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***Remembering together.
Some considerations on how direct or virtual social
interactions influence memory processes***

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Memory is usually studied and commonly represented as an individual faculty, allowing past information (coming from external environment through senses, or deriving from some internal activities, as thoughts, fancies, mental images, etc.) to be recalled, being the original stimulus already disappeared from current experience. It may therefore be conceived as a mental link between past perceptions and current states of mind. Referring to this first definition, similar to many ideas of memory coming spontaneously to our mind, the aim of this paper is twofold. First, I intend to review some classical contributions, challenging this definition of memory as a purely individual faculty. Starting from different points of view, these pioneering authors studied how social interactions may not only be a context in which memory processes are embedded, but may on the contrary deeply influence basic functions of individual remembering – such as information recall, reconstruction of the meaning of past stimuli or events, and monitoring activities that spontaneously follow remembering acts. These authors showed that a definition

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of memory as a purely individual activity could be seen as lacking of many important aspects, if not erroneous; therefore, their precious new insights allow us a deeper understanding of the importance of social influence on memory acts. Apart from profound differences in their overall perspectives, in fact, all the authors chosen are showing how social interactions may change our memory processes.

Second, I will try to speculate on how these classic intuitions may be applied to new perspectives due to virtual interactions, characterising our contemporary technological ambience. This new kind of social reality could not ever be fancied at the time of these seminal studies, all realised in the first half of the last century. Nevertheless, their pioneering intuitions are potentially rich of many applicative consequences referred to this innovative state of affairs of our social world, because of their yet unsurpassed sensitivity to the way in which the historical and cultural conditions may be mentally internalized.

Finally, in the last part of my paper, I will try to suggest, starting from the innovative points of view on social dimensions of remembering proposed by classical authors reviewed above, how an accurate interaction design could be used to change and eventually improve individual acts of memory.

The first question to afford, to arrive to this kind of conclusive remarks, is then if memory is only a capability more or less accentuated, being the individual more or less endowed by nature, or if it may be socially improved, at least to a certain degree. Although this question lay

basically in all the classical authors that we intend to review, is essentially the work of Lev Vygotskij² that overtly proposed it as a key theoretical issue.

1. Can memory be socially improved? Introducing the Vygotskij's perspective on social intermediation of memory processes

From a phenomenological point of view, memory may occur either after a conscious decision, when the person actively seeks for a memory to come to his\her mind, or may on the contrary “pop up” abruptly. In this case, usually a hint in external environment (as a smell, a sound, a word, a particular view) or in the subjective activity (as a thought, a feeling or an emotion, a mental image, etc.) acts as a cue -- retracing, through a more or less complicated chain of associative links, the original memory. Memory may, therefore, being experienced either as a voluntary or as an involuntary phenomenon.

Starting from these observations, Lev Vygotskij (1931) proposed the idea of dividing memory processes into two main categories:

- *Elemental processes*, due to direct associative links between current situation and past perceptions and experiences, responsible mainly of involuntary memories;

² In the text of the article, we refer to the transliteration from the Russian “Vygotskij”, as it was proposed by Luciano Mecacci, the Italian scholar who firstly translated without any censorship *Thinking and Speech*, the Author unfinished masterpiece. Nevertheless, in our bibliography we use the anglo-american classical transliteration “Vygostky”, to keep our quotations accurate to the original essays.

- *Superior processes*, guided by active decision and willingness of the remembering one, acting in the case of voluntary memories.

Moreover, he proposed that the peculiar feature distinguishing human from animal memory, is linked to this second kind of processes of voluntary recalling of memories, that he called “superior processes”. In fact, only the human superior processes are based on the conscious use of *intermediations*, to guide associative chains linking actual cues to past memories; intermediations that, in a famous quotation, he exemplified in activities either meant to private eyes only (as knotting one’s own handkerchief) or aimed to well chosen communities (as putting a statue in a public garden to remember an excellent citizen).

“The very essence of human memory is that human beings actively remember with the help of signs. (...) As one psychologist (Dewey) has said, the very essence of civilization consists in the fact that we deliberately build monuments so as not to forget. In the knotted handkerchief and the monument we see the most profound, most characteristic and most important feature which distinguishes human from animal memory” (Vygostky, 1931, p.86).

If we adopt the observation criteria proposed by Vygotskij, the well-cut border between individual memory and social environment tend to become fuzzy, being the social activities in which we are embedded also a way to influence our memory, facilitating or inhibiting it. This is particularly evident when memories that “pop up” refer to

cues present in the individual environment because of some social decision, as in the case of monuments quoted above. In this case, what may seem, at an individual level, a kind of involuntary recollection (e.g. we think of a particular historical episode, because we happen to pass in a street having this name), may be seen, at a more collective level, as a consequence of a voluntary decision, stressing some kind of historical episodes instead of others (e.g., choosing to remember a battle won by our own nation, instead that a defeat, similarly important from an historical point of view). Interestingly, the research group coordinated by Lev Vygotskij chose exactly the interactions between individual and social cues as its prominent procedural strategy, to explore the development of memory both as a personal and a social ability.

In fact, a well-known series of experiments, organised by the research group coordinated by Vygotskij and exposed by himself (Vygotsky, 1931) and by his disciple Leontiev (1931), showed how a memory performance may be sometimes ameliorated, sometimes damaged by a same external help. In their research design, different groups of participants (younger or older children, adolescents or adults; children disadvantaged because of intellectual deficits or children without any intellectual deficit) had to remember a list of words, not interrelated, in two different research conditions. In the first condition, they have to remember only by heart; in the second condition, they received an external help, looking at a set of pictures, linked to the words to be remembered.

Results showed that, if remembering subjects, being adolescents or adults, were already able to organise their

own chains of intermediations, they showed a *poorer* memory performance when, before remembering, the external set of intermediations (pictures) was shown. In fact, these external helps acted as a source of interference, slowing down autonomous processes of recalling.

Nevertheless, when subjects had some memory difficulty (because they were younger, and therefore less able to autonomously organise their recall, or because of some intellectual deficit), the presence of an external help, giving them a prearranged possibility of intermediation, clearly *ameliorated* their memory performances.

Vygotskij (1931) theoretical explanation for these data was that the use of intermediation was a social practice, made firstly available by the social environment, which only in a further moment of individual development was gradually internalized by participants. This could explain how a same exterior help could produce *both* a poorer performance, among adolescents and adults, and a better one, among younger or disadvantaged participants.

As it is known, the experimental work of this research group was very soon interrupted, because of Vygotskij's premature death. Nevertheless, in his scientific production, covering only a ten years span (from 1924 to 1934), was already shining such a genial transformation of previous research paradigms, to suggest to Toulmin, in a famous article published in 1978 in the New York Review of Books, a parallelism between Vygotskij's tragic role in the history of psychology and the one attributed to Mozart in the music development.

In a certain sense, time shortage made some features of his set of researches to remain partly unexplored or, anyhow, too rough to show all the subtleties proposed by his theoretical model itself. Nevertheless, these data clearly demonstrated that individually impaired memory might be *socially improved*. This is one facet of the basic Vygotskian idea of the existence of an area of individual development that may be brought to perfection only through educative tools, made available by social structures, and therefore changing according to cultural and historical periods.

As it is well-known, his theoretical models were furiously attacked by the establishment of his own society, the USSR in late Twenties and first years of Thirties, as unduly “idealistic” and “cosmopolite” (i.e. too near to research trends developing in Europe, for his frequent quotations of prominent authors, as Freud, Piaget, etc.).

In fact, there were the years when Stalinism entered the life of scientific community, as well as any other kind of organised social life, cruelly showing its will to persecute any kind of intellectual originality. And this trend was bound to last long after his death, forcing his former disciples to try to distinguish themselves from his researches, firstly criticising his methods and theories as too much complex and abstract from material conditions of social life, and then editing his works censoring many words or quotations, in order to make them more acceptable both for the Russian and the European political context (Mecacci, 1990).

If we think about this climate of political and personal persecution, it is surprising to find out how, when

evaluating his own scientific production, Vygotskij was, another time again, far in advance than his contemporaries. In fact, commenting on his own results and theoretical models on memory researches, he had the moral and intellectual strength to bitterly acknowledge:

“.....I’m inclined to think that it (my memory research) represents a colossal oversimplification, even though at first it was often criticised as unduly complex” (Vygotsky, 1932, p. 392).

It is touching to note how, in last years of his too short life, while enduring a stupid and violent persecution against his ideas, considered too much “immaterial” to fulfil the needs of a Marxist point of view on psychology (Bakhurst, 1990), Vygotskij not only had completely overruled many limited research paradigms of his time, but was also conscious of further changes necessary for a better understanding of memory processes.

In fact he felt that his procedure and tasks, judged by his contemporary as “unduly complex”, were on the contrary too simple to capture all the facets of memory processes. A set of words was shown, a set of intermediations was given, and then a comparison between the number of words shown and the ones recalled was used as an index of memory performance.

Although recognizing that complexity reduction was necessary to produce the smart simplicity essential to experimental settings, Vygotskij was aware that, in the case of memory, these research procedures could lead to “colossal oversimplifications”. In fact, interviewing children

participants after a version of his experiments, in which they were allowed to choose which pictures to use as memory aids, he noticed that some child reported a strategy more complicated than a simple chain of associative links. A child chose the picture of a crab near a stone to remember the word “theatre”, saying that the animal looking towards the stone reminded him of a man, staring at the stage; another used a camel as a cue for the word “death”, imagining a story in which a lost voyager starves in a desert, without food and water (Vygotsky, 1931; quoted in Backhurst, 1980). Therefore, interviews of participants clearly suggested that the efficiency of intermediations was due not only to a more or less complicated chain of associative links, but also to a creative way of inserting these cues in a complex strategy, aimed to seize a relationship between the meaning of the stimulus and the meaning of the intermediation used as a cue.

These observations demonstrated how the experimental task -- recalling a series of words -- captured not only the *reproductive* aspect of memory, but also the *reconstruction of the meaning* of past stimuli.

Unfortunately, Vygotskij had no time to change these intuitions into new research procedures. Nevertheless, in these same years another researcher decided to focus his work precisely on this reconstructive aspect of memory, summarising his results in a book, *Remembering*, bound to become a classical quotation in memory research (Bartlett, 1932).

2. Meaning reconstruction and social schemata: Bartlett contribution

Unlike the mainstream of his days' memory research, Bartlett proposed the provocative idea that memories are *not* copies, more or less accurate, of the past.

As it is known, the development of psychological studies on memory reached an important turning point because of the innovative procedure, created by Ebbinghaus (1850-1909), of observing the way in which one person (usually the experimenter himself) memorised different lists of nonsense syllables. Using this meaningless material, Ebbinghaus could observe how different kind of exercise may cause a more or less high performance in recalling the lists studied, being certain that no association whatever could link nonsense syllables to previous knowledge. In other words, by this new procedure Ebbinghaus disentangled effects of simple rehearsal from effect of association between the stimuli used in the experimental tasks with previous knowledge held by participants. This procedural device not only skilfully isolated amelioration in memory performances due only to exercise, but also -- and perhaps most importantly, it proved that basic memory processes could be efficiently investigated by experimental procedures. So forth, Ebbinghaus experiments overcame the specialised domain of memory studies, to become a more general and very effective demonstration of how psychological research procedures had to be distinguished from their traditional philosophical roots, to be better placed in the domain of natural sciences (as they could be seen in the

positivistic perspective dominating the scientific debate at that time) (Farr, 1996).

Bartlett obviously recognised the skilfulness of this kind of procedural device, but strongly argued on ecological validity of these results. In fact, in Bartlett (1932) very words, the “lifeless copies” of meaningless syllables, originated by Ebbinghaus procedures, could be seen only as “unpleasant fictions”, due to the artificial setting of laboratory tasks. In everyday life, in fact, it is very unlike to have to study and reproduce meaningless material: on the contrary, memory can be seen as an effort to reconstruct the meaning of past perceptions and experiences, trying to grasp the gist of the memory itself using all the knowledge presently accessible.

Referring to Bartlett definition, then, every act of memory, at any time we recall it, is constructed freshly anew: in other words, it is an act that starts from the present to reconstruct the past, instead that a past knowledge influencing the present activity of the mind.

Starting from this theoretical position, Bartlett proposed to study permanent memory by an original methodology, called “repeated reproductions method”. After showing participants a meaningful material (a map, a drawing, a story, etc.) he asked them to repeat their reproductions of the original material at different times, and appreciated the work of their memory as the gradual shaping – from the first reproduction to the subsequent ones -- of a new and more complete meaning, slowly emerging from differences between these repeated reproductions. This creative transformation of original material was due, from Bartlett point of view, not to “mistakes”, as in theoretical models

viewing memory as a copy, but to a never-ending effort of understanding the gist of original items, slightly changing any reproduction until the memory has reached a stable meaning pattern. Results of many experiments made by this method showed, in fact, that any reproduction was considerably different from the previous one, until it was shaped in a simplified way, bound to stay similar in all the subsequent reproductions. In fact, if memories were quickly and dramatically changing in the first part of the reproductions' series, they became stable from the moment when this new, simplified organisation was reached. Bartlett named "schemata" this kind of reorganised and simplified structures, bound to be reactivated any time a new reconstruction was done, from the moment when the schemata themselves were reached on; as if, once created, they were guiding all the next reproductions. If the schemata notion appeared, to his contemporary critics, a too loose and somehow elusive idea, it was lately recognized as one of the most useful to explain not only memory processes, but all the cognitive dynamics finalised to organise the never-ending flow of new information ceaselessly reaching the mind. In a certain sense, this later success of a previously misjudged concept was done emphasizing some aspects of his theory, while obscuring others (Mazzara & Leone, 2001). The fact that schemata act as a sort of "freezing" of never-ending changing information fitted, in fact, very well with the more generalized idea, basic for the cognitive approach, of the mind as a "cognitive miser", always trying to simplify a too complex reality. On the contrary, the stress on dynamicity of the mind, able to reconstruct any

time afresh a new memory, and always struggling to reach the meaning of the past, was quite obscured by this emphasis on the mind's tendency to persevere in using pre-consolidated schemata. In fact Kintsch, introducing a recent reissue of *Remembering* (1995), notes how "schemata as fixed memory structures that are pulled out for use on demand, as in most applications of modern schema theory" are a new interpretation of Bartlett's original work that, although very widespread, is far away to catch the core of his work. Therefore, he comments on Bartlett's original presentation of schema theory: "this is particularly worth rereading, for what a surprisingly fresh and sophisticated version of schema theory it is!" (Kintsch, 1995, p.XIII). To better appreciate the sophistication of this original theory, later disappeared in its more mechanical interpretations, it is perhaps useful to remember that Bartlett borrowed the concept of *schemata* from two eminent physiologists of his time, Head and Holmes, that used it to describe the internal structure which automatically guides the *spatial orientation of human bodies*. On their turn, they derived this name from the Greek word σκημα, indicating the dynamic balance of a body *during a movement*, as in the famous statues of Olympic players, caught in the effort of their athletic performances (Mazzara e Leone, 2001). In the same way, Bartlett wanted to catch the memory as a mental movement, or, to better say it by his very words, as "an effort after meaning" (Bartlett, 1932).

To observe this effort of organising acceptable schemata, catching the core meaning of past information, Bartlett's

procedures tried to enlighten both individual and social dynamics.

On one hand, individual effort after meaning was made clear through the possibility, for each participant, to reproduce memories several times, having time to add or change previous versions.

On the other hand, social aspects of remembering were made evident in two principal ways.

First of all, to make the observation of the “effort after meaning” done by memory as clear as possible, Bartlett used a material coming from other cultures (e.g. American natives or African). Confronted to these unusual contents, the repeated reproduction method showed, from repetition to repetition, a process that Bartlett called *conventionalisation*: material was changed in such a way that any unfamiliar content was forgotten, while new and more plausible elements were inserted, producing a final memory that was extremely different from the original one, because gradually shaped into more familiar schemata, i.e. more culturally conventional ones.

Second, Bartlett asked in some trials participants to “pass” their memories from one to another: for instance a first participant, having heard a story, had to recount it to a second; the second had to recount what he heard to a third subject and so on... Through this different kind of repeated reproductions (called *serial reproductions*), Bartlett tried to capture what happens in everyday life, all the time we receive second hand news. By this procedure, he somehow replicated, in fact, what happens in social phenomena as the creation of rumours, or the spreading of false anecdotes (the “urban legends”), but he also

represented, to a more general level, the deep changes affecting a memory, when it is shared with others through a narrative activity.

In short, repeated reproduction and serial reproduction methods suggested that memories frequently rehearsed or recounted to other people are not only made more stable, more accessible and “alive”; somehow they are spoiled, too. In fact, reconstructive changes due to the “effort after meaning” made by memory not only are amplified by elaborations during internal rehearsal, but are moreover changed by the need of putting one’s memories into words and arranging them into a plausible narrative shape, to make them comprehensible for the listening ones. Some participants make clear this point, declaring after the task of having changed some culturally unusual details, to create a more “sympathetic climate” with their listener.

Of course, some of these effects could be a direct consequence of Bartlett methodological choices. It could be argued, in fact, that Bartlett instructions were too loose: asking participants to reproduce the items, he did not stress the necessity of being as precise as possible (also because of its theoretical model of memory, emphasising only reconstructive aspects vs. reproductive ones). Participants could be, therefore, induced to confabulate (Kintsch, 1995). Nevertheless, his methodological choices, although somehow too informal, let him discover a set of phenomena extremely important in everyday uses of memory. Asking participants to repeatedly reproduce a same memory, in fact, he highlighted how rehearsal or sharing activity are aimed not only to reconstruct the meaning of past experiences, but also to “turn around”

memories, so as to check and ameliorate them. The spontaneous use of these *monitoring activities* is another crucial point to consider, if we want to grasp social influences on memory.

3. Turning around one's own memories: The role of monitoring processes

If we look at memory performances outside laboratory settings, when remembering is used to fulfil needs characterising everyday life (see Cohen, 1996; Neisser, 1982), we may see that very often, while people remember, they not only recall a previously perceived content, but also try to be certain of getting the essential meaning of it, what Neisser calls its "gist". Therefore, they constantly evaluate and monitor the quality and validity of their memory processes. To better understand this point, let us examine some of these everyday phenomena.

Consider, as an example given, the situation in which you perfectly know that some content is present in your memory, but you cannot reach to grasp it at the moment (as in the popular way of speaking, saying that you have this content "on the tip of your tongue"). This means that, although you cannot temporarily access this memory, nevertheless you have somehow the possibility to know that it is stored in.

On the other hand, you may perfectly know that some content is new at all for you, and yet have a strong feeling of having a memory of it (as in the *déjà vu* phenomenon). This perfectly reverses what happens in the tip-of-the-tongue phenomenon. In this case, your awareness tells

you that this content is *not* stored in, although you may have a strong illusion to access it as a proper memory.

Or consider what happens to a memory that is frequently rehearsed or recounted to other people. In fact, elaborations during internal rehearsal, or the need of putting one's memories into words and arranging them into a plausible narrative shape, to make them comprehensible for the listening ones, are all processes that cause content reformulations "sticking" to original experience, irreparably changing memories forever.

Nevertheless, in spite of awareness of re-arrangement made, people spontaneously try to monitor the source of their memories, distinguishing between original sensations and perceptions and further imaginations, comments and thoughts. For instance, through the so-called source monitoring (Johnson, Hashtroudi & Lindsay, 1993), the remembering person tries to evaluate, as far as it is possible, differences between what was really experienced and what was later elaborated or imagined, starting from the type of content prevalent in memory itself (more sensations and perceptions, for previous experiences; more considerations and reflections, for further reformulations). In an interesting series of experiences, Mazzoni and Vannucci (1998) keenly demonstrated that people, to a certain extent, manage to distinguish between really experienced and reformulated contents, disentangling what they actually remember from what they know about this same memory.

Strictly linked to these *monitoring activities*, other phenomena spontaneously shadowing recalling occur, due to the degree of *confidence* that people show in the

accuracy of their own memories. Sometimes persons feel that their memories are highly accurate; other times they seem more doubtful. Interestingly, a large number of researches demonstrate that confidence feelings are very loosely related to the actual accuracy of memories themselves, while they seem much more linked to the situation in which memory occurs (a testimony during a trial arises more doubts than an informal chat with friends) and to personality characteristics of the remembering person, being more or less self-assured (Ross, 1997).

Nevertheless, although confidence cannot be used as a good way to evaluate accuracy, it is an intriguing phenomenon *per se*. For instance, we recently made a series of experiences, using a very easy recognition task. Four people did any session. In the experimental condition, 3 of them were confederates instructed to make an evident mistake in some critical trails, overtly declaring their wrong answer in front of the experimental subject, who was obviously unaware of the fact that the other 3 were instructed to say their foolish answers by the experimenter. Results showed that socially isolated subjects, exposed to the wrong influence of the unanimous majority of confederates, did not change their correct answer to the task, but significantly diminished their degree of confidence on the accuracy of correct memories. Our results suggest therefore that the confidence degree may be linked more to the social acceptance of memories than to accuracy itself (Ritella, 2004).

In short, out from psychological labs, remembering people not only recall a more or less high degree of original stimuli, but also incessantly check the quality and accuracy

of their own memories, decide if share them with others or not, and resent deep emotions linked to the recalling of some particular memories or to the sharing activity itself. All these phenomena cannot be reduced to the memory capacity of *copying* past reality. In fact, they pertain more to the *interpreting* function of memory: in other words, to the need not only to replicate reality but also to be reasonably certain of having grasped its meaning or core, out of unessential details.

4. Remembering what we already know. Halbwachs and the monitoring of affective meaning of repeatedly shared memories.

Until now, we analysed how others may influence us in remembering (or fail to remember) particular contents. Yet, there is another social use of memory in which sharing information is not the first aim; moreover, it is not an aim at all. In fact, every now and then, groups and communities spontaneously engage themselves in an activity at first glance purposeless: remembering what everybody already knows. This same pattern of shared remembering may occur during a dinner, in which old friends recall yesterday anecdotes, just for the old times' sake; or in a serious institutional reunion, in which authorities remember the well-known contribution given by a famous member to the institution itself. In a certain sense, we may say that these are, let apart their striking differences in power and consequentiality, just two examples of the many

commemorations, private or public, to which we are confronted during all our lifetime.

Family is one social context in which this kind of joint remembering of well-known contents is very frequent. Researches based on non intrusive observations of spontaneous family conversations estimated that, for every hour observed, a number ranging from five to seven sequences of communication were based on remembering memories known by everyone (Blum-Kulka & Snow, 1992; Miller, 1994).

This kind of “social game” of the family was keenly observed and commented by Maurice Halbwachs. In the famous fifth chapter of his classical essay on the social framings of memory, Halbwachs (1925) describes what happens “when a family remembers”. He notes that members of the family, when no extraneous can hear them, repeatedly share memories of some little episodes of family life, or recall personality and characteristics of some particular members. Moreover, he observes that all family members seem to attribute a fundamental value to these informal moments, sharing these memories as a “private treasure”.

Starting from these observations, Halbwachs asked himself what was the need for repeatedly sharing information already mastered by anyone. Moreover, he wondered why some episodes or some family members are more frequently remembered than other ones. Finally, he tried to understand why, as time passes by, family members will discover, to their big surprise, that they think more and more to these well-known and apparently trivial anecdotes. The reason for all that, he argued, is that in

these memories family members -- and only them -- may find

“a more or less mysterious symbol of the common ground from which they all originate their distinctive characteristics” (Halbwachs, 1925, It. ed. p.35).

These observations seem to enlighten, with great originality, another kind of monitoring activity referred to memory, related not only to the actual accuracy of recollections, but also to the *emotional meaning* of memories themselves. In fact, I may recognize that a memory of my past life is accurate and precise, but feel that the social context framing this recall is now vanished from my contemporary interests: because it refers to an old city in which I am not living today, to a work from which I resigned long time ago, to a political association to which I do not give my time anymore, to a personal relationship that is not so important for me as it was yesterday, etc.

This is perhaps the reason why, when we do not remember an anecdote recollected by an old pal, we feel somehow obliged to pretend to remember it: because we know that recognizing not to remember it anymore may be another way to state our indifference to this old membership, because, as Halbwachs said so simply and so well, “the one who loved the most, **will in time remember to the other episodes forgotten by him... (because their relationship) was based on a feeling unequally shared**” (Halbwachs, 1950, It. ed. p. 42).

In short, this pioneering work made by Halbwachs (1925; 1950) on social framing of memory shows a new and most

important function of remembering together: the possibility to create and consolidate the sense of belonging to an *affective community*, that is built up and confirmed through the social sharing of well chosen memories, bound to be felt of as “our memories”.

According to the innovative proposal of Halbwachs (1925), social sharing of memory may be seen not only as a function of durable groups, but also as one of the most valuable protective factors that a meaningful community may give to its members. In fact, in his very words, repeatedly shared memories create a kind of “affective armour”, constantly reminding subjects of the way their groups were able to cope with past difficulties and challenges.

It is not by chance, perhaps, that this trend of study, characteristic of the first part of Halbwachs’s career (his famous essay *Les Cadres sociaux de la mémoire*, containing his first reflection on repeated family recollections, was published in 1925), was renewed when he had to cope with the dramatic climate originated by the Nazi occupation of France. In these days of 1944 the old professor, aged 67, freshly created teacher of Social Psychology by the French Academy of *Collège de France*, decided to turn back to his first interest on social memory, writing *La mémoire collective*, his unfinished masterpiece that was bound to be published, edited by his friends and family members, after his tragic death in Buchenwald in 1945 (Halbwachs, 1950). In fact, the dark times in which he lived, and his courage in resisting to their terrible historical menace, are silently embedding the classical serenity of all the unforgettable pages of this little book.

Although never overtly referring to the tragic choices to which, as an eminent French intellectual, he was confronted in these days, he implicitly resumed his moral and political dilemma between acceptance of the occupation and active and dangerous resistance, by his theoretical arguing in favour of his somehow provocative thesis on collective memory. In the book, in fact, he proposes the idea that, in spite of commonsense implications that see memory as a faculty of individual minds, any act of memory is socially founded, because of the need for the remembering one to choose the social belonging that frames the reading of reality from which the recollection is done.

Starting from this new point of view, a memory may be, not only accurate or inaccurate, accessible or not accessible, but also emotionally meaningful or meaningless -- this last kind of monitoring being, first of all, the consequence of currently accepting, or rejecting, the social belonging to the ancient affective community to which the memory itself refers to.

Moreover, in this new theoretical perspective, the time voluntarily dedicated to the more or less ritualised social game of remembering together well-known episodes implicitly shows the importance attributed to the social sharing of memories, seen not only as a guarantee for consolidating social groups, but also as a way of confirming the affective bonds substantiating the current social identity of individuals. In Halbwachs's very words, repeatedly recollecting particular episodes or persons of one's community is, in fact, another way of saying, to all who accept to be members of this same community: "that

is the way we are”; because the “private treasure” of recollections available for community members, and only for them, implicitly shows them the way in which other members of their affective community used to cope with everyday difficulties, as well as with historical challenges (Halbwachs 1925; 1950; for a comment on today impact of classical theory of Halbwachs see also Leone 1998, 2001; for an important reflection on relationships between commemorating activities and affective coping, see Frijda, 1997).

5. How interaction design may foster social remembering activities

In the last part of this paper I will try to speculate how classical contributions on social dimensions of memory, reviewed above, may be applied to new dimensions of interpersonal and collective interaction opened by interaction design.

Starting from the point made by Vygotskij theories on memory, on crucial role of voluntary intermediations to guide information recall, it is obvious how new computerised devices for storing and communicating information create a multiplicity of possible associative chains, helping users to recall more easily and quickly pre-selected information.

Certainly, as under-stressed by Leroy-Gournan (1964), the tendency to exteriorise the information storage, saving it by some material medium (from the simple sheet of paper of a notebook, to the virtual space in hard disk...) may be considered a constant feature of human memory.

Nevertheless, today availability of “virtual intermediations” may be seen not only as a new kind of medium, replacing the older ones, but also as an innovative social practice that spread new opportunities of socially induced reorganisation of self-guided recalling. If persons could be well taught to use this new kind of self-organised intermediations, they may develop more competence in crucial areas as, for instance, perspective memory for managing formal – e.g. work or study – or informal – e.g. leisure or home managing -- activities.

This use of interaction design is focussed on the mastery of new technologies reached by individuals (and it is easy to imagine that this will create new boundaries between well educated and not educated individuals, as well as between old and new generations). We may see therefore, in these innovative technologies, another example of this process of gradual “internalization” of socially induced performances that, according to the Vygotskij’s lesson, is a crucial step to develop potential areas of individual memory.

Other important consequences may be envisaged, on the contrary, depending on the managing of relational potentiality of interaction design.

We have seen, reviewing the classical ideas proposed by Bartlett, that repeated reproductions “passing” from an individual to another accelerated the process of conventionalising memory contents. A frequently repeated remembering of events (as during conversations made in mailing list, or within sites devoted to particular problems or topics) may be another important natural setting for noting how, in everyday life, a memory may dramatically

change, when repeatedly replicated. Moreover, in interaction aimed to exchange simple conversations, chats, or to informally share point of view (as in e-mail daily activity), the “effort after meaning” of memory may be amplified and simplified, having made limits due to distance, unavailability or time of waiting for a reply near to the face-to face situation.

It is challenging to imagine how new possibilities of frequent and easy exchange on personal memories, due to technological advances, may influence the wide range of monitoring processes discussed above in the paper. But, referring only to the lesson of Maurice Halbwachs, we may propose the idea that, making possible another way of repeatedly sharing the memory of what we already know, a well structured interaction design could strengthen the affective bonds of our collective identities, so accomplishing one of the most basilar tasks that distinguish the psychological sense of community from instrumental belongings to transient associations (Sarason, 1974).

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