MEMORY STUDIES

Fixing the floating gap: The online encyclopaedia Wikipedia as a global memory place

CHRISTIAN PENTZOLD, Chemnitz University of Technology, Germany

Abstract

The article proposes to interpret the web-based encyclopaedia Wikipedia as a global memory place. After presenting the core elements and basic characteristics of wikis and Wikipedia respectively, the article discusses four related issues of social memory studies: collective memory, communicative and cultural memory, 'memory places' and the 'floating gap'. In a third step, these theoretical premises are connected to the understanding of discourse as social cognition. Fourth, comparison is made between the potential of the World Wide Web as cyberspace for collective remembrance and the obstacles that stand in its way. On this basis, the article argues that Wikipedia presents a global memory place where memorable elements are negotiated. Its complex processes of discussion and article creation are a model of the discursive fabrication of memory. Thus, they can be viewed and analysed as the transition, the 'floating gap' between communicative and collective frames of memory.

Key words

collective memory; consensus and contestation; discourse; World Wide Web

The London bombings of 7 July 2005 have been commemorated in many ways, including moments of silence, candle-lit vigils and services. A permanent memorial is planned to be located in Tavistock Square. However, a form of 'mediated memorial' was already initiated only a few minutes after the first bombings: the corresponding entry of the online encyclopaedia Wikipedia. In this article I present Wikipedia as a global memory place that exists not in space but in cyberspace. As a global memory place, Wikipedia compasses a wide spectrum of discursively constructed memories of, for instance, catastrophes such as the 2004 Tsunami, of wars and military actions, and also of festive events such as the 2008 Olympic Games in Beijing.

Wikipedia is first and foremost understood as an open, web-based platform fostering collaboration among users who aim to create an encyclopaedia. In the first part, I introduce the core elements of the wiki application and the basic characteristics of

Wikipedia. To ground my interpretation of Wikipedia as a global memory place, in a second step, I outline four theoretical premises, the concepts of: collective memory, communicative and cultural memory, 'memory places' and the idea of the 'floating gap'. Third, the communicative construction of memory is further discussed with a focus on discourses as social cognition. Fourth, these issues are associated with the World Wide Web and Wikipedia respectively. It is argued that the online encyclopaedia constitutes a prodigious example of a mediated memory place in the digital age (see van Dijk, 2007) whose networked discourses traverse communication in cultural memories. Thus, the analysis of those discourses can contribute to the methodological and methodical formation of the new academic subject of 'memory studies' (see Roediger and Wertsch, 2008).

THE ONLINE ENCYCLOPAEDIA WIKIPEDIA

A wiki (from *wikiwiki*, meaning 'fast' in Hawaiian) is a set of linked web pages that enables documents to be authored collectively. The application was invented by Ward Cunningham in 1995 for the collection and development of software design patterns. Wikis are (for a complete list see Cunningham, 2007): (1) open (anyone can edit), (2) incremental (pages can be linked even to pages that have not yet been written); (3) organic (structure and content are open to editing and evolution); (4) tolerant (all forms of activities even if undesirable are preferred to error messages); (5) observable (every activity can be watched and reviewed). Thus, these principles elaborate how web creation, maintenance and access can operate as well as the features the technology has to provide, so as to enable this form of collaboration (see Wagner et al., 2006). The editing options include, significantly, the opportunity to change, add, delete and link material. In their most basic form, wikis provide open access so that anyone can edit documents. Therefore, wikis are susceptible to vandalism and disruption. Instead of a team of (paid) editors who review new content before it is published, most of the wikis rely on the concept of 'soft security': damage is not prevented in the first place, but easy to undo. This is possible because every activity is registered and can be monitored and, if need be, reviewed (see Pentzold, 2008). For that purpose, the usual applications possess additional elements, for instance, the so-called 'Recent Changes' sites where all edits are registered, the 'History of Changes' (a chronological list that documents all edited versions of an article) and the 'Diff Function', which shows the alterations between two consecutive versions (see Leuf and Cunningham, 2001).

The online encyclopaedia Wikipedia, which is based on these principles, has evolved since it was launched in January 2001 to be not only the most successful wiki project, but to become the largest encyclopaedic companion ever known.[1] It was founded by the US internet entrepreneur Jimmy Wales and the philosopher Larry Sanger as 'an effort to create and distribute a multilingual free encyclopedia of the highest possible quality to every single person on the planet in their own language' (Wales, 2005). It now exists in more than 250 languages. The English version currently (October 2008) contains almost 2.6 million articles and more than 8 million registered user accounts.[2]

Despite its short existence, the project belongs to the long history of encyclopaedias that dates back to the library of Alexandria.[3] Although its organization and editing activities are fundamentally different from the working mechanisms of encyclopaedia publishers, the project understands itself as one legitimate example of the encyclopaedic tradition (see Wikipedia, 2008). Moreover, the attempt to utilize automated machinery to build up universal lexicons dates back to Paul Otlet's *Traité de documentation* (1934) which outlined a document collection containing the world's knowledge. In so doing, it prefigured the network of texts that ultimately became realized as the World Wide Web, which its inventor Tim Berners-Lee described as a 'universe of network-accessible information, an embodiment of human knowledge' (1999). As such, it was also envisioned in 1960 by Ted Nelson's project Xanadu and in 1945 by Vannevar Bush who prophesized that 'wholly new forms of encyclopedias will appear, ready-made with a mesh of associative trails running through them' (Bush, 1945: Section 8).

One element that is not common to printed encyclopaedias but that is of pivotal importance for Wikipedia's role as global memory place is the so-called 'talk page'. Every article is accompanied by such a discussion forum. Talk pages have explicitly been designed for settling the constantly occurring disagreements and disputes among the authors (see Pentzold and Seidenglanz, 2006). They fulfil a vital function in serving the role of a low-cost arena for resolving conflicts (see Viégas et al., 2007). In addition, they are utilized to plan reworking, to discuss selected paragraphs of the associated article, to list sections that should be trimmed, and so on. The language of the texts is consistently informal and 'reflects an online discussion style typical of web-boards and other asynchronous discussion forums' (Emigh and Herring, 2005: 7).

Consequently, wikis present a collaborative open content system and mark an important step in fulfilling the promise of the internet to challenge the biased production and distribution structures of the mass media and the asymmetrical relationship between the producer and recipient of media messages. Wikis and Wikipedia facilitate communication processes without thresholds. Thus, they provide alternative patterns of knowledge production through online cooperation.[4]

THEORETICAL BACKGROUND: CONCEPTS OF MEMORY

In what follows, I shall not embark on an extensive discussion of the various strands of research on collective memory. Instead, I want to reconsider one line of argumentation to ground and elaborate the understanding of Wikipedia as a global memory place. It includes four steps: Halbwachs's notion of collective memory, the Assmanns' discussion of communicative and cultural memory, Nora's memory places and Vansina's 'floating gap' model.

Halbwachs's concept of collective memory

Maurice Halbwachs is arguably the most important figure of the second generation of Durkheimian sociologists. The crucial point of his work on the collective memory

(*mémoire collective*) is the comprehension of its social construction (see Coser, 1992). He introduces a culturalistic concept to address the question of what draws people together. Halbwachs's answer is that the constructed past mediates a group's feeling of togetherness. In this sense, a group is a set of people who conceive their unity and peculiarity through a common image of their past: 'Memory is a collective function.' (Halbwachs, 1992[1925]: 183). Thus, memory is constructed in the individual during communication with other members of a given social constellation. It lives and sustains itself in communication processes. Moreover, memories act like social order parameters or frames (*cadres sociaux*). An individual places his/her thoughts in given frameworks and therefore participates in a collective memory so that he/she is capable of the act of recollection.

Apart from the constructivist aspect there are two other central points that need to be considered: the social relativity and the conditionality of memory. On the one hand, memory is always bound to a single social group. 'Every collective memory requires the support of a group delimited in space and time' (Halbwachs, 1950: 84). Halbwachs denies the possibility of a universal group as well as of a universal memory. There are as many collective memories as there are groups and people normally share a plurality of collective memories. On the other hand, the construction of the past is fundamentally shaped by the concerns of the present. Memory is in accord with the predominant dis-courses and it is reconstructed in relation to its functions in a social context. Memory is remembered, that is, re-constructed, insofar as it is needed. And only what is com-municated is remembered: 'One cannot think about the events of one's past without discoursing upon them' (Halbwachs, 1992[1925]: 53).

The differentiation of communicative and cultural memory

Based on Halbwachs's concept, Jan and Aleida Assmann examined the organization and content of collective memories. In so doing, they established a separation of the collective memory into two distinct frames: communicative and cultural memory (see Assmann, 1995).

The first of these includes all forms of collective memory that are based on everyday communication. Hence, it can be regarded as the social short-term memory that is shared with contemporaries. It is characterized by informality, a high degree of non-specialization, the reciprocity of roles, disorganization and thematic instability. It is constructed in interactions with a high degree of formlessness and wilfulness. Furthermore, communicative memory is limited to a temporal horizon that spans not more than 80 to 100 years.

In turn, cultural memory is distinguished by its distance from the everyday. Like its counterpart, it is related to one group and defined through a kind of 'identificatory determination in a positive … or a negative … sense' (Assmann, 1995: 130).[5] But it differs from communicative memory by its formality, fixed organization, objectivations, buttressed communicative situations and the specialization of its bearers, that is, it has a limited participation structure consisting of administrators, custodians, etc.[6] Cultural memory manifests itself in 'media and platforms embodying and transmitting

memory' (Hebel, 2003: x) and is, as Marita Sturken (1997: 1) remarks, a 'field of cultural negotiation through which different stories vie for a place in history'.

It is debatable whether the two *modi memorandi* constitute a polarity or whether they are just the two extreme points of a continuum. Aleida Assmann (2006a) argues for a transition that could best be described using metaphors of liquidity and solidity: The vivid, 'liquid' communicative memory crystallizes in forms of objectified, 'solid' culture, whether in images, buildings or monuments. Yet the most profound and comprehensive transformation has been accomplished by the innovation of writing and the consequent production of texts. Texts facilitate the extension of communicative situations and present an external domain to record information promoting the extension of social relations. However, the continuing production of texts introduces a differentiation in text-based cultural memory between a foreground and a background or, in other words, between a 'working memory' and a 'reference memory' (A. Assmann, 2008). While the former, as canon, consists only of a small number of normative texts, the latter encompasses the vast array of stored material in un-inhabited, un-remembered archives that epitomizes, perhaps temporarily, a form of oblivion.[7] Again, the critical point is the transition between these ways of remembering. There are not only passages from communicative to cultural modes of memory, but also interactions between the canon and the archive (see J. Assmann, 2008).

However, the Assmanns' limited use of the notion 'cultural memory' in the areas of history, art and religion prevent its straightforward application to the context of online memories. Instead, it is more appropriate to borrow Olick's (2008b: 158) broad concept of collective memory as 'wide variety of mnemonic products and practices'. So, a determination to the extremity of cultural memory is replaced by the inclusion of continuous forms of remembrance such as cultural and media products as well as communicative practices (see Welzer, 2008).

Nora's memory places

The issue of texts as promoters of oblivion has also been one of the major themes of Pierre Nora's endeavour to locate the memory places (*lieux de mémoire*) of French national identity. He argues that modern memory is first of all archival. The process that began with writing has reached its culmination in digital media. The act of remembering has turned into a meticulously minute reconstruction, that is, communicative memory is not only the disorganized, flowing counterpart of collective memory. Instead, it is under pressure to keep records. Remembering the recent past is not exclusively limited to commemorative communication as described by Jan Assmann, but committed to storage of all the vestiges a group cannot possibly remember. In this process, memory has been decentralized and democratized: 'Everyone has gotten into the act' (Nora, 1996b[1984]: 9).

Against this background, Nora develops the conception of 'memory places'. A memory place is in the broadest sense 'any significant entity, whether material or non-material in nature, which by dint of human will or the work of time has become a symbolic element of the memorial heritage of any community' (Nora, 1996a: xvii).

It is in this sense that the conception opens up new vistas. Nora takes the analytical step from groups associated in spatial–temporal coherence to abstract communities defined by symbolic memory places. Hence, the nation is an 'imagined community' (Anderson, 2003[1983]: 6). 'Imagined' because its members will never know all of their fellow-members although they share one collective memory that binds them together. The nation as an intangible unity is concretized in memory places. Additionally, Nora shifts the emphasis from the events to the construction of these events over time, from the actions remembered to the traces left by those actions and from the question 'what actually happened' to the perpetual reuse of the past (see Nora, 1996a: xxiv).

The floating gap

The issue highlighted by Jan and Aleida Assmann, the transition between communicative and cultural memory, is approached by the ethnologist Jan Vansina. In his study of oral traditions he unfolds the notion of a 'floating gap' to describe a typical phenomenon of historical recollections without writing systems (1985: 23). While there is plenty of information about recent times, one finds only a hiatus or a few names for earlier periods. There is a break in the accounts that he terms the 'floating gap'. It is a 'floating' gap because the recent past that is expressed in interactive communication by-and-by recedes more and more into the background while the information becomes scarcer. This gap shifts with the succession of generations (see J. Assmann, 2008). To gain insight into this peculiar transitional mode, oral history analyses the communications of groups where the historical consciousness is still in flux. One of the results from such examinations is a classification of two major communicative operations: news (eyewitness accounts, hearsay, dreams) and interpretations (reminiscences, commentaries, verbal art). The construction of memory – another result of the field studies – is a matter of agreement and always socially controlled (J. Assmann, 2008: 95). Furthermore, the corpus of remembered information is a communal social pool with a network of actors behind it (J. Assmann, 2008: 150).

DISCOURSE AS SOCIAL COGNITION

Before discussing the role of the web and Wikipedia in relation to these concepts of social memory, another theoretical step seems necessary. Halbwachs, as well as the Assmanns, stressed the communicative construction of memory. However, they do not discuss the conceptual background of the notion of discourse, which seems essential to understand the social nature of memory, the function mechanisms of memory work and the shift between the communicative and collective memory frames. Moreover, consideration of the connection between memory and discourse can also inform methodological and methodical approaches.

From a sociolinguistic perspective, discourses are the public means of the constitution, manifestation and distribution of knowledge. This knowledge is materialized in texts and other symbolic artefacts that form the material basis of remembrance (see Fraas, 2008). The text is, as Wertsch (2002: 14) concludes in quoting Bakhtin, 'the

primary given' of meaning, communication and thought. Thus, although knowledge and therefore memory have a physiological precondition, the form and the content of memory are mediated through social experience and formed in communication. The importance of communicative interaction makes it appropriate to refer to Norman Fairclough's notion of discourse. He understands discourse as 'spoken or written language use' and therefore fundamentally as social practice (1995: 63ff.). Discursive practices are manifested in texts. Fairclough adopts Halliday's (1978) broad definition of texts to include both written and spoken sequences. Such texts are connected to each other via formal, semantic and semiotic references. Fairclough used the term 'intertextuality' (1995: 101) to address a central feature of texts in a discourse: they are composed of 'snatches of other texts, which may be explicitly demarked or merged in, and which the text may assimilate, contradict, ironically echo, and so forth' (1995: 84). Moreover, he argues that the postulation of intertextual links accentuates the 'dialogic-ality' (2003: 41) of texts: on the one hand, some texts form dialogues with other texts; on the other, some texts are the outcome of dialogical negotiations. While the first instance points to the various voices that form a discourse, the latter shows the final version of a process 'from conflict to consensus' (Wodak, 2000).

Regardless of which forms of texts are connected in discourses, these texts always lexicalize the world in particular ways (see Fairclough, 2003: 129). So, discourses give access to the examination of collective belief systems, patterns of thought and argu-mentation structures. This connects to the understanding of discourses as a form of social cognition. In his definition of discourse as verbal interaction, Teun van Dijk (1997) highlights the importance of the cognitive view of discursive processes. Like know-ledge and memory, cognition can be theorized from its mental or social aspects. Thus, social cognition can be understood as the mental processing of information or as the social construction of knowledge about the world (see Moscovici, 1984). This second interpretation, stressing the joint discursive construction of social reality, rests upon a tradition blending elements as diverse as Mead's symbolic interactionism, Wittgenstein's late philosophy and ethnomethodology. The crucial point is that this line of argument treats 'human knowledge as a social product under shared ownership' (Condor and Antaki, 1997: 329). Consequently, the nature of knowledge and memory can be understood by looking at their constructive discourses.

THE WEB AS SPACE OF MEMORY AND OBLIVION

To sum up the theoretical considerations, the essential points of the four memory concepts that can be adopted in the present context are: first, Halbwachs's socio-constructivistic conception of the past that shaped the entire discussion. The past is relative, its configuration arises from the frames of reference of the current presences. Second, the postulation of two frames of recollection – communicative vs. cultural – introduced by Jan and Aleida Assmann: they argue that there is a passage from living memory to fixed writing and from communicative remembrance to organized memory work. In addition, cultural memory is subdivided into a functional and a storage part. Third, we have to consider Nora's notion of 'memory places', the model of

communities defined by symbolic memory places, and, based on that, the orientation toward the communicative and decentralized construction of the past. Fourth, Vansina's concept of a 'floating gap' and the insight that memory is always a matter of agreement in a social network: this too should be taken into account in the analysis of the discursive processes of Wikipedia. The communicative construction is additionally supported by the notion of discourses as forms of social interactive cognition, which is crucial to the formation of memory.

However, the attempt to associate these central elements to the functions and characteristics of the web meets immediate obstacles.[8] First, the fundamental question is whether it is at all possible to build up collective memories in a flexible, individualized, decentralized, a-historic medium like the Web, or whether it is rather a place of collective oblivion (see Fraas, 2004). The problem is that, traditionally, collective memory in literate societies is based on lexicalization and mediation. It is debatable if the Web does foster the formation and compilation of corresponding memories. Yet as already noted above, the Web can also be viewed as a vast hypertext archive of information (e.g., texts, sound files, images, video clips) as it was envisioned by Otlet, Bush and Nelson. So it can function as a resource and promoter of the construction of collective memory.

Contrary to that, it can secondly be argued that the Web does not play an active role in the memory work of social groups because it only contains enormous amounts of information that are stored but not remembered. Instead, it seems to represent the most definite example of the extensive expansion of archives and the amassing of information evoked by Nora. One possible way, however, to address this objection is to argue that the Web cannot be understood as one consistent medium like television or radio but rather as an underlying basis that fosters different applications, tools and forms of communicative interaction. Thus, it has the potential to enable new patterns of the formation of tradition since it merges features of communicative as well as of cultural memory. The Web presents not only an archive of lexicalized material but also a plethora of potential dialogue partners. In their discursive interactions, texts can become an active element in forms of networked, global remembrance. In consequence, these texts may not only be part of 'storage' memory but also part of 'functional' memory because they are remembered and linked to other texts in forms of 'living' intertextuality.[9] In this regard, O'Malley and Rosenzweig (1997) argue for the growing importance of the web because it allows for communication and exchange of divergent interpretations of the past. The web demonstrates how 'meaning emerges in dialogue and that culture has no stable centre, but rather proceeds from multiple "nodes"' (O'Malley and Rosenzweig, 1997: 154). The 'new culture of memory', as Rosenzweig (2003: 756) calls it, is fundamentally defined by 'horizontal networks of interactive communication that connect local and global' (Castells, 2007: 246). Its interactive potential enables novel forms of collaboration, modes of collective evidence, and it can become part of people's cultural acquisition (see Reading, 2001, 2003). In their argument, O'Malley and Rosenzweig (1997: 154) put special emphasis on the role of memorial websites on the Japanese American internment and argue that 'these virtual re-creations may be the most important historic sites connected to the internment experience' (for a detailed discussion see Gessner, 2007).

Yet this line of argumentation meets a third hurdle. The problem is that the Assmanns view communicative memory as in the main orally negotiated, whereas most communication on the web is a 'text-based affair' (Wilbur, 1996: 6). Despite the rapid development of internet technology and the growing importance of speech and film (e.g. the highly popular video portal *YouTube*), spoken language today has only a limited presence. One possible starting point to address this issue is the notion of 'Netspeak' as it was postulated by David Crystal (2006). He argues that although web-based material is predominately written, its type of language displays unique features. This specific form has, for instance, been termed 'electronic discourse' (Davis and Brewer, 1997) or 'interactive written discourse' (Ferrara et al., 1991). One of its most prominent features is 'writing that reads like conversation' (Davis and Brewer, 1997: 2). In his comparison between speech and writing Crystal (2003: 291) shows that the former is typically time-bound, dynamic, transient and without a time-lag between production and reception. In contrast, the second is space-bound, static and permanent. Moreover, speech is characterized by many words and lengthy coordinate sentences, whereas writing usually displays multiple instances of subordination and elaborated syntactic patterns. On this basis, Netspeak relies on elements of both speech and writing. It can be found in several varieties that demonstrate almost the complete continuum be-tween written and oral language. Therefore, Baron speaks of an 'emerging language centaur – part speech, part writing' (2000: 248). As a consequence, despite its written nature, there are forms of web-based communication displaying core properties of speech. For instance, most explicitly, the web chat is a conversation carried out by means of electronic processed text (see Hutchby, 2001).

The fourth critical argument is again produced by Aleida Assmann (2006b) who scrutinizes the potential of the 'second orality' originating from digital speech and writing. She interprets the difference between the duration of written letters on material carriers and the ephemerality of the flow of communication on the internet as the displacement of the process of canonization by the economies of attention. The key reason is that attention is always short-lived, neither sustained nor continuous. Consequently, there should be no concentration on some selected elements of the copious information online. However, in contrast to this assumption, the network an-alyses of the internet have shown that it constitutes a scale-free network with a power law distribution. Thus, there are only few sites, among them Wikipedia, that receive most of the attention (i.e. hypertext links) while most of them belong to the 'long tail' of sparsely linked websites – a fact that is also confirmed by the search algorithms of Google (see Barábasi, 2002).

WIKIPEDIA AS A GLOBAL MEMORY PLACE IN CYBERSPACE

On the basis of the outlined premises, I argue that the online encyclopaedia is a global memory place where locally disconnected participants can express and debate diver-gent points of view and that this leads to the formation and ratification of shared knowledge that constitutes collective memory.

On the one hand, it is potentially 'global' because it is accessible via the internet and therefore not bounded by national frontiers. Instead of being a national-territorial project, it is divided into separate language editions. Hence, access depends not on nationality but on possession of the requisite language skills (see Burnett and Marshall, 2003: 35ff.). Consequently, the English version is – because of its status as *lingua franca* of the web – the largest one with the highest number of authors. It is only potentially 'global' because of the 'sociocultural situatedness' of memory, as Wertsch (2002: 12) generally diagnoses: Wikipedia has cultural as well as technical and procedural constraints and affordances that need to be mastered.

On the other hand, Wikipedia is a 'memory place' because it functions as a platform where authors with divergent (national, cultural, religious, etc.) backgrounds can engage in an intense process of discursive knowledge constitution. Yet it becomes apparent that Nora's notion needs to be reinterpreted for the present purpose. In his critical conception, memory places are understood as symbolic places, artificial placeholders for a non-existent living collective memory; *lieux* instead of *milieux de mémoire*. In contrast, Wikipedia is not a symbolic place of remembrance but a place where memorable elements are negotiated, a place of the discursive fabrication of memory. Wikipedia is not only a platform to constitute and store knowledge, but a place where memory – understood as a particular discursive construction – is shaped.[10] In this perspective, analysing the discursive processes means analysing the memory work in a specific online environment. Thus, the production of articles and the parallel discussions on the associated talk pages can be viewed as the dynamic transition, the 'floating gap', between fluid communicative and static collective memory where forms of objectified culture (e.g. texts, images) are crystallized. It can be argued that the creation of an article represents a small-scale model of the discursive construction of the past. The construction of communicative recollections on the talk pages and their transition to forms of cultural memory in the article text are exposed to view under almost laboratory-like conditions. Compared to common patterns of collective remembering, these processes are accelerated and the two modes do not displace each other. Rather, they are entangled. The stable article is generated parallel to the ongoing negotiations, which can furthermore retroact on already crystallized elements. The exceptional feature in Wikipedia is that both modes of remembrance operate in written form; the floating gap does not connect oral modes of communication. In this regard, Wikipedia is an ideal field of research because each communicative act is registered and it seems feasible to examine in detail the 'floating gap' by means of a discourse analysis.

Apart from their intertextual network structure, these discourses are themselves constituted and shaped in networked communication, that is, through mediated contacts that extend beyond face-to-face discussions. So, the 'mnemonic community' (Rigney, 2008) or 'community of memory' (Irwin-Zarecka, 1994) of the Wikipedia authors can be viewed as an 'imagined community' (Anderson, 2003[1983]) spread over an extensive territory. The users do not operate as a closely knit community but as a loosely organized group. Thus their disparate social and cultural backgrounds reflect

what Halbwachs termed 'different frameworks'. This results in a form of remembrance described by Wertsch as 'contested distribution' (2002: 24). Contested distribution is marked by a system of opposition and contestation between different perspectives. The tension between consensus and contestation that is usually displayed in the article production and the discussions on Wikipedia is a vivid example of this form of remembrance.

To take the introductory example of the Wikipedia article on the 7 July 2005 London bombings: rather than presenting a homogeneous account of the events, the editing process was defined by vigorous and occasionally fierce conflicts, so-called 'edit wars'. These sprang from the heterogeneous backgrounds of the contributors and therefore the different 'social frameworks' (Olick, 2008a) for remembering that arise from the network structure of the web and the potentially global access to it. Moreover, study of the discussions on the talk pages that formed around the article production high-lights the relation between points of stability and dynamics in collective remembrance. And the article can be understood as the outcome of negotiations whose contro-versial evolution is not erased. Instead, its complete archive provides information about its development 'from conflict to consensus'. Collective memory is, in this sense, constantly a discursive process that is 'frequently a site of intense conflict and debate' as Irwin-Zarecka (1994: 67) put it. Discourse analysis would therefore illuminate the constitution and shaping of a memory that is 'not a given, not a "natural" result of historical experience. It is a product of a great deal of work by large numbers of people' (Irwin-Zarecka, 1994: 67).

A brief analysis of the formation of the article on the London bombings can dem-onstrate the potential of such an approach. The article was started at 9:18 am (Western European Time), only about 30 minutes after the first assaults. The archive of stored article versions shows that on the remainder of 7 July about 2580 edits were made that were followed by another 1303 on the following day. The emotional trauma, the dimension and importance of the crisis caused an immediate concern and intention to collect and evaluate all available information in a Wikipedia article. Unlike weblog or newsgroup posts, the Wikipedia article offered a common and prominent place for an international group of authors to express and discuss their knowledge and feelings. Apart from the article, the talk page, which was initiated at 9:59 am, also shows a rapid growth in the first days. Its version history accounts for 624 posts on the first day and 360 on the second.

As a first step towards examining the critical process of article production a closer look at the talk pages has shown the variety of topics debated by the users. Thus, the 152 threads that structure the 984 posts of the first two days were manually coded to extract the topical structure, that is, the condensed content. The most frequent issues, apart from editorial and technical remarks as well as requests for references, were arguments about the interpretation of the bombings as 'terrorism', comparisons with other major attacks (IRA/Madrid bombings, Lockerbie, Aum Shinrikyo), eyewitness accounts of people working or travelling in London as well as posts where authors expressed their condolences and confusion about the bombings.[11] Especially the last

group of threads indicates the global dimension of the community. The authors seemed to feel the need, on the one hand, to articulate their compassion for the harmed and affected people, and, on the other, their sympathy with all their fellow Wikipedians in London. Users post comments such as: 'I would also like to offer my admiration for the British people and our many fantastic British friends on Wikipedia. As a New Yorker, I stand with you' (7 July 2005, 4:26 pm), 'Deepest condolences from Slovenia' (7 July 2005, 5:47 pm) or 'Condolences from Morocco for this crazy act of terror to ~~families~~ and everyone affected.' (7 July 2005, 11:01 pm).

As a second step, the threads of discussion were studied using the technique of argumentation analysis. From the various analytical perspectives subsumed under the notion of discourse analysis, this approach was chosen on the assumption that the Wikipedia discussions and editing activities are memory work where conflicting definitions of issues, actors and events collide. On that basis, argumentation analysis presents a fruitful perspective because it allows for a breakdown of the conflicting lines of argumentation (for an introduction see Toulmin, 2003). So the investigation can deliver an insight into the complex processes of the discursive ratification of the constituents of memory. The argumentations are not only quarrels about words. In contrast, they are disputes about differing interpretations of the incidents and therefore about the question: what should be remembered in what way? To analyse the discussions is to look at the collective construction of a text – the article – as objectivation and result of conversational remembering. The discussions and editing processes are the place where viewpoints are merged or eliminated to form one shared and valid version of the past events that is manifested in the (more or less) stable article that serves as globally available reference.

The most substantial argumentation during the first two days organized around the key words 'terrorist' and 'terrorism', that is, the controversy as to whether or not these labels could be applied to the suspects and the bombings. The analysis shows that the argumentation structure evolved according to a fundamental distinction in a pro and a contra position. Thus the arguments in favour of the terms are:

1. *The definition argument*: 'Terrorist' is by definition the correct, unbiased characterization of the assassins. Example: 'I think you need find yourself a dictionary and look up the word terrorism. It is the precise word for a deliberate attack on civilians' (7 July 2005, 5:50 pm).

2. *The reasonable consensus of the majority argument*: There is a comprehensive consensus on the appropriateness of the usage. Examples: 'The consensus in the media and the government is terrorism' (7 July 2005, 5:01pm), 'It is reasonable to assume that academics will commonly use the term 'terrorist attack' to refer to the incident.' (8 July 2005, 00:17 am).

3. *The common sense argument*: The opposite arguments and the whole argumentation itself are declared futile as a matter of common sense. Example: 'An enormous amount of time has been spent arguing over whether a spade should be called a spade' (8 July 2005, 2:10 am).

The arguments against the use of the term are:

1. *The inappropriateness argument*: The neutrality of the term is questioned in relation to the demand for a balanced encyclopaedic article. The users conclude that the expression is unnecessary and can be replaced by more suitable words or phrases. Example: 'The word has inherent negative connotation and is thus POV [point of view] and it is entirely superfluous' (8 July 2005, 00:46 am).

2. *The biased sources argument*: The claimed consensus is declared invalid because of the biased institutions and official actors that established it. Example: 'If "officially" you mean "by the government", since when does NPOV [neutral point of view] mean the government's POV?' (7 July 2005, 11:40 pm).

3. *The rules of the game argument*: The contributors criticize other users for not abiding by the rules that should govern Wikipedia negotiations. Example: 'There hasn't yet been a half hour of discussion … Only a bullshit attempt to override my objections instead of actually responding to them' (8 July 2005, 00:16 am).

In a third step, these insights can be connected to the formation of the entry itself in order to interpret the successive stages of editing that are completely stored on the version archive. In so doing, the changes on the surface of the article can be related to the discursive negotiations on the talk pages. These help to explain the actions of the editors and illuminate the structure and outline of the article, the topics addressed as well as the omitted or deleted issues that could not prevail. For instance, the last version of the article on 8 July (11:37 pm) states, after an extensive edit war: 'The incident was the deadliest single act of terrorism in the United Kingdom since 270 died in the 1988 bombing of Pan Am Flight 103 over Lockerbie.' The pro position has ruled on the matter.

CONCLUSION

The argument that Wikipedia is a global memory place started from Halbwachs's insight into the collective, communicative nature of memory. In this regard, the online encyclopaedia provides an ideal example of the discursive organization of remembrance and the different observable steps of memory work as they evolve online. Its combination of article and talk pages allows for the investigation of a 'floating gap'. This concept, which was originally modelled by Jan Vansina to explain the differences between communicative and cultural memory in oral cultures, can be interpreted as the gradual passage from disputed points of view in everyday discussions to the formalized character of an encyclopaedic article. In this process, the wealth of arguments advanced during the discussions slims down to the set of validated statements that form the article. Everything else becomes part of an archive that may possibly be re-addressed in later discourses.

Moreover, the resulting article forms part of a collection of relevant texts for further memory work. Thus, the entry on the London bombings attracted the interest of other media formats. *Newsweek* (Braiker, 2005) prized the article because of its 'photographs,

detailed timelines, contact numbers, a complete translated statement by the jihadist group claiming responsibility for the attacks'. It concluded: 'it is no longer newspapers ... that write the first draft of history'.[12] And the free London newspaper *Metro* (Metro Newspaper, 2005) reasoned:

> *perhaps the most telling story contribution of the days was on Wikipedia, the online encyclopedia. Within hours of the explosion, as the death toll continued to rise, they had already updated their record for July 7. There, alongside Joan of Arc's posthumous acquittal in 1456 and the 1947 Roswell UFO scare, was a past-tense account of the bombings. In Internet terms, London's crisis was already passing into history.*

Acknowledgements

Notes

1   The English-language version can be accessed via http://en.wikipedia.org. For a Wikipedia timeline see Wikipedia (2008).

2   The popularity of the encyclopaedia is also confirmed by the latest survey of the Pew Internet & American Life Project. According to this about 36 percent of the US-American adult internet users consult Wikipedia. See Rainie and Tancer 2007.

3   As a reminder of this postulated connection, the central Wikipedia conference Wikimania 2008 was held in the New Library of Alexandria. See Wikimania (2008).

4   However, as recent work has shown, the emancipatory alternative knowledge production in Wikipedia is also characterized by cultural and regional imbalances, dominated by info-elites and subject to power plays. Moreover, its openness and the absence of formal editorial supervision have led various critics to question its reliability and accuracy. Yet some initial comparisons between Wikipedia and printed encyclopaedias suggest that their levels of accuracy are almost similar (see, e.g., Giles, 2005).

5   Therefore, they disagree with Halbwachs who argued that on a certain step of this development the group relationship is lost – *mémoire* is transformed into *histoire*. For the relation between memory and history see Wertsch, 2002: 40ff.

6   Assmann (1995: 130ff.) lists altogether six characteristics: concretion of identity (relation to group) capacity to reconstruct (memory always relates to a current situation), formation, organization, obligation (system of values), reflexivity.

7   For a discussion of the archive in multimedia spaces see Ernst (2006).

8   It is necessary to distinguish between the internet as the comprehensive network of networks and the World Wide Web as the system of linked hypertext documents, which is the relevant focus of this discussion.

9   Nevertheless, forms of 'global' remembrance are not ultimately bound to the rise of the internet. See Levy and Sznaider's study on *The Holocaust and Memory in the Global Age* (2005).

10 Obviously, not all articles in Wikipedia function as memory artefacts. Like its written counterparts, Wikipedia contains entries on objects, theories and the like. Yet it is characteristic for its dynamic, web-based existence that it is open to events of contemporary history.

11 The distribution of the topics in the threads was as follows: editorial/information accuracy 51 of 152 threads, references 46, technical remarks 24, interpretations 21, comparison 14, official comments 14, Wikipedia rules 14, persona remarks 8, eyewitness accounts 8, commendation 4, requests 4, remarks to concomitants 4, conspiracy theory 2. These discussions are an example of the struggle to establish frames of reference for the assaults that Hoskins (2006) discussed in relation to the mediated representations of crises.

12 Along with traditional mass media, other web-based communication formats did also rely on the Wikipedia. In their case studies of three events of 'global crisis communication' (7 July 2005 London bombings, Katrina, Pakistan earthquakes) Thelwall and Stuart (2007: 523) examined 68,022 blogs. On the basis of their results they defined Wikipedia as an 'emergent crisis media' (2007: 537).

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CHRISTIAN PENTZOLD is a doctoral candidate at the Institute of German, Media Communication and Intercultural Communication, Chemnitz University of Technology, Germany. During the Hilary Term 2009 he is a visiting doctoral student at the Oxford Internet Institute, UK. His main research interests concern discourse theory and methodology as well as the interplay between online collective action, communication and the development of software architectures. *Address*: Institut für Germanistik, Medien-, Technik- und Interkulturelle Kommunikation (IfGK), Chemnitz University of Technology, Thüringer Weg 11, Chemnitz D-09126, Germany. [email: christian.pentzold@phil.tu-chemnitz.de]