

## Sharing memories in children: The importance of close and significative relationship

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### Keywords

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### Abstract

In this paper we discuss several aspects of the development of the memory function in children. We examine research contributions on the ability of children to collect and tell memories, we discuss the differences between traumatic and non-traumatic memories and how early experiences influence the memory processes. Several studies suggest that memory abilities develop within a relational context in which early experiences, relational experiences, especially with parents, and cognitive processes interact with each other in order to expand and increase the memory processes. A relational framework is also essential in order to formulate and process traumatic memories. Finally we discuss implications in child psychotherapy.

### Introduction

The ability to organize and understand our experiences constitutes a fundamental part of the ways we make sense to the world. Although experiences may leave many signs on the individual, including changes in behavior and personality, the ability to tell an experience is the most obvious evidence of its existence. This paper focuses on the issue of memories in children and tries to answer some questions: when and how are memories formed in children?, in what development period children become able to recall memories?, Do the memory of traumatic events follow the same developmental trajectory of non-traumatic memories?, how are memories organized on the basis of early experiences? Finally the paper looks at how to access memories in child psychotherapy. For this purpose some specific focus-related contributions have been selected.

### When and how are memories formed in children?

According to J. Piaget the memory processes depend on the representative skills that the child has at different developmental ages. In the first year of life,

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memories are limited to recognition since the ability to represent objects or events in their absence is not yet developed. After 18 months the child becomes able to recall (Piaget, 1966). This indicates that there is continuity between memory and intelligence since the memory is based on a coding process and the code is closely linked to the patterns of intelligence that evolve over time.

The ability to discriminate between memories of real events and fantasies is a more complex mental skill and is acquired later in life (3-7 years of age). According to Foley such ability, defined by the author “the Source monitoring Framework”, involves monitoring the source of memory (Foley, 2013). In other words it is the ability to process quantitative and qualitative data associated with the representation of memory like perceptual details (eg. tone of voice), contextual details (eg. place and time of day), semantic details (eg. topic of conversation, semantic categories) and also emotional details (eg. Response of the listener). These details are mainly included in memories based on an external perception and are absent in those based on the imagination.

The ability to detect and recognize such details implies the possibility of making inferences and reflecting on mental processes (a metacognitive ability), and is acquired gradually from the late childhood onwards.

At what developmental stage do children become able to recall memories?

L. Vygotsky affirmed that language constitutes the tool that allows children to organize their own experiences in a new way and to share their memories with others (Vygotsky, 1934). Children begin to refer to past events through language around 20 months of age; although their accounts are rather vague at this age, they tend to address just-concluded or recent events and the ability to recall is still very fleeting. Around the age of two to three, children are able to tell past experiences in a coherent manner; at this stage the form of their verbal accounts is highly conformed to a script model where only generalized episodes or actions are reported and events are organized in space-time contexts. For example a child reporting of his day at the nursery will list a sequence of routine actions (e.g drawing, playing at the table, having lunch, going home) leaving out all specific events. From three years onwards, children are able to provide reasonably consistent reports of their previous experiences and can keep such memories over time. Children at this age become increasingly able to participate in conversations about current and past events and this is due to the progressive development of their language skills. The discussion of experience with others leads to more consistent memories that remain accessible and re-evocable over time. Through the development of language children interact with others in a new way and learn the narrative structure of the conversations provided by others. All this allows children to understand and organize the own experiences in a more coherent way.

In fact Several studies highlight that narrative and autobiographical abilities of children develop through social interaction and that children's memories are more detailed and elaborated if their mothers are "more elaborative" (helping the child to organize and structure their simple and essential memories by adding details and helping to develop more complex narratives) (Fivush, 2011).

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Do the memory of traumatic events follow the same developmental trajectory of memories non-traumatic ones?

Among researchers and clinicians studying the influence of trauma on memory there are two different views. Some believe that memories of traumatic and ordinary events are being processed in a similar way; others recognize the presence of specific processing pathways for traumatic memories (Camisasca et al. 2001).

According to those who identify the existence of identical explanatory mechanisms, memories of trauma, like the other types of memories, appear to be interfering with other memories and are not immune from the "normal laws of neglect". For example, as time goes by, peripheral details of the event are lost, whereas central aspects are maintained (Howe et al. 1994). This does not mean that there are no differences in the way information is stored between conditions of emotional arousal and conditions of rest.

Several studies tell us that in conditions of emotional activation there is a narrowing of the attention with a better coding of the more central information of the traumatic event and a less coding of the peripheral ones. Therefore, according to this first view, traumatic and non-traumatic memories would be qualitatively similar and would be the availability of an appropriate relational framework the key factor helping understand and recall the traumatic experience. Subsequent recollections and narrations of the event consolidate a clear and lasting memory of the event itself (Christianson, 1992). The possibility for the child to recall and face the memory of such experience depends on the availability of a supportive adult able to help him make sense and give a meaning to the event. Children who do not have an opportunity to discuss traumatic events with others may not be able to integrate negative experiences and may therefore be left in the midst of recurring fragments of memories associated with negative emotions that cannot be resolved.

The second position, conversely, identifies the existence of specific explanatory mechanisms in creation, processing and re-evocation of traumatic memories. Terr et al. (1985, 1988, 2003) shows that the way in which traumatic events are remembered varies mainly depending on the type of trauma suffered. The traumatic event that is one and unique is remembered more accurately and comprehensively than the traumatic experience that is chronic and repeated; furthermore the repeated traumatic experience can lead to the emergence of dissociation responsible for serious psychological problems. The importance of the role played by dissociative mechanisms in the pathogenesis of Post-Traumatic Stress Disorder (PTSD) is well-described by van der Kolk's who points out that traumatic memories are coded differently than ordinary memories, and this may be due either to alterations in attention focus or to interference of an extreme emotional arousal on the hippocampal activity (Van Der Kolk, 1998). According to the "Two-way Process Model" proposed by LeDoux (1992) in extreme stress conditions, there is a preferential use of the subcortical or thalamic pathway (quick response to the emotional stimulus but poor analysis of the characteristics of the stimulus, leading to a fast but unspecific emotional response) rather than the cortical pathway (a slow and accurate pathway which transfers to the amygdala a very detailed information, with the perceptual and semantic characteristics of stimulus leading to a more specific response to the situation)

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(LeDoux, 1992). In condition of extreme stress the impossibility to process the information at a symbolic level (through the cortical pathway) seems to be the central factor responsible for the lack of a coherent memory of events that can be translated into a narrative. The experience of the traumatic event would be organized as sensomotor or affective memories, and therefore traumatic memories tend to be experienced, at least initially, as fragments of the sensory components of an event such as visual, olfactory, auditory or cenesthetic sensations.

How are memories organized on the basis of early experiences?

In order to clarify the link between the formation of memories and early experiences it is of utmost importance to introduce the Bowlby's concept of Internal Working Model (IWM) (Bowlby, 1979). The IWMs are defined by Bretherton et al. as "operable models of self and attachment partner, based on their joint relationship history. They serve to regulate, interpret, and predict both the attachment figure's and the self's attachment-related behavior, thoughts, and feelings" (Bretherton, 1999).

Bowlby points out how images of the self or of the parents can emerge from information stored in two possible ways, resuming the conceptualization proposed by Tulving, between Episodic Memory and Semantic Memory. Episodic memory contains memories of events, behaviors and talks. Semantic memory contains the meaning that these events have taken over time with generalizations concerning mother, father and self (Tulving, 1972).

Regarding the organization of memories, Bowlby had identified in subjects with secure attachment (children who met with mothers sensitive and responsive to their needs) the presence of a unified main system capable of self-reflection and able to access all information stored in the Long Term Memory (from both of episodic and semantic memory). In this case, there is a clear integration between the information contained in episodic memory ("When I get hurt my mom always comes to console me") and in semantic memory ("My mother is a caring person. I am loved"); moreover information disconfirming the expectation of being cared for and protected are coded as exceptions that do not undermine the child's basic confidence (Attili, 2007).

In children with an insecure attachment (who experience the inadequacy or inaccessibility of their care figure), the memory systems are not integrated and therefore there is no communication or exchange between the information stored in episodic and semantic memory. In particular, according to Theory of Defensive Processes (Bowlby, 1980), children with inadequate attachment relationship tend to disregard autobiographical memory, in favour of semantic memory.

For example, a child with insecure-avoiding attachment, who experienced a refusal of care and insensibility to his/her requests of closeness and care, will have difficulty accessing the information contained in his autobiographical memory ("When I get hurt my mom refuses to comfort me"; "my mom is not there when I need her") because these memories, if accessible to recollection, might be unbearably painful or could lead to a conflict with his parents, thus creating a strong anxiety. Furthermore the interpretations of the events provided by the parental figures will be stored in the Semantic Memory, ("My mother behaves this way because she wants me to become independent early." "I do not behave like a grownup and I'm not worthy of being loved").

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One further differentiation with respect to the organization of memories is to be made between subjects with secure and insecure attachment (anxiety-avoiding and anxious-ambivalent) on one side and subjects with disorganized attachment on the other (Main et al., 1990).

Subjects with secure or insecure attachment create organized patterns where there is a unitary representation of the self with the other, with opportune distinctions. More specifically in the safe subjects the self is experienced as worthy of love and the other as available; in the Insecure-avoiding subjects instead the self is experienced as unworthy of love and the other generally as refusing and hostile; in the insecure-ambivalent subjects the self is intermittently love-worthy and the other is unpredictable and threatening; however in all these pattern of organization the reality principle, the consistency of the narrative and the reliability of the memories survive.

In subjects with disorganized attachment, the experience of having been cared for by a frightened / frightening parent translates into a tendency to build representation of the self with the other that are diverse and mutually incompatible, continually borrowing between the dramatic representational polarities of the Savior, the Persecutor and the Victim (dramatic triangle). Consciousness and memory cannot organize these contradictory representations of Self and the other and this predisposes to dissociative disorders (Janet, 1889).

#### How to access memories in child psychotherapy?

One of the functions of Child psychotherapy it is to recover "memories" revealing of the quality of care the child has experienced. Depending on the age considered we could assess internal operating models by looking at either behavioural patterns that allow procedures of classification or using tools that highlight the representative level reached by the child (Bara, 2009).

Research on attachment over the lifecycle thus makes use of tools suitable to detect its characteristics based on the different skills present at different stages of development. In the first year of age the communicative code is non-verbal and the assessment is observational only and focused on identifying behavioural parameters (e.g. Strange Situation) (Ainsworth, 1979); in preschool and school age, alongside the observational tools, language analysis tools are also used, which allow the use of verbal skills to analyze the attachment pattern. Indirect methods would then be used to investigate the level of mental representation of attachment through the use of verbal and graphical indexes: drawings (Ferraris, 2012), interviews such as the story completion test for 3-year-old children (Bretherton et al., 1990), the Family Drawing (Main et al., 1985) and the Interview on Childhood Attachment between 5 and 8 Years (Green et al., 1985) or through the use of a semi projective test like the Separation Anxiety Test (SAT) of Klagsbrun and Bowlby, whose Italian adaptation was proposed by Attili (Attili, 2003).

#### Conclusions

In this work we highlight how a proper relational framework is essential for the child to developing memory skills and acquire the ability to recall memories appropriately. Below are key points discussed:

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- There is continuity between memory and intelligence and according to Piaget intelligence emerges in the interplay between genetic and close environment of the child. Therefore an environment that is rich in stimuli, emotionally serene and facilitating the exploration and learning increases the child's competence (including memory abilities).
- The progressive development of language skills increases the child ability to recall and tell past experiences. It is not only the linguistic function itself that enhances this ability but rather the chance to participate to a large number of conversations with others that provides the child with greater expertise in narrative structure of memory and speech through an assimilation process resulting from the relational function.
- Based on the previous point, several studies pointed out that children and adolescents are more able and detailed in recalling and telling memories if they have had a “more elaborative” mother (helping the child to organize and structure his simple memories by adding details and helping to develop more complex narratives) during the first years of life.
- The possibility of recalling in a coherent and integrated way a traumatic memory is linked to the possibility of enjoying a supportive environment that gives meaning to the event itself. Therefore the processing of the traumatic event takes place in the context of a relational framework.
- Early experiences determine the quality of attachment patterns that in turn affects feelings and thoughts that the child has of himself and others (IWM). Based on the quality of attachment relationship the child has a different way of organizing, interpreting and recalling memories. An important consideration is made about the process of integration of episodic and semantic memory and how this is often disrupted by a disorganized attachment patterns which ultimately predisposes to dissociative disorders.
- Psychotherapy helps children to recover "memories" revealing of the quality of care that he/she has experienced.

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