The influence of availability and affect on children’s pretence

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This study reports three experiments investigating children’s understanding of the distinction between pretence and reality. Previous research (e.g. Harris, Brown, Marriott, Whittall, & Harmer, 1991; Johnson & Harris, 1994) has suggested marked individual differences in children’s susceptibility to pretend–reality confusions. The present series of experiments explored the effects of cognitive availability and affect on pretence understanding. In Expts 1 and 2, 5–6-year-old children were asked to pretend that liked, disliked and neutral entities were inside either opaque (high availability) or transparent (low availability) boxes. The children’s responses when asked to select or reject the boxes was determined by the affect evoked by the entity. In Expt 3, children were asked to explain their behaviour towards the pretended entities. The results indicated individual differences between groups of children. Across all three studies the evidence suggests that some children as old as 6 years of age may experience temporary pretend–reality confusions which can be explained in terms of the effects of availability.

A key issue in relation to ‘theory of mind’ is the extent to which children understand the basic ontological distinction between internal mental phenomena (e.g. thoughts, dreams, memories and imaginings) and external physical phenomena (Wellman, 1988, 1990). A specific issue within this domain is children’s understanding of the distinction between pretence and reality and whether children ever reach a point in their pretence when they expect features of what has been pretended to become real or to ‘seep’ into reality (Harris, 1989, 1994; Lillard, 1993, 1994).

There is evidence which suggests that young children understand at least some aspects of the mental–real distinction. For example, 3-year-old children realize that real entities but not mental entities can be physically acted upon, can be seen by other people and have a consistency of existence independent of the child’s mental processes (Estes, Wellman, & Woolley, 1989; Wellman & Estes, 1986). There have also been numerous studies which have demonstrated 3-year-old children’s ability to state the real and pretend identities of items used in object substitution pretence (e.g. Flavell, Flavell, & Green, 1987; Harris, Kavanaugh, & Meredith, 1994; Lillard & Flavell, 1992; Woolley, 1995b; Woolley & Wellman, 1990). Furthermore, young children can correctly identify a character’s mental

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representation when told what he or she is pretending and what is actually the case (Custer, 1996).

However, several findings suggest that preschool children’s understanding of the pretend–reality distinction may not be fully developed. For example, DiLalla and Watson (1988) describe a 3-year-old boy who burst into tears whilst pretending to be a monster, subsequently explaining that he was afraid of the monster. Similarly, approximately three-quarters of 4–6-year-old and half of 6–8-year-old children reported that they were sometimes frightened by imaginary creatures such as monsters and ghosts (Bauer, 1976). Several commentators have asked why these fears should be prevalent and persist well into middle childhood given the evidence that the basic fantasy–reality distinction is understood by preschool children (e.g. Astington, 1994; Harris, Brown, Marriott, Whittall, & Harmer, 1991; Johnson & Harris, 1994; Wellman, 1990).

There is also some experimental evidence which can be interpreted as suggesting pretend–reality confusion. Woolley and Wellman (1993) found that about half of younger 3-year-old and about a third of older 3-year-old children mistakenly believed reality would match what had been imagined by a story character. In a second experiment, Woolley and Wellman asked the children themselves to imagine that an object such as a pencil was inside an empty box. Over half of the younger 3-year-old and just under a quarter of the older 3-year-old children claimed that they would find a corresponding real object inside the box. Using a similar paradigm, Harris et al. (1991, Expt 3) assessed children’s understanding of the pretend–reality distinction by asking 4–6-year-old children to pretend that one empty box contained a friendly puppy and that a second contained a horrible monster. The children were then asked to put either their finger or a stick into a hole cut into the top of the boxes. Harris et al. argued that if the children were confident that the imagined entities were not real they should have been indifferent in choosing between the boxes. However, the children’s behaviour was selective; they tended to approach the puppy box before the monster box and, furthermore, displayed some wariness towards the monster, preferring to use the stick rather than their finger when approaching that box. However, as Harris et al. concede, the children were not invited to check that the boxes were empty before the pretending commenced. It is perhaps not surprising that the children responded cautiously towards the box which, for all they knew, may indeed have contained a monster. An additional problem which Harris et al. acknowledge is that the children’s selections may have reflected their interpretation of the task as a game of make-believe in which their role was to act as if the boxes contained the specified entities. There are two main reasons why this seems an unlikely explanation for the results. First, when they looked inside the boxes at the end of the experiment and found them to be empty, several children commented on the whereabouts of the monster. Secondly, the children really had no way of being certain that the task did only involve pretence – they had not seen that the boxes were empty.

These problems were resolved in Harris et al.’s (1991) final experiment. Before pretending, the children were asked to confirm that the boxes were empty and their behaviour was observed in the experimenter’s absence: children should have had no reason to continue a game of make-believe when the experimenter was no longer present. Half of the children were asked to pretend that one box contained a friendly rabbit whilst the remainder were asked to pretend about a scary monster (the second ‘neutral’ box was not pretended about). Even though the children had already seen that the boxes were empty
and had initially reported that the entities were only imaginary, about half of the children opened one or both of the boxes during the experimenter’s absence. Harris et al. argued that the children looked inside the boxes because they were uncertain of the pretend–reality status of the imagined entities.

Similar findings were obtained in a follow-up study by Johnson and Harris (1994, Expt 3), who found that approximately half of the 3–7-year-old children looked inside the boxes. Furthermore, about three-quarters of the 3- and 5-year-olds, and just under half of the 7-year-olds, reported having wondered whether the imagined objects were real. Johnson and Harris concluded that their findings suggested individual differences between two separable groups of children:

- Credulous children wondered if the imagined entity might be in the box, tested that possibility by opening it, and sometimes invoked magic by way of explanation. Sceptical children denied that the imagined entity could be in the box, did not check whether it was, and justified their scepticism in terms of ordinary spatial or physical considerations (p. 46).

However, Golomb and Galasso (1995) reject this interpretation of the findings, suggesting that there are at least three alternative explanations for children’s behaviour when they are left alone with boxes containing pretend entities as in Harris et al.’s (1991) experiment. First, children’s behaviour might reflect their continued engagement in the pretence theme which the experimenter had not explicitly ended before leaving the room. Secondly, the behaviour might result from boredom since no alternative play activities were provided. Finally, the children may have been suspicious of trickery by the experimenter. To test between these alternatives, Golomb and Galasso conducted a modified replication of Harris et al.’s fourth experiment. The children were allocated either to a condition in which the pretence was not terminated and there were no alternative play activities provided (non-terminated pretence, no toys – as in Harris et al.) or to a condition in which the pretence was terminated and there was a box of toys placed in the room (terminated pretence, toys provided). The results were dramatically different to those obtained by Harris et al.: only 2 of the 19 participants approached the boxes during the period following the pretence. Golomb and Galasso attribute their findings to the children being less suspicious of the experimenter, the termination of the pretence and the provision of alternative play activities. They also claim that the two children who opened the boxes did so as a continuation of the pretence theme rather than as a result of pretend–reality confusion. However, these results are difficult to interpret because termination of the pretence and the provision of alternative play activities were confounded.

Golomb and Galasso’s (1995) second experiment investigated the influence of emotionally charged pretence themes on children’s behaviour. During the course of a pretending game, one of two empty boxes was populated with a positive or negative pretend entity. The pretending game was then explicitly ended and the child’s behaviour observed by the experimenter who, as in Expt 1, remained in the room but no longer interacted with the child. Only a minority (15%) of the children touched or opened the boxes in the period following the pretence. Golomb and Galasso argued that given that the children who approached the boxes were no more likely to open the pretend than the neutral box, when they did so this did not reflect confusion about pretence and reality but
was instead simply a consequence of their continued involvement in the pretence. However, the possibility that the experimenter's continued presence in the period following the pretence influenced the children's behaviour should be considered (Woolley, 1997).

Taken as a whole, the results of the studies discussed above appear paradoxical. On the one hand there is ample evidence to suggest that 3-year-olds are competent at distinguishing pretend and real entities. On the other, there is also evidence to suggest that 7-year-olds sometimes exhibit uncertainty about the reality status of what they have pretended. There are two main explanations which have been offered to account for these contradictory findings: the availability hypothesis (Harris et al., 1991; Johnson & Harris, 1994) and the pretence continuation account (Golomb & Galasso, 1995).

The availability hypothesis is based on the 'availability heuristic' reported by Tversky and Kahneman (1973), who argued that it is easier to recall instances from large or likely classes of objects and events than it is to recall instances from smaller or less likely classes. Tversky and Kahneman went onto argue that individuals estimate the frequency or probability of events on the basis of the ease with which they can bring examples of what is to be judged to mind – high cognitive availability is taken to be an indicator of high frequency or high probability. Harris et al. (1991) and Johnson and Harris (1994) argued that imagining an entity causes an increase in the ease with which ideas about such entities can be brought to mind. In other words, the imagination leads to an increase in the cognitive availability of what has been imagined. As a consequence, children may experience an increase in the subjective likelihood of the possibility that the imagined entity is real and this may lead them to wonder about the real existence of the imagined entities.

In conjunction with Woolley and Phelps' (1994; see also Subbokskii, 1985; Subbotsky, 1994) claims that the effects of availability are more influential in some circumstances than in others and with the idea of individual differences between children (Johnson & Harris, 1994), the availability hypothesis provides a plausible explanation for the evidence relating to children’s occasional failures to maintain a boundary between pretence and reality. The data obtained by Woolley and Wellman (1993), Harris et al. (1991, Expts 3 and 4), Johnson and Harris (1994, Expt 3) and Woolley and Phelps (1994), in which children pretend about the contents of empty boxes and subsequently show verbal and/or behavioural signs of believing the contents to be real, are consistent with the effects of availability on credulous children. Similarly, anecdotal accounts of children’s pretend–reality confusions are consistent with the general principle that imagining an outcome makes it seem more likely.

However, there remain some unresolved issues relating to the availability hypothesis. If as Johnson and Harris (1994) argue, any act of pretence can lead to an increase in cognitive availability, then pretend–reality confusions should be widespread. Yet reports of children confusing pretence and reality during their everyday play activities are actually relatively infrequent (Leslie, 1987; Lillard, 1994). One possible explanation for this discrepancy is that empirical evidence of reality, or visual confirmation of the outcome of the pretence (Woolley, 1995a, 1997), is influential in limiting the effects of availability on children’s beliefs. That is, being able to see that an entity is only imaginary may counteract, or reduce, the increased cognitive availability for the possibility that the object is real. Consequently, pretend–reality confusion should not occur. There is some
evidence to support this proposal. The rarity of pretend–reality confusions during object substitution pretence could be attributable to the effect of being able to see the true identity of the object. In addition, Woolley and Wellman (1993) observed that some children made pretend–reality confusions about the imagined contents of a box. In these circumstances the children did not obtain feedback about the outcome of the pretence since the box remained unopened. In contrast, when children imagined there was an ice cream in the room, very few confused pretence with reality. It is possible that in this case the increased cognitive availability for the ice cream being real was offset by the fact that the children could see that the imagined object was not real.

One aim of the first experiment reported here was to assess the possible influence of empirical evidence on children’s understanding of pretence by comparing their behaviour under conditions of differing levels of visual confirmation of reality. In the design used by Harris et al. (1991, Expt 3) the children made their first box selection without being able to see the box contents. The cognitive availability for the pretence would have been high and therefore the children may have wondered about the reality status of the pretend objects. However, when they acted on the first box, the children obtained visual confirmation that it was empty and the contents only pretend. This could have caused a reduction in the cognitive availability for the remaining box and consequently led to a change in the child’s beliefs. With the two-box design used by Harris et al. this change could not be detected: having acted on one of the boxes, the child’s second selection was predetermined and may therefore have been independent of their beliefs. In contrast, by using a three-box design it becomes possible to measure any changes in the child’s behaviour as they gain experience of finding that the boxes remain empty. In these circumstances, only the last of the three choices is determined by previous decisions – the child’s second choice is open to vary across two alternatives. In Expt 1, children were asked to pretend about the contents of three boxes and then to predict the order in which they would open them (hypothetical task) before being asked to do so (actual task). By comparing children’s performance on the hypothetical and actual versions of the task, it was possible to assess the impact of differential levels of empirical evidence. During the hypothetical task, all three box selections were made without visual confirmation of the contents. In contrast, the second and third actual selections were made after the child had seen that the first box was empty.

Because of logical constraints, the children were always asked to predict their behaviour before carrying it out. Consequently, order of task presentation and level of empirical evidence were confounded and therefore any differences in children’s box selection patterns across the two tasks could potentially be attributable to a task order effect. To overcome this problem in interpreting the findings, a second set of tasks was introduced in which levels of empirical evidence were held constant across the hypothetical and actual versions. When they selected boxes to throw away rather than to open children never obtained visual confirmation that the boxes were empty and therefore any differences between the hypothetical and actual discarding tasks could only have been caused by an order effect. The inclusion of the discarding tasks facilitated the interpretation of any differences observed across the hypothetical and actual opening tasks since these additional tasks provided an indication of the degree of variability in children’s behaviour which is attributable to task order.

The second aim of Expt 1 was to investigate the influence of differing forms of affect
evoked during pretence. In drawing parallels between the reactions of children and adults to frightening fantasy content, several authors have argued that behaviours which may seem to reflect fantasy–reality confusions could instead simply reflect these emotions (Lillard, 1994; Taylor, 1997; Taylor, Cartwright, & Carlson, 1993; Wellman, 1990; Woolley, 1995a, 1997). For example, adult fear while watching a horror film should perhaps not be taken as reflecting any uncertainty about the reality status of that film. Likewise, when the children in Harris et al.’s (1991) experiment showed wariness towards the monster, this was perhaps a product of their fear and was not because they wondered whether the monster might be real. Golomb and Galasso (1995) have developed these ideas into the pretence continuation account in which they argue that during pretence with an emotional theme, children constantly monitor their experience of affect to ensure that it does not exceed a certain level, but also to ensure that they are sufficiently involved in the pretence for it to be enjoyable.

However, the pretence continuation account is not entirely consistent with the experimental findings. Some of the results obtained by Harris et al. (1991) may be interpreted in terms of pretence continuation – the children in Expt 3 may have used their finger to approach the puppy box to increase their positive affect and used the stick for the monster box, which they approached last, as an avoidant behaviour designed to reduce negative affect. If this is pretence continuation, why should some of the children have spontaneously commented on the whereabouts of the monster when they found the box to be empty? Similarly, although children’s approach to a box containing an imagined rabbit could be a means of increasing positive affect (Expt 4), the children commented that they wondered whether the imagined entity might be real.

As a first step in investigating the influence of affect in this domain, Expt 1 compared children’s behaviour towards desired, feared and neutral pretend entities on a within-subject basis. Unlike previous experiments which have used adult selected positive pretend objects such as puppies (Harris et al., 1991, Expt 3), rabbits (Golomb & Galasso, 1995, Expt 1; Harris et al., Expt 4) and fairies and ice cream (Johnson & Harris, 1994, Expt 3), in this experiment the children were asked to pretend about a positive item of their own choosing. However, unlike Golomb and Galasso (Expt 2), in which the child’s selection of a positive pretend object was embedded in a lengthy pretend scenario, here the children were simply asked to pretend about their preferred Christmas present. This ensured that all children were pretending about something that they would find desirable. Ideally, the negative pretend entity should also have been child selected. However, there are ethical concerns about asking children to think of items they find extremely frightening. Therefore, as in previous experiments (Golomb & Galasso, 1995; Harris et al., 1991) the children were asked to pretend about a scary monster – an entity which is typically associated with negative emotional reactions. To address the confounding of object pretence and affective neutrality that has occurred in previous experiments (Golomb & Galasso, 1995; Harris et al., 1991; Johnson & Harris, 1994), the neutral box was populated with a pretended object which was neither desired nor feared. Furthermore, to minimize the possibility that any child might embellish the pretence to make the neutral entity desirable, the children were prompted by showing them an empty cup and asking them to pretend that it was inside one of the boxes.

The use of a three-box design including positive, neutral and negative entities on a repeated measures basis was an important feature of the experimental design. With Harris
et al.’s (1991, Expt 3) two-box design it was not possible to determine whether the children selected the positive box first simply because they were avoiding the negative pretend entity, because they were seeking the positive entity or because they were doing both of these things. The three-box design used here reduced this ambiguity. If children were concerned both to approach the positive entity and to avoid the negative entity, they should open the positive box first and the negative box last. If, on the other hand, children were only concerned to approach the positive entity, they should open the positive box first and behave unsystematically towards the remaining boxes. Similarly, if children were only concerned to avoid the negative entity they should open the negative box last and behave unsystematically towards the positive and neutral boxes.

These predictions assume that children are likely to be motivated to decrease negative affect. However, this assumption is inconsistent with Harris et al.’s (1991, Expt 4) observation that some children chose to approach a box containing a monster. There are several possible explanations for this striking behaviour. First, it is possible that the children were not afraid of the monster and so did not wish to avoid it. Secondly, the children may have been afraid, but actually enjoyed the fear and acted as a way of increasing it. Alternatively, it could be that the interpretation of box opening behaviour may be less straightforward than it at first seems. Although the most typical motivation for approaching a box might be desire for the contents, there are several alternative motivations that might also lead a child to open one box rather than another: curiosity (wanting to find out what is inside), fear of the contents (to relieve the fear or because they enjoy the fear), or avoidance of an alternative. To overcome the ambiguity inherent in box-opening behaviours, an additional measure of children’s affective stance towards the pretend objects was included in this experiment. When a child chooses to throw a box away, it is most certainly out of avoidance or dislike of the contents. Through comparison of children’s behaviour across opening and discarding tasks it became possible to determine whether children’s motivation during the pretence was to increase positive affect, to decrease negative affect, or to do both.

Overall, the design of the first experiment allowed an investigation of the influence of empirical evidence of reality and varying forms of affect on children’s behaviour during pretence.

**EXPERIMENT 1**

**Method**

**Participants**

Forty-nine children (19 boys and 30 girls) aged between 5 years 4 months and 6 years 3 months (mean age-5 years 11 months) were recruited from two predominantly middle-class schools in south-east England.

**Procedure**

The children were tested individually in a quiet area of their school. Three identical opaque boxes (measuring $17 \times 24 \times 27$ cm) were placed on a table. When the child had settled he or she was asked to look inside all three boxes and to confirm that they were empty. The order of introduction to the pretend objects was counterbalanced. While introducing the pretend objects the experimenter used appropriate
intonation in her voice (as in Harris et al., 1991): enthusiastic for the positive object (Christmas present), dramatic for the negative object (monster) and normal for the neutral object (empty cup). The order of the hypothetical and actual tasks was fixed such that the children were always asked to predict their behaviour before carrying it out. The order of the opening and discarding tasks was counterbalanced. Overall, the children made three box selections on each of four tasks, therefore producing a 12-trial response pattern reflecting the order of hypothetical and actual opening and discarding.

**Task introduction.** ‘It doesn’t matter that the boxes are empty because we are going to play a game of pretend. I expect you’re good at pretend games aren’t you? . . . Is there something that you would really, really like for Christmas this year? . . . What is it? . . . OK, I want you to pretend that the [named object] you want for Christmas is in this box. Now look, this is my coffee cup [child shown a plain cup]. It’s empty now but that doesn’t matter, I want you to pretend that my empty coffee cup is in this box. And, I want you to pretend that there is a horrible, mean monster that wants to come out and chase you, in this box.’ The boxes were indicated left to right. The child’s memory for the nature and location of the pretend objects was then checked: ‘OK, now can you tell me what you are pretending is in this box?.’ This question was repeated for each box indicated left to right. If the child responded incorrectly to any of the memory check questions they were reminded of the objects to be pretended and the memory checks repeated. Children who responded incorrectly to any of the memory checks on a second occasion were excluded from the analyses. The child’s understanding of the pretend–reality status of the entities was also checked: ‘Is the [name of object] really in this box or are you pretending?’ This question was repeated for each box indicated right to left. Incorrect responses were not corrected.

**Opening task.** (1) Hypothetical: ‘If I asked you to open one of the boxes, which one of the boxes would you open?’ This question was repeated until all three boxes had been nominated. (2) Actual: the child was then asked to act: ‘OK, you show me now, you open one of the boxes now.’ This was repeated until the three boxes had been opened. Before moving on to the second set of tasks (opening or discarding) the child was reminded of the nature and location of the pretend objects.

**Discarding task.** (1) Hypothetical: ‘If I asked you to throw away one of the boxes, which one of the boxes would you throw away?’ This question was repeated until all three boxes had been nominated. (2) Actual: the child was then asked to act: ‘OK, you show me now, you throw away one of the boxes now.’ This was repeated until the three boxes had been discarded. Before returning to their classroom the child was asked to check that the boxes were empty and thanked for their help.

**Results**

Nine of the 49 children failed the memory checks and so were not included in the analyses. Only one child failed any of the reality checks. The data were analysed using Configural Frequency Analysis (CFA) which is a form of non-parametric, multivariate analysis of association which identifies response patterns that are overrepresented (types) and underrepresented (anti-types) given the null hypothesis that these patterns are randomly distributed (VonEye, 1988, 1990). The CFA results for the patterns of box selections on each of the four experimental tasks are shown in Table 1.

For each task only one of the six possible response patterns emerged as a significant response type. On the hypothetical opening task the significant response type was selection of the positive box first, neutral box second and negative box last ($z = 5.66$, $p < .001$, Bonferroni adjustment for $p$ at $.05 = .008$). This response pattern accounted for the behaviour of 20 children (50%). An additional 8 children (20%) were represented by a single (but not statistically significant) response pattern of positive box first, negative

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1 The introduction, memory checks and reality checks were based where possible on those used in Harris et al. (1991).
box second and neutral box last. The remaining 12 children (30%) were distributed between four non-significant response patterns. The results for the actual opening task were very similar to those for the hypothetical version – the same response pattern emerged as significant ($z = 4.38, p < .001$, Bonferroni adjustment for $p$ at .05 = .008) and accounted for the behaviour of a similar number of children ($N = 17, 43\%$). There were no other significant results; the remaining 23 children (57%) were represented by five non-significant response patterns (see Table 1).

On the hypothetical discarding task only five of the six possible response patterns were observed and of these just one emerged as a significant response type: 32 children (80%) nominated the negative box first, neutral box second and positive box last ($z = 9.49, p < .001$, Bonferroni adjustment for $p$ at .05 = .01). The remaining 8 children (20%) were distributed between four response patterns of which three emerged as significant response anti-types (see Table 1). The results for the actual discarding task were very similar to those for the hypothetical task: the same response pattern emerged as the significant response type ($z = 9.09, p < .001$, Bonferroni adjustment for $p$ at .05 = .01) and accounted for the behaviour of a similar number of children ($N = 31, 78\%$). The remaining 9 children (22%) were distributed between four response patterns, three of which emerged as significant response anti-types (see Table 1).

Inspection of the CFA results suggests that at a group level, children’s behaviour across the hypothetical and actual versions of the tasks was very similar; the significant response types were identical and emerged with similar prevalence. Analysis of individual children’s responses across the hypothetical and actual opening tasks revealed that of the 40 children only 7 (18%) produced different response patterns on each occasion. Similarly, just two children (5%) produced differing response patterns across the hypothetical and actual discarding tasks.

**Discussion**

The findings obtained in this experiment were clear. Consistent with previous research (Harris et al., 1991; Johnson & Harris, 1994), the vast majority of children showed no
uncertainty when they were asked to verbally categorize the box contents as pretend or real. However, many children went on to behave towards the boxes in a highly systematic manner; a single order of box selections emerged with statistically significant frequency on each task. On the hypothetical and actual opening tasks the response type was selection of the box containing the pretend Christmas present first, the cup second and the monster box last. The response type that emerged on the hypothetical and actual discarding tasks was the reverse of that obtained on the opening tasks – negative box first, neutral box second and positive box last. On the discarding tasks one of the possible response patterns did not emerge and some were generated by so few children that they emerged as significant response anti-types. However, this is likely to result from the dominance of the response type rather than being a psychologically meaningful effect in its own right.

It was predicted that if the effects of increased cognitive availability were the cause of children’s behaviour towards pretend objects, and if availability could be reduced by empirical evidence of reality, there would be differences in children’s behaviour across the hypothetical and actual versions of the opening task. It was expected that actually opening the first box and finding it to be empty would lead to a reduction in levels of cognitive availability and that this would lead to a change in children’s beliefs about and behaviour towards the remaining boxes. However, several findings from this experiment suggested that this did not occur. First, the same response pattern emerged as statistically significant on the hypothetical and actual opening tasks. Secondly, this response pattern emerged with approximately the same frequency on both occasions. Thirdly, very few children produced a different order of box selections on the actual tasks compared to the corresponding hypothetical tasks. In other words, children tended to act in the manner they had predicted regardless of levels of empirical evidence of reality. Taken together, these findings suggest that the empirical evidence of box contents obtained on actually opening the first box did not alter the children’s second and third choices relative to the hypothetical version of the task. There are several possible explanations for this finding. It could be that once children have predicted their behaviour, they feel committed to that particular course of action and carry it out regardless of any changes in their beliefs. Alternatively, perhaps empirical evidence does not function as a constraint on the effects of availability and that seeing that a box is empty is not sufficient to reassure children of the pretend status of the remaining entities. It is also possible that the children did not experience any pretend-reality confusion and were thus unaffected by the empirical evidence of reality. The role of empirical evidence in children’s understanding of pretence was investigated further in Expt 2.

The second issue addressed in this experiment related to the influence of differing forms of affect on children’s behaviour. The findings relating to this issue were very clear. As Golomb and Galasso (1995) would predict, many of the children behaved in ways which could be interpreted as increasing their positive affect (by opening the positive box first and discarding it last) and decreasing their negative affect (by discarding the negative box first and opening it last). These results suggest that these children were concerned both to approach the positive pretend entity and to avoid the negative pretend entity. Had these children been only concerned to avoid the negative entity, they should not have responded so systematically towards the positive and neutral entities. Similarly, if these children were solely concerned to approach the positive entity, their responses to the other entities should have been less systematic. The finding that children responded systematically to
positive and negative entities suggests that in Harris et al. (1991, Expt 3) the children had both sought the puppy and avoided the monster. However, there was a sizeable number of children whose responses did not fit the modal response pattern described above, and whose behaviour therefore does not fit a straightforward interpretation of the Golomb and Galasso (1995) account. Some of these children could be discounted through having produced a perseverative response pattern: they selected the boxes in precisely the same order irrespective of the demands of the task by, for example, showing a directional bias and selecting the boxes from left to right. Yet perseverative response patterns accounted for the behaviour of a small proportion of the children sampled. A more interesting group of children were those who elected to open the positive box first and then the negative box before the neutral box. Taking this finding in isolation could result in two alternative interpretations of the motivation underlying this response pattern: first, that these children had not experienced the negative affect that is presumably associated with the monster; or secondly, that contrary to Golomb and Galasso’s predictions, these children were deliberately behaving in a way that would increase negative affect. These conflicting possibilities emerge, at least in part, as a result of the ambiguity of opening tasks. Inspection of the behaviour of these children on the discarding tasks clarifies their motivations. Seven of these eight children discarded the negative box first. Thus these children may indeed have wanted to avoid the monster and so presumably did experience the negative affect associated with it, but nevertheless they behaved in a way that increased their negative affect. The behaviour of these children is comparable to the behaviour of the children in Harris et al. (1991, Expt 4) who opened the box they had pretended contained a monster.

Taken together, the results of this experiment show that during pretence tasks many children consistently respond in ways which increase positive affect and decrease negative affect. However, some children’s behaviour was not consistent with this model. In addition, the findings suggest that either the availability hypothesis is not an adequate explanation of children’s behaviour, or that the effects of availability persist even after children have obtained empirical evidence that one of the objects is not real. In other words, perhaps finding that one box was empty did not reassure the children that the remaining boxes would also be empty. This is feasible: perhaps the children in these experiments opened the first box, saw that it was empty, and experienced a corresponding reduction in availability for the pretence. The children were then asked to make a second selection: at this point they might have disregarded the evidence about the first box and therefore experienced increased cognitive availability for the contents of the second and third boxes. That is, perhaps children treated each box as an independent pretend episode\(^2\) and thus the information gained from opening one box did not influence their beliefs about the remaining boxes.

**EXPERIMENT 2**

The simple but dramatic experimental manipulation of asking children to pretend about the contents of transparent rather than opaque boxes minimizes the influence of availability and rules out the effects of children treating each box as independent. When

\(^2\) The authors are grateful to Paul Harris for this suggestion.
transparent boxes are used, children are continually confronted with visual confirmation of the fact that the boxes are empty before, during and after every box selection, regardless of whether the task requires selection of a box to open or to discard, and regardless of whether the task is presented hypothetically or actually. Consequently, the increase in cognitive availability for the pretence which might have occurred between the end of one box selection and the beginning of the next with opaque boxes should not occur. The use of transparent boxes maximizes empirical evidence of reality and, hence, the possibility for children to become uncertain about the reality status of the pretence is minimal. Put simply, the constant sight of the empty boxes should reassure children that the contents are pretend, not real; there is no reason for any child to wonder about the contents of the boxes when they can clearly see that the boxes remain entirely empty.

If the effects of increased cognitive availability were the sole cause of children’s behaviour towards the pretend objects in Expt 1, the results observed in this experiment, where the potential for availability to influence children’s beliefs is inhibited, should be different. When children no longer wonder about the box contents they should be indifferent, or at least less systematic, when choosing between the boxes. In contrast, if pretence continuation without pretend–reality confusion led to the results of Expt 1, the present experiment should obtain very similar results since empirical evidence of reality should not impinge on children’s pretence behaviours. To test between these predictions, the present experiment followed the procedure used in Expt 1 but with a single modification – transparent rather than opaque boxes were used in the pretence tasks.

Method

Participants

Thirty children (16 boys and 14 girls) aged between 5 years 6 months and 6 years 5 months (mean age = 5 years 11 months) were recruited from a school comparable to those which participated in Expt 1.

Procedure

The procedure was identical to Expt 1 with the exception that the opaque boxes were replaced by three identical transparent (perspex) boxes of the same size.

Results

All the children passed the memory and reality checks. The CFA results for the three choices on each of the tasks are shown in Table 2.

On the hypothetical opening task the significant response type was selection of the positive box first, neutral box second and the negative box last ($z = 8.22, p < .001$, Bonferroni adjustment for $p$ at $.05 = .01$). This response pattern represented the behaviour of 24 children (80%). The remaining 6 children (20%) were distributed between four non-significant response patterns. On the actual opening task the same response pattern emerged as the significant response type ($z = 7.35, p < .001$, Bonferroni adjustment for $p$ at $.05 = .008$) and accounted for the behaviour of a similar number of children ($N = 20, 67%$). The remaining children ($N = 10, 33%$) were distributed between five non-significant response patterns (see Table 2).
On the hypothetical discarding task, one pattern of response emerged as a significant response type, one response pattern was not observed, and the remaining four response patterns were not significant (see Table 2). The significant response type was selection of the negative box first, neutral box second and positive box last \((z = 8.22, p < .001, \text{Bonferroni adjustment for } p \text{ at } .05 = .01)\). This response pattern accounted for the behaviour of 24 children (80%). A similar pattern of results emerged on the actual discarding task – the same pattern of response emerged as the significant response type \((z = 7.35, p < .001, \text{Bonferroni adjustment for } p \text{ at } .05 = .008)\) and accounted for the behaviour of a similar number of children as on the hypothetical discarding task \((N = 20, 67\%)\). The remaining 10 children (33%) were distributed across four non-significant response patterns (see Table 2).

A comparison of the frequency of the dominant response pattern across the present experiment and Expt 1 revealed a significant difference (Table 3). Significantly more children in Expt 2 produced the response type on the hypothetical opening task than had done so when opaque boxes were used \((\chi^2 (1) = 6.61, p < .05)\). There were no differences in the children’s behaviour on the hypothetical discarding tasks across the two experiments \((\chi^2(1) = 1.00, p > .05)\).

### Discussion

It was argued that the use of transparent rather than opaque boxes could have two possible consequences for the results of this experiment in comparison to those obtained in Expt 1. According to the pretence continuation account, this experimental manipulation should have no impact on children’s behaviour. In contrast, the availability hypothesis predicted that there should be differences in children’s behaviour across the two experiments.

All of the children in this experiment accurately reported that the contents of the boxes were pretend, not real. Furthermore, as in Expt 1, many children went on to behave in highly systematic ways: they tended to open (hypothetically and actually) the positive box first, neutral box second and negative box last and to discard (hypothetically and actually)

| Pattern | Frequency | Hypothetical (actual) | | Pattern | Frequency | Hypothetical (actual) |
|---------|-----------|------------------------| | |-----------|------------------------|
| + N −   | 24 (20)   | *T 8.22 (*T 7.35) | | Discarding task | | | | + N −   | 2 (2)     | −1.83 (−0.98) | | Discarding task | | | | + − N   | 2 (3)     | −1.83 (−0.98) | | Discarding task | | | | N + −   | 1 (1)     | −2.28 (−1.47) | | Discarding task | | | | N − +   | 2 (2)     | −2.28 (−1.47) | | Hypothetical (actual) | | | | − N +   | 1 (2)     | −2.28 (−1.47) | | Hypothetical (actual) | | | | − + N   | 1 (2)     | −2.28 (−1.47) | | Hypothetical (actual) | | | | **Note:** + = positive; N = neutral; − = negative. | | | | | **T** = significant response type at \(p < .001\). | | | | **Table 2. CFA results on children’s response patterns for each experimental task (Expt 2: \(N = 30\))** | | | | On the hypothetical discarding task, one pattern of response emerged as a significant response type, one response pattern was not observed, and the remaining four response patterns were not significant (see Table 2). The significant response type was selection of the negative box first, neutral box second and positive box last \((z = 8.22, p < .001, \text{Bonferroni adjustment for } p \text{ at } .05 = .01)\). This response pattern accounted for the behaviour of 24 children (80%). A similar pattern of results emerged on the actual discarding task – the same pattern of response emerged as the significant response type \((z = 7.35, p < .001, \text{Bonferroni adjustment for } p \text{ at } .05 = .008)\) and accounted for the behaviour of a similar number of children as on the hypothetical discarding task \((N = 20, 67\%)\). The remaining 10 children (33%) were distributed across four non-significant response patterns (see Table 2).

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### Discussion

It was argued that the use of transparent rather than opaque boxes could have two possible consequences for the results of this experiment in comparison to those obtained in Expt 1. According to the pretence continuation account, this experimental manipulation should have no impact on children’s behaviour. In contrast, the availability hypothesis predicted that there should be differences in children’s behaviour across the two experiments.

All of the children in this experiment accurately reported that the contents of the boxes were pretend, not real. Furthermore, as in Expt 1, many children went on to behave in highly systematic ways: they tended to open (hypothetically and actually) the positive box first, neutral box second and negative box last and to discard (hypothetically and actually)
the negative box first, neutral box second and positive box last. Thus, the significant response types which emerged in this experiment were identical to those observed in Expt 1. This similarity between the experiments suggests that children’s behaviour was unaffected by empirical evidence of reality and therefore that the findings are consistent with Golomb and Galasso’s (1995) pretence continuation account; without any confusion or uncertainty about the pretend–reality distinction, many children behave towards pretend objects in ways which increase positive affect and decrease negative affect.

However, despite the obvious similarities in the findings from the two experiments, there were two noticeable changes which suggest that empirical evidence of reality did influence the behaviour of at least some children. First, whereas in Expt 1 half of the children selected the Christmas present box first, the cup box second and the monster box last when hypothetically opening the boxes, 80% did so in Expt 2. Secondly, in Expt 1 a sizeable group of children (20%) selected the monster box prior to the neutral box on the hypothetical and actual opening tasks. In contrast, this response pattern was infrequent (7%) in the present experiment. The increase in the number of children selecting the positive box first, neutral box second and negative box last was of similar magnitude to the decrease in the number of children selecting the positive box first, negative box second and neutral box last. The frequency of the remaining response patterns was unchanged. It therefore seems reasonable to suggest that these are related changes and that the increased number of children seeking the Christmas present and avoiding the monster could be attributable to the changed behaviour of equivalent children who would (in Expt 1) have approached the monster second rather than last. This difference between the experiments is not easy to reconcile with the pretence continuation account. Instead, the results seem more in keeping with the availability hypothesis.

It was initially anticipated that if the effects of increased cognitive availability were causal in Expt 1, when these effects were minimized by the use of transparent boxes the children’s behaviour should become unsystematic, or at least less systematic. In other words, the children should be indifferent in choosing between the boxes when the potential for pretend–reality confusion was minimal. It seems that this prediction was incorrect – rather than their behaviour becoming less systematic, children responded differently but nevertheless systematically. One possible interpretation of the data is that in Expt 1, those children who opened the negative box prior to the neutral box were uncertain of the pretend–reality status of the entities. In Expt 2, an equivalent group of children did not emerge because the constant sight of the empty box reassured them that the entities were not real. Instead, these children continued the pretence theme and this resulted in the increased prevalence of the positive–neutral–negative response pattern in Expt 2 relative to Expt 1. In other words, the dominant response pattern seems to have been generated by children who were continuing the pretence theme in the manner which Golomb and Galasso (1995) suggested. In contrast, the positive–negative–neutral response pattern seems to have been generated by children who had become uncertain of the pretend–reality distinction in the manner which Harris et al. (1991) and Johnson and Harris (1994) suggested. Overall, the similarity between Expts 1 and 2 offers support for the pretence continuation account. However, it does seem that at least some of the children in Expt 1 had wondered about, or doubted the pretend status, of the entities.

In Expts 1 and 2 the dominant response pattern when asked to open the boxes was the one whereby children selected the positive box first, the neutral box second and the
negative box last. On discarding tasks the children selected the negative box first, the neutral box second and the positive box last. This response pattern suggests that children had both sought the positive entity and avoided the negative one. If the children had been only avoiding the monster or only seeking the present, the neutral box should not have been so consistently chosen as the second of the three selections when both opening and discarding the boxes. However, issues surrounding the influence of affect during pretence are not fully resolved. The pretence continuation account (Golomb & Galasso, 1995) does not offer any predictions about whether children are equally concerned with positive and negative affect, or whether one is prioritized over the other. Instead Golomb and Galasso simply posit that children regulate their affect by modifying pretence themes to reduce negative affect or to increase positive affect. That is, pretence is continued in terms of affect-appropriate responses. But what is the affectively appropriate response when positive and negative affect are placed in conflict such that the child cannot both increase positive and decrease negative affect? This issue was explored in Expt 3.

EXPERIMENT 3

Experiment 3 was designed to further investigate the influence of differing forms of affect on children’s behaviour during pretence. In particular, the extent to which children prioritize either positive or negative affect was assessed. This was achieved by placing the motivation to increase positive affect and to decrease negative affect in direct conflict. The children were asked to pretend that each of two boxes contained a positive and negative entity respectively. Subsequently, the children were asked to choose to either open or discard both boxes. In these circumstances the children were forced to prioritize one type of affect over the other. Opening both boxes required the children to confront both the monster and the present and/or the affect associated with these, whereas throwing away both boxes would result in a reduction in both types of affect.

However, it is possible that children may actually make the decision to open or to discard the boxes for reasons unrelated to the pretence. For example, task demands may prompt children to open a box rather than to throw it away. Clearly a measure other than the children’s behaviour is needed to test between these possibilities. To this end, Expt 3 was designed as a single trial task. This afforded the opportunity to question the children about their motives for making their choice and thus to provide important corroborating evidence on the relationship between children’s beliefs and behaviour. In earlier work, Harris et al. (1991) and Johnson and Harris (1994) asked children whether they had ‘wondered’ what was in the boxes or whether they ‘knew’ that the contents were just

<table>
<thead>
<tr>
<th>Box type</th>
<th>Response pattern</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opaque (Expt 1)</td>
<td>20 (32)</td>
<td>20 (8)</td>
</tr>
<tr>
<td>Transparent (Expt 2)</td>
<td>24 (24)</td>
<td>6 (6)</td>
</tr>
</tbody>
</table>

*Note: Figures in parentheses are for the discarding task.*

Table 3. Comparison of numbers of children generating the response type on hypothetical opening task in Expts 1 (N = 40) and 2 (N = 30)
pretend. The children’s responses, in conjunction with their earlier behaviours, were taken as evidence of individual differences between children in the susceptibility to pretend–reality confusion. However, it is possible that some of those children who admitted to ‘wondering’ were instead convinced that the boxes were not empty or indeed held some belief other than that they ‘knew’ the boxes were empty. To test this possibility, in the present experiment children were asked an open-ended question to elicit evidence about their beliefs without suggesting those beliefs to them.

Method

Participants

Twenty-three children (7 boys and 16 girls) aged between 5 years 5 months and 6 years 5 months (mean age 5 years 11 months) were recruited from a school comparable to those which participated in experiments 1 and 2.

Procedure

Task introduction. The procedure was based on that used in Expt 1. The children were asked to check that two opaque boxes (as used previously) were empty before being asked to pretend that one contained a positive object (Christmas present) and the other a negative object (monster). The children were asked the memory and reality checks before being asked to either open or throw away both boxes. The order of mention of the decision options (open or throw away) was counterbalanced between children, remaining constant for each child. The children were debriefed as before.

Hypothetical task. The children were asked: ‘If you could choose to either open all of the boxes or throw all of the boxes away, what would you do, would you open them all or throw them all away?’

Actual task. Once the children had made their hypothetical decision they were asked to act: ‘OK, you show me now, you either open all of the boxes or throw all of the boxes away.’

Justification question. Children were asked to give the reasons for their decision: ‘Why did you choose to open/throw away all of the boxes?’

Results and discussion

One child failed the memory checks and so was not included in the analyses. None of the remaining children failed the reality checks. The children’s verbal responses to the question of why they had opened or discarded the boxes were allocated to one of three mutually exclusive categories: object presence, uncertainty, or other reasons unrelated to the pretence. The content analysis of children’s justifications for their behaviour is presented in Table 4 according to the children’s response to the actual task. The results obtained for the hypothetical task showed that the majority of children (17 out of 22; 77%) elected to open both boxes. Similarly, on the actual task, 82% of the children (18 out of 22) elected to open both boxes. How might this be explained? One possibility is that children show a performance bias in response to task demands towards opening rather than violating box function by discarding the boxes. However, the children’s justifications mitigate against this explanation. Of the six children who gave justifications for their behaviour that were unrelated to the pretence, only two explained their behaviour in terms of literal uses for the boxes: ‘Because they would be good to hide in’ and ‘Because
if I moved house I might need them'. The remaining four children in this category gave ambiguous responses: ‘Because I wanted to’, ‘Because I don’t want them’, ‘Because they aren’t much use’ and ‘Don’t know’.

A further possible explanation for children’s behaviour relates to the role of affect in influencing children’s decision to open rather than to discard the boxes. As outlined earlier, Golomb and Galasso (1995) argued that tasks such as this simply result in children continuing previous pretence themes without believing the boxes to be anything other than empty. The fact that so many children elect to open rather than discard the boxes could be interpreted in these terms. It might be the case that children are prioritizing the positive affect from the pretended present and this overrides the negative affect associated with the monster. Alternatively, the children might be seeking the scary monster since they know it is just pretend and can do them no harm. In either case, the pretend–reality distinction is unaffected. The difficulty with the pretence continuation argument is that although it can account for the children’s behaviour it is less easily reconciled with the children’s subsequent justifications.

Table 4 shows that of the 18 children who opted to open the boxes, all but four (who provided no justifications) explained their decisions in terms of their beliefs, desires or planned action towards the pretended entities (object presence and uncertainty). Five children discussed their desire for the positive entity: ‘Because I like opening presents’, ‘So I can get my racing car track’, ‘Because I wanted to get the dolly out’, ‘Because I’m so desperate to have the Pocahontas Barbie doll’, and ‘Because there’s presents in them’. Two children who opened the boxes referred to both the Christmas present and the monster: ‘I could get the gun and I could shoot the monster’ and ‘Because the dragon was in one and the toy was in the other’. Only one child giving an object presence justification for opening the boxes referred exclusively to the negative object: ‘I wanted to see if the monster was still in that one’. The two remaining children who gave object presence justifications for their behaviour explained their decision to discard the boxes in terms of the presence of the negative pretend entity: ‘Because one had an ugly monster in’ and ‘Because I didn’t like something in there’. Even if it is assumed that these children were referring to the pretended objects without believing they existed and were therefore continuing the pretence theme, the comments of some of the other children are less easily explained in these terms. Three children commented that they wanted to open the boxes because they had really thought there was something inside them: ‘Because I thought something was really inside it’, ‘Because I thought there was something in there’ and ‘I thought it was in there’. A further three children were categorized as showing ‘uncertainty’ about the pretend–reality distinction since they explicitly discussed their doubts about the box contents: ‘To see if there was something inside it’, ‘Because I wanted to see what’s in them’ and ‘Because there might have been something in there so it’s best not to throw them away it’s best to open them and see if there’s something in there’.

Taken together, the findings from this experiment suggest that when positive and negative affect are placed in direct conflict, children tend to act and explain their actions in terms of the positive entity. Moreover, the findings suggest that there are individual differences between children in terms of their susceptibility to pretend–reality confusions. Just over half of the children (59%) gave justifications for their behaviour which could perhaps be interpreted as reflecting a sceptical stance towards the entities (object presence). Nevertheless, just under a third of the children (27%) explicitly expressed credulity about
the entities’ reality status. Some of these children expressed uncertainty while others explicitly stated that they thought that an entity may be inside the boxes. These findings support those obtained by Harris et al. (1991) and Johnson and Harris (1994) by providing further evidence that the pretence continuation argument put forward by Golomb and Galasso (1995) can explain the behaviour of some, but not all, children.

**GENERAL DISCUSSION**

The series of experiments reported in this study had two main aims. The first was to provide data relating to the influence of empirical evidence of reality on children’s understanding of pretence; and the second was to investigate how affect influences children’s pretence. Golomb and Galasso (1995) argued against Johnson and Harris’s (1994) claim that some children show evidence of a breakdown in their understanding of the pretend–reality boundary as a result of the effects of increased cognitive availability. Instead, Golomb and Galasso claimed that no such breakdown occurs, that availability is not involved and that Harris’s results can be better explained as children continuing pretence themes in affectively appropriate ways. The evidence from the present experiments is difficult to reconcile in its entirety with the pretence continuation account for two main reasons. First, some children were influenced by the use of transparent rather than opaque boxes (Expts 1 and 2); if children had merely been continuing their pretence, transparency should have had no impact whatsoever. Secondly, a group of children in Expt 3 gave justifications for their behaviour which explicitly referred to their beliefs or doubts about the contents of the boxes.

Taken together, the present experiments are suggestive that increased cognitive availability may influence children’s beliefs about the pretence, and also that there are individual differences between children in terms of their understanding of the pretend–reality distinction. Across Expts 1 and 2 several manipulations were made in an attempt to vary levels of empirical evidence of reality and therefore to vary potential levels of availability. However, no differences were found between children’s actual and predicted performance despite the differential levels of availability involved in these two situations. Nevertheless, a comparison of children’s performance across Expts 1 and 2 suggests that availability may have a key role to play for at least a subgroup of children. In Expt 1, some children approached the monster box second rather than leaving it until last. In contrast, when the possibility for wondering about box contents was minimized by the use of transparent boxes, a corresponding group of children did not emerge. Instead, significantly more children produced the dominant positive–neutral–negative response pattern. Thus, providing children with continual evidence that the boxes were empty influenced some children’s behaviour and suggests that availability may be influential. Clearly further empirical work

### Table 4. Children’s responses and justifications when asked to open or throw away both boxes (actual task: N = 22)

<table>
<thead>
<tr>
<th>Task response</th>
<th>Object presence</th>
<th>Uncertainty</th>
<th>Other reasons</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open</td>
<td>11 (61%)</td>
<td>3 (17%)</td>
<td>4 (22%)</td>
<td>18</td>
</tr>
<tr>
<td>Discard</td>
<td>2 (50%)</td>
<td>0 (0%)</td>
<td>2 (50%)</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>13 (59%)</td>
<td>3 (14%)</td>
<td>6 (27%)</td>
<td>22</td>
</tr>
</tbody>
</table>
is required to establish conclusively the most appropriate interpretation of the response pattern in which children select the negative entity second rather than last.

The results are also in keeping with the suggestion by Johnson and Harris (1994) that there are individual differences between children in this domain. Johnson and Harris propose two key groups: ‘sceptical’ and ‘credulous’. According to them, sceptical children are those who are in control of their pretence and do not wonder about the possible existence of the pretend entities. In the present experiments these children may be represented by those children who both approached the present and avoided the monster boxes in Expts 1 and 2. Moreover, these children are likely to be those who, in Expt 3, justified their behaviour in terms of the imagined contents of the boxes, without experiencing any pretend–reality confusion.

The second group of children identified by Johnson and Harris (1994) were credulous children who wondered about the possible existence of the pretend entities because of the effects of availability. The experiments reported here provide two main pieces of evidence for such a group. First, the results of Expt 2 using transparent boxes suggest that some children are influenced by empirical evidence which reduces the levels of availability. Secondly, in Expt 3 some children reported directly that they thought there was something really inside the boxes, or that they were uncertain and were therefore checking to see whether there was something inside the boxes. That is, some children explain their behaviour by directly referring to their uncertainty about the pretend–reality status of the imagined entities.

Overall, the findings from the experiments reported here suggest that the availability hypothesis (Harris et al., 1991; Johnson & Harris, 1994) and the pretence continuation account (Golomb & Galasso, 1995) may not be competing explanations for children’s behaviour, but instead may be complementary explanations for the behaviour of quite separable groups of children. Sceptical children may be those whose behaviour is best explained in terms of pretence continuation, while credulous children’s behaviour might best be explained in terms of the effects of increased cognitive availability.

References


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