What Did We Do To Germany During The Second World War? A British Perspective On The Allied Strategic Bombing Campaign 1940-45

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ABSTRACT

The Allied strategic bombing of Germany during World War II was a significant event in the history of Europe. Social representations of this event were investigated at the level of individual knowledge. To establish an index of British collective memory for this event, 169 adults (aged 18–87 years), divided into three generational groups, completed a questionnaire. The findings showed a disparity between subjective knowledge and historical actuality across all three age groups. A decline in understanding across time also suggests that a large degree of social, cultural and institutional forgetting has taken place since 1945 leading to misapprehension and widespread inability to comprehend the scale, intensity and destructiveness of the campaign. Social representations of the Allied bombing of Germany continue to endorse a British narrative that is unable to articulate with any accuracy the effects of the campaign on German civilians or British airmen. Representations of this historical event

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appear to be shifting in ways that may eventually lead to an unintended state of denial in the future, i.e. that the human consequences of the campaign were rather limited.

Keywords: History, social memory, Germany, strategic bombing

The imposing nature of the past on the political and psychological landscape has been particularly significant in the 20th century. Two world wars, the Holocaust, the formation of the modern state of Israel, the rise and fall of the Soviet Union and the attack on New York in 2001 are just some events that continue to reverberate around the world, creating diverse waves of volatile memory across generations of people. Although the past no longer exists, it does not simply disappear. It is subject to a dynamic process of re-engagement with the present, transforming itself into a social and psychological experience that shifts and evolves across generations (Hewer & Roberts, 2012). This aptly describes the social representation of history. "Social representations are carriers of collective memory" (Wagoner, 2015, p. 143) and through a variety of social processes the past is continuously reviewed, adjusted or forgotten by existing generations. What remains is actively or passively transmitted to the next generation as historical information (from newspapers, radio, television, film, the Internet and everyday conversation) and converges on the public to produce a *sketch* of history, which imposes a structural understanding on the present. Moreover, the polyphasic nature of these representations becomes apparent when we encounter variable, inconsistent and contradictory formulations operating within cultures and individuals (see Jovchelovitch, 2012). Indeed, where polemical representations exist across groups, counter-memories may contradict, challenge, and resist mainstream versions of history.

Social representations of the past may also include mythical elements. Both empirical and ethnographic myths (see Brown, 2005) may feature in the re-narration of the past as part of a dynamic social process of *collective remembering* – an active reconstruction of the past that takes place in the present (Wertsch & Roediger, 2008). Collective remembering may rationalize aspects of the past for the purposes of identity construction. Holding to a particular narrative in the face of contrary evidence is an uncomfortable position and may present a threat to identity (see Breakwell, 1986), and when the counter-evidence is convincing, a loosening of social identity ties may result. On the other hand, loyalty to a narrative in the face of counter-evidence is

an assertion of group affiliation, which endorses and strengthens social identity.

Such is the power of collective remembering that Wertsch & Roediger (2008, p. 324) argue that: "History is willing to change a narrative in order to be loyal to facts, whereas collective remembering is willing to change information (even facts) in order to be loyal to a narrative." In this analysis, collective remembering becomes an identity project that is intolerant of ambiguity or counter-narrative. In contrast, academic history is argued to be more open to new knowledge since historians continually review evidence-based arguments in order to present the past in an accurate manner. Wertsch & Roediger (2008) see academic history as the study of *what actually happened,* and maintain that historians employ critical, complex and reflective thinking based on primary sources.

Whether historiography always fits this description or whether history meets the criteria of an objective science is a matter of debate. Most national historical narratives seem to be the product of selective attention, distortion, and omission (Baumeister & Hastings, 1997). Indeed, memory shaped by culture ensures that events are viewed through the prism of the collective: a process in which aspects of the past may be understated, fabricated or forgotten. This means that the boundary between history and memory may be more porous than we imagine and, therefore, it becomes important to interrogate *power relations* within narrative accounts. Whose version of the past prevails and why? We should also be alert to metanarratives within historical discourse characterized by the absence of counter-memories. Brown (2005) describes metanarratives as:

> "grand, ideological generalized stories by which societies understand themselves, and which are so normative and all-consuming, that individuals in a society are not aware of them as constantly re-circulated. Metanarratives only work when they become invisible by having no acceptable opposites." (p. 184)

In the decades following the Second World War, the Allied narrative of "victory over the evils of Fascism" had become the definitive moral account throughout the Cold War period and beyond. Indeed, the Allied narrative of World War II from 1945–1990 was shielded behind the western face of the Iron Curtain during the Cold War and further protected from counter-memories within Germany by the power dynamics of victory and defeat. There were no alternative accounts of the war. No thought was given to the existence of counter-memories in the Soviet Union (see

Wertsch, 2002) or other parts of the Eastern bloc (see also Hewer & Kut, 2010) that emerged to challenge particular aspects of the Allied account of WWII. Eventually, the fall of the Berlin Wall in 1989, and the Soviet Union shortly after, provided the psychological and political space for the expression of alternative memories from within the Eastern bloc. Even in Germany, after the peaceful unification of East and West in 1990, some aspects of World War II were subject to subtle differences of interpretation (von Benda-Beckmann, 2011).

The study of social representations of history helps us to understand identity dynamics, which may find significant application in the socio-political world, e.g. facilitating reconciliation after conflict. This study examines the British narrative of World War II and explores lay understanding of a very specific feature of this period of historic violence: The Allied Strategic Bombing Campaign of Germany 1940-45. While the precise details of the Allied strategic bombing[1] of Germany remain in government archives, the cultural memory of this event – subject to social memory processes – might, when examined, produce quite a different account.

The Historical Context Of The Study

The Allied victory over Nazi Germany in May 1945 signalled the approaching end of World War II and the beginning of a cultural narrative that would dominate the political and social landscape in post-war Britain. For the generation that followed, making sense of this past was more difficult than might be thought. War veterans wanted to forget and seldom spoke of their experiences, and there was no provision within a national school curriculum to formally study these events. The meaning of the Second World War had largely to be inferred from information provided by entertainment and more informal channels within the family and other social networks. Politically and historically informed explanations were in short supply. From this knowledge base, common sense explanations and beliefs about the cause of the war, Hitler's objectives, notions of good and evil, and beliefs about national character and moral superiority emerged with considerable political and psychological implications.

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[1] The term "strategic" bombing denotes aerial attacks on an enemy's capacity to wage war and typically includes the destruction of military infrastructure and production, as well as civilian morale and willingness to continue fighting. On the other hand, "tactical" bombing concentrates on enemy targets of direct military value, e.g. soldiers, equipment and military installations. Strategic bombing is typically conducted over a longer range.

Indeed, the transmission of memory of the war in Britain was neither systematic nor overly contrived. The main source of information was a routine diet of war films, which included propaganda films made during the war (see Thorpe & Pronay, 1980). Most emphasised Allied heroism and ingenuity while German forces were depicted as militarily powerful, technologically superior, merciless, and terrifying. These films, however, raised a troubling question about the British war narrative: how *did* British forces manage to defeat the German war machine after the catastrophic fall of France in 1940 and unsuccessful attempts to invade German occupied territories in Norway in 1940 and at Dieppe, France in 1942. A clearer picture began to emerge with the release of *The World at War* series produced by Thames Television in 1973. These carefully crafted programmes modified the narrative by providing historical and political context (e.g., see Douglas-Home & Childs, 1974) and it gradually became clear that the inference that British forces,[2] after "standing alone" in 1940, eventually overcame the *Wehrmacht* with the assistance of the Americans was an oversimplification. Two elements in the storyline, in particular, had been significantly underplayed.

The first *recessive* element was the contribution of the Soviet Union to Allied victory, which incurred a human cost, according to conservative estimates, in the region of 20 million combatants and civilians. Hitler's decision to invade the Soviet Union on 22 June 1941 had clearly shifted the military focus eastward, which reduced the likelihood of a German invasion of Britain. This providential development had never been part of the British narrative; the Battle of Britain is always presented as the main event that thwarted German plans for invasion. Britain's post-war silence on the contribution of the Soviet Union to victory over Germany was understandable given that, between 1947 and 1991, the West was embroiled in a Cold War with the Soviet Union. This post-war political reality also sharply reduced any enduring memory that Stalin had once been an ally and that British resources had been used to support the Soviet war effort. Indeed, the contribution of the USSR to Allied victory has become a fading memory in Britain even though Soviet forces engaged and defeated the main body of the *Wehrmacht* (Terraine, 1985).

The second *recessive* element in the narrative is the role of Bomber Command. As the Second World War came to an end, the British arguably succumbed to "collective amnesia" with

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[2] This also included troops from the British Empire and free forces from occupied territories.

respect to Bomber Command (Connelly, 2004, p. 257), even though the capacity of British and American forces to carry out a bombing campaign remained an important part of Cold War dialogue. Bomber Command, of course, was never entirely edited out of the narrative, but the issue here is one of emphasis, i.e. what elements are brought to the fore as a *primary* source of explanation of victory. Bomber Command was mentioned in acts of commemoration, TV documentary and occasionally in popular culture, but its contribution was always tangential to the major events associated with the successful defence of Britain and liberation of Europe, namely the role of Fighter Command in the Battle of Britain in 1940 and the Allied invasion of Normandy on D-Day on June 6th 1944.

The full extent of its operations was never prominent in public discourse. Indeed, the strategic bombing campaign was such a contentious issue that the contribution of Bomber Command has been difficult to assimilate into the broadly positive British war narrative (Connelly, 2004). While the Blitz narrative in Britain had emphasised the resourcefulness, adaptability and resilience of the British people (Furudi, 2007), the Christian nature of this mythology – particularly in the form of stoic sacrifice – barred a role for Bomber Command because of the moral ambivalence associated with the bombing of Germany (Calder, 1992). The destruction of some urban areas on strategic grounds not only positioned the campaign as morally and legally dubious, it was also wasteful for all concerned in human and economic terms (Overy, 2013). For example, American bombers razed the historic centre of Halberstadt a month before the end of the war and just three days before it was occupied by American troops (Neumann, 2009) and many regard the bombing of Dresden as vengeance rather than a strategic necessity (e.g., Gottfried, 2007). And when Churchill raised the question about the extent of the bombing campaign, Lord Casey of Berwick, a minister in the war cabinet, reminded him that "it wasn't us who started all this" (Grayling, 2007, p. 88) and that it was "us or them" – a moral justification that eventually filtered down to the population in the post-war years.

The Rationale For The Bombing Campaign

The Allied strategic bombing campaign waged against Germany should be understood within the historical context of the development of bombing as a military strategy. Throughout the 20th century, air power played a significant role in almost every major war. The main advantage of this strategy is that air assets can be committed iteratively to the fray, which avoids the risk of

annihilation associated with encounters between armies (Allen, 2007). In the opening phases of *Blitzkrieg* in 1940, aerial bombardment played a major role in the attacks on Warsaw in September 1939 and Rotterdam in May 1940. The RAF responded with an attack on the Ruhr the next day. On 24 August 1940, the Germans bombed London and the British retaliated with 81 aircraft seeking industrial targets on the outskirts of Berlin (Chandler, 1993). The inaccurate bombing gave the impression to the German High Command that the response had been indiscriminate and the retaliatory nature of what followed ensured that the bombing campaign escalated. For 57 consecutive nights from 9 September 1940, London and other British cities were attacked from the air (Friedrich, 2006).

From the British perspective, defeats in France at Dunkirk (1940) and Dieppe (1942) were an indication of Britain's limited options to wage war against Fortress Europe. It was not possible to invade with land forces prior to June 1944 simply because the *Wehrmacht* was too formidable. Churchill had agreed to Stalin's request in 1942 to open a "second front" against the Germans in the West, but he opted to delay this and focused instead on attacking the Germans in North Africa, as well as destroying materiel and wearing down the German people and their willingness to continue the conflict through aerial bombing (Biddle, 2011; Kadera & Morey, 2008). The air assault targeted the full range of Nazi-occupied Europe. The *Luftwaffe* killed some 65,000 in Britain (Price, 2009) while the Allied bombing killed about 60,000 in France and destroyed or damaged nearly one fifth of all buildings (Knapp, 2007). The air campaign produced five-figure casualties in Germany on six occasions: Hamburg, Kassel, Darmstadt, Pforzheim, Swinemünde and Dresden (Friedrich, 2006) and the human cost to Bomber Command was a total of 55,573 dead and 8,403 wounded (Middlebrook & Everitt, 1985) – a 44% death rate (Hitchens, 2015).

Tonnage And Accuracy

The exact tonnage of bombs dropped by the Allied forces on Germany can never be precisely determined, but an initial estimated total *for all enemy targets* was 1,578,482 tons (see Appendix B) (Saunders, 1953; Webster & Frankland, 1961). However, the US Strategic Bombing Survey gives totals of 755,531 tons (RAF) and 644,073 tons (USAAF – not just US Eighth Air Force). Making adjustments for American "short tons", which are equivalent to 0.922 British Imperial tons or 0.907 metric tons, we can estimate from the USSBS figures that a total of 1,290,435 Imperial tons or 1,269,440 metric tons were deployed. Over the same period, the *Luftwaffe*

dropped 64,393 tons of bombs on Britain, which was approximately 5% of the amount used against Germany.

Bombing accuracy varied widely. The idea that RAF strategic bombers in 1940 could hit small targets in Germany, like oil plants, was "nonsensical" (Liddell Hart, 2011, p. 759). In August 1941, the Butt Report, a study based on reconnaissance photographs, concluded that 33.3% of aircraft dispatched failed to attack the target. Furthermore, among those that did, only 33.3% succeeded in bombing within five miles or 26,400 feet (8,047 metres) (Irons, 2009). The accuracy of strategic bombing was generally woeful, with target error often measured not in yards, but miles (Biddle, 2011).

What The British Choose To Remember About The Campaign

Rather than reflecting on the human consequences of the Allied strategic bombing campaign, the emphasis since the war has largely been placed on the engineering ingenuity of Barnes Wallis, his innovative bouncing bomb, and the skill and daring of Bomber Command's 617 Squadron. Operation *Chastise* on 16–17 May 1943 involved 19 Lancaster aircraft in the attack on the Möhne, Eder and Sorpe dams in the Ruhr. Eight aircraft (42.1%) and 53 pilots and aircrew (39.9%) were lost; three people were captured (2.3%). As a result of the damage and the deluge that followed, 749 Dutch and Ukrainian forced labourers and French and Belgian prisoners of war lost their lives (RAF Museum, 2013) and, although the raid was a propaganda coup (Niemi, 2006), the dams were repaired within a few months. The raid was eventually popularised in 1951 in *The Dam Busters*, a book by Paul Brickhill and a film of the same name four years later. The 70th anniversary of the raid in 2013 saw the release of a number of biographical and historical publications, as well as attracting tens of thousands of people to a "fly past" at the precise location in Britain where the crew trained in 1943. The raid was presented as an event involving a small group of courageous men and the deployment of an ingenious weapon that was directed not at people, but inanimate objects. The human cost of the raid for the people in the region is not considered: public memory remains focused on an atypical raid against a "point" target rather than an area or a population. Indeed, remembering this event above all else reflects a deep-rooted cultural position. The commemoration of this raid over-shadows the main use of RAF bombers such as the Lancaster in the strategic bombing of Germany (Lake, 2002); the full extent of the bombing of Germany and its human consequences are not considered.

Rationale

This study sets out to assess the extent to which the Allied Strategic Bombing Campaign 1940-45 is remembered and understood by British people across three broad generations. The purpose of three generational groups is to see how much information has been transmitted or lost between generations. What does each generational group know about the campaign? What details or generalities have filtered down? To what degree is the scale, intensity and human cost of the campaign remembered? The bandings are broadly based on (i) the "war generation" – those alive at the time of the war, (ii) their children, and (iii) their grandchildren. The study adopts an historical positivist approach, comparing what actually happened (documented historical fact and estimates) with lay knowledge. While we do not expect people to have a detailed or encyclopedic knowledge of the campaign, we do expect them to be able to respond in accord with their knowledge and impressions regarding the number of sorties (attacks by single aircraft), cities bombed and civilian deaths. Given the military and historical significance of this event, we wish to see whether people fully comprehend the degree to which their own nation has harmed others whatever the circumstances or justification.

We acknowledge that social representations should be studied at different levels – a combination of micro and macro elements (see Wagner & Hayes, 2005), i.e. the *individual level* of knowledge: what do individuals across generations know? – an *inter-individual level* that evaluates and organizes knowledge expressed, acquired and adjusted through interpersonal communication (an analysis of focus groups and informal conversation) – and a *cultural level* that explores memory "beyond individual cognition" through the study of memorials, institutional remembrance and ritual. The present study addresses the way the collective past is understood at the individual level.

METHOD

Participants

Participants were self-identifying British adults ($N = 169$) aged between 18 and 87 years ($M = 46.27$). 38.5% ($n = 65$) were male and 61.5% female ($n = 104$). There were three broad generational groups: 75 years and over (10.7%; $n = 18$), 40–74 years (49.1%; $n = 83$) and 18–39 years (40.2%; $n = 68$). Participants were either working in some capacity 47% ($n = 79$), students 30% ($n = 51$) or retired 20% ($n = 34$) – no response 3% (n = 3). Participants were obtained

through social networks (snowballing) in southwest London, Surrey and West Sussex in the south of England.

Questionnaire

The questionnaire was designed to assess a basic level of understanding of the Allied Strategic Bombing Campaign, which included foundational questions, such as the start and duration of World War II from a British perspective. Respondents were then asked to comment on their understanding of the political and military rationale for the campaign. The questionnaire items were designed to assess the scale, intensity and duration of the campaign, i.e. the number of sorties, the nature of targets, the towns and cities targeted, the geographical range and extent of the bombing, the number of deaths, the number of aircraft and aircrew lost and sources of transmission. These questions would provide a broad outline of understanding from which it would be possible to establish an *indicative* measure of British memory for this event over three generations. However, memory in this context is not the retention of firsthand experience or recall, but rather the currency of cultural knowledge existing at a specific point in time.

Analysis

As well as eliciting qualitative data for illustrative purposes, the questionnaire asked people to express their knowledge and impressions in numerical terms. We acknowledge that numerical estimation, as an index of collective memory, is a crude measure − and perhaps more appropriately described as "collected memory" (see Olick, 1999), i.e. the measurement and aggregation of individual memories. We also acknowledge the argument that a pervasive but less tangible sense of collective memory operates within the culture outside and beyond individual cognition, which involves symbols, artifacts, museums, and deeper institutional structures. This study simply represents the first stage in an attempt to understand the social representations of this historic event.

Procedure

Participants were asked to complete a questionnaire with both multiple-choice and free-writing items, which assessed particular features of the Allied strategic bombing campaign. Participants were later debriefed and correct answers provided to them based on standard historical texts.

FINDINGS

Structural Amnesia

When assessing the precise time and duration of World War II, 63.9% (*n* = 108) provided the correct response; the range (earliest to latest) was 72 years, i.e. from 1914 to 1986. Approximately one third of participants were unable to pinpoint the start of the Second World War, which raised questions about their ability to formulate an accurate and meaningful historical context for the questions that followed.

Table 1. Accurate identification of date and duration of WWII (i.e. 1939-45) by age group

AGE 75+ (*n* = 15)	40-74 (*n* = 86)	18-39 (*n* = 68)
93.3%	84.6%	41.8%

The Bombing Of Germany

Table 2. Estimated number of operational sorties (attacks by single aircraft)

Sorties	% (*n*)
0 – 49	1.2 (2)
50 – 499	4.7 (8)
500 – 999	7.7 (13)
1,000 – 9,999	20.1 (34)
10,000 – 19,999	10.7 (18)
20,000 – 49,999	15.4 (26)
50,000 – 99,999	8.2 (14)
*100,000 – 500,000	**13.0 (22)**
Over 500,000	3.0 (5)
No Response	16.0 (27)

*Correct estimate

Bomber Command flew 75,851 day and 297,683 night sorties: a total of 373,534 from 101 operational bases spread across eastern England. The US Eighth Air Force flew 332,904, which

amounts to 706,438 sorties against Nazi-occupied Europe (Doyle, 2013). A conservative estimate would put the number of sorties for Germany alone between 100,000 and 500,000 but towards the upper end of the range. Participants were asked to select an estimate from the categories above. Only 13% (*n* = 22) provided a correct response; 68% (*n* = 115) underestimated the number of sorties.

The Bombing Of Major Towns And Cities In Germany

Although most were aware that the bombing of Germany extended to 10 or more cities and towns, 36% (*n* = 61) underestimated the scale of the attack or knew nothing about it. Participants were asked to circle or mark all the German towns and cities from the list provided below in Table 3 *that they knew* had been bombed; they were asked not to guess. All 70 urban areas were targets of Allied attacks and many of them on multiple occasions, e.g. Essen (28 times), Berlin (24) and Cologne (22) (Hastings, 2010). The correct response would have been to circle them all. While we acknowledge that responses may have reflected a limited knowledge of German geography and/or a tendency towards cognitive simplification, we maintain that the widespread nature of the campaign has not filtered down to people. This, however, should not be interpreted as an example of collective narcissism (see Golec de Zavala, Cichocka, Eidelson & Jayawickreme, 2009) since there was a similar tendency to underestimate the number of British cities bombed by the *Luftwaffe*. The issue is a lack of historical knowledge.

Table 3. Major German cities and towns identified as known targets – % sample (n)

Berlin 76.3 (129)

Dresden 56.8 (96)

Hamburg 50.9 (86)

Cologne 41.4 (70)

Munich 40.2 (68)

Düsseldorf 30.2 (51)

Frankfurt am Main 30.2 (51)

Stuttgart 26.6 (45)

Bremen 24.9 (42)

Hannover 22.5 (38)

Nuremburg 22.5 (38)

Dortmund 21.3 (36)

Leipzig 20.1 (34)

Essen 20.1 (34)

Bonn 17.8 (30)

Kiel 15.4 (26)

Potsdam 14.2 (24)

Bremerhaven 12.4 (21)

Karlsruhe 8.9 (15)

Aachen 8.3 (14)

Lübeck 7.1 (12)

Mainz 6.5 (11)

Münster 6.5 (11)

Ten or fewer participants identified Brunswick (10); Osnabrück, Wilhelmshaven and Würzburg (9); Duisburg, Kassel, Magdeburg, Rostock and Wiesbaden (8); Emden, Koblenz and Mannheim-Ludwigshaven (7); Augsburg (6); Darmstadt, Saarbrücken, Schweinfurt and Stettin (5); Bochum, Chemnitz, Friedrichshafen and Hagen (4); Dessau, Königsberg, Krefeld, Mülheim, München-Gladbach and Rheydt, Oberhausen, Solingen and Wuppertal-Barmen (3); Elberfeld, Freiburg, Gelsenkirchen, Harburg, Hildesheim, Kaiserslautern, Ulm, Worms and Wuppertal (2); Hamm, Neuss, Pforzheim, Remscheid, Trier and Witten (1) and Giessen, Hanau, Heilbronn and Plauen (0).
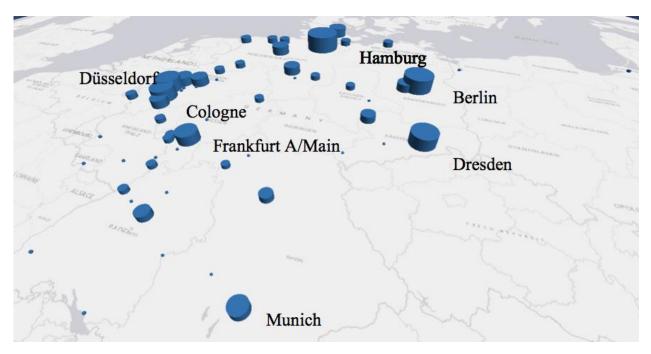
Figure 1: Memory map of major German cities and towns bombed

The most frequent responses were Berlin, Dresden, Cologne, Munich and Hamburg: major cities, which to a large degree are key co-ordinates in the geographical mind-map of Germany. In less prominent places, however, there was also much destruction. For example, in Pforzheim there were over 20,000 fatalities, among the highest number throughout the campaign, but only one participant acknowledged it as an Allied target (0.6%). In addition, also "forgotten" among participants were the stories of Giessen, which was "simply swept away" (Friedrich, 2006, p. 467); Hanau, which was destroyed in a heavy area attack (Richards, 2001); Heilbronn – "a purely civilian massacre" (Friedrich, 2006, p. 294) and Plauen, which received about three times as many bombs per square mile as Dresden (Schlosser, 2012).

The Extent Of The Destruction

Although the destruction of urban areas in Germany was extensive, 75% (n = 127) did not respond to this question either because they did not know the answer or because they were unable to conceptualise their response in numerical terms. Of those who responded (n = 42), the average estimated area of Germany bombed was 36%. For 18 individual German cities, however, damage ranged between 33 and 94% (see Appendix A). Thus far, the picture is one of considerable

knowledge with some important areas of omission. There is no sense from the data that the event has been airbrushed from history but, as we shall see, the data are littered with significant underestimations.

German Civilian Deaths

Participants were told that the German bombing campaign of Britain killed approximately 60,000; they were then asked to quantify the German death toll. No list was provided for this exercise: free-responses are represented in clusters (see Table 5). Official estimates of the number of German civilians killed vary widely and the precise number will likely never be known (Bishop, 2008). In 1962, the German government put the estimate at 593,000 (Bishop, 2008), which included 75,000 children under 14 years old (Valiunas, 2007). The range of 400,000–600,000 was taken as a working total for the purposes of this study.

Table 4: German death toll

Deaths	% (*n*)
10,000 – 60,000	16.6 (28)
65,000 – 90,000	12.4 (21)
100,000 -120,000	30.8 (52)
140,000 – 180,000	5.9 (10)
200,000 – 250,000	7.7 (13)
300,000 – 350,000	1.2 (2)
*400,000–600,000	**6.5 (11)**
650,000 – 800,000	1.7 (3)
1 million	0.6 (1)
2 – 3 million	1.2 (2)
No Response	15.4 (26)

*Correct estimate

Only 11 participants (6.5%) provided an accurate estimate of German civilian deaths and 15.4% (*n* = 26) were unable to give an answer. The modal estimate was 100,000 (*n* = 43), a good round

number, which likely explains its frequency within a particular range of scores. Giving an estimate of British civilian casualties in the original question was deliberate; it provided a reference point – a baseline to prevent extreme over and underestimates and it allowed us to interpret the scores as a specific response, i.e. *what was done to them in relation to what was done to us.* In the first category, 16.6% believed that Germany experienced *about the same or fewer civilian deaths*; 12.4% ($n = 21$) took the view that *a little more was done to them than was done to us*; 30.8% estimated that Germany suffered *up to double* the number of civilian casualties inflicted on Britain; 5.9% ($n = 10$) estimated that Germany had *between double and up to three times* the number of British civilian casualties; 7.7% ($n = 13$) *up to four times*; 1.2% *between five and six times* the number of British casualties, which was still an underestimate. The six participants (3.5%) who had *overestimated* the number of dead were aged 45 years and over and two had lived through the war. There were no overestimates among younger respondents.

Allied Aircraft Destroyed

The total number of Allied aircraft lost in the strategic air offensive against Germany was 12,330 (Bomber Command Museum of Canada, 2013). From the list provided (see Table 6), 13.1% ($n = 21$) provided a correct estimate and 77.4% ($n = 120$) underestimated this figure.

Table 5: Allied aircraft destroyed in action

Aircraft lost	% (*n*)
0 – 99	3.0 (5)
100 – 999	23.1 (39)
1,000 – 3,999	26.6 (45)
4,000 – 8,000	18.3 (31)
*Over 8,000	**12.4 (21)**
No Response	16.6 (28)

*Correct response

Allied Aircrew Killed

There were further underestimates of Allied aircrew lost (81.4%, *n* = 127). A list was provided for this exercise (see Table 6).

Table 6: Allied aircrew killed in action

Aircrew lost	% (*n*)
0 – 99	1.2 (2)
100 – 999	10.1 (17)
1,000 – 9,999	32.5 (55)
10,000 – 19,999	17.2 (29)
20,000 – 50,000	14.2 (24)
*Over 50,000	**8.8 (15)**
No Response	16.0 (27)

*Correct response

Inter-Generational Transmission

Less than half the sample, 43.2% (*n* = 73) reported that their parents or grandparents had talked to them about the Second World War; 55% (*n* = 93) had no such conversation and three people gave no response. Participants were invited to recount what they had been told and the consistent theme was "silence"; that is, the war generation rarely talked about these events, although there was a willingness to speak in broad terms about air raids, evacuation and rationing. Only 25.4% (*n* = 43) reported that their relatives or teachers had mentioned the bombing of Germany, while 49.7% (*n* = 84) could not remember anything, and 19.5% (*n* = 33) gave no response. A typical comment was: "Don't remember them mentioning it" or comments that the war was not covered in the school curriculum. As for relatives, one participant spoke of his father being "totally against and ashamed of the bombing of Dresden" and another, when speaking about his father, said that he "never spoke about his involvement in major events – I think he must have seen some horrific things and wanted to forget them all". Another reported: "All my Dad would say is – pray you never know". Other similar comments included: "tended not to say so much"; "My father was on a ship which was at Omaha Beach on D-Day but never talked about it".

These cases illustrate that, as claimed in the introduction, the inter-generational transmission of memory within the family lacked substance, detail and motivation. A small proportion of the sample, 11.8% ($n = 20$), had family members involved in the Allied bombing of Germany, but very little was said to relatives. Some typical comments from these respondents were: "My uncle was a tail gunner; he made no other comment other than he was part of the bombing sorties"; "He never spoke about it"; "He never discussed what he did in the war"; "He never talked about how it felt to drop bombs; we believed he bombed Dresden but he never confirmed this".

When asked to place the human consequences of the Allied bombing campaign of Germany in the context of other major bombings, just less than a third of the sample (28.4%*; $n = 48$) erroneously believed that the atomic bombs dropped on Hiroshima and Nagasaki in Japan killed more people than the Allied bombing of Germany. The death toll from the deployment of the two atomic bombs killed in the region of 214,000 people (BBC News, 2013), approximately less than half the number of German civilians killed in the Allied bombing. In the textual responses to the questionnaire, the most prominent rationale for the bombing campaign was to attack legitimate industrial targets, to dampen morale, and for the purposes of retribution and retaliation.

What follows is a comparative analysis of British memory of the Allied bombing across three generations. Approximately 706,000 operational sorties were carried out against Nazi-occupied Europe, but precise figures for Germany are not readily available. Adjusted estimates for Germany have been made in accord with advice from experts in this field.
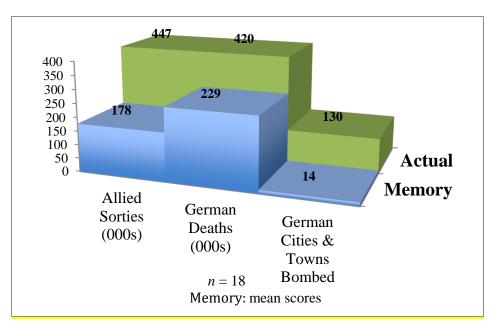
Figure 2: Intensity of Allied Bombing of Germany (75+ Years): Actual Versus Memory
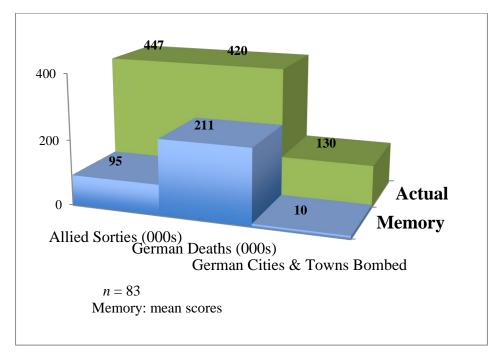

Figure 3: Intensity of Allied Bombing of Germany (40–74 Years): Actual Versus Memory
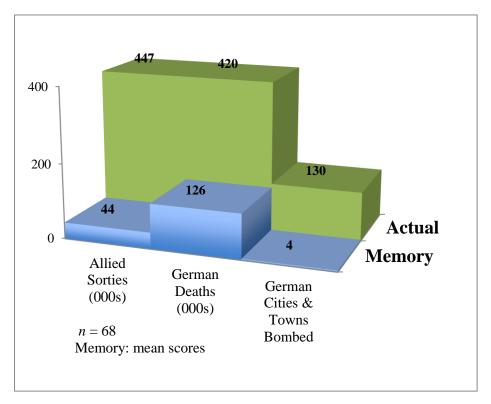
Figure 4: Intensity of Allied Bombing of Germany (18–39 Years): Actual Versus Memory

The results suggest a decline in knowledge of the Allied bombing campaign over time. Of particular interest is the disparity between memory and historical actuality among participants aged 75 years and over – people who were alive at the time of the campaign, which suggests that the public has never properly apprehended the full extent of the Allied bombing campaign.

DISCUSSION

The findings of this study suggest that – at the level of the individual – a significant amount of forgetting (intentional or otherwise) has taken place since 1945. What is more, we conclude that there is some initial indication that social representations of the Allied bombing campaign are shifting across generational groups and that the incremental inaccuracy across three generations is the product of limited or restricted transmission. Indeed, many participants were unable with any clarity to comprehend the scale of the bombing campaign against Germany or to weigh accurately the suffering of those affected by it. However, what we are describing as individual

knowledge or memory here is arguably the product of social and cultural processes, which are also responsible for the construction and maintenance of identity and the production of idiosyncratic versions of social reality (see Hewer & Roberts, 2012). What we conclude then from these data is that post-war British culture, for whatever reason, has neglected to provide details of the campaign. Whether this is the result of *prescriptive forgetting* (Connerton, 2008), whereby states on both sides of a conflict pursue a policy of forgetting to further social cohesion, or whether the data simply reflect a desire to confine this particular feature of historical violence to the abyss remains an open question. The data could also be explained as *forgetting by annulment* – the idea that there is simply too much information in circulation for the average person to absorb. Most people might assume that this type of detailed military information must be stored away somewhere in the archive and, therefore, because it is "always retrievable", "we can afford to forget it" (Connerton, 2008, p. 65).

Whatever the cause of this predicament, it is worth noting that a degree of institutional forgetting was also evident: the researchers had considerable difficulty obtaining precise historical data. Many statistics were not available or are in dispute. Since acquiring historical data for this study required significant archival and investigative skills, it is not surprising that participants in this study were unable to give accurate estimates. For example, Hastings (2010, p. 458) points out that the four-volume British Official History of the air war provided "not a single appendix giving details or estimates of German civilian casualties."

This cultural position has political implications since what is not remembered in a cultural sense can never be passed on to subsequent generations. Although a selective narrative of events related to war exists in all nations because they want to present a favourable image to the world (Baumeister & Hastings, 1997; Wertsch, 2002), it is important not to gloss over the past otherwise future generations may find themselves embroiled in controversy. On the other hand, some would argue that the development of a restricted narrative for historical violence over three generations is a significant cultural achievement (e.g. Meier, 2010) since remembering the past can arouse old hatreds. It depends on who is remembering or forgetting and for what purpose. The merits of forgetting have to be weighed against the possibility of unintended consequences (Assmann, 2012) and while the Allied bombing campaign as a real event is not in question, widespread ignorance of its scope or intensity may eventually constitute a form of denial that

implies that the human consequences have been exaggerated or that "it was not as intense or widespread as German people claim" (see Cohen, 2001).

To counter this, an alternative approach to history is required which, in full view of the data, should move the culture towards a more considered and precise form of remembering. History teaching has to go beyond stories of pride, heroism and personal sacrifice. There is need to provide the next generation with an open and honest account and appraisal of the past, which includes addressing what is uncomfortable, i.e. *what we have done to others* whatever the justification or context. Now that students are acquainted with important statistics from the Second World War – that, for example, six million Jews died in the Holocaust – it might now be appropriate to add that almost 1.3 million metric tons of explosives were dropped on Germany between 1940 and 1945 killing (by conservative estimates) over 400,000 German civilians as a result. These issues are delicately balanced as each country navigates its way through the troublesome remembering/forgetting terrain.

The data from this study suggests that memory of the Allied strategic bombing campaign among the British public is rather sketchy and in decline. Further research at the inter-individual level where knowledge is created, constructed, positioned and reconfigured would provide some understanding of warrant or justification; for example, whether the action taken by Bomber Command is rationalised or justified post hoc by the discovery of concentration camps in 1945. Further research also needs to study cultural artefacts, institutional practices, memorials and commemoration rituals. In June 2012, a memorial to Bomber Command and the 55,573 British and Commonwealth aircrew lost in the campaign was unveiled in London. The decision to memorialise the campaign remains controversial and the news was received with predictable disdain in Germany (Crossland, 2012). In Britain, over seventy years after the end of the campaign, it is now permissible to remember. However, this memory artwork, with its questionable appropriation of heroic architectural language, projects a narrative that requires deconstruction (e.g. see Brockmeier, 2002). On the grand facia above the six men of Bomber Command on operational duties is Churchill's salute to the campaign: "The Fighters are our salvation, but the Bombers alone provide the means of victory" and above the columns, at right angles to this, is the inscription, "This memorial also commemorates *those of all nations* who lost their lives in the bombing of 1939–1945" [italics ours]. Is this an expression of conciliation or regret? Might this be the beginning of further reflection and necessary adjustment to the way in

which this particular episode of historical violence is remembered? Whatever the intended meaning, the data from this study suggest that the full extent and scale of the bombing of Germany might already be rapidly diminishing from public consciousness in Britain. Whether this is a positive development or a serious cultural deficiency is a question in the politics of memory that future generations in both countries will have to consider.

REFERENCES

Allen, S. H. (2007). Time bombs: Estimating the duration of coercive bombing campaigns. *Journal of Conflict Resolution, 51,* 112–113. doi:10.1177/0022002706296153

Assmann, A. (2012). To remember or to forget: Which way out of a shared history of violence? In A. Assmann & L. Shortt (Eds.), *Memory and political change* (pp. 53-71). London: Palgrave Macmillan.

Baumeister, R. F., & Hastings, S. (1997). Distortions of collective memory: How groups flatter and deceive themselves. In J. W. Pennebaker, D. Paez, & B. Rimé (Eds.), *Collective memory of political events: Social psychological perspectives* (pp. 277-293). Mahwah, NJ: LEA.

BBC News - On This Day 1950 - 2005 - 6th August 1945: US drops atomic bombs on Hiroshima. Retrieved 9th December 2013, from http://news.bbc.co.uk/onthisday/hi/dates/stories/august/6/newsid_3602000/3602189.stm

Biddle, T. D. (2011). Leveraging strength: The pillars of American grand strategy in World War II. *Orbis, 55,* 4-29. doi:10.1016/j.orbis.2010.10.001

Bishop, P. (2008). *Bomber boys: Fighting back 1940–1945*. London: Harper Perennial.

Bomber Command Museum of Canada. (2013). Statistical summary of Bomber Command's operations. Retrieved from http://www.bombercommandmuseum.ca/commandlosses.html

Breakwell, G. M. (1986). *Coping with threatened identities*. London: Methuen.

Brickhill, P. (2009). *The dam busters*. London: Pan Books.

Brockmeier, J. (2002). Remembering and forgetting: Narrative as cultural memory. *Culture and Psychology, 8,* 15-43. doi:10.1177/1354067X0281002

Brown, C. (2005). *Postmodernism for historians*. Oxford: Pearson.

Calder, A. (1992). *The myth of the Blitz*. London: Pimlico.

Chandler, A. (1993). The Church of England and the obliteration bombing of Germany in the Second World War. *English Historical Review, 108,* 920–946. doi:10.1093/ehr/CVIII.CCCCXXIX.920

Cohen, S. (2001). *States of denial: Knowing about atrocities and suffering.* London: Polity Press.

Connelly, M. (2004). *We can take it! Britain and the memory of the Second World War*. Harlow: Pearson.

Crossland, D. (2012, June 25). Queen to unveil WWII monument in London. Germans grudgingly accept bomber memorial. *Spiegel On-Line International.* Retrieved May 7, 2014 from http://www.spiegel.de/international/europe/controversial-memorial-to-british-wwii-bombers

Douglas-Home, C. (Writer), & Childs, T. (Producer & Director). (1974, January 23). Whirlwind: Bombing Germany (September 1939–April 1944) [Television series episode]. In J. Isaacs (Series Producer), *The world at war*. London: Thames Television.

Doyle, P. (2013). *World War II in numbers*. London: A & C Black.

Friedrich, J. (2006). *The fire: The bombing of Germany, 1940–1945* (translated from the German by Allison Brown). New York: Columbia University Press.

Furudi, F. (2007). From the narrative of the Blitz to the rhetoric of vulnerability. *Cultural Sociology, 1,* 235–254. doi:10.1177/1749975507078189

Golec de Zavala, A., Cichocka, A., Eidelson, R., & Jayawickreme, N. (2009). Collective narcissism and its social consequences. *Journal of Personality and Social Psychology, 97,* 1074-1096.

Gottfried, P. (2007). The invincible Wilsonian matrix: Universal human rights once again. *Orbis, 51,* 239–250. doi:10.1016/j.orbis.2007.01.004

Grayling, A. C. (2007). *Among the dead cities: Is the targeting of civilians in war ever justified?* London: Bloomsbury.

Hastings, M. (2010). *Bomber Command*. London: Pan Books.

Hewer, C. J., & Kut, M. (2010). Historical legacy, social memory and representations of the past with a Polish community. *Memory Studies, 3,* 1–15. doi:10.1177/1750698009348292

Hewer, C. J. & Roberts, R. (2012). History, culture and cognition: Towards a dynamic model of social memory, *Culture & Psychology, 18,* 167–183. doi:10.1177/135406 7X11434836

Hitchens, P. (2012, June 30). The heroes of Bomber Command deserve their memorial… unlike the butcher who led them. *Mail Online.* Retrieved March 10, 2015 from http://www.dailymail.co.uk/debate/article-2166966/PETER-HITCHENS-The heroes-…

Irons, R. (2009). *The relentless offensive: War and Bomber Command 1939-1945*. Barnsley, South Yorks: Pen and Sword Aviation.

Jovchelovitch, S. (2012). Narrative, memory and social representations: A conversation between history and social psychology. *Integrated Psychological Behaviour, 46,* 440-456. doi 10.1007/s12124-012-9217-8

Kadera, K. M., & Morey, D. S. (2008). The trade-offs of fighting and investing: A model of the evolution of war and peace. *Conflict Management and Peace Science, 25,* 152–170. doi:10.1080/07388940802007272

Knapp, A. (2007). The destruction and liberation of Le Havre in modern memory. *War in History, 14,* 476–498. doi:10.1177/0968344507081551

Lake, J. (2002). *Lancaster squadrons 1942–43*. Oxford: Osprey Publishing.

Liddell Hart, B. H. (2011). *History of the Second World War* (Pan Military Classics Series). London: Pan Books.

Meier, C. (2010). *Das Gebot zu vergessen und die Unabweisbarkeit des Erinnerns* [The imperative to forget and the inescapability of remembering]. Munich: Siedler Verlag.

Middlebrook, M., & Everitt, C. (1985). *The Bomber Command war diaries: An operational reference book, 1939–1945*. Harmondsworth, Middlesex: Viking.

Neumann, K. (2009). When history isn't made but happens: Memories of victimhood in Halberstadt (Germany), *Memory Studies, 2,* 171–194. doi:10.1177/1750698008102051

Niemi, R. (2006). *History in the media: Film and television*. Santa Barbara, California: ABC-CLIO, Inc.

Olick, J. (1999). Collective memory: The two cultures. *Sociological Theory, 17,* 333-348.

Overy, R. (2013). *The bombing war: Europe 1939-1945*. London: Allen.

Price, A. (2009). *Blitz on Britain 1939–45*. Stroud, Gloucestershire: History Press.

RAF Museum. (2013). Casualties of the dams raid. Retrieved from http://www.rafmuseum.org.uk/research/online-exhibitions/617-squadron-and-the-dams-raid/casualties-of-the-dams-raid.aspx

Richards, D. (2001). *RAF Bomber Command in the Second World War: The hardest victory*. London: Penguin Books.

Saunders, H. St. G. (1953). *Royal Air Force 1939–1945, volume 3: The fight is won*. London: HMSO.

Schlosser, E. (2012). *Fast food nation: The dark side of the all-American meal*. New York: Houghton Mifflin Company.

Terraine, J. (1985). *The right of the line: The Royal Air Force in the European war 1939–1945*. London: Hodder & Stoughton.

Thorpe, F., & Pronay, N. (1980). *British official films in the Second World War: A descriptive catalogue*. Oxford: Clio Press.

Valiunas, A. (2007, July/August). Fire from the sky. *Commentary,* 52–57. Retrieved from http://www.commentarymagazine.com/article/fire-from-the-sky/

Von Benda-Beckmann, B. (2011). Imperialist air war: East German academic research and memory politics reflected in the work of Olaf Groehler. In H. Schmidt & A. Seidel-Arpaci (Eds.), *Narratives of trauma: Discourses of German wartime suffering in national and international perspective.* (pp. 33-58). New York: Rodopi.

Wagner, W & Hayes, N. (2005). *Everyday discourse and common sense.* Basingstoke: Palgrave Macmillan.

Wagoner, B. (2015). Collective remembering as a process of social representation. In G. Sammut, E Andreouli, G. Gaskell & J, Valsiner. (Eds.), *The Cambridge handbook of social representations*. (pp.143-162). Cambridge: Cambridge University Press.

Webster, Sir C., & Frankland, N. (1961). *The strategic air offensive against Germany 1939–1945, volume IV: Annexes and appendices*. London: Her Majesty's Stationery Office.

Wertsch, J. V. (2002). *Voices of collective remembering.* Cambridge: Cambridge University Press.

Wertsch, J. V., & Roediger, H. L. (2008). Collective memory: Conceptual foundations and theoretical approaches. *Memory, 3,* 318–326.

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APPENDICES

Appendix A *Area of Damage to German Cities*

Name of city	Area destroyed or damaged (%)
Wuppertal	94
Würzburg	89
Hamburg	75
Kassel	69
Düsseldorf	64
Mannheim	64
Cologne	61
Bremen	60
Hannover	60
Dresden	59
Dortmund	54
Frankfurt am Main	52
Nuremberg	51
Essen	50
Duisburg	48
Stuttgart	46
Munich	42
Berlin	33

Adapted from *World War II in numbers* by P. Doyle, (2013, pp. 164–165).

Appendix B *Tonnage of Bombs Dropped on all Enemy Targets*

Year	Tonnage bombs dropped (RAF Bomber Command)	Tonnage bombs dropped (US Eighth Air Force)
1939	31	–
1940	13,033	–
1941	31,704	–
1942	45,561	1,561
1943	157,457	44,185
1944	525,518	389,119
1945	181,740	188,573
Total	955,044	623,438

Saunders, H. St. G. (1953). *Royal Air Force 1939–1945, volume 3: The fight is won*. London: HMSO