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THE EFFECTS OF TWO INTERVENTION PROCEDURES ON CHILDREN'S NARRATIVE SKILLS

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Abstract

This paper presents results of two intervention procedures whose aim is to bring children to improve their narrative skills and produce more coherent and complex mind-oriented stories. Sixty children between 6;0 and 7;8 years, were presented with a sequence of five wordless pictures (the "stone story") based on a misunderstanding among two characters. After having told the story they understood spontaneously (first narrative), the children recounted it a second time (second narrative) after one of three conditions: 1) a conversation on the causal explanations of the events and behaviors of the characters (Conversation on causes - ConCau) 2) after they heard a coherent story narrated by the experimenter (Story Model - Mod), or 3) after playing a Memory game with the story pictures and other similar pictures (Control - Con). The children told the story again one week later (third narrative).

Results show that after the ConCau and Mod conditions the overall coherence of the stories narrated by the children increase. They express more explanations of events, make greater reference to the internal states of the characters and are more numerous to express the characters' different points of view ascribing to one of them a state of false belief. The positive effects obtained immediately are maintained one week later. No significant differences are found between the ConCau and the Mod intervention procedures. Moreover, the answers provided by the children during the ConCau intervention procedure do not predict the explanations and the overall coherence of their subsequent narratives.

These findings support a multidimensional - socially and individually-driven - account of learning. Moreover, they point to the usefulness of using intervention procedures to improve the manifestation of children's skills and to the necessity of using multiple means to evaluate children's competences.

Keywords - narrative skills, intervention procedures, short and long term effects.

1 INTRODUCTION

Children listen and tell stories from very early on. However, telling stories monogérés is a complex activity that develops over the years. It requires competences to plan, organize and structure thematically the story. It also requires language skills to signal new and known information and provide cohesion to the successively produced sentences. This form of decontextualized discourse, close to the material children encounter often in school, is a strong predictor of literacy skills ([1] [2] [3] [4] [5]), particularly for dealing with meaningful texts ([6] [7]), is related to children's inferential capacities ([8] [9]), and to imagination abilities ([10]).

Studies of children's capacity to tell a story on the basis of wordless pictures (as in the "frog story" studies, e.g., [11] [12]) show that preschoolers can organize their storytelling to reflect the successive unfolding of events on the action/behavioral level, but expression of the reasons for events is still scarce at 6 years and increases only gradually until 9 to 10 years of age (e.g., [11] [13] [14] [15]). Moreover, even if some 4 to 5 year olds may attribute mental states to the character of a single picture "story" ([16] [17]), references to beliefs within a structured narrative are still rather uncommon at 6 to 7 years and it is not until about 8-9 years that children use internal states to explain behaviors ([11] [13] [14] [18] [19]). It is even later that they explicitly let know that a character has a false belief about the state of the world or about the intentions and mental states of other characters ([14] [20] [21] [22]).

Are these developments inevitably late or can children be helped to construct coherent narratives expressing the mental stances of characters and integrating them into explanatory constructs earlier? Given the importance of narrative abilities and their relation to more general sociocognitive and language skills, the question of whether it is possible to provide children the means to foster them early in their development is quite legitimate.

To this effect, in the present study we introduced two intervention procedures. One consists in a conversation focusing children's attention on the reasons of events and of the characters' behavior ([22]), and the other consists in telling children a story mentioning the reasons of events and their connections in the overall story. The intervention occurred *after* children had produced an initial narrative and before they were asked to retell the story.

If children improve the mentalistic content of their narratives after intervention, the reasons for the poverty of these expressions in their first narratives will have to be scrutinized more closely. At any rate, successful intervention procedures would become excellent tools for a deeper evaluation of children's competences in this domain and would greatly contribute to our understanding of the variables involved in the limited mind-oriented approach found in young children's narratives.

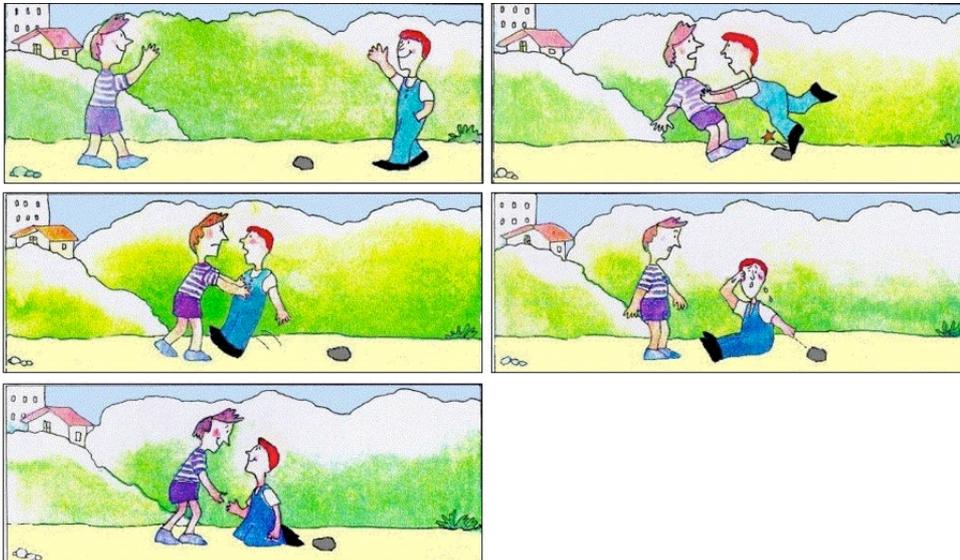
2 METHOD

2.1 Subjects

Participants were 60 French-speaking children (30 girls and 30 boys) aged 6;0 to 7;8 years (mean age: 6;8 year, s.d.: 4 months) attending elementary schools in Paris.

2.2 The story

The story used is that of the "Stone on the Path" ([23]). The story is made up of five wordless pictures (see below) where the core problem is a misunderstanding among two characters, involving the attribution of intentions and of false beliefs to the characters.



The first picture depicts the "greeting" exchanged between two characters, referred hereafter as P1 and P2. The second shows the accidental stumbling of P1 on a stone, leading P1 to push P2 (the "first push"). The third picture shows P2 pushing back P1. The fourth picture depicts P1 sitting on the ground, crying and pointing at the stone placed behind. The fifth picture shows P2 helping P1 to get back on his feet.

2.3 The procedure

All children were first requested to tell the experimenter the story they understood after the set of pictures was presented sequentially (*first narrative*). Then, the children were assigned blindly to one of three conditions: 1) "Conversation on causes" (ConCau) (29 children) focusing children's attention on the causal explanations of the story events and the behaviors of the characters; 2) "Story Model"

(Mod) (21 children) by which the experimenter narrated a coherent and well constructed story to the child and 3) "Control" (Con) (10 children) where the children participated in a game with the story pictures and other similar pictures. In all conditions, children were asked to narrate once again the story (*second narrative*). To verify the stability of the possible immediate effects of the intervention procedures, one week later a third narrative of the Stone story was collected from 15 children who participated in the ConCau condition and from 11 children who participated in the Mod condition. All the interviews were audio recorded and were transcribed *verbatim*.

2.4 Data Analysis

The analyses presented focus 1) on children's expression of internal states attributed to the characters, particularly on epistemic states; 2) the expression of the conditions that present the belief attributed to one character (P2) as false, at the source of the misunderstanding; 3) on the rectification of the false belief through the retroactive explanation of the first push, leading to the resolution of the misunderstanding; 4) a measure of overall coherence of the narrative.

1. Expression of internal states

Four types of internal states were identified:

- a. *physical states* (phy), referring to sensations (e.g., he hurt himself) and to perceptions (e.g., he did not see the stone);
- b. *emotional states* (emot), like, for example, he is angry, he is happy, he is not happy;
- c. *intentional states* (int), referring of the characters' intentions or absence of intentions (e.g., he did not do it on purpose; he wanted to push him);
- d. *epistemic states* (epi), referring to beliefs, knowledge or lack of knowledge by the characters. These can be about a "world state" (e.g., he did not know how he had fallen) or about the internal state of a character (e.g., he thinks he pushed him on purpose), which constitutes a mental state attribution of second order (e.g., Perner & Wimmer, 1985).

2. Levels of expression of False Belief (FB)

Three levels have been identified:

Level 3 of *false belief expression* (FB3). This is the highest level. It is identified when children 1) attributed to P2 the belief that P1 pushed him intentionally, something already captured by the coding of internal states (see above); 2) allows to evaluate this belief by expressing that the first push has a physical (not intentional) cause. Given that the child presented the event as it "objectively" happened, he not only attributes a belief to P2, but he also sets the background conditions to understand that this belief is false; and 3) uses the word "croire" (believe) to talk about the belief of P2. The following example contains the three elements mentioned: *he stumbles on a pebble and he pushes the other child; then the other child/...he believes that he did it on purpose.*

Level 2 of *false belief expression* (FB2). Here children mention the element 2) above but, instead of attributing explicitly a belief to P2 (elements 1 and 3 for FB3) children use more implicit ways. This level is identified when children 1) talk about the fact that P2 doesn't know about the physical cause of the push and 2) talk about the physical cause of the first push (element 2 of FB3 above). Even if children do not talk about beliefs here, mentioning both the state of ignorance of P2 and the accidental nature of the first push, makes us sense the misunderstanding between the characters. Here is an example of this level: *The one with the blue dress hadn't seen the stone, and he pushed the other one/ and the other one didn't even realize that he had stumbled on a stone.* The two propositions, taken together, let know that the knowledge state of P1 is distorted as to the cause of the first push and that a misunderstanding might arise.

Level 1 of *false belief expression* (FB1). Here children express one of the preliminary conditions of false belief attribution. They express *either* 1) the non intentional nature of the first push (e.g., *he hasn't pushed him on purpose*) or 2) the state of ignorance of P2 about the physical cause of the first push (e.g., *he doesn't know why he fell on him*):

3. Levels of expression of False Belief Rectification (RFB)

Children express here, in a more or less explicit way corresponding to the levels below) the clarification between the characters and thus the resolution of the misunderstanding.

Three levels have been identified:

Level 3 of *False Belief Rectification* (RFB3). This is the highest level. It is identified when children express the different viewpoints of the two characters on the *first push*. Specifically, children 1) express the false belief of P2 at least at level 2 (FC2 ou FC3); 2) have P1 explain retroactively (after the *first push* had been mentioned as part of the story plot); and 3) express or hint to the fact that P2 understands, supposing that he changes opinion about the first push and the intentions of P1. In the following example the child, having already expressed the false belief at level 3 (FB3), produces the other two elements mentioned: *he (P1) tells him (P2) that he hadn't pushed him on purpose and the other one understands*.

Level 2 of *False Belief Rectification* (RFB2). This level has been identified when children, as for RFC3, 1) express the false belief of P2 at least at level 2 (FC2 or FC3) and one of the other two above-mentioned elements: *either* express the point of view of P1 through the retroactive explanation of the first push, *or* the understanding of P2. Having already expressed the false belief at level 3 (FB3), this child expresses the point of view of P1: *he tells him that it was because of the stone* while this other child talks about the stance of P2: *he sees why the other fell*. At this level, the resolution of the misunderstanding is less complete and explicit than it is the case for level 3.

Level 1 of *False Belief Rectification* (RFB1). This level is for those children who have expressed the false belief at level 1 (FB1) and who, in unfolding their plot, allude to the misunderstanding between the characters. Children who mention the point of view of the two characters (as for RFB3) or only the point of view of one of them (as in RFB2), are grouped together in this work.

4. A global measure of narrative coherence

In order to evaluate the overall narrative coherence we have attributed a maximum of 12 points to each story by considering seven important aspects of the story:

4.1. EXPRESSION OF THE FRAMEWORK

1 point when the child mentions the initial context of the story where the two characters meet and greet each other: *There are two friends who say hello*

4.2. EXPRESSION OF THE CAUSE OF THE FIRST PUSH

2 points for the expression of the physical cause or the non intentional reason of the first push by P1;

1 point for other explanations (e.g., *he pushes him so as to take him the ball*)

4.3. EXPRESSION OF THE CAUSE OF THE SECOND PUSH

2 points when the second push by P2 is explained by his belief on the intentions of P1 quand la deuxième poussée de P2 est expliquée par sa croyance sur les intentions de P1 ;

1 point for other explanations (e.g., *and then he has pushed him back because he had pushed him*)

4.4. EXPRESSION OF THE "EXPLANATION" BY P1 CONCERNING THE FIRST PUSH

2 points for the retroactive explanation of the first push by P1: *he shows him the stone to tell that he hasn't done it on purpose*

1 point for other explanations of the fact that P1 shows the stone: *he shows the stone because he hurt himself*

4.5. EXPRESSION OF THE RECONCILIATION BETWEEN THE CHARACTERS

2 points when the reconciliation is expressed as the consequence of the rectification of the false belief: *then the boy with the overall tells that it was because of the stone and then the boy with the shorts has understood that he was wrong and then they become friends again*

1 point when the resolution of the misunderstanding is expressed but not as a consequence of the rectification of the false belief: *and then, without doing it on purpose, he pushed the one in shorts and then the one in shorts has pushed him and then they become friends*.

4.6. THE TEMPORAL AXE OF THE OVERALL NARRATIVE

1 point when the following elements: greeting, first push, second push, showing the stone, and reconciliation are mentioned in this order.

4.7. OVERALL LOGIC OF THE STORY

1 or 2 points depending on the clarity and explicitation of the expression of the following explanatory and evaluative elements: physical cause of the first push; psychological cause of the second push, the rectification of the false belief and the reconciliation between the characters.

The following example contains all of the elements coded and has thus received 12 points:

They say good morning to each other from a distance (4.1: 1pt) and, because of the stone he pushed him (4.2: 2 pts) ad them his pal thinks that he has done it on purpose and pushes him (4.3: 2 pts) and...and the other eh and the one with the overall says that there was the stone that he didn't do it on purpose (4.4: 2 pts) and...and the other, the other with the short, he picks him up because he hasn't done it on purpose to push him because there was the stone (4.5: 2 pts).

Temporal axe: 1 pts; overall logic: 2 pts since the four elements are clear and explicit.

Total points of the story: 12.

3 RESULTS

3.1 Internal states

Table 1 presents the number and the percentage of children attributing internal states, overall and by type, to the story characters in their first and their second narrative, according to the condition they participated between the two narrations (ConCau, Mod, Con).

Table 1
Number and percentage of children attributing explicitly an internal state, overall and by type of internal state, in the first and second narrative, according to intervention procedure

	FIRST narrative				SECOND narrative			
	Total	According to Future experimental conditions			Total	According to experimental conditions		
		CON	ConCau	MOD		CON	ConCau	MOD
Number of Subjects	60	10	29	21	60	10	29	21
Number of children producing at least one internal state								
total	22	2	11	9	33	0	18	15
% of children producing at least one internal state	37%	20%	38%	43%	55%	0%	62%	71%
physical	10	0	6	4	10	0	7	3
emotional	11	1	5	5	2	0	2	0
intentional	7	1	3	3	23	0	13	10
epistemic	0	0	0	0	24	0	12	12
% of children producing at least one epistemic state	0%	0%	0%	0%	40%	0%	41%	57%

In the first narrative, 37% of the children attribute at least one internal state to the characters, most of them of the emotional (e.g., unhappy), physical (e.g., it hurts) and intentional (e.g., "not on purpose"). However, none of the children talks about epistemic states. After the ConCau and Mod intervention procedures, the proportion of children who produce at least an intentional state increases and so thus the proportion of the children who attribute at least one epistemic state: this increases from 0% to 41% for the ConCau group and to 57% for the Mod group). No notable change has instead been obtained in the CON group where the children had played a Memory game with the story pictures and similar ones.

3.2 False Belief and Rectification of False Belief

Table 2 shows the number and percentage of children that talk or hint to the state of False Belief of P2 (FB), and to the Rectification of the False Belief (RFB), overall and by level of expression.

Table 2
Number and percentage of children attributing False Belief and Rectification of False Belief in First and Second Narrative, according to level of FB and RFB and to intervention procedure

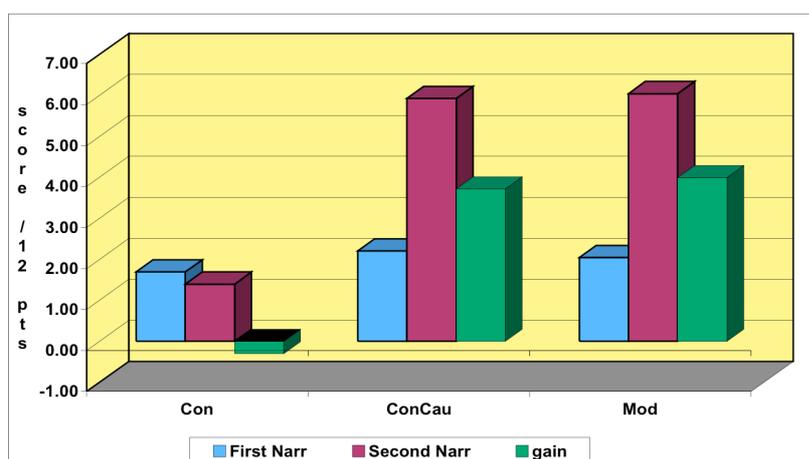
	FIRST narrative				SECOND narrative			
	Total	According to Future experimental conditions			Total	According to experimental conditions		
		CON	ConCau	MOD		CON	ConCau	MOD
Number of Subjects	60	10	29	21	60	10	29	21
Number of children expressing at least one component of False Belief	0	0	1	1	23	0	6	9
% of children	0%	0%	3%	5%	38%	0%	21%	43%
No (%) of children expressing ≠ levels of FB								
Only components : FC1	2 (3%)	0 (0%)	1 (3%)	1 (5%)	8 (13%)	0 (0%)	6 (21%)	2 (10%)
all components - no epistemic term : FC2	0 (0%)	0 (0%)	0 (0%)	0 (0%)	2 (3%)	0 (0%)	1 (3%)	1 (5%)
all components+ epistemic term : FC3	0 (0%)	0 (0%)	0 (0%)	0 (0%)	13 (22%)	0 (0%)	5 (17%)	8 (38%)
Number of children expressing at least one component of False Belief Rectification	0	0	0	0	29	0	18	11
% of children	0%	0%	0%	0%	48%	0%	62%	52%
No (%) of children expressing ≠ levels of RFB								
no previous FC/ 1 or 2 partners: RFC1	0 (0%)	0 (0%)	0 (0%)	0 (0%)	20 (33%)	0 (0%)	14 (48%)	6 (29%)
previous FB2 or FB3 / 1 partner: RFC2	0 (0%)	0 (0%)	0 (0%)	0 (0%)	5 (8%)	0 (0%)	2 (7%)	3 (14%)
previous FB2 or FB3 / 2 partners: RFC3	0 (0%)	0 (0%)	0 (0%)	0 (0%)	4 (7%)	0 (0%)	2 (7%)	2 (10%)

In the first narrative, only two children, one child in ConCau and one child in the group Mod, hint to the False Belief by talking about the non intentional nature of the first push, but none of the 60 children talk about the event from the point of view of the two characters nor use the term "belief" for P2. No child hints to the RFB, even at the lowest level. Instead, in the second narrative, the number of children who express the FB increases significantly, for hints but also for the highest level of FB (FB3), and this for both intervention procedures: from 3 to 21% for the ConCau procedure and from 5 to 41% for the Mod procedure. 17% in the ConCau group and 38% of the children in the Mod group use also the expression "believe that". The same occurs for the expression of the RFB that overall increases from 0% in both groups, to 62% and 52% respectively for the ConCau and the Mod procedures. RFB of level 1 having the highest increase. In contrast to these improvements in the experimental conditions, children in the control group (repetition only) showed no improvements.

3.3 Overall coherence of the story

Concerning the measure of overall coherence the story capturing the expression of explanations and of the key elements of the plot that are the misunderstanding and its resolution, Fig. 1 shows that while in the first narrative the mean score obtained by the children in the Con, ConCau et Mod group was respectively 1.7, 2.2 et 2.0, the scores of the second narratives increase in the children participating in the two intervention groups.

Figure 1
Mean scores in first and second narratives and gains between the two, according to intervention group (Con, ConCau and Mod)



The mean score for the ConCau group is 5.93 (a gain of 3.72 points) and for the Mod group is 6.05 (a gain of 4 points), both increases being significant¹. An ANOVA applied to the gains between the second and the first narrative shows a difference between the control group and the two intervention groups but no difference between the two intervention groups. One child in the ConCau and one child in the Mod reach even the highest score and a gain of 11 and 10 points respectively between the narrative produced before and after intervention²

3.4 Stability of the improvements

In order to examine the long term effect of the two intervention procedures (ConCau and Mod), one week later a third narrative of the Stone story was collected from 15 children from the ConCau group and 11 children from the Mod group. In their third narrative, the children continue talking about the intentional and epistemic states of the characters, about the false belief and its rectification ([24]).

Table 3 presents the results concerning the overall coherence of the stories obtained in the second and in the third narrative.

Table 3

Scores of overall coherence of the stories in the second and third narratives, by intervention group¹⁾

Procedure	ConCau Group (N=15)	Gains ConCau (N=15)	Mod Group (N=11)	Gains Mod (N=11)	Gains : All children (N=26)
Second narrative	6.20	1.40	5.82	1.45	1.45
Third narrative	7.60		7.27		

¹⁾ the data concern only the children interviewed one week later

One week later the stories recounted by the children in the ConCau and in the Mod groups increase their mean scores of 1.4 points.

Table 4 presents the individual profiles of the children according to whether they maintain the score obtained in the second narrative, increase the overall coherence score or produce stories with a lower overall coherence score.

Table 4

Individual stability profiles according to the intervention procedure

Percentage (number) of children¹⁾

Score	maintain	increase	lower	Total children
ConCau	20% (3)	73% (11)	7% (1)	100% (15)
Mod	0%	73% (8)	27% (3)	100% (11)
Tot	11.5 % (3)	73% (19)	15.5% (4)	100% (26)

¹⁾ the data concern only the children interviewed one week later

¹ T-test before-after for the ConCau group: $t(28) = 7.42$, $p < .001$; for the Mod group: $t(20) = 6.21$, $p < .001$.

² ANOVA for the difference among the three groups: $F(2,59) = 10.62$, $p < .001$; for the difference between the ConCau and Mod groups: $F(1,49) = 0.12$, $p > .05$

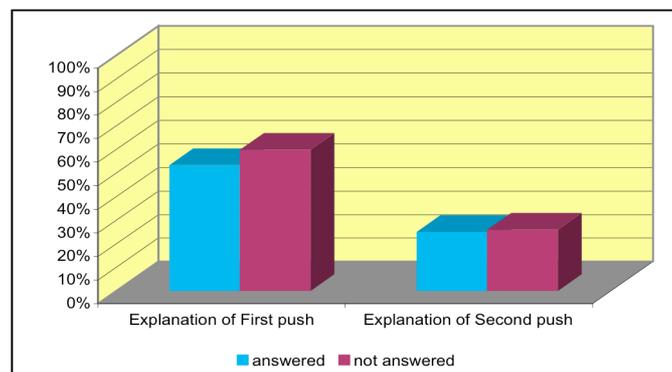
One week later, in both intervention groups, most children increase the overall coherence score of their stories. Children in the Mod group are more numerous than in the ConCau group to lower their score, while children in the ConCau group are more numerous than in the Mod group to maintain their overall coherence score.

3.5 Conversation and improvements: The ConCau group

Are the improvements observed in the second narrative related to the way children have answered the questions during the conversational intervention centered on the causes of the events and of the characters' behaviors?

To investigate this question we considered whether the second narratives of the children who participated in the ConCau intervention group expressed or not the explanations of the first and of the second push, and how the expression of explanations in the single-speaker narratives was related to children's answers to the questions about the reason of the first and of the second push during the ConCau intervention procedure. Fig.2 shows that children are more numerous to produce the explanation of the first than of the second push (56% vs. 26%).

Figure 2
Explanations of the First Push and of the Second Push
in the Second Narrative according to whether the explanations were
produced during the conversation on the causes



It shows however that in both cases the presence of the explanation in the second narrative is not related to the child's explicit answer to the questions during the ConCau intervention: the proportion of children producing the explanation in the second narrative is the same whether the children had answered the question during the intervention or not.

3.6 Comparison between the intervention procedures

No significant differences in the measures reported have been found between the two intervention groups. The ConCau and the Mod intervention procedures seem to have helped rather equally the children in structuring the second narratives. One slight indication of possible underlying differences comes from the measure of overall coherence of the story. More children in the Mod than in the ConCau group lower the score of the story overall coherence in the third narrative. Instead, children in the ConCau group are more numerous to maintain the same score of overall coherence as that produced in the second narrative. This result needs, however, to be checked with a larger sample.

4 DISCUSSION

As expected from earlier studies on narratives based on wordless pictures, few 6-7 years old children attribute internal states to the characters, and when they do, they attribute emotional physical and intentional states but not epistemic ones. Few children explain events and the false belief is alluded to by only 2 children, and only through its preliminary components. However, the intervention procedures used in this study show that many children can improve their narratives either after a conversation on causes or after the narration of the story by the experimenter. The second narratives, produced after these interventions, present a higher overall coherence by the fact of containing more explanations

and of expressing the point of view of the characters. Some children express or hint to the false belief of one of the characters and thus to the misunderstanding and some also to its rectification. In other words, after the interventions, several children tell mind-oriented stories revealing capacities that couldn't have been imagined looking at their first narratives.

These results converge with those found in previous research using a scaffolding procedure close to the ConCau intervention ([22] [25]). The present study shows further that similar improvements are obtained in having children listen to a structured story. Moreover, our results show that the gains obtained immediately after intervention are maintained or continue to improve one week after, a result suggesting that children might have changed their approach to story telling. In this respect, there are also some preliminary indications that the overall coherence of the story produced immediately after intervention is better maintained in children who participated in the ConCau intervention procedure than in children who listened to the story in the Mod intervention. If confirmed in further research, this point would be quite interesting and have important implications. It would show that a process of conversation that stimulates children's reflection results in more long lasting understanding and ability to express such a deeper understanding than the assimilation of a model where the "understanding" is provided by external sources.

Our findings show also that both intervention procedures produce higher quality narratives than the simple repetition of the story. Indeed, no improvements are observed in the stories produced by the children in the CON group where the children tell their second narratives after they played a Memory game with the story pictures, indicating the specific role of the interventions in the story improvements. Given the importance of narrative abilities discussed earlier, these results on the positive effects of the two intervention procedures are important for guiding concrete applications.

How to explain the changes obtained immediately and their stability and further improvements one week later? The ConCau procedure segments the events of the story while focusing the attention of the children on the reasons and causes of these same events. The segmentation can help the comprehension of the story and improve the overall coherence of the second narrative. The increase in reference to internal states and in false belief expression occurs after a procedure that doesn't ask questions neither about internal states nor about the points of view of the characters. It is by asking questions about the causes and reasons of events that children can take a more mind-oriented approach to story telling. As the results on the relation between the answers provided to these questions and the quality of the second narratives show, the improvements are not due simply to the answers that children provide explicitly. It is possible that it is the reflection on the causes solicited by the questions that brings children to express them later, as a sort of catalyzer of competences hindered by functional constraints of various nature. Considered together with the finding on stability of the improvements, these results indicate that the manifestation of underlying abilities is a complex issue and an object of development and acquisition in itself.

The Mod procedure has other advantages and can also be considered to facilitate children's narrative functioning. It presents children all the elements of the story in a ready to use linguistic form. As the story model contains all the basic explanatory relations, one could have expected a greater effect of this intervention procedure over the ConCau one that limits itself to asking questions about these relations. Although a slight advantage of the Mod procedure appears for certain measures, none of the differences are significant. Moreover, the ConCau might result in more long lasting deeper understanding than the Mod procedure. However, the comparison between the two interventions needs to be taken up again and studied in a larger sample. The two intervention procedures diminish the cognitive load implied by the single-speaker narrative activity, allowing to better cope with its multiple requirements and to have emerging capacities to come to the surface. It could be the case that the most positive effect would be found by combining the two procedures.

However, if some children improve their narratives, others do not. Certainly, the level of theory of mind understanding might be one explanation in the case of the Stone story. Veneziano et al. (2009) ([24]) show that improvements in the second narrative are somewhat related to children's success in first grade ToM tasks. The child's own level of cognitive development and of understanding of the relations involved in the story limit the improvements that can be obtained by external interventions.

According to the Piagetian notion of schema ([26]) and to the Vygotskian concept of 'internalization' ([27]), progress requires a cognitive reorganization and cannot take place by simple copy of an external model. Intervention procedures definitely help children in making their competences to function better. They appear as a very valuable means to evaluate children's underlying competences

and have a serious potential to have children function at their highest level in narrative skills. In turn, It is supposed that they help stimulating other activities related to more complex narrative activity.

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