THE DISTINCTION BETWEEN REAL AND APPARENT EMOTION IN PRETEND PLAY AND DECEPTION SITUATIONS

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Abstract: Children's understanding of the distinction between real and apparent emotion was assessed using a deception task and a pretend play task. In each task, children aged from 5 to 7 listened to a story and were asked about protagonist's external and internal emotion. Our procedure allowed children to show their understanding of the distinction spontaneously, with prompting and after explicit questioning. Children had great difficulty to make the distinction spontaneously in both tasks. However, they performed better when they were explicitly asked whether protagonist's external and internal emotion could be different. Globally, 7 year-olds understood the distinction better than 5 year-olds. More important, we found no differences between the deception and the pretend play tasks. A possible explanation is that children's understanding of the distinction develops simultaneously in both kinds of situations. The importance of understanding emotions in pretend play for the comprehension of the distinction between real and apparent emotion is discussed.

Keywords: Emotional expression, display rules, deception, pretend play, theory of mind.

A distinção entre emoção aparente e real no faz-de-conta e em situações de engano (Resumo): A compreensão das crianças acerca da distinção entre emoção aparente e real foi avaliada através de uma tarefa de engano e de uma tarefa de faz-de--conta. Em cada tarefa, as crianças entre os 5 e os 7 anos ouviram uma história e foram inquiridas acerca das emoções internas e externas do protagonista. O procedimento permitiu que as crianças mostrassem a compreensão dessa distinção a nível espontâneo e após questionamento explícito. As crianças tiveram grande dificuldade em fazer a distinção espontaneamente em qualquer uma das tarefas. No entanto, tiveram um melhor desempenho quando foram questionadas explicitamente acerca de a possibilidade de as emoções internas e externas do protagonis-

ta serem diferentes. De um modo global, as crianças com 7 anos de idade compreenderam melhor a distinção do que as de 5 anos. Mais importante, não houve diferenças entre as tarefas de engano e de faz-de-conta. Uma possível explicação é a de que a compreensão dessa distinção desenvolve-se em simultâneo em ambos os tipos de situações. É discutida a importância da compreensão das emoções através do faz-de-conta para um entendimento da distinção entre emoção real e aparente.

Palavras-chave: Expressão emocional, engano, fazer-de-conta, teoria da mente.

Introduction

The Theory of Mind (ToM) is the mechanism which allows people to understand mental states, such as desires, beliefs, intentions and emotions. Research dealing with ToM usually aims at finding out how this capacity influences children's comprehension of human beings and their adaptation to the social environment. Others' emotions can never be perceived directly and they may give false information about people's feelings. Thus, the ability to infer people's emotions by formulating spontaneous hypotheses about them seems essential for interactions in the social world (Rieffe, Meerum Terwogt & Cowan, 2005). The present research is intended to explore how children come to understand that both in pretend play and deception situations, the apparent or external emotion can be different from the real or internal emotion.

One important aspect of this issue to take into account is the existence of a significant gap between emotional experience and emotional consciousness (LaFrenière, 2000). Several authors (Cole, 1986; Josephs, 1994; Lutkenhaus, Grossman, & Grossman, 1985; Reissland & Harris, 1991) suggest that children as young as three regulate their emotional expression to conform to social rules. According to Harris (1989), however, children of three and four years of age have great difficulty distinguishing between real feelings and outward experience. Not until they reach five or six do they start to make this distinction, after having started to control their emotional expression adequately. When children acquire the capacity to make this distinction explicitly, the regulation of their emotional expression becomes more flexible (Josephs, 1994).

Studies looking at how children's understanding of internal and external emotions might differ have, so far, basically focused on deception situations. They have typically used tasks where the protagonist has a reason to hide his internal emotion from an observer. For instance, Saarni (1979) displayed situations to children in which it might have been appro-

priate for the protagonist to hide his feelings. Saarni assessed children's ability to spontaneously attribute control of emotional expression to the story's protagonist, and she found that this skill increases between the ages six and ten. On the other hand, Harris, Donnelly, Guz and Pitt-Watson (1986) conducted two experiments in order to examine children's comprehension of the distinction between real and apparent emotion. Differently from Saarni's study, they used stories where the protagonist had an explicit reason to hide his feelings, so children didn't need to infer them. Children were asked what emotion the protagonist would show and how would he feel inside, and were given four answer options: very happy, a bit happy, a bit sad or very sad. When children attributed an internal emotion different from the external one, they were believed to understand the distinction between real and apparent emotion. The authors found that even 4-year-olds seemed to understand it, although that was only for negative emotions. They suggest that the ability to make this distinction may appear around this age, but it is only between the ages of six and ten when it becomes systematic and correctly justified. Harris *et al.* (1986) comment that they obtained better results for children's ability to draw the distinction at issue than previous studies, such as Saarni's, probably because they used stories in which the protagonist explicitly wanted to control the expression of his emotions. This is consistent with Bennet and Knight's (1996) proposal that young children's problems in understanding the distinction may be due to their difficulty in realising that people might have reasons to conceal their emotions.

In short, existing literature suggests that children begin to understand the distinction between four and six years of age (Friend & Davis, 1993; Gross & Harris, 1988; Josephs, 1994; Misailidi, 2006; Pons, Harris & de Rosnay, 2004; Saarni, 1979) or even from the age of three (Banerjee, 1997; Davis, 2001). It also suggests that children's capacity to show this understanding depends on how explicit the questions used to assess it are. In other words, it is possible that some children have the capacity to differentiate between external and internal emotions but they don't show it because they don't interpret the tasks in the same way as researchers expect. In this sense, explicit questions could help researchers to make sure if children have this capacity or not.

Apart from deceiving an observer, previous research has disregarded another possible motivation for children to control their emotional expression, namely, to play. When children are inside a pretend play situation, they facially express the emotions that the characters they play would have in the imaginary state of affairs (Harris, 2000). Some aspects of pretend play might help children to distinguish between external and internal emotion in these situations. Children know how to pretend from an early age (Mitchell & Neal, 2005), and they spend a great deal of time playing games

involving some kind of pretending, where mannerisms are used. Mannerisms are the typical gestures of pretend play, consisting of glances, vocal modulations, and other elements that could make it easier for the observing children to realise that a pretended emotion is not real, but only simulated (Leslie, 1988). However, it has been claimed that, even at the age of six, children fail to consider another's intentions when they attribute pretence to him or her (Mitchell & Neal, 2005).

Overall, it seems reasonable to believe that pretend play has an important role in children's understanding that internal and external emotion can be different, but this understanding has not been tested yet. The main goal in our study is to look at how children understand the distinction between external and internal emotion in pretend play and deception situations. In order to do so, we created a pretend play task, where the protagonist would pretend an emotion while feeling another emotion inside. We found it would be appropriate to compare it to a deception task, since children's understanding of this kind of tasks has already been studied. So we also created a deception task, where the protagonist had a reason to hide his feelings from an observer. Since no other research has addressed this issue before, we cannot make predictions about our main research question, which is whether there are differences in how children solve the two tasks. Nevertheless, two hypotheses are examined: (a) there is a rising understanding of the distinction at issue according to age in both tasks. We expect 7--year-olds to show a better understanding than 5-year-olds. (b) It is more likely for children to show an understanding of the distinction the more explicit is the method we use to assess it. Concretely, we will give children the opportunity to show their understanding in three occasions: spontaneously, with prompting, and after explicit questioning about protagonists' emotions. We expect children to have difficulty in spontaneously showing their understanding of the distinction between real and apparent emotion. We also anticipate that some children will be helped by the prompting. Nevertheless, we expect that some children will show their understanding only after the explicit questioning.

Method

Participants

The study involved 103 children attending two public schools of medium socioeconomic level. Children were divided into three age groups: 5--year-olds ($N = 37$, 17 girls, mean age = 5;1, range = 4;9-5;3,), 6-year-olds ($N = 35$, 14 girls, mean age = 5;11, range = 5;9-6;3,), and 7-year-olds ($N = 31$, 16 girls, mean age = 7;1, range: 6;9-7;3, 15). While 5- and 6-year-olds

attended preschool classes, 7-year-olds were drawn from 1st grade primary school classes. Parents were informed about the project and gave consent for their children to participate in the study. All children were tested at their own schools in the city of Girona, Spain.

Material

The material consisted of (a) a tape recorder used to record the interviews; (b) three drawings of a child's face showing happiness, sadness and fear (see appendix 1); (c) a pretend play task and a deception task (see appendix 2). Each task consisted of three pictures which were shown to the children as they were told the pretend play or the deception story in Catalan language. Both tasks contained an initial event, which made the protagonist feel sad, and a motive for the protagonist to display a happy face while he was feeling sad inside. In the pretend play task, the protagonist's motive was to play, and in the deception task, it was to mislead an observer about his feelings. In the third picture of each task, the protagonist was turned back, so his facial expression could not be seen.

Procedure

We used an intra-subjects design with two experimental conditions: a pretend play task and a deception task. Thus, each subject did both tasks, being the order of presentation counterbalanced across subjects. Data were obtained through transcription of individual interviews. At the beginning of each interview, we carried out a preparatory task in order to check that the children could identify the facial expressions of happiness, sadness and fear in the drawings of a child's face. After that, children did the pretend play and the deception tasks. After having been told one story, children were asked to retell it. If they were unable to do it, they were told the story again. Once the children understood the story, we assessed their understanding of the possible distinction between the real and the apparent emotions of the protagonist through increasingly explicit questions. This let us compare children's performance in pretend play and deception situations. Children had the opportunity to show their understanding of the distinction in three different occasions: *spontaneous distinction, prompted distinction and distinction after explicit questioning*. In the next paragraph, it will be explained how the interviews were carried out.

1. Spontaneous distinction. In the first place*,* we asked subjects which facial expression and which inner emotion the protagonist had in the third picture, and why he had them. The procedure went as follows. Subjects were drawn attention to the third picture of the story (e.g., *"Do you see that*

Jordi is turned back?"). After that, the three same drawings which were used in the preparatory task of a child's face showing happiness, sadness and fear, were placed on the table. Immediately, subjects were asked about protagonist's apparent emotion (*"If we could see Jordi's face, how would he look like?")*. Children usually responded by saying one of the three facial expressions: happy, sad or fearful. In case children pointed to one of the pictures instead of verbally saying the emotion, they were asked to do so (*"How does this boy look like, happy, sad or fearful?"*). Once the subjects had chosen an apparent emotion for the protagonist in the third vignette, they were asked to justify their choice (*"Why does Jordi look happy / sad / fearful?"*). Afterwards, children were asked about protagonist's real emotion and the reason for their choice (*"How does Jordi feel inside? Why does Jordi feel happy / sad / fearful?"*).

2. Prompted distinction. We continued the interview proposing the children to imagine that the protagonist was showing a happy face in the third picture, and we asked them why, considering the sad initial event, the protagonist would have that happy face (e.g., "*Imagine that Jordi is looking happy here. Why is Jordi looking happy if he has not had afternoon snack?"*).

3. Distinction after explicit questioning. Finally, we explicitly asked subjects if the protagonist could have a happy face outside while feeling sad inside, and if they answered yes, why this could be so (e.g., "*Do you think it is possible that Jordi looks happy outside but he is really sad inside? Why does Jordi look happy if he is sad inside?"*).

Measures

Children's responses were assessed using two criteria: the level of spontaneity and the justifications they used for the possible distinction between the real and apparent emotion of the protagonist.

Level of spontaneity. We considered three levels of spontaneity depending on the moment in the interview in which subjects showed an understanding of the distinction. Thus, children obtained a qualitative score "*understanding / no understanding of the distinction"* in each of the three occasions: spontaneous, prompted distinction and distinction after explicit questioning. Now it will be explained in detail the criteria used to assess children's understanding at each moment: a) *Spontaneous distinction:* participants were considered to make the distinction spontaneously if they chose for the protagonist an internal emotion different from the external one, and gave a correct justification; b) *Prompted distinction:* participants were deemed to make the distinction with prompting if they correctly justified why the protagonist could look happy despite the sad initial event; c)

Distinction after explicit questioning: Participants were regarded as able to make the possible distinction after explicit questioning if they answered "yes" to the question "*Do you think it is possible that Jordi looks happy outside but he is really sad inside?*", and gave a correct justification for it. Below it is described which kind of justifications were considered as correct.

Justifications. Children's justifications for the distinction at issue were classified qualitatively into the following three categories: (a) *simulation,* when participants justified the distinction they made referring to the protagonist's motive for controlling his facial expression, or if children said that the protagonist would dissimulate his facial expression; (b) *elaboration of the situation,* when participants justified the distinction by changing the protagonist's situation, that is, by inventing a positive event to give him a reason for having a happy face when he felt sad; or (c) *incorrect,* when participants gave an incorrect or incomprehensible explanation for the possible distinction. The categories simulation and elaboration of the situation were both considered correct justifications for the distinction. However, we regard the category of simulation as a better response, since the child does not need to change the story to explain why the protagonist controls his facial expression. Responses were categorised by one experimenter and two judges who were blind to the study's aims. Each judge classified responses for one of the tasks. There was agreement between judges and experimenter in 314 out of 339 responses (92,6%). Non-concordant responses were solved by discussion.

Results

Spontaneous and Prompted Distinction

As explained in the procedure, children's spontaneous understanding of the distinction was assessed by asking participants what facial expression the protagonist would show and what emotion he would feel inside. In the pretend play task, children chose the happy face or the sad face for the protagonist in the third picture. No children chose the scared face in this task. The percentages of the children who chose the happy face increase as a function of age (see Table 1). In fact, analysing the contingency between face chosen and age group, we found a significant difference between 5- and 7-year-olds (χ^2 (1, $N = 103$) = 10,454, $p < 0,05$), and also between 5- and 6-year-olds (χ^2 (1, $N = 103$) = 6,180, $p < 0,05$), but not between 6- and 7-year-olds (χ^2 (1, $N = 103$) =1,064, $p > 0,05$). In the deception task, unlike the pretend play task, children rarely said the protagonist would have a happy face in the third picture. Instead, they mostly chose the sad face, and secondly the face of fear (see Table 1).

Table 1. Percentages of face choice in the pretend play and deception tasks by age group.

	Happy		Sad		Afraid	
	Pretend play	Deception	Pretend play	Deception	Pretend play	Deception
5-year-olds (n = 37)	59,5% (22)	5,4% (2)	40,5% (15)	72,9% (27)	0	21,6% (8)
6-year-olds (n = 35)	85,7% (30)	2,9% (1)	14,3% (5)	74,3% (26)	0	22,9% (8)
7-year-olds (n = 31)	93,5 % (29)	3,2% (1)	6,5% (2)	61,3% (19)	0	35,5% (11)

Concerning children's spontaneous understanding of the distinction in each task, only two children attributed an internal emotion different from the face they had chosen for the protagonist (in the pretend play task, a 7--year-old boy and a 5-year-old girl, and in the deception task, two girls of 6- and 5-years-old).

With the prompting, only two children in the pretend play task (two boys of 6- and 5-years-old) and three children in the deception one (one 6--year-old boy, and two girls of 6- and 5-years-old) gave a correct justification of why the protagonist could look happy despite the sad initial event.

Distinction after Explicit Questioning

The percentage of children who accepted, when explicitly asked, the possibility that the protagonist could have one emotion outside and a different emotion inside was similar in both tasks and across ages (χ^2 (4, $N = 103$) = 4,702, $p > 0,05$). The justifications from these children were analysed according to the number of correct justifications and the type of justification given (see Table 2 and Table 3 for further information).

a) *Number of correct justifications*. Considering all the children in the sample, the percentage of 5-year-olds who gave a correct justification was a bit higher in the pretend play task than in the deception one. In 6-year-olds, the percentages were similar in both tasks, whereas the percentages in 7--year-olds were higher in the pretend play task. These data are reflected in Table 3. Despite the percentage differences, repeated-measures t test revealed no differences between the two tasks in the number of correct justifications (t (103) = 1,469, $p > 0,05$). Pearson chi-square test indicates that the

increasing number of correct justifications between 5- and 7-year-olds is not statistically significant in the pretend play task (χ^2 (1, $N = 103$) = 1,01, $p > 0,05$), or in the deception task (χ^2 (1, $N = 103$) = 2,48, $p > 0,05$). The overall percentage of participants who gave a correct justification for the distinction in at least one of the two tasks is 39,8% ($N = 103$). Looking at the age groups, the percentages were 27% in 5-year-olds ($N = 37$), 42,9% in 6-year-olds ($N = 35$) and 51,6% in 7-year-olds ($N = 31$). If we consider both tasks together, the difference in the number of correct justifications between 5- and 7-year-olds is statistically significant (χ^2 (1, $N = 103$) = 4,32, $p < 0,05$). Furthermore, it is worth noting that 18,4% of the children were able to make the distinction only in the pretend play task, and 10,6% only in the deception one.

Table 2. Percentages of children who accepted the possible distinction by age group and task.

	Pretend play task	Deception task
5-year-olds (n = 37)	45,9% (17)	40,5% (15)
6-year-olds (n = 35)	45,7% (16)	34,3% (12)
7-year-olds (n = 31)	51,6% (16)	38,7% (12)

Table 3. Percentages of children who gave a correct justification for the distinction by age group and task.

	Pretend play task	Deception task
5-year-olds (n = 37)	24,31% (9)	13,51% (5)
6-year-olds (n = 35)	25,71% (9)	20% (7)
7-year-olds (n = 31)	35,48% (11)	29,03% (9)

Table 4. Type of justification used by children who accepted the distinction in the pretend play tasks by age group.

	Simulation	Elaboration of the situation	Incorrect
5-year-olds (n = 17)	5	4	8
6-year-olds (n =16)	8	1	7
7-year-olds (n = 16)	9	2	5

Table 5. Type of justification used by children who accepted the distinction in the deception task by age group.

	Simulation	Elaboration of the situation	Incorrect
5-year-olds (n = 15)	2	3	10
6-year-olds (n =12)	5	2	5
7-year-olds (n = 12)	8	1	3

b) *Type of justifications*. In the pretend play task, the total amount of children who accepted the possible distinction was 49 (47,6%). These children were then asked to justify their response: 44,9% gave a simulation response, 14 % gave a response categorised as an elaboration of the situation, and the rest gave an incorrect response (see Table 4). In the deception task, the number of children who accepted the possible distinction was 39 (37,9%). These children were then asked to justify their answer: 38,5% gave a simulation response, 15,4% gave responses categorised as elaboration of the situation, and the remaining children gave an incorrect response (see Table 5). Considering the type of justifications in both tasks together, we find differences between 5- and 7-year-olds (χ^2 (2, $N = 39$) = 9,388, $p < 0,05$). While in 5-year-olds, only 21,9% from the total amount of children's justifications for the possible distinction refer to the protagonist's

aim to control his facial expression, giving a simulation response, the percentage increases in 7-year-olds to 60,7% of the justifications.

Discussion

The primary aim of this study was to compare children's understanding of the distinction between pretend play and deception situations. The results obtained for the children's ability to distinguish between real and apparent emotion in the deception task are lower than previous research indicates, but that can be explained by differences in task demands. Pons *et al.* (2004) found that 50% of 5-year-olds and 65% of 7-year-olds were capable of drawing the distinction at issue, but unlike our study, they did not ask children to explain why internal and external emotions were different. Harris *et al.* (1986) found that 6-year-olds were able to discriminate between real and apparent emotion, while in our study only 20 % of 6-year--olds were able to make such a distinction in the deception task. In the task used by Harris *et al.*, however, they explicitly told children that the protagonist's internal and external feelings could be different, which could have resulted in better performance by their children. Furthermore, in our study we explicitly asked children about whether it was possible for the protagonist to be happy outside while being sad inside, and the way this question was made might have been too difficult for some children to understand. It may also be argued that if we had used more than one single deception task, children would have had more opportunities to show their understanding of the distinction. Certainly, it is possible that children found no need for the protagonist to conceal his emotion in the given story, but the aim of our study was not to go deeply into children's understanding of the distinction in deception tasks but to compare it with how they understand emotions in pretence. In this sense, we found that the number of correct justifications for the distinction was similar in the deception and the pretend play task. This fact suggests that children might develop their understanding of the distinction through both kinds of situations, and thus, not only deception but also pretend play situations seem to be important in the acquisition of such understanding. An experimental research is needed to address this possibility, but since simulated emotions may unintentionally mislead observing children about the pretender's real feelings, it seems plausible to us. Imagine a child who is pretending to be sad and crying loudly. An observing child may think that she is really sad and asks her why she is sad. Then, the child who is pretending would realise that her facial expressions have consequences on others' beliefs about her emotions. The observing child

could learn a similar lesson. Contrary to her previous belief, the crying child wasn't really sad, but only pretending.

Considering the hypothesis of an increasing understanding of the distinction between external and internal emotion according to age, we found no significant improvement in the number of correct justifications in any of the two tasks separately. However, when we look at the two tasks together, there is a significant improvement between 5- and 7-year-olds in both the number and the type of correct justifications. Indeed, most of the 7-year--olds seem to understand that a happy face might be used to mislead another person about their own feelings or to pretend that they are happy when they are actually sad. By contrast, 5-year-olds had more problems providing such interpretations, and they often justified the happy face of the protagonist by introducing some changes to the stories to make them more positive. In sum, we conclude that between the ages of 5 and 7 differences occur in the understanding of the distinction. Nevertheless, our data do not let us conclude that such an improvement occurs particularly in pretend play situations.

When we regard the hypothesis of an improvement in the understanding of the distinction the more explicit is the method we use to assess it, we must say that children's performance improved when they were explicitly asked about the possible discrepancy between protagonists' internal and external feelings. These results uphold previous studies (Gnepp, 1983; Saarni, 1979), which indicated that children have difficulty in spontaneously realising that somebody is hiding or masking emotions to deceive, and extends it to situations of pretence. As expected, the prompting was useful for children to express their understanding, but only for a few. In sum, there is a clear need to take into account which method is used to assess children's understanding of the distinction in order to make an accurate interpretation of the data.

The next question we wonder is: when do children begin to differentiate real and apparent emotion in pretence? Custer (1996) states that young children understand the contradictory mental representations of a person engaged in pretence. However, in our study, even 7-year-olds had problems explaining why simulated emotions in pretend play could differ from internal feelings. These data seem to be at odds with some observational studies (e.g., Bretherton, Fritz, Zahn-Waxler, & Ridgeway, 1986), which suggest that an understanding of the difference between simulated and real emotion emerges in the second and third years of life (Gross & Harris, 1988). In fact, there is some evidence that 2- or 3-year-olds are able to play with emotions in pretence (Bretheron *et al.*, 1986), but from our viewpoint, children's ability to engage in emotional pretend does not assure any understanding of the distinction at issue. We propose that as young children are

able to adapt their expressive behaviour to display rules without even realising, it is likely that they are able to pretend emotions, without understanding that simulated emotions can be different from internal feelings. As suggested by Harris and Kavanaugh (1993), we believe that children engage in pretence without analysing their own or their partner's mental state. Later, they start recognising others' pretence through action and situational information, and as they gain more experience in pretend play, they develop representations of the pretender's thoughts (Rosen, Schwebel, & Singer, 1997) and feelings. But what is most intriguing is how children's understanding of the distinction between external and internal emotion might modify how they attribute and simulate emotions in pretence. Future research in the field should address this issue.

Sapp, Lee and Muir (2000), comment that the paradigm for evaluating children's capacity to distinguish appearance from reality has an important temporal component to consider. These authors say that the questions presented to children must be asked in a sequential way. Thus, no paradigm can question children's ability to maintain two representations of a deceptive object simultaneously. In the current study, we observed that this methodological problem is also present in pretence situations. Children are able to consider protagonists' feelings both in the real and in the imaginary situation, but it is rather difficult to evaluate whether they are capable of thinking about the real and simulated events simultaneously or they are just regarding them one after the other. New research methods should be developed to solve this problem.

In the present study, the percentage of children who, regardless of their justification, accepted the possible distinction was not related to age or task. Conversely, when children were explicitly asked why the protagonist could have a happy face while he was sad, the number and kind of justifications were better in older children. One possible explanation is that younger children tended to accept the possible distinction without understanding it, but another possible account is that they understood that external and internal emotion might differ, but were not able to express it verbally. According to this view, Sapp *et al.* (2000) say that the capacity of 3-year-olds to distinguish between appearance and reality improves substantially when the task does not require a verbal response. We wonder if the understanding of the distinction would be different using a non-verbal task.

Lucariello, Durand and Yarnell (2007) found that, in deception tasks, children understood better the distinction between real and apparent emotion when reasoning about others' mental states rather than reasoning about their own mental states. We wonder if this could also be true for pretended emotions; some other studies (Dennis, Lockyer, & Lazenby, 2000; Friend & Davis, 1993; Harris *et al.*, 1986; Hosie *et al.*, 2000) suggest that this distinc-

tion could be better understood when the internal emotion is negative rather than positive; in another study carried out by Zeman and Garber (1996), children's reports about regulation of emotional displays were different depending on the type of affect being expressed. In the current study we have merely used stories in which the protagonist's internal emotion is sadness. How the valence and the particular emotions might affect children's understanding of the distinction in pretend play situations is yet to be studied. Particular attention must be given to the level of inference built into the tasks presented to children.

In conclusion, results from our study suggest that 5- and 7-year-olds understanding of the distinction between real and apparent emotion in pretend play situations is not fully developed. Moreover, their understanding of this distinction seems to be similar in both kinds of situations. However, since we only used one story for each kind of task, our study is clearly limited. More research is needed to clarify how children understand the emotions underlying pretence, and the specific role that pretend play has in the development of this distinction. Future research in the field should assess this understanding using a broader range of ages, stories and emotions. In addition, combining experimental and observational methods is needed to confirm both the possible lag between engaging in emotional pretence and understanding it, and to compare self/other understanding of emotions in pretence.

Acknowledgements

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Appendix 1.

Drawings of a child's face showing happiness, sadness and fear

| Happiness | Sadness | Fear |
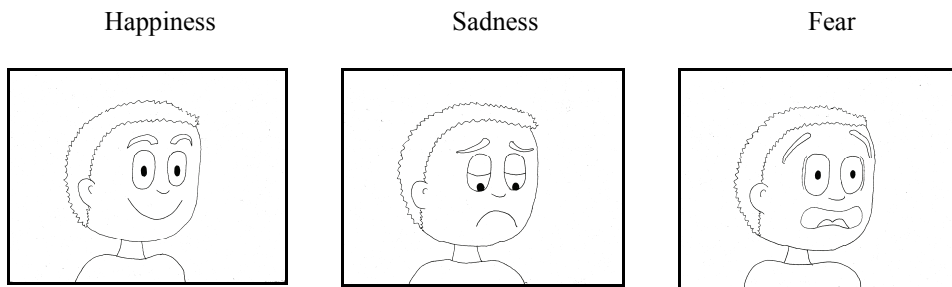
Appendix 2.

Stories used in the experiment

Pretend play story

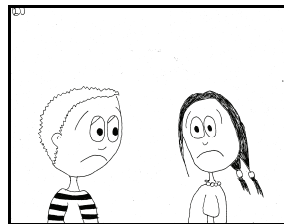Scene 1: Jordi and Maria have been naughty. Their mother is punishing them without an afternoon snack.

Scene 2: Jordi and Maria feel sad, because they haven't had an afternoon snack.

Scene 3: Later, Maria makes up finding a sandwich in the kitchen, and she pretends to be happy. Maria asks Jordi if he wants some of the sandwich and Jordi says: "oh, it is very good!"
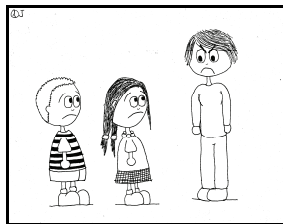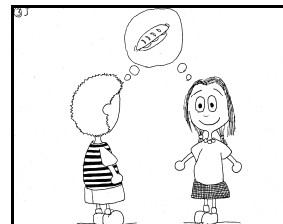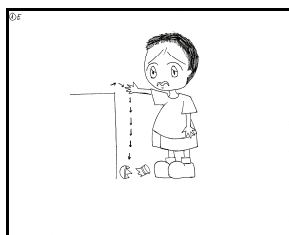
Scene 1   Scene 2   Scene 3

Deception story

Scene 1: This is Marc. Marc is playing at home and suddenly he breaks his mother's jar. He did not mean to break it.
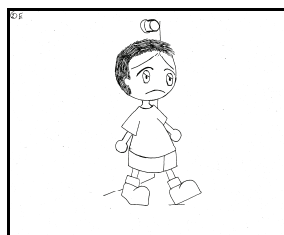
Scene 2: Marc feels sad because he has broken the jar. He leaves the room.

Scene 3: Later, Marc meets his mother. Marc doesn't want his mother to know that he broke the jar, because if she knew, she would get mad at him.

Scene 1   Scene 2   Scene 3