

## Collective Memories across 11 Nations for World War II: Similarities and Differences Regarding the Most Important Events



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World War II affected almost all nations of the world. The events of the war and their consequences are still being debated today, decades later. In two studies, we examined how people from different countries remembered the war. Over 100 people from each of 11 countries (Australia, Canada, China, France, Germany, Italy, Japan, New Zealand, Russia, UK, and USA) provided their opinions of the 10 most important events of WWII. Participants also completed an event recognition test to assess their general knowledge of the war. The results demonstrate great consensus for important events, but also some striking differences wherein people frequently nominated events that were important to only their country. Particularly, Russians’ collective memory for the war is quite different from that of its former allies and enemies. Study 2 replicated the findings in former Axis countries when the survey was provided in their native languages rather than in English.

### *General Audience Summary*

To understand how people of different nations view and interpret the world, it is useful to know what they remember of events from past conflicts. We examined collective memories of World War II of people from 11 countries (8 Allies, 3 Axis) by assessing general knowledge of the war and asking people to nominate the ten most important events that occurred during the war. Two different narratives emerged from our survey: a Russian view, and a separate scenario that might be called a Western Allied, or perhaps even an American, view.

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This research was supported by a Collaborative Activity grant from the James S. McDonnell Foundation to HLR. We appreciate the help of numerous psychologists and other people in all 11 countries for distributing our

questionnaire. We also appreciate the willingness of so many participants to complete a fairly lengthy survey for no compensation.

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Russians knew more about the war on an objective test than did people from most other countries, but they mostly focused on events on the Soviet side of the war when recalling the 10 most important events (e.g., the Battle of Stalingrad and the Battle of Kursk). Participants from the other ten countries showed a high degree of consensus across countries regarding which events were considered important and remembered events that could be seen as consistent with an American view on the war (e.g., Pearl Harbor, or the atomic bombings of Hiroshima and Nagasaki). In contrast, the list of events that Russians provided had only one event in common with those of people in most other countries: D-Day, or, as many Russians remembered it, the opening of the second front. We discuss how different interpretations of the same events and of the war in general are plausible, and why this particular split may have developed. We hypothesize that the dominance of American and other western media (books, movies, television, blogs) may shape collective understanding of important international events and make the western perspective highly accessible.

*Keywords:* Collective memory, National memory, Public event memory, Ethnocentrism, National narcissism

A famous quote attributed to Napoleon Bonaparte (1769–1821) states that “History is the version of the past that people have decided to agree upon.” Today, roughly two hundred years later, history is predominantly seen as an objective academic discipline, striving to accurately characterize and understand the past. However, the quote is essentially consistent with *collective memory*, the shared memories of members of large groups (Halbwachs, 1980; 1992/1925). Collective memory is assumed in part to maintain group identity and, in contrast to history, is not necessarily devoted to accurate accounts but rather acts as a lens through which past events are interpreted by group members (e.g., Hirst & Manier, 2008; Wertsch & Roediger, 2008). Collective memory has been studied in various disciplines, resulting in emphases on different aspects of remembering (e.g., Olick, Vinitzky-Seroussi, & Levy, 2011; for a brief overview, see Roediger & Abel, 2015). Consequently, collective memory can refer to a relatively static body of shared knowledge, to memories that characterize a group and its “image,” but also to a process of fighting about how the past should be remembered (Dudai, 2002).

Even within psychology, collective remembering has been examined from different angles (for an overview, see Hirst, Yamashiro, & Coman, 2018). One major question has been, how do group members reach shared representations of the past? Empirical work suggests that collaborative or conversational remembering plays an important role. For example, people who initially engaged in remembering with others show a higher degree of mnemonic overlap later when tested individually relative to people who always remembered in isolation (e.g., Congleton & Rajaram, 2014; Rajaram & Maswood, 2017). Similarly, emphasizing certain aspects of a past episode in conversations not only results in enhanced recall for the repeated contents, but also in greater forgetting of related but unmentioned details—in both speakers and listeners (e.g., Cuc, Koppel, & Hirst, 2007), including in larger social networks (Coman, Momennejad, Drach & Geana, 2016; see also Luhmann & Rajaram, 2015). A further proposal stresses the importance of schematic knowledge structures for collective remembering, which could be formed by group interactions, but also by exposure to a specific education system and mass media (e.g., Wertsch, 2008). Broadly, knowledge structures affect the recall of events that happened in the past, but also the encoding of

new events that occur in the present (e.g., Brewer & Nakamura, 1984). Such influences of schemata on our ongoing cognition also occur without our awareness and seem critical in how members of large groups may come to think of their shared past. In a different society with different schemata and cultural filters, these same events may come to be remembered quite differently (e.g., Wertsch, 2002, 2009; Wertsch & Karumidze, 2009).

Another approach, however, is to examine the shared memories of large social groups (e.g., nations) themselves for particularly central specific events (Hirst et al., 2018). Pennebaker, Páez, and Deschamps (2006) asked participants from seven countries to nominate the three most important events of the last 100 years. World War II (WWII) was ranked first. When asked about the last 1000 years, WWII still placed fourth (for similar findings, see Liu & Hilton, 2005; Liu et al., 2009; Schuman, Akiyama, & Knäuper, 1998; Scott & Zac, 1993; see also Berntsen & Thomsen, 2005). Some of these studies also probed *why* WWII was considered such an important event, providing a potential means to understand particular nations’ perspectives and interpretations of this globally experienced event, but they have little, if any, data directly addressing the following questions: Which specific events do people of different nationalities remember about the war? Do their characterizations of which events were important differ? Is there also some agreement, both within and across countries, decades after the war has ended? Considering not only these previous studies, but the far-reaching consequences of the war and its effects on many nations globally, we thought WWII to be an excellent test case to understand the content of collective memories from the perspectives of people in multiple nations. As such, the present project aimed to examine collective memories for WWII, both within and across 11 countries.

Extensive research has been done on memory for events that occurred during WWII, with many studies focusing on single mnemonic communities. For instance, Wertsch (2002) compiled Russian memories of WWII from 177 Soviet-educated and post-Soviet participants, asking them to list the most important events of WWII. In considering cross-national differences in responses, he speculated that “whereas Americans could be expected to respond to a question of major events in World War II by listing items such as Pearl Harbor, D-Day, the Battle of the Bulge, the liberation of the concentration camps by American

troops, Guadalcanal, and Hiroshima and Nagasaki, the prototypical Soviet account included the German attack of Russia, the Battle of Moscow, the Battle of Stalingrad, the Battle of Kursk, the Siege of Leningrad, and the Battle of Berlin” (2002, p. 152). Notably, Wertsch’s assumptions about WWII events important to Americans were rather prescient. In a sample of US citizens asked about the most important events of WWII, Zaromb, Butler, Agarwal, and Roediger (2014) indeed found that the top 3 events (nominated by over 50 percent of their participants), were the attack on Pearl Harbor, D-Day, and the dropping of the atomic bombs, consistent across samples of older and younger adults. Thus, even though the US and Russia fought together as Allies, the two studies show that there is almost no overlap regarding which events were most remembered, with members of each group predominantly remembering events that involved their own nation as the most important ones.

In the present study, we followed and expanded the general methodology of Wertsch (2002) and Zaromb et al. (2014) and, as part of a larger online survey, asked participants to nominate the 10 most important events of WWII. Critically, our goal was to examine collective memories across 11 countries (8 Allied countries: Australia, Canada, China, France, New Zealand, Russia, UK, USA; 3 Axis: Germany, Italy, Japan) and the extent to which countries maintain only their own unique events and experiences—or, alternatively, the extent to which collective memories become more similar across groups over time. As evidenced by comparing Wertsch (2002) and Zaromb et al. (2014), even former Allies who fought on the same side of the war can remember it very differently.

## Study 1

### Method

**Participants.** We collected data from at least 100 participants per country. International contacts of the authors distributed the online survey in each country, and participants were also encouraged to distribute the link in their respective countries. Participation was voluntary, with no compensation. The study protocol received approval from Washington University’s Institutional Review Board. Only complete data sets were considered for analysis. Moreover, we excluded complete data sets prior to analysis if participants provided a different citizenship than the one targeted in each country ( $n = 129$ ), reported using the internet to answer survey questions ( $n = 44$ ), or to be less than 18 years old ( $n = 27$ ). After these exclusions, the final sample included 1332 participants. Sample sizes differed across countries, with a range of 102 to 146 participants per country (see Table 1 for demographic details).

**Materials and procedure.** The online Qualtrics survey (*Qualtrics, Provo, UT*) was provided in English and consisted of several parts. A full copy of all survey contents can be found on the Open Science Framework (<https://osf.io/vjw3/>). After providing consent and some demographic information about themselves, subjects were asked to recall the ten most important events of WWII: “In the spaces provided below, please list the TEN most important events of World War 2, in your opinion. You may list them as they come to mind, in any order. When listing

the event, you do not need to describe the event in detail. Please just provide the name or a short label. For non-native English speakers, if you cannot think of the English name, please provide the name you know, but also give a short description of the event you are referring to.” This text was followed by ten empty numbered (1 to 10) spaces. Subjects could only proceed after entering a minimum of five events. Notably, this was the first part of the survey, so it is a relatively pure measure of subjects’ spontaneous recall of WWII events as they began the survey.

Next, participants were asked to complete a multiple-choice general knowledge test on some facts about WWII (e.g., when WWII began; the corresponding data are reported in Roediger et al., 2019). Then, subjects were also asked to complete a standard yes/no *recognition test*, which probed knowledge of WWII events: Participants decided whether each of 40 events had occurred in WWII including 20 target items that referred to WWII events and 20 lures that did not occur during WWII (see Table 2). The 20 lures included 12 WWI events (e.g., Battle of Gallipoli) and 8 completely fabricated events (e.g., the Battle of Sydney). The sequence of events was randomized for each subject. For countries in which the native language was not English, the events were provided in the native language in parentheses next to the English names; for China, this was done in both traditional and simple characters.

The survey had two further parts, asking subjects to estimate countries’ contributions to the war (see Roediger et al., 2019) and to consider several statements about WWII. After completing the full survey, subjects answered post-survey questions (e.g., if they had looked up any information), were thanked for their participation, and debriefed.

**Data coding.** For the full sample, all events nominated as the most important WWII events were coded by the same two independent coders (MA, SU). First, a total of 695 non-events (e.g., names of political actors such as Hitler or Mussolini), confused events (e.g., those that did not occur during WWII such as the Vietnam War), responses that were too vague to identify (e.g., “peace treaty” or “government”), nonsensical responses (e.g., “.”), personal events (e.g., “my uncle died”) and duplicates (e.g., repeated references to the same event by the same subject) were removed. Second, the remaining events were coded with a fine grain, with interrater agreement being 97%; discrepancies were resolved through discussions. Third, a consistency check was carried out to ensure that event labels were used consistently across the whole sample. Finally, the coders identified single narrower events that could be collapsed into larger-grain labels. For instance, explicit mentions of the extermination of Jewish people were initially coded as “The Holocaust,” whereas mentions of concentration camps were coded as “Concentration camps in Nazi Germany” and references to the liberation of concentration camps as “Liberation of Concentration Camps;” in the last round of coding, both were collapsed into the label “The Holocaust” (for some examples for event coding, see Supplementary Materials A). Yet, based on the specificity and frequency with which some events were nominated, particular related events were sometimes also kept separate from one another (e.g., the bombing of London vs. the bombing of the UK). If event-collapsing resulted in duplicated

**Table 1**  
Sample Sizes and Demographic Variables for Participants in Studies 1 and 2

Country	Sample size	Mean age ( <i>SD</i> )	Sex	Educational attainment
<b>Study 1</b>				
Australia	106	43.1 (18.4); N/A: <i>n</i> = 2	41.5% M; 57.5% F; 0.9% Other	12.3% MS/HS; 27.4% College; 60.4% Master's or higher
Canada	121	42.4 (17.7); N/A: <i>n</i> = 1	47.9% M; 52.1% F	23.1% MS/HS; 33.9% College; 43.0% Master's or higher
China	102	25.5 (8.3); N/A: <i>n</i> = 7	36.3% M; 63.7% F	19.6% MS/HS; 39.2% College; 35.3% Master's or higher; 5.9% N/A
France	106	41.4 (15.3)	41.5% M; 57.5% F; 0.9% Other	2.8% MS/HS; 10.4% College; 86.8% Master's or higher
Germany	133	26.8 (8.9)	30.8% M; 68.4% F; 0.8% Other	47.4% MS/HS; 30.8% College; 19.5% Master's or higher; 2.3% N/A
Italy	146	37.7 (14.7); N/A: <i>n</i> = 2	45.2% M; 54.8% F	38.4% MS/HS; 28.1% College; 18.5% Master's or higher; 15.1% N/A
Japan	121	22.4 (8.9)	57.0% M; 43.0% F	59.5% MS/HS; 24.0% College; 9.9% Master's or higher; 6.6% N/A
New Zealand	111	43.1 (19.8); N/A: <i>n</i> = 1	40.5% M; 57.7% F; 1.8% Other	20.7% MS/HS; 32.4% College; 43.2% Master's or higher; 3.6% N/A
Russia	132	28.0 (8.5); N/A: <i>n</i> = 1	54.5% M; 44.7% F; 0.8% Other	11.4% MS/HS; 52.3% College; 28.0% Master's or higher; 8.3% N/A
U.K.	116	46.7 (19.4); N/A: <i>n</i> = 2	43.1% M; 56.9% F	19.0% MS/HS; 25.9% College; 50.0% Master's or higher; 5.2% N/A
U.S.	135	35.4 (18.5); N/A: <i>n</i> = 1	31.1% M; 66.7% F; 1.5% Other; 0.7% N/A	30.4% MS/HS; 25.9% College; 41.5% Master's or higher; 2.2% N/A
<b>Study 2</b>				
Germany	134	24.7 (5.3)	37.3% M; 62.7% F	
Italy	143	20.5 (2.7); N/A: <i>n</i> = 1	16.1% M; 82.5% F; 0.7% Other; 0.7% N/A	
Japan	71	20.6 (1.8)	21.1% M; 78.9% F	

Note. M/HS = Middle school or high school. N/A indicates no response given.

events for a subject's responses, the duplicates were excluded so as not to double-count data from the same individual. Overall, 11,024 events were analyzed. We report and discuss the large-grain event labels created during the last round of coding.

## Results and Discussion

**Most important events of WWII: Number of events nominated.** On average, participants nominated 8.30 identifiable

events ( $SD = 2.13$ ; range 1-10). The mean number of generated events differed across the 11 countries, however,  $F(10, 1318) = 50.45$ ,  $MSE = 4.17$ ,  $p < .001$ ,  $\eta^2 = .08$ , with Russian participants nominating the highest mean number of events ( $M = 9.34$ ,  $SD = 1.29$ ) and Japanese participants nominating the lowest mean number of events ( $M = 6.90$ ,  $SD = 2.61$ ; see Supplementary Materials B for further details).

**Most important events of WWII: Core events.** Table 3 shows the Top 15 events nominated by the whole sample. To

**Table 2**  
List of Item Types and Events Used in the Recognition Test in Study 1

Item type	Origin	Events
Critical events	WWII	Battle of Stalingrad, D-Day, Pearl Harbor, German Invasion of Poland, Battle of Midway, Bombing of Hiroshima/Nagasaki, The Holocaust, Yalta Conference, Battle of Britain, Battle of Berlin, Operation Barbarossa, Battle of Kursk, Battle of Guadalcanal, Battle of Moscow, Battle of the Bulge, Battle of El Alamein, Battle of Okinawa, Siege of Leningrad, Battle of Leyte Gulf, Battle of Iwo Jima
Lure events	WWI	Battle of Tannenberg, Battle of the Marne, Battle of Ypres, The Dardanelles Campaign, Battle of Gallipoli, Battle of Verdun, Battle of the Somme, Treaty of Versailles, The Russian Revolution, Battle of Jutland, Assassination of Archduke Ferdinand, Sinking of the Lusitania
Lure events	Fake	Battle of Salt Flats, Siege of Edinburgh, Battle of Sydney, German Invasion of Portugal, Japanese Invasion of Siberia, Lisbon Conference, Operation Submarine, Summit of the West

**Table 3**  
Top 15 Nominated Events across the 11 Countries in Study 1

Rank	Event label	n	%
1	Attack on Pearl Harbor	901	68%
2	Atomic Bombings	899	67%
3	D-Day	852	64%
4	Holocaust	720	54%
5	German Invasion of Poland	539	40%
6	Battle of Stalingrad	397	30%
7	German Invasion of USSR	305	23%
8	Battle of Britain	289	22%
9	Victory in Europe Day	282	21%
10	Fall of France	245	18%
11	Death of Hitler	215	16%
12	Battle of Berlin	169	13%
13	Surrender of Japan	145	11%
14	USA Enters the war	145	11%
15	Battle of Midway	140	11%

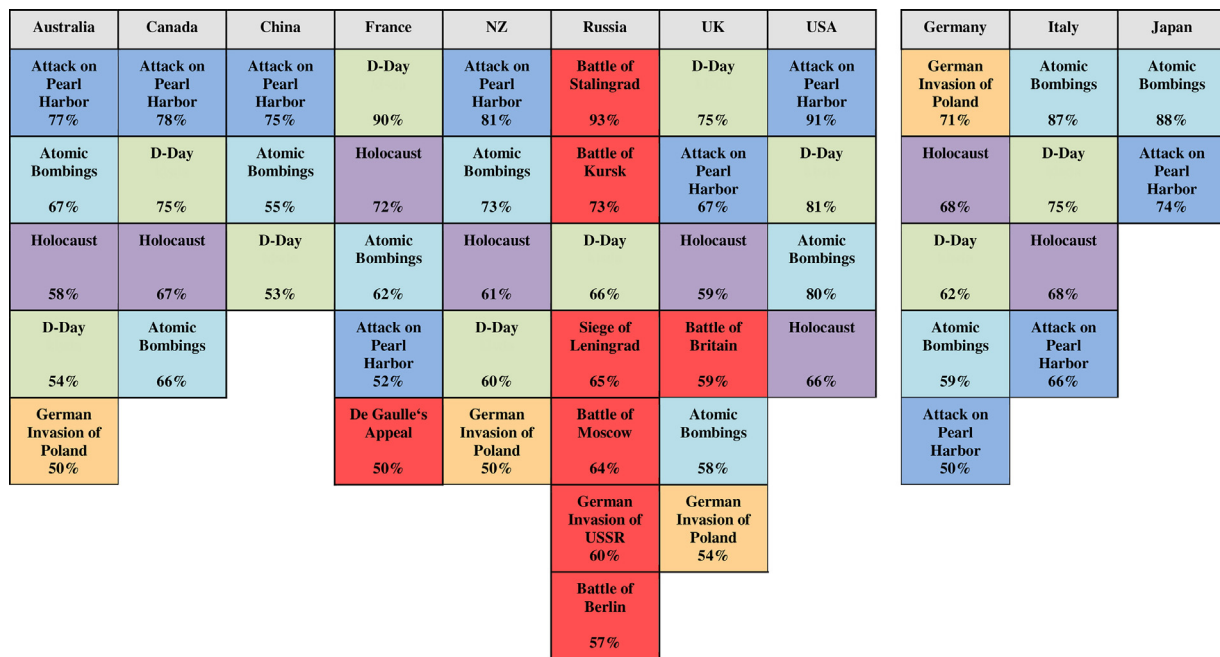
Note. The first four events constitute core events that are shared by  $\geq 50\%$  of the overall 1332 participants. The color coding of the Top 5 events will be used consistently throughout, e.g., when showing the most important events as a function of country in Figure 1.

examine collective memories that are shared by the majority of people, we followed Zaromb et al. (2014) and defined those events that were nominated by half or more of the subjects as “core events.” Across the whole sample, there were four such core events. The same criterion was applied for the data within each country: Core events were those that were nominated by the majority of the subjects in that sample. We assigned a specific color code to those core events that were shared by at least two countries (see Table 3 and Figure 1). Considering the core events by country, as illustrated in Figure 1, a high degree of

overlap is apparent between countries regarding the events generated most frequently as among the most important ones: 10 of the 11 countries shared Pearl Harbor, D-Day, and dropping of the atomic bombs as core events; 8 countries also shared the Holocaust, and 4 countries shared the German invasion of Poland as core events. For all core events, the precise percentages differed across countries, of course, but it is nevertheless striking that many highly agreed-upon events within a country were also shared across countries.

Japanese people reported the smallest number of core events, with two, and their most nominated events clearly focused on ones that directly involved Japan (i.e., Pearl Harbor and the atomic bombings). Most other countries had 4 core events or more, and their most frequently nominated events did not always relate to events that directly affected the respective country (for instance, Australians nominated the German invasion of Poland, Pearl Harbor, and the Holocaust as core events, none of which directly involved Australia). Taken together, we observed some differences in the number of core events across countries, but also agreement across many of the surveyed countries regarding which events were nominated most frequently as important ones from the war.

Only three countries provided unique core events, ones nominated by at least half of the participants within their country but not by the majority in other countries. These unique events are highlighted in red in Figure 1, and all of them reflect events directly involving the nominating country. France and the UK each had one unique core event. Half of the French participants nominated Charles de Gaulle’s appeal of June 18, 1940, broadcast from his exile in London, in which he called on the French citizens to support the resistance. For the UK, the unique event



**Figure 1.** Core events, shared by  $\geq 50\%$  of participants in each country. Each core event that is shared in more than one country has a specific color code (e.g., green codes D-Day); core events that are unique to a specific country and not shared by any of the other countries are highlighted in red.

was the Battle of Britain, in which the UK successfully defended against heavy attacks by Nazi Germany's air force.

Only one country showed more than one unique core event: Russia. With 7 total core events, Russian participants showed the highest degree of mnemonic overlap and cohesion within their group, but, strikingly, only one of these core events was shared with other countries (namely, D-Day, sometimes referenced as the "opening of the second front" by Russians). In fact, Russia was the only country among the 11 surveyed that did not have Pearl Harbor and the dropping of the atomic bombs among their core events. All other Russian core events were unique to Russian participants and the Russian involvement in the war: The Battle of Stalingrad, the Battle of Kursk, the Siege of Leningrad, the Battle of Moscow, the German invasion of the USSR and the Battle of Berlin. None of these events were core events for any of the other countries (i.e., not even for Germany, which was directly involved in all of these events). This list of core Russian events perfectly replicates Wertsch's (2002) findings. While Russian participants are not the only ones who demonstrated an orientation towards events involving their own country, they seemed to differ from the other countries in that their perspective shows a higher level of agreement within the group and differs from all the others. Russian participants seem to have been taught and maintain the Russian perspective on the important events of the war, whereas participants from many other countries (even China and Japan) nominated events that appear consistent with a Western-dominated view of the war.

**Most important events of WWII: Other frequently nominated events.** We next examined the remainder of the top 10 most frequently nominated events (excluding the core events that have already been discussed). Figure 2 shows the list of events for each country rounding out the top 10, and all but 3 received at least 20% endorsement. One important note is that some of the unique core events discussed above did appear in the remainder of the top 10 events for other countries (though, of course, not as frequently mentioned). For example, the Battle of Stalingrad, a core event for Russia (93%), was included for 7 of the other 10 countries (namely Canada, China, France, Germany, Italy, New Zealand, and the UK), with 20–46% of the respective samples nominating the event. Similarly, the Battle of Britain, shared by 59% of participants from the UK, was also included in the top 10 events for Australia, Canada, New Zealand, and the USA, with 19–48% of the respective samples generating it. Some other events were shared as important by a few countries, like the German invasion of the USSR (nominated by participants from Germany, New Zealand, and the USA), the Fall of France (generated by participants from Australia, France, New Zealand, and the USA), and the Surrender of Japan (listed by Chinese and Japanese participants). Even though relatively few unique core events were observed, the list of the remaining top 10 events shows that participants from almost every surveyed country nominated unique events. In sum, there were 24 unique events across all 11 countries. These unique events, left uncolored in Figure 3, were not shared by the majority; however, like the few unique core events highlighted in Figure 2, they again consisted of events that mostly involved the respective countries. For example, Australian participants uniquely listed

the Japanese Bombing of Darwin, Canadian participants nominated the Dieppe Raid, Chinese participants remembered the Nanking Massacre, French participants reported the liberation of France, participants from the UK listed the Battle of Dunkirk, German participants nominated assassination attempts on Hitler, Italian participants remembered the Allied invasion of Italy, and Japanese participants listed the Potsdam Declaration. Only US participants uniquely nominated an event that did not involve their own country, namely the Bombing of London. Participants from New Zealand did not show any unique top 10 events. Of note, for Russia, the remaining 3 events of their top 10 list constituted cross-nationally shared ones that were core events for many of the other countries (namely, the dropping of the atomic bombs, the German invasion of Poland, and Pearl Harbor). Taken together, examining the list of top 10 events by country, clear differences appear in how people from various countries remember the war and which events they consider to be important. These differences, however, are not shared by the majority of each group but are expressed by subgroups within the larger sample. Although a high degree of overlap exists across countries for core events shared by the majority of participants in each sample, there was less overlap when considering events still nominated frequently but by fewer participants.

**Event recognition test.** Figure 3 provides accuracy on the event recognition test, with accuracy measured as hits (correct recognition of events from WWII) minus false alarms (false recognition of events from World War I or of fictitious events). We should note that this case is unlike scores in standard recognition memory experiments, because obviously targets and lures cannot be counterbalanced across subjects. Still, hits minus false alarms provides a single metric for accuracy in these conditions, and the hit and false alarm data are reported in Supplementary Materials C. Corrected recognition (hits minus false alarms) differed among the 11 countries,  $F(10, 1318) = 22.14$ ,  $MSE = .06$ ,  $p < .001$ ,  $\eta^2 = .14$ . Bonferroni-corrected post-hoc tests confirmed that Russian subjects clearly outperformed all other groups of participants, all  $ps < .001$ . Japanese subjects, on the other hand, scored lowest and performed worse than most other groups,  $ps < .02$ , apart from participants from Germany, Italy, and China,  $ps \geq .25$ . Note however, that this does not seem to be an Axis versus Allied-based knowledge difference as Germany and Italy only scored lower than New Zealand and Russia ( $ps < .01$  versus all other  $ps > .09$ ); for further details on performance for the single item types and analyses of recognition memory for events from the European vs. the Pacific theater of the war, see Supplementary Materials C). Despite the observed differences, subjects across countries did show a reasonable and common recognition level of events from WWII, indicating that all subjects had some standard knowledge of WWII. If anything, these recognition rates are inflated since subjects had already been asked to generate the ten most important events of the war and answer general knowledge questions about it.

## Study 2

While the events on the recognition test were provided in both English and non-English native languages, the question

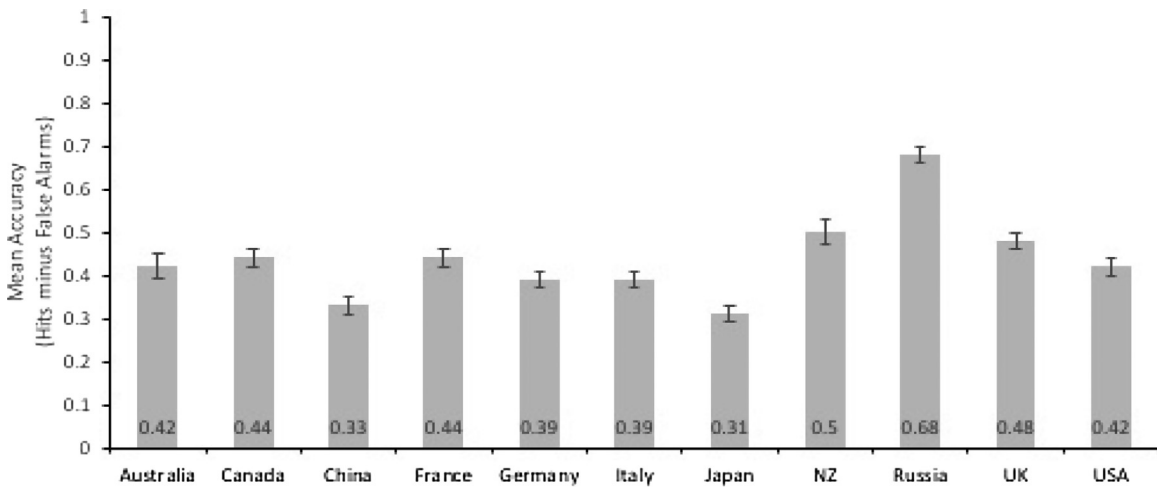
Australia	Canada	China	France	NZ	Russia	UK	USA	Germany	Italy	Japan
Battle of Britain 31%	Battle of Britain 42%	Nanking Massacre 41%	Liberation of France 38%	Battle of Britain 48%	Atomic Bombings 43%	Battle of Dunkirk 45%	German Invasion of Poland 37%	Battle of Stalingrad 46%	German Invasion of Poland 47%	Potsdam Declaration 36%
Death of Hitler 26%	Death of Hitler 26%	Surrender of Japan 38%	Fall of France 29%	German Invasion of USSR 32%	German Invasion of Poland 42%	Battle of Stalingrad 32%	Fall of France 26%	Victory in Europe Day 45%	Allied Invasion of Italy 26%	Battle of Okinawa 34%
Bombing of Darwin 25%	German Invasion of Poland 26%	Holocaust 31%	Battle of Stalingrad 26%	Fall of France 23%	Pearl Harbor 39%	Victory in Europe Day 32%	German Invasion of USSR 24%	Plots to Kill Hitler 26%	Italian Resistance 25%	Air Raid on Tokyo 33%
Fall of France 24%	Victory in Europe Day 25%	Sino-Japanese War 25%	Vichy France 26%	Death of Hitler 22%		USA Enters War 25%	Victory in Europe Day 22%	German Invasion of USSR 26%	Liberation Day in Italy 23%	Holocaust 30%
Fall of Singapore 23%	Battle of Stalingrad 21%	Battle of Stalingrad 24%	Vel'd'Hiv Roundup 25%	Battle of Stalingrad 20%			Bombing of London 20%	Night of the Broken Glass 26%	Pact of Steel 22%	Battle of Midway 26%
	Dieppe Raid 17%	Marco Polo Bridge Incident 23%					Battle of Britain 19%		Battle of Stalingrad 21%	Tripartite Pact 26%
		German Invasion of Poland 22%								Surrender of Japan 24%
										Battle of Iwo Jima 17%

**Figure 2.** The remainder of the Top 10 events, shared by <50% of participants in each country. Again, events that were nominated by participants from more than one country are coded in a specific color; events that are unique to a specific country and not shared by any of the other countries were left uncolored.

asking subjects to provide the 10 most important events of the war was conducted only in English. Both use of English and online testing (from an American university) may have affected subjects' reports for important events, potentially priming them to think of the war from a particular perspective. Five of the eight former Allied countries in Study 1 shared English as their official language, so in Study 2, we focused on the three Axis countries and examined whether the results observed in Study 1 could be replicated when subjects from these countries were asked to think of the ten most important events of the war in their native languages on a shortened pen-and-paper survey.

**Method**

**Participants.** Subjects were students who were offered partial course credit for participating, having been recruited at universities in Germany, Italy, and Japan by the authors (MA, BF, MT). Prior to data analysis, participants were eliminated if they did not provide a minimum of 5 events (Germany: *n* = 18; Italy: *n* = 49; Japan: *n* = 37). After such exclusions, 348 newly recruited participants were included in the analyses below with sample sizes differing across countries (from a low of 71 to a high of 143; see Table 1 for sample sizes and demographic details).



**Figure 3.** Mean accuracy (hits minus false alarms) on the events recognition test, separately for all eleven countries. Error bars represent ± 1 standard errors of the mean.

**Materials.** The shortened paper-and-pencil survey included only two of the survey parts included in Study 1, which were now presented in the native languages (German, Italian, and Japanese): the question regarding the 10 most important events of WWII (which we report and discuss here) and the estimation of one's own country's percentage contribution to the war effort (reported in Roediger et al., 2019). The recognition test was not included because both English and native languages were used for the event recognition test in Study 1.

**Procedure.** After providing consent and answering demographic questions, students were asked to provide the most important events of WWII, just as in Study 1. However, here, they were encouraged to nominate as many events as possible but were not compelled to list a minimum of 5 events. Instructions were identical to Study 1, but subjects wrote down their responses on a sheet of paper on empty lines numbered from 1 to 10. Next, participants were asked to estimate how much their own country contributed to the war efforts of the Axis powers (see Roediger et al., 2019). Finally, subjects were thanked for their participation and debriefed.

**Data coding.** As in Study 1, all events were coded by the same two independent coders (MA, SU). A total of 122 non-events, confused events, responses too vague to be identified, nonsensical responses, personal events, and duplicates were removed. The remaining 2,293 events were analyzed. The events were coded via the same three rounds by the same two coders as in Study 1 (interrater agreement: 97%).

## Results and Discussion

**Number of events nominated.** On average, subjects nominated 7.31 identifiable events ( $SD=2.24$ ; range: 1–10). To examine differences between studies and countries, a 2 (Survey Language: Native in Study 2, English in Study 1)  $\times$  3 (Country: Germany, Italy, Japan) between-subjects ANOVA was conducted. The mean number of generated events differed depending on survey language,  $F(1, 742)=78.88$ ,  $MSE=4.22$ ,  $p<.001$ ,  $\eta^2=.10$ , and country,  $F(2, 742)=21.51$ ,  $MSE=4.22$ ,  $p<.001$ ,  $\eta^2=.06$ . Unexpectedly, subjects nominated more events when the survey was presented in English ( $M=7.93$ ,  $SD=2.24$ ) than in the native languages ( $M=6.59$ ,  $SD=2.00$ ; for details, see also Figure D1 in the Supplementary Materials). We might have predicted that being asked to respond in one's native language would have facilitated recall due to increased fluency, but that was not the case. Potentially, the observed differences in mean numbers of events generated may have arisen because subjects in Study 1 participated out of interest, whereas participants in Study 2 were university students that received course credit for participating. Another possibility stems from differences in the age of the participants which we discuss below. Bonferroni-corrected post-hoc tests indicated that regardless of survey language, German participants generated a higher mean number of events ( $M=7.74$ ,  $SD=2.09$ ) than participants from Japan ( $M=6.57$ ,  $SD=2.41$ ;  $p<.001$ ) but no more than participants from Italy ( $M=7.40$ ,  $SD=2.16$ ;  $p=.14$ ); Italian participants also generated significantly more events than Japanese participants ( $p<.001$ ). This pattern is consistent with

that found in Study 1 (see Supplementary Materials D for further details).

**Top 15 events nominated by German participants.** Consistent with Study 1, a majority of participants in Study 2 again shared the Holocaust (64%) and the German invasion of Poland (55%), making them core events; D-Day (43%), the atomic bombings (28%), and Pearl Harbor (18%) no longer constituted core events but were still included in the Top 15 events list of Study 2 (see also Table E1 in the Supplementary Materials). Overall, 14 of the 15 listed events were the same when participants were surveyed in English versus German. Only one event differed: German participants in Study 2 listed the Nazi Control of Germany as one of the Top 15 events; participants in Study 1 had instead listed the Firebombing of Dresden.

**Top 15 events nominated by Italian participants.** For Italian participants, the Holocaust (78%) and the atomic bombings (62%) continued to be remembered as core events in Study 2; Pearl Harbor (32%), the German invasion of Poland (30%), and D-Day (17%) still appeared in the Top 15 list, but they were no longer core events (see also Table E2 in the Supplementary Materials). There was again much overlap, with 11 of the 15 listed events being the same regardless of the language of the survey. Four events were newly included in the Top 15 list of Italian participants in Study 2, namely Race Laws, the Night of the Broken Glass, Hitler's rise to power, and the Tripartite Pact, whereas mentions of Italian resistance, the Battle of Stalingrad, the German invasion of the USSR, and the surrender of Italy—all included in Study 1—dropped off the list.

**Top 15 events nominated by Japanese participants.** For Japanese participants, the two core events observed in Study 2 were identical to Study 1 (the atomic bombings: 86%; Pearl Harbor: 55%), and twelve of the 15 listed events overlapped between Study 1 and Study 2 (see also Table E3 in the Supplementary Materials). Three events were newly included by Japanese participants in Study 2: The Nazi control of Germany, the postwar occupation of Japan, and the fact that the war had resulted in a high number of casualties. In exchange, D-Day, the German invasion of Poland, and the Battle of Iwo Jima from Study 1 did not appear in the top 15 most frequently generated events in Study 2.

**Across countries.** In summary, the comparisons between Study 2 and Study 1 indicate that the general set of events generated by participants was very similar, irrespective of whether the study was conducted in English. Nevertheless, the Study 2 data do not constitute perfect replications of the Study 1 data: Even though most Top 15 events stayed the same across samples, the number of core events was reduced in Study 2 for two of the three surveyed countries, indicating a lower degree of cohesion within countries. Among other possibilities, this could be directly tied to the fact that participants generated fewer events in their native language than in English, thus providing fewer chances for consistency.

Additionally, mean age was rather similar for German and Japanese participants across Studies 1 and 2 but Italian participants were on average 17 years older in Study 1 compared to Study 2 (see Table 1). Age was not controlled in the present studies, but the two Italian data sets could indicate that age may not



have been a critical factor either, because participants considered similar events, irrespective of one sample being slightly older than the other. Prior research has found age-related differences concerning how WWII was remembered, with older participants who lived through the war nominating more idiosyncratic events than younger participants who did not directly experience the war (Schuman et al., 1998; Scott & Zac, 1993; see also Zaromb et al., 2014). In our Study 1, however, only 75 participants (5.6%) of the total sample reported an age of 70 or above, suggesting that very few of our participants were even alive when WWII ended. Potentially, age could be an explanation for why participants generated more events in Study 1 in English compared to Study 2 in their native language, but because a pronounced age difference was only observed for Italian participants the same reasoning may not apply to Japanese and German participants.

### General Discussion

In this project, we compared memories of people from 11 different nations for the most important events of WWII. A consensus emerged across most countries for which events were remembered by the majority of individuals within each country (Pearl Harbor, the dropping of the atomic bombs, D-Day, and the Holocaust). Study 2, conducted in the native language for three countries, showed considerable (albeit imperfect) consistency with the events nominated in Study 1 using English. The number of core events was reduced in two out of the three former Axis countries, relative to Study 1, but native language did not greatly change which events were considered important. A high degree of overlap existed in the top 15 events that were nominated by German, Italian, and Japanese participants in Studies 1 and 2.

The observed overlap regarding core events across many of the surveyed countries in Study 1 is striking and indicates that, decades after the war has ended, some more global agreement may have been reached regarding WWII's most important events (see also Schuman et al., 1998; Scott & Zac, 1993). Examining the contents of these core events, however, it seems that the observed "consensus" may be primarily due to the proliferation of a Western-Allied perspective, whereas critical events that occurred on the Eastern front of the war in Europe are simply missing for ten of our 11 countries. One plausible vehicle of this Western-Allied emphasis could be a dominance of Western ideas through frequent exposure in education and mass media. The US had a direct influence in both Asia and Europe immediately after the war and has continued to proliferate its perspectives via popular culture since. An additional or alternative possibility that we cannot exclude is that the study being conducted in English by an American university may have cued participants from all countries to consider the war from an American perspective. However, the results of Study 2 seem to rule this out as a major concern, although it is true that core events differed somewhat between the two studies.

The profound differences observed for Russian participants (even when tested in English) may also be related to the dominance of a Western-Allied perspective in participants from most other countries. For 10 out of the 11 surveyed countries,

we only observed two core events in total that were unique to a specific country (one for France, one for the UK). Russian participants, however, shared the highest number of core events, with six out of 7 core events being unique to the Soviet experience of the war. Even for the one core event shared with other countries, D-Day, many Russian participants referred to it as "the opening of the second front." This suggests that their perspective is quite different, even regarding events that are "shared" with participants from other countries. An analysis of the rest of the top 10 events for each country showed that some unique Russian core events (i.e., the Battle of Stalingrad and the German invasion of the USSR) were considered important by participants from other countries, too—but the degree of cohesion was much higher among Russian participants, indicating that their collective memories of WWII differ from those of people from most other countries.

The event recognition test in Study 1 showed that all participants seemed to have some baseline knowledge about the events of the war. Russian participants, however, clearly outperformed participants from all other countries on this test and generated a higher number of events than participants from any other country, indicating that their unique perspective on the war is not born out of ignorance.<sup>4</sup> In fact, their responses can be viewed as reflecting a more accurate account of WWII (especially in Europe) if measured by losses and by damage inflicted on Germany. The Siege of Leningrad and the Battle of Stalingrad each cost more Soviet lives than all the American losses in WWII, for example, making the Russian case for including these as core events understandable. In addition, memory for WWII is commemorated, indeed sanctified, in Russia as nowhere else (e.g., Bernstein, 2016; Uldricks, 2009) and seems to act as a central contributor to the current Russian identity project. Such a focus on WWII is consistent with our Russian sample's greater basic knowledge of the war, low tendency to fall for lures, incredibly high internal agreement, and overall the elaborated form of collective memory for the events there.

Changes in collective memory over the past few decades provide further support for the hypothesis that the U.S. has influenced the accounts in countries around the world, with the exception of Russia. Discussing data that were collected by the French Institute of Public Opinion (IFOP) between 1945 and 2015, Berruyer (2015) pointed out that public opinion on the main contributors to the defeat of Nazi Germany has shifted over time: Whereas 57% of French citizens surveyed directly after the war in 1945 credited the Soviet Union with having contributed the most to the Nazis' defeat, more recent polls show that 54% of respondents now credit the USA with having contributed most. A similar pattern, with the US receiving more credit than Russia for their contribution to the war, is also reported in Roediger et al. (2019). Considering these findings, the pattern observed for non-Russian countries in the present study may be consistent with the view that many countries have experienced this shift in

<sup>4</sup> A very similar pattern, with Russian participants outperforming participants from all other countries, was also observed on the multiple-choice general knowledge test on WWII facts (reported in Roediger et al., 2019).

perspective, resulting in a neglect of critical events that occurred on the Eastern front of the war. As mentioned above, this shift is perhaps due to American movies, novels and other media that enhance the American view becoming popular and influencing opinion over the decades since the war. One way to examine this influence more directly in future studies could be to gather data on the popularity of (American vs. Russian) WWII movies or, more generally, the frequency of mentions of certain war events in the most important media outlets in different countries, thus enabling a test of the idea that media exposition influences collective memory. In addition, it would be worth studying whether other international events besides World War II are recollected in agreement with an American/western perspective.

The present study has several limitations. Although our methods of data collection may have enabled the recruitment of a more diverse sample (at least in Study 1), the trade-off is a lack of experimental control. This resulted in different sample sizes across countries, sample differences regarding age, gender distributions, or education, and in participants of differing nationalities nominating different mean numbers of events. This latter difference may not only have affected the degree of cohesion observed within each country, but also makes comparing percentages for shared events across countries more difficult. Additionally, though sample sizes of around 100 subjects per group may seem large, for collective memories of nations even larger (and random) samples would be preferable. Finally, the wording of the critical question regarding the 10 most important events of WWII might also be examined in future research, because the results might differ if we had framed the question in a different way, for instance emphasizing a certain country's perspective on the war. However, Schuman et al. (1998) provided evidence that such questions seem to be robust to minor differences in wording. Our rather general wording probably provided a conservative approach to posing the question, one that seeks general answers and not events specific to a country.

Despite these limitations, what does the present study tell us about collective memory, and, more broadly, about how countries remember their shared pasts? As described by Dudai (2002), collective memory can be a body of knowledge that is shared by group members, and this view is certainly supported here. As can be seen in Figure 1 for core events, participants from each country shared knowledge of some important events of the war with members of their own national group. This agreement was, however, evident not only within countries but also across most countries, indicating that there may also be collective influences at play that are larger than nations. Dudai (2002) also referred to collective memories as identity projects that are linked to the "image" of a people (see also Hirst & Manier, 2008; Wertsch & Roediger, 2008). In the present data, this perspective may be reflected in the unique core events observed for participants from Russia, France, and the UK and also in the relatively high number of unique events present in almost every country's top 10 list of events (see Figure 3). These unique events related almost exclusively to the respective country's involvement in the war, thus emphasizing the group's role. Finally, Dudai (2002) discussed how collective remembering can also be regarded as a fight about the past and about how it should be remembered. If

anything, the high degree of consensus observed across countries in the present study, which mostly followed a Western-Allied perspective of the war, may indicate that this fight has indeed been fought throughout the last decades and has a current winner. Winston Churchill is often quoted as having said that "History is written by the victors." With regard to the implications of the present data, we might modify this quote to say that instead "collective memory is written by some of the victors more than others."

In conclusion, in the present study, we observed striking consensus, but also some differences within and across countries in which events were remembered as the most important events of WWII. Although we included 11 central countries involved in the war, people from many more countries fought in and were affected by WWII, both during the war (e.g., Poland, Romania, the Netherlands) and afterwards (e.g., former British colonies in Asia and Africa). People in these countries might have different perspectives on the war. More generally, future work is needed to gain a broader perspective on how and why decisive events are remembered the way that they are by different parties throughout time. Following Napoleon Bonaparte's quote cited in the introduction, such work may enable us to understand how people "decide" to agree upon a specific version of the past, and how such shared collective memories influence the ways in which events that occur in the present are viewed and interpreted by different groups of people.

### Funding Sources

This research was supported by a Collaborative Activity grant from the James S. McDonnell Foundation to HLR.

### Author Contributions

H.L.R.III and J.V.W. conceived the studies and designed them together with S.U. and M.A. All authors were involved in data collection. S.U. and M.A. coded, analyzed and interpreted the data. S.U. and M.A. drafted the manuscript and received critical comments and feedback from all other authors. All authors approved the final draft of the manuscript.

### Conflict of Interest Statement

The authors declare no conflict of interest.

### Ethical Disclosure

All data were collected in accordance with the ethical standards of the American Psychological Association and with the approval of the Institutional Review Board at Washington University in St. Louis.

### Appendix

#### Supplementary data

Supplementary data associated with this article can be found, in the online version, at <https://doi.org/10.1016/j.jarmac.2019.02.001>.

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Received 22 October 2018;  
 received in revised form 14 February 2019;  
 accepted 17 February 2019  
 Available online 2 April 2019