



Remembering the big game: social identity and memory for media events

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ABSTRACT

Two studies examined how memories are formed around championship sporting events, which we classify as *media events*. The first study employed a test-retest methodology to assess how fans of a sport recall a championship sporting event. The second study examined how fans of specific sports teams recalled two championship sporting events in which their team either won or lost. Of particular interest was the emergence of a collective memory within fan communities. We assessed memory for the event itself (event memory), with an emphasis on the emergence of a collective memory, and memory for the context in which one experienced the event (personal circumstance memory). In contrast to fans of a sport more generally, fans of a particular team recalled events involving their team with detail, converged on collective memories, and provided personal circumstance memories that met the criteria for flashbulb memories. We discuss these results in the context of social identities and the elements involved in narratives of media events. Different types of fandom, our measure of social identity, uniquely influenced the collective memories formed for essential and ancillary elements of narratives surrounding championship sporting events.

ARTICLE HISTORY

Received 9 March 2020
Accepted 12 June 2020

KEYWORDS

Collective memory; social identity; flashbulb memory; media event; public event memory; sports

We live in a New Media Age (Neiger et al., 2011). We encounter many events not through direct experience, but through mediated formats. Dayan and Katz (1992) labelled a subset of these mediated encounters *media events*. As they use the term, media events are broadcast live to a large audience. In both the lead-up to and the immediate aftermath of the events, they dominate the discourse within a community. Moreover, they are usually pre-planned, remote to the viewer, and interrupt the normal schedule. Regularly scheduled programming, as well as viewers' normal activities, are set aside. Coverage of media events, including pre- and post-event analysis, provides a sense of reverence and ceremony, making media events the "high holidays of mass communication" (Dayan & Katz, 1992, p. 1). Examples include presidential debates, the moon landing, royal weddings, funerals of famous individuals, and awards ceremonies. We are concerned here with what people remember about such events.

We focus on a particular class of media events: championship sporting events. Sporting events may not be as consequential as, for instance, a media event of national importance, such as the funeral of a world leader. Any study of sporting events must carefully consider the extent to which one can generalise findings to other contexts. But this caveat does not mitigate the advantages accrued by studying them as an example of a media event. As media events must be, championship sporting

events are addressed toward a large community, in this case, a large community of sports fans (Jones, 2015), with events often profoundly affecting fans' personal identity, as well as the identity of the community built around the sport or a sports team (Cialdini et al., 1976; Wann et al., 1999). It is not uncommon for members of a sporting community to shed tears of joy or heartbreak after a championship victory or loss.

Championship sporting events are unquestionably media events. Not only do they address, in the main, a specific community, they are, for most sports fans, mediated experiences witnessed on television rather than in the stadium. Coverage of championship sporting events dominates attention within a sports community for a time. The events interrupt typical schedules within the community, as fans set aside other interests to attend the event or watch it on television. Viewers and broadcasters alike treat the events with reverence and ceremony. If media events are the "high holidays of mass communication" (Dayan & Katz, 1992, p. 1), championships are the high holidays of broadcast sports.

Treating championships as media events highlights two aspects of sporting events worth considering. First, media events are designed to bind a community (or communities) together. With this in mind, we focus the present study not just on what individuals remember about championships, but what a community of fans remembers. That is, we investigate the collective memories formed for these

events. Without the formation of a collective memory, championship sporting events are unlikely to supply, over the long-term, the social unity they are meant to bring about. What aspects of a championship event become incorporated into the collective memory of a community of fans? And what factors affect the formation and content of these collective memories?

Second, media events are witnessed indirectly; that is, through some sort of media. In this way, they are distinctive from many other events, such as the event of eating dinner with one's family. When a media event is witnessed, there are really two events occurring: the event itself and the personal circumstances in which an individual is viewing the event. Will people remember the circumstances in which they learn of a championship sporting event? Are some fans more likely to do so than others? And, if so, what factors relate to the accuracy, confidence and vividness of these recollections? Such questions are often asked in the context of flashbulb memories (see Hirst & Phelps, 2016, for a review), but there is no a priori reason to assume that media events in general, and championships, in particular, will routinely lead to the formation of flashbulb memories.

Forming collective memories

We define collective memories as individual memories shared across a community that bear on the identity of that community (Hirst et al., 2018; see Olick, 1999, for an alternative definition and Hirst & Manier, 2008, for a discussion of the differences between these definitions). Whether a memory is part of a community's collective memory is a matter of degree rather than a clear delineation, but the definition here would suggest that the more members of a community holding a memory, the more reasonable it is to consider it a collective memory. Operationally, we will assume that a majority of a community should know about an item for it to be *securely* part of the community's collective memory. Although it can be argued that memories held by less than a majority of a community are, at times, collective memories, very few would argue that memories held by a majority of a community are not collective memories. Moreover, this criterion produces reasonable assessments as to what is or is not a collective memory. Consider, for example, Belli et al. (1997). They asked participants whether they knew about 11 different events occurring between 1930 and 1986. According to our criteria, five would be part of the community's collective memory: the Holocaust, Rosa Parks, Woodstock, Watergate, and the Space Shuttle Challenger crash. Other than the Challenger disaster, which occurred five years before the survey took place, the events all occurred around 20 years or more before the survey. Their prominence can be contrasted with the events that would not fit our criteria: the Marshall Plan, the testimony of John Dean, and the Tet Offensive. Intuitively, these events seem less a part of the American collective memory than the first

group. If one sought more objective, textually-based support for these intuitions, as some researchers do (e.g., Candia et al., 2019), then one might ask if the judgments of Belli et al.'s participants corresponded to the frequency of mentions found on the internet. Although a substantial amount of time has passed since Belli et al.'s survey, all the events above the 50% cut-off point (other than the Challenger disaster, which may have been recalled more often in the survey due to a recency effect) elicited more than 18 million results in a Google search, whereas none of the events below that cut-off point elicited more than three million.

Essential and ancillary elements

What aspects of a championship sporting event are likely to be incorporated into a collective memory? Many events can be said to have both essential and ancillary elements. As we use the terms, *essential elements* are those that must be included in a narrative about the event if the narration is to achieve a reasonable level of relevance to a listener (Sperber & Wilson, 1996). If they are left out, the listener will know that something is missing, even if the listener knows nothing about the specific event being described. *Ancillary elements* are those that might add detail, but can be left out of the narrative without the naïve listener realising that something is missing. For instance, in the World Series, the championship event for Major League Baseball, one of two teams must win a prescribed number of games in order to win the series – the best out of seven. If a speaker fails to mention who the winner was, a listener will know that the speaker left something out. On the other hand, a baseball game does not have to involve home runs; it is still a game even if there are none. If a speaker fails to mention a home run to someone who had not seen the game, a listener will not necessarily feel that something is being left out of the description. Of course, simply because an element is optional does not mean that it is unimportant. A home run in the 9th inning may crucially determine the outcome of a game. What differentiates essential from ancillary elements is that the latter do not need to occur in order to qualify the event as a game and, as a result, are not necessary to include it in a description of the game. The narrative might seem "stripped down" in their absence, but it would still be considered complete and coherent. The same would not hold for essential elements.

Fandom

As to what factors might affect the formation of a collective memory, here we focus on fandom. If collective memories pertain to group identities, then community membership should influence their formation and retention (Abel et al., 2019; Wertsch, 2002). Fandom here serves as an index of community membership. Our treatment of fandom differs from much of the psychological work on collective memory, which tends to treat group membership as a binary construct; that is, researchers tend to

consider whether one is or is not a member of a community. However, the degree of importance ascribed to community membership will vary across any group's members. If community membership is critical to the emergence of collective memories, this variation might relate to variation in recall.

In addition to degree of membership, we also consider the nature of the group more closely than most studies of collective memory, which often take, for instance, the nation as the given "container" of collective memories. When it comes to fandom, there are fans of specific sports – a baseball fan or a football fan – and fans of specific teams – a Red Sox fan or an Eagles fan. That is, a sports community at large or a community surrounding a specific team might "contain" collective memories. Of course, these types of fans are not mutually exclusive. Most, if not all, Red Sox fans are also baseball fans. But it is possible to watch a game in which one's favourite team is not playing. Under such circumstances, one's identification with a particular team may not be highly relevant to the way one experiences and remembers the game. Rather, what may be important is one's identification with the sport more generally. We suspect that such situations arise frequently, especially when a championship event is involved. Nearly half of the world's population, 3.57 billion people, watched the 2018 FIFA World Cup, with over one billion tuning in for the final game alone. Some of the viewers were no doubt fans of the French or Croatian teams, the two teams in the final match. Most, however, were probably just fans of the sport, and these could be further divided according to the strength of their sports fandom: "die-hard" to "of-only-passing-interest". This distinction between fans of the sport in general and fans of a specific team reflects not just what occurs in sports, but also what occurs with the multifaceted social identities people hold in a large number of situations. One can identify as an American and/or a New Yorker, as a Christian and/or a Catholic, as a psychologist and/or a cognitive psychologist.

Predicting the contents of collective memory: The interaction between fandom and essential/ancillary elements

Although there are many factors that go into what makes an event memorable, both for an individual and for a community, there is no doubt that narrative structures not only shape how we communicate about an event, but also the way we remember it (Bower et al., 1979; Kintsch & Van Dijk, 1978; Mandler & Johnson, 1977; Schank & Abelson, 1977; Szilas, 2015). We might expect, then, that the essential, or necessary, elements of a narrative would generally be more likely to be remembered than ancillary, or optional, elements. That is, if one were to remember a championship game, one would be more likely to remember who won than any particular play in the game, because it is essential to include this information in any narrative of a sporting event. To be sure, there might be variation from one

individual to another. Likewise, there might be variation in the recall of ancillary details. For instance, recall may vary as a function of how unique or bizarre a detail is. Moreover, the extent to which an ancillary detail bears directly on the outcome of a competition no doubt has a bearing on recall. However, if one is concerned with the details that *most* members of a community will remember for *most* events impacting the community – that is, with collective memories – essential details would more likely be recalled than ancillary ones. Fandom, however, might moderate and particularise this general principle.

First, consider *non-fans*, individuals who have little or no interest in the sport, though they might well have a passing familiarity with it. The third author could tell someone the basic rules of baseball, and even played some baseball as a child, but would never watch a professional baseball game on his own. There is probably little that non-fans as a group would find of any importance or draw their attention, including the outcome of the game. As a result, a collective memory might not emerge for non-fans, even for essential elements.

As for fans, consider first those who are *fans of a sport*, but not necessarily of a specific team. Every fan will attend to the outcome. After all, that is why they are watching, in the main: to see who wins or loses. If they had to describe the event in one or two sentences to someone else, the outcome – that is, essential elements – would surely be noted. As to ancillary elements, such as specific plays, we would expect variability, even for strong fans of the sport. Some fans may know little about either team playing, others may be better informed. Some may appreciate, for instance, that a home run was hit by a "star player", whereas others may not. We would expect, then, that the collective memory for fans of a sport would consist mainly of essential elements. Moreover, the extent of one's fandom of a sport is expected to be more strongly related to recall for essential than ancillary elements.

With respect to *fans of a specific team*, they know the players and have a strong attachment to both the players and the team. Although they might view the outcome of the event as important and memorable, they also might place importance on individual plays of different team members. The narrative they are forming is based on their detailed knowledge of "their" team. A home run hit by the team's star player fits well with their knowledge about the player's strengths and weaknesses. As a result, we would expect team-specific fans may have collective memories that include both essential and ancillary features.

Extant research on memory for sporting events

The extant research on memory for sports does not address these specific predictions. It has examined a range of sporting events: Major League Baseball games (Breslin & Safer, 2011; Kensinger & Schacter, 2006), college football (Hastorf & Cantril, 1954; Talarico & Moore, 2012), college basketball, (Botzung et al., 2010), and the

World Cup (Kopietz & Echterhoff, 2014; Tinti et al., 2014). Hastorf and Cantril's (1954) study of a rather violent football game between Dartmouth and Princeton showed that group membership – in this case the college a viewer attended – affected what one remembered about the game. It did not, however, vary the level of group membership nor assess the type of fandom. Additionally, it was interested mainly in what we call ancillary elements, in this instance, the violence of the game.

More recent work has examined group membership by contrasting how well fans remembered their team's victories and losses. The findings are inconsistent. Two studies found that fans of the winning team rehearsed more, recalled more vividly, and, critically, remembered with greater accuracy the details about the game (Breslin & Safer, 2011; Talarico & Moore, 2012). Botzung et al. (2010) found this positivity bias not only in terms of accuracy and confidence, but also for neurological activity. On the other hand, Kensinger and Schacter (2006) found that event-related details were recalled more accurately by fans of the losing team. These disparate results make it difficult to claim definitively that being a fan of a particular team leads to more accurate memories for victories – or for losses. Moreover, the extant studies did not look at different types of fans. Indeed, they typically recruited only team-specific fans. Finally, the studies did not frame their results in terms of collective memories, nor did they look at which specific details are remembered best across their sample. One may observe that team-specific fans have better overall recall for a victory than a loss, but one cannot conclude from these averages if these fans remember the same elements of the event or if what they remember differs from what fans of the sport more generally might remember.

The present study, then, adds to the extant literature on memory for sports and, in doing so, contributes to the growing body of psychological research on collective memory. It asks: (1) Are essential elements of a sporting event more likely to become incorporated into viewers' collective memory than ancillary elements? We expect that essential elements will play a larger role. (2) Does recall for essential and ancillary elements vary as a function of fandom, both in terms of the type of fandom and the extent of that fandom? We expect that non-fans should fail to form a collective memory, fans of a sport should form a collective memory mainly around essential, but not ancillary elements, and fans of one of the competing teams should form a collective memory around both essential and ancillary elements. Team-specific fans' memory might also vary as a function of whether their team won or lost.

The present study explores these two issues by examining memory for two championship sporting events that occurred in 2016: the MLB (Major League Baseball) World Series and the NBA (National Basketball Association) Finals. These championships are particularly telling for the present concerns about the formation of collective

memories in that they are widely viewed as historic in their respective sports communities. The 2016 MLB World Series featured the Chicago Cubs and the Cleveland Indians. The last time Cleveland had won this title was 1948. The Cubs, who ended up winning the Series, had not won it for 108 years, which was one of the most talked about "droughts" in American sports. As to the 2016 NBA Finals, the victory by the Cleveland Cavaliers marked the first-ever NBA Finals win for the franchise and the first championship victory for any of Cleveland's professional sports teams in 52 years.

Memory for personal circumstances

As we stated, a distinctive feature of media events, and championship sporting events in particular, is that, in actuality, two distinctive events are taking place: the event itself and the event of witnessing it in a setting other than the one in which the event itself is unfolding. Perhaps more critically, in the case of media events, the witnessing of the event can be disconnected from the event itself in a way that the direct experience of an event cannot be. For directly experienced events, the event itself and the setting in which one is observing the event are intricately bound together; they are, essentially, one and the same. For media events, on the other hand, the event itself and the reception event are distinct. What might unfold in the living room as one watches a sporting event on television – a ceiling collapses, for instance – will have no effect on the game itself. But a similar event – the collapse of a stadium ceiling – will directly affect the flow of the event. The question here is, even if the two events are disconnected, are they nevertheless connected mnemonically, in the sense that one remembers both the event and the circumstance of witnessing the event? To be sure, one might forget the circumstances in which one witnesses an event directly, but it is probably more likely that such forgetting would occur when the event itself and reception event are dissociable. As Brown and Kulik (1977) emphasised, it is peculiar that people will confidently and vividly retain long-term memories not just for the event, but also for the personal circumstances in which the event was learned about (i.e., *flashbulb memories*).

Do memories for the circumstances in which people watched a media event, specifically a championship sporting event, unfold show characteristics of *flashbulb memories*? That is, are they vivid and confidently held? Are they long-lasting? And do these characteristics vary with the social relationship the viewer has with the event, that is, with fandom? There is some indication that fans do remember the circumstances in which they witness a sporting event (Kensinger & Schacter, 2006; Talarico & Moore, 2012; Tinti et al., 2014), but it is unclear how often these events elicit characteristically "flashbulb" memories and the various ways in which the viewer's social relationship with the event influences the formation of these memories.

We are particularly interested here in the role of fandom. Does it figure in the formation of autobiographical memories of the reception event, as well as the formation of collective memories of the event itself? In the flashbulb memory literature, group membership or social identity is critical to the formation of a flashbulb memory (see Berntsen, 2018 for a review). For instance, African Americans formed flashbulb memories of the assassination of Malcolm X, whereas European Americans did not (Brown & Kulik, 1977), and French citizens formed flashbulb memories of the death of President Mitterand, whereas French-speaking Belgians did not (Curci et al., 2001). Fandom could similarly predict personal circumstance memories for championship sporting events. Kensinger and Schacter (2006) and Talarico and Moore (2012) both indicated that memory for personal circumstances did not differ among fans of the winning and losing teams, whereas Tinti et al. (2014) demonstrated that rehearsal, which was predicted by importance and emotional intensity, predicted memory for the circumstances of learning of outcome of the 2006 World Cup. These studies have examined fans' identification with a particular team, as indicated by an event's subjective importance, but did not explore the impact of differing types or levels of social identification with the event, which we will operationalise as fandom of a sport in general and fandom of specific teams.

The present study should be viewed as exploratory. We did not systematically vary the level of fandom and the type of fandom in a single study. Rather Study 1 examined generic sports fans and Study 2 examined team-specific fans.

Pilot study

What details of a game do people consider essential? What do they consider ancillary? We addressed these questions in a pilot study that examined event details from the 2016 MLB World Series, which served as the target event for Study 1. Two hundred participants were recruited via Amazon's Mechanical Turk. The mean age of the sample was 34.38 years ($SD = 9.98$) and a majority were males (67.5%). We did not want to recruit any specific level or type of fans in that we were interested in what the general public thought was essential or ancillary. We did, however, assess the extent to which participants understood the rules of baseball.

The survey focused on 21 event details from the 2016 MLB World Series (see Table 1). The first author selected these elements after carefully reviewing the Series. They would serve as the target details in Study 1. At the beginning of the survey, participants were informed that one sports fan was describing a previous MLB World Series to another fan. The fan describing the series had watched; the other had not. Participants were first told three specific features about this particular World Series: it lasted seven games, the final game went into extra innings, and neither team had won the World Series in a

long time. Participants then rated each of the 21 details on a 10-point scale indicating how important the detail would be to include in a narrative about the World Series. We chose not to use the term "essential" because we felt that it may not be clear to participants what we meant, but we emphasised that we were interested in what was important to *include in a narrative*. Those with high ratings were treated as "essential" and those with lower ratings as "ancillary". Participants then rated their

Table 1. Ratings of importance (pilot study) and percentage of recall of event details (Study 1).

Event detail	Mean (SD) Pilot rating	Percentage of participants		
		S1	S2	S3
<i>Essential details</i>				
Which team won the World Series	9.59 (1.22)	—	—	—
Game 7 final score	9.29 (1.41)	70.3	35.9	35.9
The number of games played in the series	8.31 (2.32)	93.8	89.1	82.8
The number of innings played in Game 7	8.19 (2.33)	75.0	46.9	42.2
<i>Ancillary details</i>				
Names of players on winning team who had hits in the final inning of Game 7	6.62 (2.59)	39.1	23.4	20.3
The last year the Cubs won the World Series	6.62 (2.86) ^a	78.1	42.2	43.8
The last year the Indians won the World Series		45.3	25.0	15.6
Name of player on winning team with a grand slam in Game 6	6.61 (2.55)	35.9	27.0	17.2
Which team had home field advantage	6.48 (2.45)	82.8	54.7 ^b	56.3 ^b
Inning of a rain delay in Game 7	6.32 (2.49)	50.0	29.7	32.8
Name of player on winning team with a leadoff home run in Game 7	6.25 (2.65)	42.2	20.3	28.1
Game 6 final score	5.89 (2.78)	39.1	9.4	10.9
Name of Cubs' starting pitcher in Game 7	5.79 (2.81) ^a	45.3	31.3	21.9
Name of Indians' starting pitcher in Game 7		48.4	39.1	31.3
Name of player on losing team with a two-run home run in Game 7	5.73 (2.63)	34.4	18.8	23.4
Game 1 final score	5.58 (3.07)	32.8	14.1	15.6
Game 5 final score	5.23 (2.84)	23.4	9.4	10.9
Game 4 final score	5.17 (2.85)	12.5	4.7	4.7
Game 2 final score	5.04 (2.87)	26.6	4.7	4.7
Game 3 final score	5.02 (2.79)	25.0	7.8	10.9
Name of player on losing team with two home runs in Game 1	3.67 (2.58)	21.9	10.9	12.5
Name of Cubs' starting pitcher in Game 1	3.48 (2.56) ^a	42.2	32.8	35.9
Name of Indians' starting pitcher in Game 1		46.9	31.3	45.3
Name of Cubs' starting pitcher in Game 3	3.32 (2.36) ^a	29.7	20.3	18.8
Name of Indians' starting pitcher in Game 3		15.6	9.4	6.3

Note: Details are displayed in order of rated importance. Percentages are displayed in bold when more than 50% of the sample recalled the detail accurately.

^aPilot rating for this detail was provided for both the winning and losing teams in a single rating, whereas the item was recalled separately for each team in Study 1. Thus, the pilot rating is displayed only once.

^bAlthough home field advantage was recalled accurately by a majority of the sample at S2 and S3, there were only two possible responses for this item, suggesting that recall was at chance levels.

understanding of the rules of baseball on a four-item response scale: *no understanding, below average, average, or above average*. Most participants indicated an average understanding (64%), followed by above average (21.5%), then below average (14.5%) and no understanding (1%). In other words, all but 1% of our participants had a basic understanding of the rules of baseball.

Mean importance ratings for each event detail are displayed in *Table 1*. The means did not vary across gender or level of understanding. Certain event details were clearly considered more important than others. Four details were rated, on average, above eight on the 10-point scale, whereas the others were all rated below seven. The difference between the top four and the bottom 17 details was significant across all pairings, all Bonferroni-adjusted p 's $< .001$. Because of this striking difference in ratings, we labelled the top four details – the team that won the series, the score of Game 7, the number of games played in the series, and the number of innings played in Game 7 – as essential; the other 17 as ancillary. It is worth noting that the details from the end of the series were considered more important to include in a narrative – or more essential – than details from earlier in the series, supporting the idea that essential elements centred on the event's outcome.

Study 1

Our first study set out to determine if fans of a sport would form lasting collective memories for a championship sporting event, and whether these memories would centre on essential or ancillary elements. Moreover, it examined whether fans remember the personal circumstances in which they learned about the event, and whether these memories reflect those detailed in the literature on flashbulb memories.

In this study, we collected memories from generic sports fans for the 2016 MLB World Series, which the Chicago Cubs won. We assessed these fans' event memory (i.e., memory for the event itself) for this World Series using a questionnaire built around our pilot study. To assess collective memory, we examined the percentage of participants who recalled each detail and used the 50% cut-off point discussed in the Introduction, keeping in mind that this constitutes an operational definition and that, in actuality, whether a memory might be included in a community's collective memory is a matter of degree.

As noted in the Introduction, we will be interested in contrasting essential with ancillary elements of the game. Because we were interested in the long-term retention of a collective memory, we tested our sample at three different time periods: within a week after the final game, approximately 15 weeks later, and one year later. In addition to questions about the details of the event, we also asked our participants about their personal circumstance memories (memories for the reception event), as well as their level of fandom.

Method

Participants

In the week after the conclusion of the 2016 MLB World Series, 151 participants were recruited via Amazon's Mechanical Turk. In the recruitment message, we specified that we were interested in recruiting baseball fans, though others were welcome to participate. We recruited as many participants as we could initially, because we did not know what the drop-out rate would be. Participants in the first survey were invited to complete two additional surveys at later dates. Of the participants who completed the first survey, 65% returned for the second survey and 42% completed all three surveys. To determine if being a fan of the sport was related to drop out rates, we compared the fandom of participants who completed all three surveys ($M = 4.73$, $SD = 1.44$) with those who did not ($M = 4.58$, $SD = 1.42$). The difference was not significant, $t(149) = 0.66$, $p = .51$, 95% CI $[-0.31, 0.62]$, $d = 0.11$. All reported results for Study 1 include only the participants who completed all three surveys ($N = 64$). A sensitivity power analysis indicated that our repeated-measures analysis comparing participants' recall accuracy across the three surveys had 80% power to detect an effect size of $f = .15$ with an assumed alpha significance criterion of .05.

The mean age of the sample was 41.44 years ($SD = 13.11$). By chance, there were equal numbers of males and females. Age and gender did not impact the results and therefore are not discussed further. A "fandom" variable was calculated from self-reported ratings concerning the extent to which participants follow professional baseball and sports in general (see "Materials and procedure" section below for details on this composite score). As noted above, the mean of this composite score was 4.73 out of 7, indicating that, on average, participants were at least moderate fans of sports in general and baseball in particular. It is notable that 85.9% of the sample viewed the Cubs' victory positively, though very few participants indicated that the Cubs were the primary MLB team they supported.

Materials and procedure

The three surveys (S1, S2, S3) were administered over the course of 12 months. S1 launched the morning after the final game of the 2016 World Series and closed seven days later, S2 was administered 15–17 weeks after the Series, and S3 was administered one year after the event and was available for a two-week period during which the 2017 World Series was ongoing. Neither the Chicago Cubs nor the Cleveland Indians participated in the 2017 World Series.

The three surveys were identical, except that S1 included the items used to create a fandom variable. Participants were asked the extent to which they were a fan of a particular baseball team, the extent to which they feel part of a group that supports a particular baseball team, general interest in MLB, extent to which they

follow MLB, and the extent to which they follow professional sports in general. All ratings were made on a 7-point scale. These items demonstrated high reliability (Cronbach's alpha = .89). The "fandom" score was calculated as the mean of ratings for these five survey items. Participants also indicated their favourite baseball team. Demographic questions were included in S1.

All three surveys probed for event memory, that is, factual knowledge about the series. These included all of the details probed in the pilot study except for "Which team won the World Series?" Some event details were rated once for both teams in the pilot study (i.e., "The names of the starting pitchers in Game 1"), but these details were recalled separately for each team in Study 1 (i.e., "Who was the starting pitcher for the Chicago Cubs in Game 1?"). Thus, Study 1 included 24 event details. Participants were instructed not to look up the answers to these questions, as this was a test of memory.

Another series of open-ended questions probed the circumstances in which participants learned the outcome of the final game of the 2016 World Series. They were asked how they first learned about the outcome (the *source* of the information), where they were, what they were doing, the first person they communicated with about the outcome, and what they were eating and drinking at the time. They rated their confidence in the accuracy of each response. For activity (i.e., what they were doing), they provided an additional rating of how vivid this memory was. All of these ratings were made on 7-point scales. The complete survey can be found at <https://osf.io/rvku3/>.

Coding of responses

Accuracy of event memory was assessed as the proportion of the 24 factual questions answered correctly. Questions were asked in a text-entry format, and each question had a specific correct response. A correct response was scored as 1, while incorrect responses were scored 0. When calculating event memory accuracy for questions regarding the scores of each game, responses were scored as 0 if neither reported score was correct, 0.5 if one team's score was correct, and 1 if both teams' scores were correct. When examining collective memories, responses for the scores of each game were considered accurate only if both teams' scores were correctly provided. As indicated, collective memories were measured as the proportion of people accurately answering a particular question about the championship event. The greater the frequency of a correct answer, the more likely, we would claim, the probed-for fact had become incorporated into the collective memory held by our participants. Details that were recalled by at least 50% of the sample were considered collective memories.

Consistency of personal circumstance memories across surveys was coded using a scheme developed by Neisser and Harsch (1992; see also Kvavilashvili et al., 2009). Personal circumstance memory responses at S2 and S3 were

coded on a 3-point consistency scale. Responses were scored as a 0 if the participant could not remember the information or the response included a major distortion of the previous response, 1 if the response was less specific than the previous response or involved a minor distortion, and 2 if the response was the same or more specific than the prior response. Responses for S3 were coded for consistency with both S1 and S2.

One coder coded all of the personal circumstance memories for all participants and a second coder completed coding for a randomly selected subset ($n = 40$). Intra-class correlation coefficients were examined separately for each personal circumstance feature across all three coding combinations (i.e., S1 to S2, S1 to S3, and S2 to S3). Interrater reliability was high for all features (lowest ICC = .80; highest ICC = .98; $M_{ICC} = .90$, $SD = .06$). All discrepancies were resolved via discussion between coders.

Consistency scores were calculated using an adapted version of the *weighted attribute score* (WAS) used by Neisser and Harsch (1992) and Kvavilashvili et al. (2009). This score gives more weight to canonical features of personal circumstance memories, which include the activity, location and source of information, and less weight to the peripheral features of the memory; in our case, the peripheral details included the first person communicated with about the event and what participants were eating and drinking when they learned about the event. To calculate WAS, the sum of consistency scores was computed for the canonical features. An additional point was added to this summed score if the participant's combined consistency score for the peripheral details was 3 or greater. Thus, WAS represents a measure of overall consistency on a scale of 0–7. Inasmuch as the ranges of event memory accuracy and WAS differed, we calculated the proportion of accurate or consistent answers for each measure and used these in our statistical analyses.

Results

We first discuss event memory accuracy and the emergence of collective memories. We then discuss personal circumstance memories and their related factors. In any repeated-measures tests in which the assumption of sphericity was violated, Greenhouse-Geisser adjusted test values are reported and can be noted by observing the adjusted degrees of freedom. When reporting results of statistical comparisons, we present 95% confidence intervals for the difference of the means.

Collective memory and fandom

Inasmuch as most studies of memory for sports provide overall event memory accuracy, we do so here. It consists of the proportion of event details recalled correctly by each participant. A repeated-measures ANOVA demonstrated a main effect for survey (S1: $M = .45$, $SD = .27$; S2: $M = .27$, $SD = .22$; S3: $M = .28$, $SD = .21$), $F(2, 126) = 26.04$, $p < .001$, $\eta^2_p = .29$. Post-hoc comparisons indicated that

event memory accuracy at S1 was greater than S2, $p < .001$, 95% CI [.12, .24], $d = 0.72$, and than S3, $p < .001$, 95% CI [.11, .24], $d = 0.72$, but there was no difference between S2 and S3, $p = .46$, 95% CI [-.04, .03], $d = 0.02$. In other words, accuracy dropped from S1 to S2 and then levelled off.

Fandom of the sport was strongly correlated with the number of details accurately recalled at S1, $r(64) = .65$, $p < .001$, remained positively correlated at S2, $r(64) = .26$, $p = .04$, but was no longer positively correlated at S3, $r(64) = .08$, $p = .54$. It appears that a higher level of baseball fandom does not prevent the erosion of event memory over time. However, we were also interested in the relation of sports fandom with recall for essential and ancillary details. Fandom was positively correlated with recall accuracy for essential details at S1, $r(64) = .51$, $p < .001$, but did not correlate at S2 or S3, $r(64) = .09$, $p = .49$ and $r(64) = -.08$, $p = .55$, respectively. For ancillary details, fandom was positively correlated with recall accuracy at S1, $r(64) = .65$, $p < .001$, and S2, $r(64) = .31$, $p = .01$, but this correlation was no longer significant at S3, $r(64) = .19$, $p = .14$. To summarise, fandom of the sport was related to recall of event details, both essential and ancillary, shortly after the event. Fandom was also related to recall of ancillary details after a 15–17-week delay. However, after an extended one-year delay, fandom was no longer related to recall of either essential or ancillary details.

We now turn to whether a collective memory emerged and whether it emerged for essential or ancillary elements, or both. As indicated in the pilot study, four event details might be considered essential: the score of game 7, number of innings in game 7, number of games played in the series, and the winner of the series. Inasmuch as we told participants the outcome before probing them for details of the game, we only test the other three essential details.

Table 1 depicts the percentage of participants who recalled each detail accurately across the three surveys. Essential details are listed first, followed by ancillary details. Only a few details were accurately recalled by the majority of the sample, even at S1. At S1, these items included the three essential details, as well as three others: home field advantage, the year of the Cub's last World Series victory, and the timing of the rain delay in game 7. That is, 100% of the essential elements and 15.7% of the ancillary ones were recalled accurately by a majority of the sample at S1. By S2 and S3, only one essential element, the number of games played in the series, was above the 50% mark. Home field advantage was also recalled by approximately 55% of the sample at S2 and S3, but this question had only two correct answers, suggesting that recall was near chance performance. No other ancillary details achieved the 50% level. The other two details one might consider essential on the basis of the pilot study did not achieve the 50% mark at S2 and S3.

Figure 1 provides an overview of the results in **Table 1**. It depicts the overall percentage of essential and ancillary details that were accurately recalled at each survey in

Study 1 and, from the pilot study, the mean ratings for how important it is to include the essential and ancillary details in a narrative about a World Series. Pilot ratings are displayed as the mean rating of "importance to include in a narrative" (made on a 10-point scale) divided by ten. It is clear from this figure that recall among the sample in Study 1 mapped onto ratings from the pilot study quite well. Moreover, the sample as a whole did recall over 50% of the identified essential details not just at S1, but also at S2 and S3, though, as noted, the percentages in S2 and S3 are due in large part to one element: number of games played. Baseball fans, it seems, formed a collective memory that, despite being rather impoverished in the long-term, centred on the essential elements.

Also of note, a closer look at **Table 1** reveals a potential serial position curve, with details from the first and last games being recalled by more participants than those in between. This is particularly apparent in recall for the scores of each game, but can also be observed for the names of starting pitchers and other game-specific details. To further explore this pattern, we returned to our measure of event memory accuracy. We calculated event memory accuracy for the first game, the middle games (i.e., Games 2 through 6), and the final game, as shown in **Figure 2**. The four questions that pertained to the series in general (e.g., the last year in which each team won the World Series) were not included in this analysis. A series of repeated-measures ANOVAs were conducted to compare event memory accuracy for the first game, final game, and those in between at each survey. A main effect of serial position was found for each survey (all F 's > 14.48 , all p 's $< .001$, all η^2 's $> .19$). Post-hoc comparisons showed that, at S1 and S2, details from the final game were recalled more accurately than details from the first game, which were in turn recalled more accurately than those from Games 2 through 6 (all p 's $< .003$). At S3, details from Games 2 through 6 were recalled with less accuracy than both the first and final game (both p 's $< .001$), but there was no difference in the accuracy of recall for the first game and the final game ($p = .75$). This pattern of results should be interpreted with some caution, in that standard primacy and recency effects are not likely the only cause for this pattern. Teams competing in the World Series tend to start their best pitchers in the first game of the series, and sports fans are more likely to know the names of these "star players" than the names of other players. Moreover, the more accurate recall for the end of the series is likely due, in large part, to heightened attention to the event's outcome.

Did fandom, our surrogate for social identification with the sports-watching community, impact the formation of a collective memory? One item, the number of games played in the series, had surpassed our criterion threshold – correct recollection by at least 50% of the sample – to qualify as a collective memory after a delay. We assessed whether those who converged on this memory, i.e., who answered it correctly, had higher fandom scores than

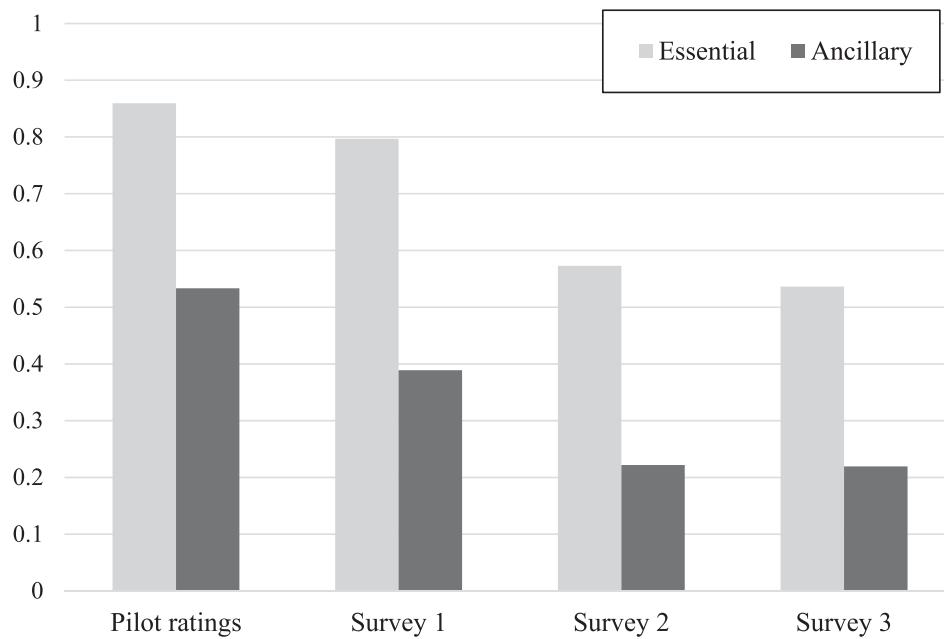


Figure 1. Collective memory convergence (Study 1) and importance ratings (pilot study) for essential and ancillary elements. S1, S2 and S3 data represent the percentage of all essential and ancillary details recalled accurately at each survey. Pilot data represent the mean importance ratings of essential and ancillary details in the narrative of a World Series. Pilot ratings were made on a 10-point scale and were divided by ten for this figure.

those who did not. Because the number of participants who recalled this detail accurately varied at each survey, this required three *t*-tests, one for each survey. At S1, participants who recalled this detail accurately did have higher fandom scores than those who did not, $t(62) = 3.84$, $p < .001$, 95% CI [1.24, 3.95], $d = 2.01$. At S2 and S3, however, fandom did not differ between those who did and did not recall this detail, $t(62) = 0.81$, $p = .42$, 95% CI [−0.69, 1.63], $d = 0.33$, and $t(62) = 0.56$, $p = .58$, 95% CI [−0.69, 1.23], $d = 0.19$, respectively. These results suggest that baseball fandom was related to the mnemonic convergence observed shortly after the World Series, but convergence over the long-term did not appear particularly linked to generic baseball fandom.¹

Personal circumstance memories and fandom

Weighted attribute scores (WAS), which represent the overall consistency of personal circumstance memories, were entered into a repeated-measures ANOVA. A main effect of survey was found, $F(1.64, 103.49) = 6.62$, $p = .004$, $\eta_p^2 = .10$. Post-hoc tests demonstrated that consistency from S1 to S3 ($M = .55$, $SD = .30$) was lower than consistency both from S1 to S2 ($M = .60$, $SD = .28$) and from S2 to S3 ($M = .65$, $SD = .29$), $p = .04$, 95% CI [.01, .10], $d = 0.27$ and $p < .001$, 95% CI [.05, .14], $d = 0.56$, respectively. There was no significant difference between consistency from S1 to S2 and S2 to S3, $p = .19$, 95% CI [−.02, .11], $d = 0.17$.

Confidence. Participants were highly confident in their memory for the circumstances in which they learned about the outcome of the 2016 World Series. We calculated the mean confidence for all personal circumstance features

and conducted a repeated-measures ANOVA to compare confidence across surveys. Confidence changed across the three surveys, $F(1.80, 113.48) = 46.29$, $p < .001$, $\eta_p^2 = .42$. Confidence was of course high at S1 ($M = 6.81$, $SD = 0.37$), which had been completed within one week of the 2016 World Series' conclusion. Confidence was significantly lower at S2 ($M = 5.54$, $SD = 1.43$), $p < .001$, 95% CI [0.92, 1.62], $d = 0.91$, and S3 ($M = 5.52$, $SD = 1.07$), $p < .001$, 95% CI [1.03, 1.55], $d = 1.24$, but there was no difference between confidence at S2 and S3, $p = .89$, 95% CI [−0.33, 0.29], $d = 0.02$. Although there was a decline in confidence over time, it should be stressed that confidence remained high, even after a one-year delay, i.e., 5.52 on a 7-point scale.

Vividness. We also assessed vividness of participants' recall of what they were doing when they learned of the outcome of the 2016 World Series. As with confidence, vividness differed across the three surveys, $F(2, 126) = 109.11$, $p < .001$, $\eta_p^2 = .63$. Post-hoc tests showed significant differences between all surveys. Vividness at S1 ($M = 6.50$, $SD = 0.80$) was greater than at S2 ($M = 4.67$, $SD = 1.86$), $p < .001$, 95% CI [1.37, 2.29], $d = 1.00$, and S3 ($M = 3.02$, $SD = 2.07$), $p < .001$, 95% CI [2.99, 3.98], $d = 1.79$. In addition, vividness at S2 was greater than at S3, $p < .001$, 95% CI [1.20, 2.12], $d = 1.08$. That is, the degree of confidence did not decline from S2 to S3, but the degree of vividness did. It is notable that vividness ratings were low at S3.

In general, then, participants' personal circumstance memories were not consistent over time, though most of the forgetting occurred in the first four months and

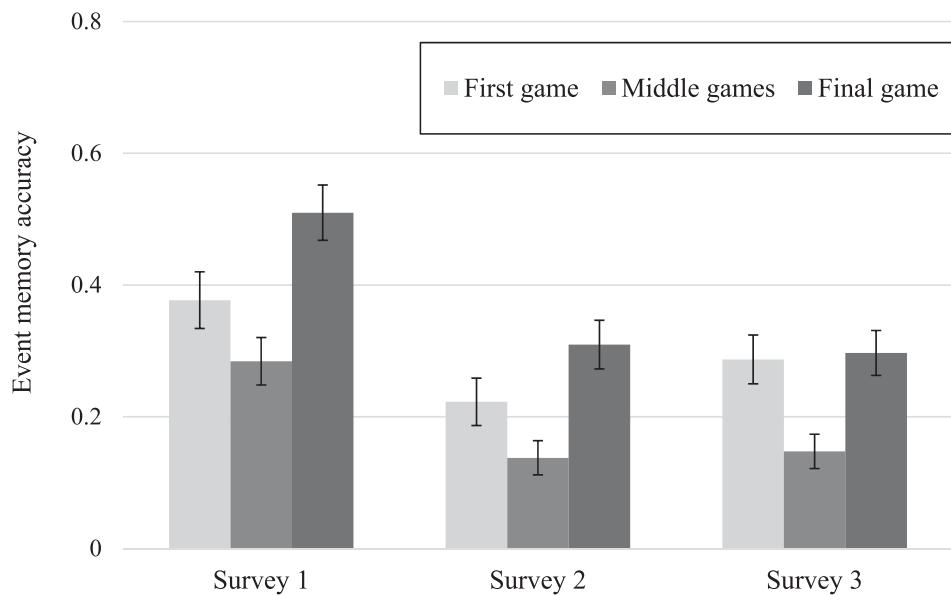


Figure 2. Serial positive curve of event memory accuracy across games in the 2016 World Series. Error bars represent the standard error of the mean.

consistency levels were in the range of those reported in other studies of flashbulb memories (e.g., Hirst et al., 2009). As with flashbulb memories, participants were confident in their sometimes erroneous recollections. Interestingly, unlike flashbulb memories, the memories our participants had for the circumstances in which they viewed the media event were not vivid after a delay.

Fandom. Strong fans of baseball were more likely to remember the personal circumstances in which they learned about the outcome over the long-term. We correlated fandom with consistency of personal circumstance memory across surveys. Fandom did not correlate with consistency from S1 to S2, $r(64) = .13, p = .31$, but did correlate with consistency from S1 to S3, $r(64) = .31, p = .01$, and from S2 to S3, $r(64) = .31, p = .01$. The correlations between fandom and confidence in personal circumstance memories demonstrated a similar pattern: at S1, $r(64) = .18, p = .15$; at S2, $r(64) = .26, p = .04$; and at S3, $r(64) = .29, p = .02$. Fandom correlated with vividness of their memory for what they were doing when they learned about the event at all three surveys: at S1, $r(64) = .42, p = .001$; at S2, $r(64) = .31, p = .01$; and at S3, $r(64) = .39, p = .002$.

To determine if participants had some sense of their accuracy, or lack thereof, we assessed correlations between confidence and personal circumstance memory consistency at S2 and S3. Confidence in one's memory at S2 did not correlate with consistency from S1 to S2, $r(64) = .18, p = .17$. Confidence at S3, however, was positively correlated with consistency from S1 to S3, $r(64) = .34, p = .006$, as well as consistency from S2 to S3, $r(64) = .26, p = .04$. Baseball fans, it seems, had some awareness of the accuracy of their personal circumstance memories, at least after a substantial retention interval.

Discussion

In the world of professional baseball, the Chicago Cubs' victory in the 2016 World Series was about as historic as a media event can be: The Cubs had not won the World Series for a longer period than any other MLB team, they overcame a 3–1 series deficit by winning three straight games, and the final game ended in extra innings. Each of these features would be unique in baseball's championship event; in combination, this event was quite an anomaly. Presumably, this is the type of media event that all baseball fans would consider important. However, the memories these fans formed were far from complete.

In particular, in terms of ancillary elements, less than half were recalled accurately by the sample immediately following the event and fewer than a quarter were recalled accurately after a delay. If any collective memory emerged among baseball fans, it centred on essential elements. Yet even the collective memory for these elements was fairly impoverished, with one detail in particular – the number of games played in the series – accounting for most of the increased mnemonic convergence observed for essential elements. Moreover, the extent of one's fandom of the sport did not appear to be strongly related to this convergence after a one-year delay. Of course, it is worth pointing out that fandom was only measured at S1. It is possible that the extent of one's fandom, or one's identification with a social group more generally, may fluctuate over time and in relation to events that are deemed relevant to the group.

As to memory for the personal circumstances in which one learned of the event, sports fandom was positively correlated with consistency and confidence in personal circumstance memories after a delay; however, these fans did not develop characteristically "flashbulb" memories,

at least to the extent that ratings of vividness for personal circumstance memories declined to moderate levels after a delay (see Talarico & Rubin, 2018 for a review of flashbulb memory features).

This study examined exclusively generic fans, that is, fans of the sport and not necessarily of a specific team. We wondered if we could find a stronger effect of fandom if we confined ourselves to fans of specific teams. As we mentioned in the Introduction, team-specific fans may find that it is critical to include in any narrative of the event not just the essential features, but elements relevant to their community's shared goal of seeing one team win the event. Generic fans might not have a common goal, and hence may structure their collective memory only around the essential features. Would, then, team-specific fans produce a rich collective memory, as well as vivid flashbulb memories? In Study 2, we do not specifically contrast team-specific with generic fans, in that our recruitment procedure focused on team-specific fans. Study 2 does, however, allow us to examine what a team-specific fans' collective memory might look like.

Study 2

In 2016, in dramatic fashion, the Cleveland Cavaliers won the NBA Finals and the Cleveland Indians lost the MLB World Series. The victory occurred in June 2016 and the loss, which was the target event in Study 1, occurred in November 2016. In both series, the winning team overcame a 3–1 deficit to win the seven-game series, and the final games in both series were decided by a small margin. The Cavaliers' victory was the first championship win for the franchise, and the first championship in any professional sport in the city of Cleveland in 52 years. For fans of Cleveland sports, who felt as if their sports teams were cursed, this win was a distinctive event that could be construed as consequential for their identity as Cavaliers' fans, as well as their identification with the city of Cleveland. Likewise, their baseball team's loss might have felt distinctive in the wake of their basketball team's victory and may have been construed as comparably consequential.

In this study, we examined event memory and personal circumstance memory more than 15 months after the events. This recruitment procedure allowed us to assess our main focus of interest, the formation of a collective memory, but it did not permit us to measure the consistency of the personal circumstance memories. We could, however, measure phenomenological characteristics of reported personal circumstance memories. Such a strategy is common in flashbulb memory studies (e.g., Brown & Kulik, 1977; Finkenauer et al., 1998; Mahmood et al., 2004). For event memory, in contrast to Study 1, Study 2 used an open-ended free response format to solicit important events in the target games. In this method, it is the participants, not the experimenters, who determine what

is important to recall. We decided to use this procedure because prior collective memory work had used such methods, and we wanted to make a closer connection to this literature. Moreover, the use of this methodology might provide a better measure of what details are readily accessible, relative to recall for experimenter provided details (for other examples of this method, see Abel et al., 2019; Zaromb et al., 2014). Given the change in procedure from Study 1 to Study 2, comparisons across studies must be made cautiously. Study 2, then, should be viewed as an independent examination of team-specific fans, though some comparisons will be drawn in the final Discussion.

Method

Participants

In early February of 2018 participants were recruited via social media. They were not compensated for their participation. A recruitment message was shared with the first author's social media followers/friends. Over three days, 212 individuals accessed the survey, and 120 of these individuals completed the survey. Seventeen of these participants provided incomplete responses and were excluded from analyses, leaving a sample of 103 participants. A sensitivity power analysis indicated that analyses comparing features of the positive event with the negative event had 80% power to detect an effect size of $d=0.20$ with an assumed alpha significance criterion of .05. The mean age of the sample was 30.48 years ($SD=10.56$). There were 76 males and 25 females. Two participants did not provide their age and gender. Age and gender did not impact the results and therefore are not discussed further.

The recruitment procedure for Study 2 resulted in a sample comprised almost entirely of fans of Cleveland sports teams, with 98.1% indicating that the Cleveland Cavaliers were their favourite professional basketball team and 97.1% indicating that the Cleveland Indians were their favourite professional baseball team. Moreover, mean fandom ratings on a 7-point scale (see "Materials and procedures" section below for details on this score) were very high both for the Cavaliers ($M=5.50$, $SD=1.20$) and Indians ($M=5.75$, $SD=1.19$). The high levels of reported fandom for Cleveland sports teams here distinguished this sample from that of Study 1 and justifies the claim that, in Study 2, participants included "die-hard" fans of specific teams involved in the target events.

Materials and procedure

Participants completed a series of questions regarding the conclusion of the 2016 NBA Finals and the conclusion of the 2016 MLB World Series. Questions for each event were presented in a block, including questions regarding event memory, personal circumstance memory, and fandom of each Cleveland sports team. The order of presentation of the two event blocks was randomised. This order had no impact on the results.

The series of questions for each event block began with a question asking participants if they had watched the final game of the respective series, which they all had. To assess event memory, participants listed three important details from the final game of each series. The instructions were to describe things that happened during the game, such as important plays or calls made by the referees/umpires. They were asked to provide players' names, if appropriate, and when the event occurred during the game. Participants were instructed not to look up any information while completing this task. They also rated how confident they were in the accuracy of each provided detail.

For both championships, three features of personal circumstance memories were probed for: location ("Where were you ... ?"), activity ("What were you doing ... ?"), and others present ("Who was the first person you communicated with ... ?"). Participants reported their confidence in the accuracy of their recall of these details, as well as vividness ratings for activity (all on 7-point scales). Participants then rated their overall personal circumstance memories on a series of phenomenological dimensions, each on a 7-point scale: the experience of reliving the event while remembering it, the extent to which they feel as if they travel back in time when remembering it, their belief that the event occurred as they remember, the extent to which they remember the event vs. just knowing that it happened, and how strongly they feel the emotions that they felt then as they remember it now. These questions were adapted from Sheen et al. (2001) and Talarico and Rubin (2003).

Regarding the fandom measure, Study 2 assessed attitudes toward particular teams. Specifically, for each team participants were asked "How big of a fan are you of the [team name]?" on a 7-point scale with 1 being *not at all* and 7 being *the biggest fan ever*, and "To what extent do you feel that you are part of a group that includes all fans of the [team name]?" on a 7-point scale with 1 being *not at all* and 7 being *I definitely feel this way*. The mean of these two variables for each team served as the primary fandom variable for Study 2.

The unique experience of a championship loss and victory in a short period of time offered an opportunity to explore the similarities and differences between the impacts of positive and negative media events. Thus, we asked participants to rate various event features for the loss and victory: the consequentiality of the event for themselves, the consequentiality for the city of Cleveland, the emotional intensity of the event, how often they thought about the event, and how often they talked about the event (all on 7-point scales). After both event blocks were completed, participants provided demographics and were asked if they were a fan of one of the two teams more than the other, if they liked one of the two sports (i.e., basketball or baseball) more than the other, and if they believed that they remembered one event better than the other. The complete survey can be found at <https://osf.io/rvku3/>.

Coding of responses

We scored the three event details provided for each event by referring to videos and box scores (i.e., structured game summaries) of the actual games. We assigned a value of 0 to an inaccurate detail or a failure to provide a detail and a 1 to an accurate detail. Repetitions were not coded as accurate. Thus, each participant had a summed accuracy score ranging from 0 to 3, which we then used to calculate a proportion.

Each detail was also coded for the time at which the detail occurred during the game. For the 2016 NBA Finals, this entailed providing a number for each accurate detail representing the minute of the game in which it occurred. Basketball games in the NBA consist of four 12-minute quarters, so the first sixty seconds of the game were coded as 1 and the last sixty seconds were coded as 48. Details that came after the game had ended (e.g., celebrations by the players) and details that were not specific to a point in time during the game (e.g., "The game was played at Golden State") were coded into separate categories. One detail mentioned from the basketball game spanned a few minutes (a player made three straight shots) and was coded as the median of this timeframe.

A similar process was used to code the timing of recalled details in the baseball game. Baseball games consist of nine innings in a regulation game. The final game of the 2016 World Series, however, was tied at the end of nine innings, so the game was extended and ended in ten innings. Each inning in baseball is split into two halves, the "top of the inning" and the "bottom of the inning", with one of the teams at bat in each. Details were coded for the half-inning during which they occurred. For example, a detail that occurred in the top of the eighth inning was coded as 8 and a detail from the bottom of the eighth inning as 8.5.

As to our probe for mnemonic convergence on the details of the game, as the coding was being carried out, a tabulation was kept of each event that was mentioned. In sports, an event is fairly easy to demarcate. It typically consists of a particular "play" in the game; that is, a brief sequence of occurrences initiated by the actions of one player and concluded with a score, a change of possession, or a stoppage of play (e.g., an "out" in baseball). After obtaining a list of all of the events mentioned by participants, we then tabulated how many participants mentioned a particular event. This allowed us to examine the extent to which fans developed a collective memory of the details in question.

Consistency of personal circumstance memories could not be assessed in Study 2 in that we did not use a test-retest methodology, as we did in Study 1. Everyone in our sample supplied recollections of what they claimed were the circumstances in which they learned about the games; that is, everyone claimed to have a memory. We therefore focused on confidence, vividness and phenomenological qualities in our discussion of personal circumstance memory.

Results

We first examine event memories and the emergence of collective memories across events, followed by factors related to these memories. We then discuss personal circumstance memories and related factors. Throughout the results sections and subsequent discussion, the basketball game in which a Cleveland team was victorious is often referred to as the “positive event” and the baseball game in which a Cleveland team lost is often referred to as the “negative event”.

Collective memory and fandom

As in Study 1, we first examine event memory accuracy. Accuracy was quite high for both the positive ($M = .87$, $SD = .27$) and negative ($M = .82$, $SD = .34$) events, and these values did not significantly differ from one another, $t(102) = 1.58$, $p = .12$, 95% CI [-.01, .12], $d = 0.16$. Most participants were able to recall three details from the final game of each series. For the positive event, 76.7% of participants accurately recalled three details and only 4.9% were unable to describe a single detail. For the negative event, 72.8% were able to describe three details accurately and 9.7% were unable to recall a single detail. Of note, 13.6% provided responses for the positive event that included direct and accurate quotes from the announcers calling the game or from players’ interviews after the game. Confidence in event memories was extremely high and did not differ between the positive ($M = 6.22$, $SD = 1.36$) and negative ($M = 6.10$, $SD = 1.54$) events, $t(102) = 0.64$, $p = .53$, 95% CI [-0.24, 0.47], $d = 0.06$.

We next examined correlations between team-specific fandom and event memory features. Fandom was positively correlated with event memory accuracy for both the negative, $r(103) = .51$, $p < .001$, and the positive event, $r(103) = .37$, $p < .001$. Fandom also positively correlated with event memory confidence for the negative, $r(97) = .26$, $p = .01$, and positive event, $r(99) = .33$, $p = .001$. In other words, team-specific fandom was related to recall accuracy and confidence for championship sporting events involving those teams, even after a delay of more than 15 months.

Turning to collective memory, participants often mentioned the same details. The percentage of participants who recalled event details for both events are listed in **Table 2**. The table includes only details recalled by five or more participants. We once again relied on our threshold of accurate recall by at least 50% of the sample for consideration as a collective memory, but it is worth mentioning that this threshold was far more conservative in Study 2 than it was in Study 1. The recall task in Study 1 essentially involved cued recall, whereas Study 2’s method involved event generation. Participants in Study 2 who did not provide a particular detail in the open-ended prompt may have been able to recall that detail, as well as other unmentioned details, if specifically cued to do so. Thus, the current method may underestimate mnemonic

convergence when compared to Study 1. Nonetheless, we employed the 50% threshold for consideration as a collective memory in Study 2.

From the positive event, two details were recalled by well over 50% of participants: a three-point shot made by a Cavaliers player in the final minute of the game and a blocked shot by a Cavaliers player in the second-to-last minute of the game; 81.6% of participants accurately recalled *both* of these details. Clearly, these details, which would not be considered essential elements, emerged as a collective memory for Cleveland sports fans. A few other details emerged as common responses for the positive event, though they did not reach the 50% threshold. It is worth noting that the top three most-often recalled details had acquired labels that were used by numerous participants: “The Shot”, “The Block”, and “The Stop”. In regards to the negative event, one detail was recalled by more than 50% of the sample: a home run by an Indians’ player in the bottom of the eighth inning. In addition, the rain delay that occurred between the ninth and tenth innings was recalled by just under 50% of the sample. As was the case for the positive event, then, collective memories emerged around ancillary elements of the negative event.

To compare mnemonic convergence across the two events, we used McNemar’s chi-square test for comparing paired nominal data. In this analysis, we focus on the details that were recalled by 50% or more of the sample, of which there were two per event (i.e., the events in bold font in **Table 2**). We considered the “rain delay” to be recalled by at least half of the sample even though 49.5% recalled this detail. We compared the proportion

Table 2. Percentage of recall of event details (Study 2).

Event details	Percentage of participants
<i>Positive event</i>	
Three-point shot made by Cavaliers player in final minute (“The Shot”)	87.4%
Shot block by a Cavaliers player in the second-to-last minute (“The Block”)	81.6%
Strong defense by a Cavaliers player in the final minute (“The Stop”)	27.2%
A foul that appeared to injure a Cavaliers player in the final minute	17.5%
A player making three shots in a row at the start of the third period	7.8%
<i>Negative event</i>	
Home run by an Indians player in the bottom of the eighth inning	75.7%
The rain delay that occurred between the ninth and tenth innings	49.5%
The final out of the game (a ground ball to third base)	33.0%
A foul ball by the Indians that looked like it was going to be a home run	15.5%
A home run by a Cubs player in the sixth inning	11.7%
The leadoff home run by the Cubs	7.8%
A hit by the Cubs in the tenth inning that ultimately led to the Cubs’ victory	4.9%

Note: Event details in bold are those that constitute a collective memory by nature of being recalled by 50% of the sample.

of participants who recalled both of the two most often-recalled details from the positive event with the proportion who recalled both of the two most often-recalled details from the negative event. In other words, we compared the proportions of fans who converged on similar representations of the games across the positive and negative events, effectively comparing mnemonic convergence on a collective memory. This test determined that there was a statistically significant difference in the proportion of participants who recalled these details across the two events, $p < .001$, with the positive event eliciting higher levels of mnemonic convergence than the negative event. See Table 3 for the crosstabulation of these data.

The details that participants converged on tended to come from the end of the recalled games. To examine this trend for the positive event, we calculated the percentage of accurate details recalled from each quarter of the final game of the 2016 NBA Finals. Of the accurately recalled details, 89.7% came from the final quarter of the game, and the three most common details mentioned all occurred in the final two minutes of the game. Only 4.2% were drawn from the third quarter, and 1.2% were taken from the first and second quarters combined. To assess the temporal distribution of negative event details, the 20 half-innings from the final game of the 2016 MLB World Series were split into four quarters, each containing five half-innings. Once again, a vast majority of accurately recalled details came from the end of the game, with 85.5% from the final five half-innings of the game. Only 4.3% were drawn from first five half-innings, and 8.5% from the remaining ten half-innings. Clearly, team-specific fans tended to recall the endings of the events. This did not come as a surprise. The outcome of sporting events is, after all, what viewers consider important and, in the events being recalled, the outcomes were determined in the final moments of the final games. Nonetheless, the extent of the emphasis on the ending was greater than we anticipated, particularly for the 2016 World Series, in which a home run was hit on the first at-bat and nine of the 15 total runs scored occurred prior to the final five half-innings.

Did team-specific fandom vary between those who converged on a shared representation of the events and those who did not? To assess these differences for the positive event, we split the sample into those who recalled three

details from the Cavaliers' victory that were all among those mentioned by more than one participant (collective group: $n = 55$) and those whose details did not include three details mentioned by more than one participant (non-collective group: $n = 48$). Critically, the collective group ($M = 5.90$, $SD = 1.19$) reported greater levels of fandom than the non-collective group ($M = 5.05$, $SD = 1.07$), $t(101) = 3.79$, $p < .001$, 95% CI [0.40, 1.29], $d = 0.76$. A similar analysis was then conducted for the negative event (collective group $n = 38$; non-collective $n = 65$). As before, the collective group ($M = 6.20$, $SD = 0.78$) reported significantly higher levels of fandom than the non-collective group ($M = 5.49$, $SD = 1.31$), $t(101) = 3.01$, $p = .003$, 95% CI [0.24, 1.17], $d = 0.62$.

The relation between fandom and convergence on a collective memory could, of course, be influenced by other variables. That is, greater levels of team-specific fandom may be linked to higher ratings of consequentiality, how shocking the event was, emotional intensity, and how often the event had been thought about and talked about. Inasmuch as Cleveland sports fans' unique experience of a championship victory and loss in a short period of time offered an opportunity to examine differences between a positive and negative media event, we first compared these features across events. See Figure 3. A 2 (game: victory, loss) x 6 (feature: shocking, consequentiality for city, consequentiality for self, emotional intensity, thought about, talked about) repeated-measures ANOVA was conducted. An effect of game was found, $F(5, 510) = 15.70$, $p < .001$, $\eta_p^2 = .13$, suggesting that, across all features, the positive event received higher ratings than the negative event, $p < .001$, 95% CI [0.66, 1.11], $d = 0.98$. A significant interaction between game and feature also emerged, $F(5, 510) = 15.70$, $p < .001$, $\eta_p^2 = .13$. The positive event was rated higher on all event features (a series of paired-samples t -tests resulted in all t 's > 2.45 , all p 's $< .02$); however, the effect size for consequentiality for the city was twice as large as any other effect size, suggesting that the interaction was driven by the larger difference across events on this event feature.

We next examined the correlations between fandom and these event features. As might be expected, most of the correlations were significantly positive. For the positive event, fandom was positively correlated with consequentiality for the self, emotional intensity, how often the event was thought about, and how often the event was talked about, all r 's $> .46$, all p 's $< .001$. Fandom was not correlated with how shocking the positive event was, $r(103) = -.08$, $p = .44$, or how consequential it was for the city of Cleveland, $r(103) = .08$, $p = .45$. For the negative event, a very similar pattern emerged. The same four details were positively correlated with fandom, all r 's $> .45$, all p 's $< .001$, but fandom was also positively correlated with how shocking the negative event was, $r(103) = .30$, $p = .002$. Once again, fandom did not correlate with the negative event's consequentiality for the city of Cleveland, $r(103) = .08$, $p = .42$. We suspect that the lack of a correlation between fandom and

Table 3. Crosstabulation of participants who remembered the two most often-recalled details from each event in Study 2.

		Negative event	
		Did not recall both details	Recalled both details
Positive event	Did not recall both details	15	4
	Recalled both details	45	39

Note: The two most often-recalled details for each event are listed in bold font in Table 2.

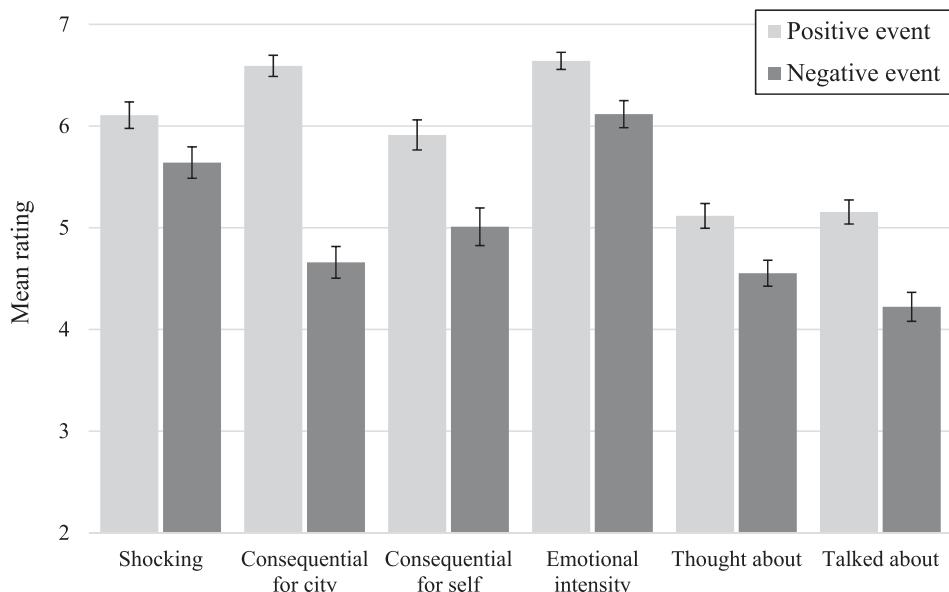


Figure 3. Ratings of characteristics of the positive and negative events in Study 2. Ratings were made on 7-point scales. Error bars represent the standard error of the mean.

consequentiality for the city arose because all team-specific fans, regardless of the extent of their fandom, acknowledge that certain events are more or less consequential for a community, independent of their own personal judgment of an event's importance.

Did fandom relate to participants' recall independently of these event features? We conducted a series of partial correlations to examine the relationship of fandom with event memory accuracy and confidence while controlling for the event features displayed in Figure 3. For the positive event, fandom did not significantly correlate with event memory accuracy, $r(95) = .14$, $p = .17$, nor did it correlate with confidence in event memory accuracy, though the result was approaching significance, $r(95) = .18$, $p = .08$, while controlling for other event features. For the negative event, on the other hand, fandom did positively correlate with accuracy, $r(95) = .28$, $p = .005$, and confidence of event memories, $r(95) = .42$, $p < .001$, while controlling for other event features. In other words, fandom seemed to play a larger role in event memory retention for the negative event, which was considered less shocking, consequential, emotionally intense, and was thought and talked about less than the positive event. This suggests an interaction of event features and fandom: Memory for sporting events might be impacted by the extent of fandom when the event is not considered extremely important to that group of fans (or, at least, when there is some variation in construals of its importance across group members), but the role of fandom is mitigated when the event is considered particularly important to the group, in which case all, or, at least, a vast majority of fans are impacted by the event. Critically, however, team-specific fandom nonetheless matters independently of event features, as evidenced by the fact that generic

sports fans in Study 1 remembered very little about a championship sporting event.

Personal circumstance memories and fandom

Nearly all participants witnessed the outcome of the championship victory and loss, with over 94% watching the final game in each series in its entirety. Ratings of confidence in the accuracy of personal circumstance memories were extremely high in this sample. The mean of all three confidence ratings (activity, location, others present) was 6.89 ($SD = 0.45$) for the positive event and 6.77 ($SD = 0.70$) for the negative event. It is notable that 85.4% of participants reported complete confidence (i.e., a mean of 7.00 on a 7-point scale for all three ratings) in personal circumstance memories for the positive event and 76.7% reported complete confidence for the negative event. There was no significant difference in confidence ratings for the two events, though there was a trend towards higher confidence for the positive event, $t(102) = 1.68$, $p = .096$, 95% CI [-0.02, 0.25], $d = 0.16$. Vividness ratings of memory for what participants were doing when they learned the outcome of the event were also very high, and were greater for the positive event ($M = 6.53$, $SD = 1.00$) than for the negative event ($M = 6.14$, $SD = 1.28$), $t(102) = 2.73$, $p = .007$, 95% CI [0.11, 0.69], $d = 0.26$. Questions pertaining to other phenomenological qualities of participants' personal circumstance memories (reliving the event, travelling back in time, belief in reality of the memory, remembering vs. knowing, and extent to which the emotions are re-experienced) showed high consistency (Cronbach's $\alpha = .87$ for the positive event; $\alpha = .81$ for the negative event), so the mean of these items was calculated. There was no significant difference

in these qualities for the positive event ($M = 5.81$, $SD = 1.19$) and negative event ($M = 5.68$, $SD = 1.13$), $t(102) = 1.16$, $p = .25$, 95% CI $[-0.10, 0.37]$, $d = 0.11$. It is notable that confidence, vividness, and other phenomenological qualities were all positively correlated: for the positive event, all r 's $> .45$, all p 's $< .001$; for the negative event, all r 's $> .57$, all p 's $< .001$.

As to fandom, for the positive event, fandom of the Cleveland Cavaliers was only moderately correlated with personal circumstance memory confidence, $r(103) = .18$, $p = .07$, a result that may reflect a ceiling effect. For the negative event, on the other hand, fandom of the Cleveland Indians was positively correlated with confidence, $r(103) = .34$, $p < .001$. For the positive event, fandom was positively correlated with vividness, $r(103) = .29$, $p = .003$, and other phenomenological qualities, $r(103) = .45$, $p < .001$. A similar pattern was found for the negative event: vividness, $r(103) = .27$, $p = .006$; other phenomenological qualities, $r(103) = .49$, $p < .001$.

When asked directly which game they remembered better, participants tended to select the Cavaliers' victory, with 56.3% of participants claiming the victory was more memorable, 20.4% claiming that the loss was more memorable, and 22.3% responding that the two games were equally memorable. It is noteworthy that, overall, participants tended to indicate that they supported Cleveland's baseball team, the team involved in our negative event, more than the basketball team (46.6% were greater fans of the baseball team, 20.4% were greater fans of the basketball team, and 33.0% supported each team equally), suggesting that fandom was not the sole factor in determining subjective judgments about memorability. In other words, though fandom influences subjective judgments of memorability, it does not hold enough influence to wash out effects stemming from an event's outcome. Moreover, the fact that the positive event was recalled subjectively better than the negative event is particularly striking given that the positive event occurred approximately five months earlier than the negative event. If the memories for each event decayed at the same rate over time, the opposite pattern would have been expected.

General discussion

We examined memory for media events, specifically championship sporting events. As noted in the Introduction, two distinctive features of media events, and championship sporting events in particular, are (1) their role in binding a community together and (2) their mediated nature, that is, that the event is witnessed in a setting other than the one in which it is unfolding. Any consideration of memories of championship sporting events, then, should include the study of (1) the collective memories formed of the event and (2) the autobiographical memories formed of the circumstances in which one witnessed the event.

Forming a collective memory: social identity and essential/ancillary elements

As we noted in the Introduction, we are operationally defining collective memories formed of sporting events as those elements of the event that are widely recalled by a community of fans. To be sure, one could argue that this definition does not capture all aspects of a collective memory, particularly the way the memory might bear on the identity of the community, but it is a reasonable starting point for a discussion of collective memory formation (Coman et al., 2009).

With respect to sporting events, their structure allows one to distinguish straightforwardly between essential and ancillary narrative elements. Pilot study ratings of elements in a generic World Series demonstrated a sharp divide between a small set of elements widely agreed upon to be important to include in a narrative of the game and a larger set of elements considered significantly less important. Upon inspection, the more important elements were those that could figure as important in any championship sporting event, e.g., which team won the series. We referred to them as *essential*. The other elements did not have this "universalizing" characteristic, and hence were referred to as *ancillary*.

In terms of collective memory, fans of a sport in general, in this case, baseball, tended to have at best a limited collective memory of the 2016 World Series, especially after a delay. The emergent collective memory focused on the essential elements of the series, and, after a year, really only one essential detail. Ancillary elements did not figure. It was surprising, at least to the present authors, how few details of the game a majority of baseball fans could accurately recall. The generic baseball fans did not widely remember spectacular plays, even those that bore directly on the outcome of the game. Moreover, the level of baseball fandom did not seem to have an effect on long-term retention. Research has shown that collective memories tend to be "skeletal" in terms of details (Yamashiro et al., 2019; Zaromb et al., 2014), but it would be difficult to argue that generic sports fans formed much of a collective memory at all, even a skeletal one.

The situation differed when examining the collective memories among fans of specific sports teams. A remarkable consensus now emerged around ancillary details. Inasmuch as both Studies 1 and 2 involved the 2016 MLB World Series, we can compare some of their results. The team-specific fans in Study 2 mentioned largely ancillary elements, whereas a preponderance of accurate responses in Study 1, which examined generic baseball fans, was limited primarily to essential elements. In Study 2, team-specific fans did not always volunteer essential elements of the game, but we suspect that they could if pressed. They probably assumed that these essential elements were so obviously important that they were not worth mentioning. As one participant stated: "I know [this game] really well, so I'll go with some more obscure stuff

... " And, when describing the ancillary elements they did provide, the essential elements were often woven into the narrative by, for example, describing plays "... that tied the [score of the] game" or "... gave our team the lead". Some caution is in order when comparing the impoverished collective memory the generic fans seemed to form with the more detailed collective memory formed by team-specific fans, inasmuch as the two studies used different methodologies. However, some very direct comparisons can be made. For instance, concerning the home run in the 8th inning in the 2016 World Series, only 23.4% of baseball fans in Study 1 accurately recalled the name of the player who hit this home run, whereas 75.7% of the team-specific fans in Study 2 spontaneously and accurately recalled this detail. Moreover, 64.1% of the sample in Study 2 not only accurately recalled this home run, but also correctly identified the player's name.

We might conclude, then, that after a substantial retention interval, the team-specific fans had a collective memory consisting of both essential and ancillary details, whereas only a single essential detail and no ancillary details were recalled by a majority of generic baseball fans (or recalled above chance when there were only two possible responses). As noted, this pattern is surprising given that generic baseball fans might be expected to appreciate the noteworthy plays upon which at least some of the ancillary details rested, particularly in an event that holds at least some import for all fans of the sport. In emphasising generic sports fans' lack of memory for ancillary details, we do not mean to claim that all ancillary details will fail to figure in the collective memories formed by sports fans. Clearly, some plays are so bizarre or distinctive that they will be memorable across an entire sports community. For instance, many soccer fans likely remember Diego Maradona's "Hand of God" goal in the 1986 World Cup, and many fans of American football will recall the "helmet catch" by a New York Giants' wide receiver in Super Bowl XLII. The distinctiveness of these events is, however, not reflective of most ancillary details, nor do most championship sporting events involve such distinct or bizarre occurrences. Most ancillary details are "ordinary", in that similar details, such as home runs, can be found in many other games, even though they are not guaranteed to occur. What the current findings demonstrate is that team-specific fans form collective memories around ancillary details, even those that are not exceptionally distinct or bizarre. Generic fans do not form collective memories around such ancillary details. Future research might want to examine the ancillary details that "break the rules" and become part of even a generic fan's collective memory.

There are a few reasons why the type of affected community, in this case generic versus team-specific fans, might shape collective memories. First, team-specific fans may simply be greater fans of the sport in general than the generic fans in Study 1. We suspect this is not the case. Whereas the participants in Study 1 may not have

been fans of either of the competing teams, they loved the sport enough to watch the game. Moreover, even the strongest baseball fans still remembered relatively little about the game, except for a few essential details.

Second, we may not have found a rich collective memory for the generic sports fans because the championship sporting event may not be viewed as distinctive for them – it is "just another championship". For the team-specific fans, it is *their team's* championship. In the present instances, instead of one of many championship events in a sport, for the team-specific fans it was one of only a few championship events in which their team was involved. This distinctiveness can clearly offer a mnemonic advantage (Calkins, 1896; Craik & Jacoby, 1979; Lockhart et al., 1976; von Restorff, 1933). One might wonder, then, whether the same level of detailed knowledge found among team-specific fans would hold when the team routinely plays in a championship sporting event, as is the case for the New England Patriots in the Super Bowl. In such instances, unlike what we found here, one might predict a more impoverished collective memory for these team-specific fans.

Third, as noted in the Introduction, collective memory formation may differ as a function of the nature of fandom due to variation in consensus regarding which details are deemed important. For generic sports fans, the level of importance placed on the details, other than the essential elements, might vary because they do not have a strong feelings about a desired outcome. For team-specific fans, however, details that led directly to their team's victory or loss, whether essential or ancillary, will be agreed upon as the most important. For instance, when recalling their baseball team's loss in Study 2, more Cleveland fans remembered a foul ball hit by their team that initially *looked like* it was going to be a home run than either of the *actual* home runs hit by the other team. In such instances, it is not only that individual fans focus on certain event elements, but also that local media sources highlight certain elements. The foul ball that a number of Cleveland fans recalled will not be found in general highlight videos of the event, but perhaps was more likely to appear in post-event media coverage in the Cleveland area. Moreover, regardless of which details are highlighted, local media will certainly devote more coverage of sporting events involving local competitors. This increased coverage would increase event rehearsal by team-specific fans, which may underlie their increased retention for event details. Such a possibility could be tested by examining the memory of sports fans who, despite residing in a particular city, are not fans of any of the city's sports teams.

Finally, team-specific fans are more likely to possess team-specific schemata or knowledge that could shape the way they interpret and recall championship events. The team-specific fans are more likely to know their team's history, the current players and coaches, and their team's strengths and weaknesses. As a result, they will

have a frame for understanding detailed aspects of the game (i.e., ancillary elements) more so than generic fans might have. To be sure, some generic fans may also possess team-specific knowledge, but the variability within this group should be greater than found in a community of team-specific fans. The labels used to describe three details from the Cavaliers' victory – "The Shot", "The Block" and "The Stop" – underscore this point, inasmuch as they have historical precedence. For fans of the NBA, including – at least, prior to 2016 – Cavaliers fans, the term "The Shot" has been used in reference to Michael Jordan's game-winning shot that eliminated the Cavaliers from the playoffs in 1989 (see the Wikipedia entry: "The Shot", n.d.). Shared knowledge about their team's history, in this case a previous failure to achieve a goal, appeared to guide the shared representations that emerged from a new event and likely serve as an aid in retention for these details.

In sum, then, the collective memories of the different types of fans vary in detail and are comprised of different content. Surprisingly, it was not enough to be a fan of a sport in general to form a rich, long-lasting collective memory, particularly one that included ancillary elements. One needed to identify with one of the teams involved in a championship series. This result presumably arises, in part, because the team-specific fans have detailed knowledge of the team and can assimilate specifics of an event into this knowledge base, and, in part, because a shared desire for one team's victory demarcates certain event details as important.

Personal circumstance memories: social identity and the "flashbulb" effect

The study of memory and media events entails not just memory for the event itself and the emergence of a collective memory, but also memory for the personal circumstances in which one experienced the event. After all, most viewers experience these events remotely. Personal circumstance memories have garnered a great deal of attention in the literature on flashbulb memories, which are vivid, confidently-held, and long-lasting memories for the reception context of a public event (see Hirst & Phelps, 2016 for a review). In the current studies, the presence of the "flashbulb" effect differed across different types of fans.

For the generic fans of baseball in Study 1, memory for the personal circumstances in which the event was learned about mirrored flashbulb memories in some ways, but not others. Consistency of these memories was not extremely high, but did hover around the same level that Hirst et al. (2009) reported for memory of the reception context for 9/11 after one year. Moreover, baseball fans remained highly confident in these memories over time. Unlike previously documented flashbulb memories (see Talarico & Rubin, 2018), however, ratings of vividness dropped considerably over time and were at only moderate levels

after one year. Moreover, consistency and confidence were correlated, a departure from the dissociation between consistency and confidence often observed in studies of flashbulb memories (Talarico & Rubin, 2003, 2007). Finally, baseball fandom was positively correlated with consistency after an extended, one-year delay, but not after a briefer, four-month delay. All baseball fans might form personal circumstance memories initially, but it might be that only more devoted fans will maintain them.

As to the team-specific fans of Study 2, their personal circumstance memories were more similar to those reported in the flashbulb memory literature. Although we could not assess consistency, we found extremely high levels of both confidence and vividness; indeed, they reached a ceiling for a majority of participants. Moreover, team-specific fandom positively correlated with vividness and other phenomenological qualities of personal circumstance memories. Interestingly, fandom significantly correlated with confidence in these memories for a supported team's loss, but not a supported team's victory. It might be that the victory was so highly consequential for fans of the winning team that any effects of the extent of fandom were washed out as all fans formed vivid and confidently-held personal circumstance memories. This finding reflects the patterns observed regarding the partial correlations of fandom and event memory accuracy/confidence while controlling for event features in Study 2.

It would appear, then, that fandom affects how well one retains personal circumstance memories over the long-term, but, to a degree, it depends on the kind of fandom. Research on social identity and flashbulb memories to date has rather uncritically assigned identity to a particular sample: Britons versus Italians, Black Americans versus White Americans, Catholics versus non-Catholics. The present research indicates that a more careful consideration of the relation between social identity and the flashbulb memory-eliciting event needs to be considered. Neisser (1982; see also Hirst et al., 2015) maintained that possessing a flashbulb memory allows one to claim that "I was there" when recollecting a public, historically important event. One might not have been at the stadium when the history-making victory of the Cleveland Cavaliers occurred, but remembering where one was justifies the claim that one did indeed witness it. Such witnessing may be more critical in shaping social identity for die-hard, team-specific fans than for others. And, as a result, the possession of a flashbulb memory and the formation of a collective memory become tightly intertwined, at least for those with a strong sense of belonging to the affected community.

Conclusion

In the beginning of this paper, we framed the present study in terms of media events: events that bind a

community together, but are experienced indirectly, often through television. Media events are not only an increasingly dominant part of contemporary life, but, because of their social function and distinctive mode of experiencing, they offer unique opportunities to study both collective memory and memories for the circumstances of witnessing public events. These two memories could be dissociable, but, we would argue, if a media event is to serve its social function in a robust manner, people must not only remember what happened as the event unfolds, but also feel as if "they were there". They may not be able to experience it directly, but they can remember witnessing it, albeit in a mediated manner. The claim would be that such witnessing makes the memory of the event more resonant.

The current studies examined a particular class of media events: championship sporting events. Clearly, there are some limitations to studying this specific class of events, though we need to emphasise we are, as just stated, discussing media events, not national events. Most avid sports fans would admit that sporting events are not as objectively important as nationally-relevant media events. Nevertheless, many sports fans would subjectively ascribe a great deal of importance to championship events. For researchers, this psychological reaction might be as meaningful as the event's objective importance. Moreover, parallels to the distinctions driving the present research can be found in a range of media events. First, most events can be described in terms of essential and ancillary details. Second, no matter what the community might be, members do not simply belong to the community or not. The degree to which they identify with the community can vary (Swann et al., 2012). Finally, social identities are layered and intersecting. For a media event such as the wedding of Princess Diana, which was broadcast internationally, there are the equivalent to generic fans – those who watched the wedding because they had an interest in the Royal family, but no direct connection to them – and team-specific fans – Britons who were inculcated into the history and importance of the Royal family. In the former instance, it was *a* Royal family, in the latter, it was *their* Royal family. Just as we found here, these specific identities may impact the memories that individuals form for these events in unique ways.

Although more research needs to be done, the present effort suggests that membership in specific social groups may lead to expansive collective memories with a strong sense of "witnessing", whereas membership in larger, less defined social groups may lead to more impoverished collective memories centreing on essential details, without a strong sense of "witnessing" (Hirst et al., 2020). Future research might further test such claims and specify why certain social groups form these different types of collective memories.

Note

1. Very few participants failed to recall the number of games in the series at each survey. Thus, it is worth noting that the

same pattern of results (i.e., a significant difference at S1, but not S2 and S3) emerged when comparing the fandom of those who did and did not recall each of the five most-often recalled details in Study 1, both before and after applying statistical corrections to adjust for multiple tests.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This research was supported in part by NSF grant no BCS-1827182.

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