind and culture* (pp. 83–112). New York, NY: Cambridge University Press. http://dx.doi.org/10.1017/CBO9780511626999.006

Schacter, D. L., & Madore, K. P. (2016). Remembering the past and imagining the future: Identifying and enhancing the contribution of episodic memory. *Memory Studies, 9,* 245–255. http://dx.doi.org/10.1177/1750698016645230

Shao, Y., Yao, X., Ceci, S. J., & Wang, Q. (2010). Does the self drive mental time travel? *Memory, 18,* 855–862. http://dx.doi.org/10.1080/09658211.2010.514272

Sherman, S. J., & Percy, E. J. (2010). The psychology of collective responsibility: When and why collective entities are likely to be held responsible for the misdeeds of individual members. *Journal of Law and Policy, 19,* 137–170.

Shrikanth, S., Szpunar, P. M., & Szpunar, K. K. (2018). Staying positive in a dystopian future: A novel dissociation between personal and collective cognition. *Journal of Experimental Psychology: General, 147,* 1200–1210. http://dx.doi.org/10.1037/xge0000421

Suddendorf, T., & Corballis, M. C. (2007). The evolution of foresight: What is mental time travel, and is it unique to humans? *Behavioral and Brain Sciences, 30,* 299–313. http://dx.doi.org/10.1017/S0140525X07001975

Szpunar, K. K. (2010). Episodic future thought: An emerging concept. *Perspectives on Psychological Science, 5,* 142–162. http://dx.doi.org/10.1177/1745691610362350

Szpunar, K. K., Watson, J. M., & McDermott, K. B. (2007). Neural substrates of envisioning the future. *Proceedings of the National Academy of Sciences of the United States of America, 104,* 642–647. http://dx.doi.org/10.1073/pnas.0610082104

Szpunar, P. M., & Szpunar, K. K. (2016). Collective future thought: Concept, function, and implications for collective memory studies. *Memory Studies, 9,* 376–389. http://dx.doi.org/10.1177/1750698015615660

Thomsen, D. K., Olesen, M. H., Schnieber, A., & Tønnesvang, J. (2014). The emotional content of life stories: Positivity bias and relation to personality. *Cognition and Emotion, 28,* 260–277. http://dx.doi.org/10.1080/02699931.2013.815155

Tollefsen, D. (2015). *Groups as agents.* New York, NY: Wiley.

Topcu, M. N., & Hirst, W. (2019). *The role of perceived-agency in episodic mental time travel.* Manuscript in preparation.

Tulving, E. (1985). Memory and consciousness. *Canadian Psychology/Psychologie canadienne, 26,* 1–12. http://dx.doi.org/10.1037/h0080017

Van Boven, L., & Ashworth, L. (2007). Looking forward, looking back: Anticipation is more evocative than retrospection. *Journal of Experi-mental Psychology: General, 136,* 289–300. http://dx.doi.org/10.1037/0096-3445.136.2.289

Wai-man Ip, G., Chiu, C. Y., & Wan, C. (2006). Birds of a feather and birds flocking together: Physical versus behavioral cues may lead to trait-versus goal-based group perception. *Journal of Personality and Social Psychology, 90,* 368–381. http://dx.doi.org/10.1037/0022-3514.90.3.368

Walker, W. R., Skowronski, J. J., & Thompson, C. P. (2003). Life is pleasant—And memory helps to keep it that way! *Review of General Psychology, 7,* 203–210. http://dx.doi.org/10.1037/1089-2680.7.2.203

Wenglert, L., & Rosen, A. S. (2000). Measuring optimism–pessimism from beliefs about future events. *Personality and Individual Differences, 28,* 717–728. http://dx.doi.org/10.1016/S0191-8869(99)00133-6

Wertsch, J. V. (2002). *Voices of collective remembering.* New York, NY: Cambridge University Press. http://dx.doi.org/10.1017/CBO9780511613715

Wertsch, J. V., & Roediger, H. L., III. (2008). Collective memory: Conceptual foundations and theoretical approaches. *Memory, 16,* 318–326. http://dx.doi.org/10.1080/09658210701801434

Williams, E. F., & LeBoeuf, R. A. (August 25, 2017). *Starting your diet tomorrow: Consumers believe they will have more control over the future than they did over the past.* http://dx.doi.org/10.2139/ssrn.1892484

Williams, J. M. G., Ellis, N. C., Tyers, C., Healy, H., Rose, G., & MacLeod, A. K. (1996). The specificity of autobiographical memory and imageability of the future. *Memory & Cognition, 24,* 116–125. http://dx.doi.org/10.3758/BF03197278

Wilson, A. E., & Ross, M. (2001). From chump to champ: People's appraisals of their earlier and present selves. *Journal of Personality and Social Psychology, 80,* 572–584. http://dx.doi.org/10.1037/0022-3514.80.4.572

Yzerbyt, V., Judd, C. M., & Corneille, O. (Eds.). (2004). *The psychology of group perception.* New York, NY: Psychology Press. http://dx.doi.org/10.4324/9780203644973