INTRODUCTION

Several of the major accounts of how children develop an understanding of the mind assign some sort of special role to pretence. For example, in Harris's simulation account (1991; this volume), the child learns about other people's mental states by using a capacity that is also exercised in pretend play: The capacity to simulate nonexistent situations. In Leslie's (1987; 1988) computational model, the same cognitive architecture that is used in pretend play is also used in understanding others' mental states. Ferner, Baker, and Hutton (this volume) maintain that pretence and belief understanding arise from a single concept, which they term "prelief." Others (Flavell, 1988; Fodor, 1992; Forgson & Gopnik, 1988) have written that children have an early understanding of mental representation in the domain of pretence. (Flavell has since retracted this claim.)

Some recent research supports the idea that pretence and understanding the mind might be linked. These reports indicate that children who engage in more joint pretend play (Jenkins & Astington, 1993) or role enactment (Dunn, 1993), or who have a higher fantasy predisposition (Taylor, Gerow, & Carlson, 1993) perform at a higher level than do other children on theory of mind tasks.

In my recent work I have set out to explore just what the relationship between understanding the mind and pretence might be (Lillard, 1991; 1993a; 1993b). In this chapter I elaborate on what is involved in the mental
state of pretence, and hence what a child must know about pretence in order to be said to truly understand it. I then discuss research pertinent to this understanding, focusing in particular on others’ reports concerning children’s ability to maintain a real–pretend boundary, and on two of my recent studies of children’s understanding of the mental representations underlying pretence. I conclude by describing current and planned research investigating other aspects of children’s understanding of pretence.

DEFINING PRETENCE

What exactly is involved in pretence? Pretence involves stretching one “reality” over another, or (Austin, 1979, p. 260) holding “one thing in front of another in order to protect or conceal or disguise it.” There are six features that could be considered necessary for pretence. These features are described next, followed by an example illustrating each.

First, in an act of pretence there is always a pretender—an animate, mindful being who does the pretending. Lamps, trees, and clumps of soil do not pretend. Second, there must be some real situation with which the pretence contrasts. A minor technicality here is that the pretence might not actually differ from reality, but the pretender generally must think it does. One would not pretend George was at the door if one knew he really was at the door. However, lacking the knowledge that he was truly there, one might pretend he was. (A bizarre coincidence would then be brought to light when one opened the door!) A further technicality regarding this second feature is that at some points the pretence and the reality might coincide, and (unlike the case mentioned as a first technicality) the pretender might be fully aware of their coinciding. Leslie (1987) pointed out that a child can pretend a cup is full of water, and then pour the pretend water out, at which point we would say the child is pretending the empty cup is empty. Note, however, that in this example the cup is empty in contrast to its prior state of being full. The pretend-empty-cup exists on a different plane to the real one, and it has an independent history and network of associations (to tea, for example). In sum, although at times a given element of the pretence world might happen to coincide with the real world, the elements do exist on two different planes—a pretence plane and a real plane—and in this sense they are distinctly different elements. These technicalities aside, in general, pretence does not match reality.

The third defining feature of pretence is mental representation. The pretender holds a mental representation of the pretence scenario in his or her mind. For example, the pretender mentally represents tea in the empty cup, then tea spilling from the cup, and then the consequences of its having spilled. The fourth feature of pretence is that the pretence representation is projected onto the reality, such that they exist within the same space and time. One pretends that one thing is another, or that one situation is another situation. Sometimes, of course, the reality is that there is nothing there. These are cases of imaginary entities pretence.

This projection of the pretence representation onto reality implies the fifth and sixth features, which also concern the pretender’s mental state. The fifth feature is awareness. The pretender is aware of the reality, the representation, and the fact that the representation is projected onto the reality. Without such awareness, one would merely be mistaken, rather than pretending. Note that one might not necessarily be aware of the representation as a representation (Perner, 1991). A girl who is pretending a block is a cookie probably sees herself as simply play eating a pretend cookie, and does not focus on the mental representation as such. However, she is aware that she is dealing with a pretend cookie, and hence is aware of the pretence representation (“cookie”) even if she is not aware of it as a representation. The sixth feature of pretence is intention. Pretence involves intention because the projection of the pretence representation onto reality is done on purpose. The pretender tries to enact the pretence scenario, or tries to see and treat the real object as the pretend one. In contrast, when a patient in psychoanalysis unintentionally projects his mental representation of his mother onto the analyst, we do not say he is pretending the analyst is his mother. Pretence involves conscious, intended projections of mentally represented scenarios onto real ones.

As an example, take a boy pretending that a stick is a horse. The boy is of course the pretender, and the reality is the stick. The boy represents a horse, rather than a stick (although he still represents a stick at some level). He represents the horse right where the stick is, in fact projecting the horse representation on to the stick. The top of the stick is represented as the horse’s head, the bottom as the legs, and so on. In addition, the pretender is aware of several aspects of the process: He knows the item is a stick (or at the very least he knows that it is not a horse), he knows what a horse is, and he knows that he is conceptualising the stick as a horse. If he were not aware of all this we would simply say he was mistaken about sticks or horses or both. Finally, the boy is projecting the horse representation onto the stick intentionally.

These six features are necessary to pretence. However, there are two other features that frequently accompany pretence, particularly when pretence is performed for young children. These could be said to be characteristic of pretence, in Keil’s (1989) sense. The first of these is a nonserious emotional tone. Although pretence can be serious business and sometimes seems truly to frighten children, it is often a silly, fun activity. How exactly this “emotional tone” is conveyed is uncertain, but facial expression and vocal intonation (see Dias & Harris, 1990) seem to be likely candidates. The second characteristic feature is activity. (Throughout this discussion, activity
is used to denote corporal and not mental activity.) Informal interviews suggest that adults vary in their estimation of whether pretending requires activity (but see Fein, 1981). Whereas some adults feel that pretending always involves bodily movement, others think that even immobile daydreaming is a kind of pretence. In the present analysis, the action component of pretence is one of potentiality: One does not have to move, but were one to move, one would do so in accord with the pretence. However, there are two cases in which bodily activity is central to pretence. First, pretending to perform an action requires some sort of movement to mime the action that one is pretending to perform. It is for this reason, as Austin (1979) points out, that one cannot pretend to bend one’s trunk. The only way to mime such an action would be to do it. The second case is that of pretending for an audience (as in deception or play-acting). Such pretence requires an external manifestation of what is being pretended. The content of the pretence must be communicated, be it via actions, static appearances, or a Greek chorus. But aside from these two special cases, one can pretend without any action or other externally readable manifestation of what is being pretended.

To summarise, pretence entails six defining features: (1) a pretender, (2) a reality, and (3) a mental representation that is (4) projected onto reality, with (5) awareness and (6) intention on the part of that pretender. Pretence is also linked with two commonly co-occurring features: a non-serious emotional tone and action. This analysis of pretence points out several “developables” in children’s understanding of the mental state of pretence. In the following discussion I address three of these. First, I review the literature on children’s understanding of the fact that the real situation is not the represented one, and children’s ability to negotiate what is often referred to as the “real-pretend boundary.” Next, I present two experiments addressing children’s understanding of the fact that mental representation undergirds pretence. The second of these experiments also touches on the fourth feature: That the pretence representation is project onto reality. Finally I discuss other possible developments in understanding the mental state of pretence.

THE REAL-PRETEND BOUNDARY

Lateson (1955/1972, p. 180), in writing about play in animals, discussed the paradox inherent in pretend play: “Expanded, the statement ‘This is play’ looks something like this: ‘These actions in which we now engage do not denote what those actions for which they stand would denote’ (emphasis is).” The word “not” is at the crux: The behaviour is not serious, the playful nip is not a bite, and the real object is not the pretend object. To be truly engaged in pretence, the pretender must be aware of this paradox. For example, if one is trying to eat a block because one believes it’s a cookie, then one is not pretending; rather, one is mistaken. On the other hand, if one enacts the same eating behaviour knowing full well that what one is acting on is in fact a block, then one is pretending. To be truly pretending, one must grasp the situation on two levels: both as the real situation (the block) and as the pretend situation (the cookie).

Furthermore, the real and pretend situations are kept distinct in pretence. There are two clearly separate worlds, one layered over and projected onto the other. The pretend world is not expected to seep into the real world (e.g. one does not expect the block to become a real cookie in real life). Nor is the real world expected to adopt features of the pretend one (e.g. when one buys a bag of blocks, one does not expect it to contain cookies). Keeping these two worlds separate is referred to as maintaining the real-pretend boundary, and such maintenance is essential to pretence. If the pretend world and the real world are not clearly differentiated, the paradox is not understood, and the pretender is not actually pretending. Likewise, if the two worlds were not kept separate by an outside observer then that observer would not have a clear understanding of the fact that the pretend was engaged in pretence. Many developmental psychologists believe that young children do not maintain a solid real-pretend boundary. Bretherton, for example (1989, p. 390), has asserted that the toddler’s boundary “tends to be diffuse.” If this is true, then children do not really understand pretending. Pretending entails knowingly projecting a pretence representation that is thought to be different from reality onto that reality.

There are three ways in which the real-pretend barrier could be lacking. One is that the barrier does not exist, and children assume that the pretend world and the real world are one. This does not seem likely, for two reasons. One reason that it does not seem likely is that if children had no awareness of the separateness of real and pretend worlds, then they should not issue the metacommunicative signs of pretence (such as “knowing” smiles and exaggerated gestures) (Bateson, 1955/1972; Bretherton, 1984a; 1984b; Garvey, 1990) more frequently in pretend situations than in other situations. Although the exact frequency with which children emit these signs in various situations has not been studied, they do seem to know to produce them in pretend situations as early as 18 months (Piaget, 1962; see also Verba, 1993), and they do not seem to emit them erroneously at inappropriate moments.

A second reason to expect that children have at least a basic understanding of the real-pretend boundary is that if they did not, then their understanding of the real world would be abused by pretence (Leslie, 1987). For example, a child who watched an adult pretend a banana was a telephone would become confused about the true properties or functions of bananas. Although such reality confusion does appear to occur with
fantasies that parents want children to believe are real, like Santa Claus, it does not appear to happen in other cases, when parents are not trying to dupe their children. The fact that children do not seem to have great confusion about reality after every instance in which it has been supplanted by pretence suggests that young children have some understanding of a real-pretend boundary.

There is some experimental support for a basic awareness of the separateness of the real and pretend worlds. For example, Wellman and Estes (1986) showed that children differentiate real and pretend entities in that children understand that only real entities can be acted on physically. Wellman and Estes presented children with two pictures, one of a boy whom they described as having a cookie, and another of a boy whom they described as pretending he had a cookie. Children were asked questions like which boy could touch the cookie and which boy could eat the cookie. Even three-year-olds differentiated between the two boys, apparently understanding that real but not imagined objects can be manipulated physically (see also Estes, Wellman, & Woolley, 1989). Furthermore, Harris and his colleagues (1991) have shown that three-year-olds can distinguish reality from fantasy even when asked to imagine a monster that is chasing them, in that they know that the monster is not real, and that others cannot see the monster. Finally, Morison and Gardner (1978) found kindergarteners were correct 70% of the time on tasks requiring them to sort pictures of real versus fantasy characters (such as dogs versus mermaids). These studies all indicate that young children have the ability to distinguish real entities from pretend ones, and thereby imply that by three or four years of age children do not completely lack a real-pretend boundary.

The second way that the real-pretend boundary might be diffuse is that the boundary might be generally present but penetrable, like a semi-permeable membrane (Kuersten, 1991, expresses a similar idea). Certain real-world features could seep across the membrane into the pretend world and/or vice-versa. Regarding the first option, real life certainly does surface in the pretend world. Children’s real-world knowledge (scripts, language, and so on) is often the basis for their play (see Bretherton, 1984a; Nelson & Seldman, 1984b). However, use of real-world knowledge does not necessarily indicate a lack of boundary; it could merely reflect that knowledge from one domain is applied in another domain. As an example of this transfer, Bretherton and her colleagues have found that securely attached children differ from insecurely attached children in how they represent family relations in doll play (Bretherton, Prentiss, & Ridgeway, 1990; Bretherton, Ridgeway, & Cassidy, 1990). Similarly, Schwartzman (1978) found that more popular children tend to take higher status positions in pretend play than do less popular children, indicating that the social hierarchy children establish outside of the play frame is reflected within it as well. Although this is very interesting in itself, and provides experimental validation for clinical psychologists’ use of play to reveal children’s representations of the world (Erikson, 1950; Freud, 1959; Pellegr, 1952), it only demonstrates that children represent relations in play as they represent them in real life, which is how they know them to be. It is natural that play reflects children’s psychological structures, since those very structures create the play. The fact that pretend play reflects real-world knowledge speaks only of the fact that it is a subset of children’s behavior, not that children do not differentiate what is real from what is pretend. Therefore real life seeping into pretend play is not necessarily a concern for the real-pretend boundary.

The reverse of this sort of real-pretend boundary breakdown is that pretend-world features could seep across the semi-permeable membrane into the real world. If this were the case, then children, although operating in the real world, might expect pretend-world features to surface. For example, they might expect that if, in the pretend world, a block was a cookie, then in real life that which is called a “cookie” should actually be a block. Although it has not been directly studied, the available reports suggest no such confusion.

Hence it does not appear that children routinely suffer from the first two forms of real-pretend boundary breakdown—a general inability to discriminate the real and the pretend, and having pretend-world elements seep into the real world. A third type of real-pretend boundary breakdown is confusion about the reality status of particular real- or pretend-world elements. One might, for example, be confused as to whether the real was actually pretend, or as to whether the pretend was actually real.

Wondering whether what is real is actually pretend occurs when one suspects (but is not actually faced with) deception. One might wonder whether a child was just pretending to be hurt; if the child truly was hurt, then one would have been wondering if what was truly real pain was actually feigned. A recent study by Samuels and Taylor (1992) provides evidence relevant to whether children sometimes think that what is real is actually pretend. They showed some children scary pictures and showed others emotionally neutral pictures; for each group, half of the pictures depicted impossible (fantasy) events and half depicted possible events. Children were asked whether the event in the picture could really happen. The group that saw pictures of frightening events performed worse than the group that saw neutral events, because they claimed that real and scary events (the example given is a policeman talking to a child) could not really happen. In other words, they claimed what was real was actually pretence. As the authors suggest, such claims might be due to a self-protection mechanism, whereby denial helps the child to mitigate negative feelings because it involves disavowing the reality of their source (see also Golomb & Kuersten, 1992). In this sense, then, children might suffer from a
real–pretend boundary breakdown, in that they misjudge the real as pretend when the real event is frightening. Note that it is possible in such cases that the boundary is still firmly in place, and that children are simply moving certain events, which they find difficult to cope with in the real world, over to the pretence side of the boundary. The extent to which this really constitutes a loss of the real–pretend boundary is therefore questionable. (For further discussion of denial and self-deception, see Mitchell, 1993.)

Samuels and Taylor’s (1992) study indicates that in nonemotional situations children do not have trouble differentiating between real and pretend. This finding is corroborated by Johnson and Harris (in press). They asked children to judge whether certain events (like having a toy move across the floor by itself or by being transferred by a person’s hand) were performed by a magic fairy or a real boy (Experiment 2). Three-year-olds were quite good at making these judgements, claiming that the fairy was behind the magical events but that the real boy was responsible for the real events. In other words, children appeared to see the real event as something that would be done by a real person, and hence they did not mistake the real for pretend. In sum, it appears that children do not have a general problem with mistaking the real for pretend, although they do sometimes deny the reality status of frightening events.

The other way this type of breakdown in the real–pretend boundary could be manifested is that, while in the pretend world, children could become confused and think that what they are pretending is in fact really happening. This species of breakdown has been the focus of several reports in the literature. These reports can be divided into emotional and nonemotional events; for each, there are both anecdotal and experimental reports of children thinking that what is being pretended is in fact really happening.

Two anecdotal reports from a situation that does not appear to be emotionally charged are sometimes cited as evidence for an insufficient real–pretend boundary. Both are reported by DeLoache and Piazzella (1985), and come from their observations of children playing tea with their mothers. They noted that a 15-month-old peeked into a cup of pretend tea as if to look for real tea, and that a 30-month-old apparently looked for pretend spilled tea to wipe up. In these cases, however, the children gave no definitive evidence (like verbal report of their intentions) of losing the real–pretend boundary. The first child might have been looking to see if anything was in the cup, or might have been looking there as part of the pretence, and the second child might have been pretending he did not know where the pretend spilled tea was. These two nonemotional observations are not clearly interpretable.

Better evidence on this issue comes from experimental work involving nonemotional situations. Johnson and Harris (in press, Experiment 3) asked 3-, 5-, and 7-year-olds to imagine that either an ice cream cone or a fairy was in one box, and not to imagine anything about a second box. After the child was led through an imagination procedure, the experimenter asked, “Is there really some ice cream in the box, or are you just pretending that there’s some ice cream?” The experimenter then observed whether the children, when left alone in the room with the boxes, peeked inside the boxes, and if so, how long they took them to do so for each box. After two minutes the experimenter returned, and asked children whether they had peeked, and whether they had thought the imagined object might really have been inside the box.

There were two main findings relevant to the question of whether children lose the real–pretend boundary in such circumstances and think the pretence (or imagined) event is real. First, in response to the initial question, very few of the children (16–19%) incorrectly stated that the imagined object was truly inside. This might suggest some confusion among a minority of children. Woolley and Wellman (1993), using a similar method, found about this percentage of such errors (they term them “true fiction errors”) in older 3-year-olds but more of such errors (57%) among younger 3-year-olds. Perhaps this higher failure rate was due to their test question not including the alternative “just pretending,” or perhaps it was due to asking the reality question after a series of imagination questions. In later work Woolley (1993, Study 2) asked the reality question first and children did not make this error.

The second finding of interest in Johnson and Harris’s (in press) study was that children peeked into the imagined-about box sooner and more frequently than they peeked into the other box. This effect was especially marked in 3-year-olds. Johnson and Harris suggest that the imagined event could be more cognitively available for some children, and that availability, coupled with a tendency to embrace magical thinking, might lead children to consider that the imagined entity might somehow have got into the box. Another possibility is that children who are generally more curious are especially curious about things that they imagine about, and their curiosity leads them to explore these things. Having explored the boxes, children then answered that they thought the pretend object might be in the box in order to provide an explanation for why they had opened the box. In either case, children do not seem to have lost the real–pretend boundary in these nonemotional situations.

There are several emotional anecdotal reports. Scarlett and Wolf (1979) describe how, when an adult animated a small toy alligator in a threatening manner, a child retreated to her mother’s lap, apparently afraid. Garvey and Berndt (1975) mention a child who refused to pretend that a monster is coming, reasoning, “Because it’s too scary, that’s why.” Fein (1985) tells of a child chasing her father with a pretend knife. When a co-player
commented, “She picked up a knife. Was trying to kill her dad,” the child stopped short and said, “No, I didn’t. I just made a play one,” as if concerned that others might take the pretend world for real. (This example could also be taken as counter-evidence for the claim, since it explicitly shows awareness of the boundary.)

In addition to these anecdotal reports, there are also experimental emotional examples of an apparent breakdown in the real--pretend boundary. Harris and his colleagues (Harris et al., 1991) found that although 4- to 6-year-olds said that pretend entities, like monsters, were not real, they acted as though they were. For example, they were more apt to approach a box that they had pretended contained a puppy than a box that they had pretended contained a monster. These reports suggest that in emotional situations young children are perhaps not entirely confident that what is being pretended is quarantined from the real world when the pretence is frightening.

There are several possible explanations for the apparent confusion. Children have about the real--pretend boundary in emotional situations. Taylor (personal communication, September, 1990; see also Harris et al., 1991) has proposed that children may use their emotions as a cue to reality. When they feel fear, they may assume there really is something around of which to be fearful. Although not exactly analogous, this is reminiscent of Schacter and Singer’s (1962) claim that emotional arousal leads to cognitive assessment. In their case, the assessment merely concerned how to label the arousal (fear, love, etc.), but also had implications for what caused the arousal. If we assume the child has labelled the emotion as fear, then the child must access what is causing the fear, and the obvious choice is the monster.

Alternatively, Harris et al. (1991) suggested that children know the difference between pretence and reality, but they think that pretend entities can “transmigrate” from the pretend world into the real one, perhaps in the manner of Casper the Friendly Ghost. However, the follow-up study by Johnson and Harris (in press, Experiment 3) provided little evidence for such confusion.

Another possibility hinges on the fact that most of these episodes of apparent real--pretend boundary breakdown occur in emotionally charged situations. Bretherton (1989) and Bateson (1955/1972) point out that even adults do not completely cordon off fantasy from reality, especially when the fantasy arouses emotion, in that we really feel the emotion that the fictional situation elicited. For example, we feel fear in scary movies, despite being absolutely certain that they are just movies. These effects can even persist for some time. Watching the movie Psycho, in which a person is killed in a shower, can leave one feeling a bit nervous the next few times one is in a shower. What we see in the fictional world therefore influences what we expect in the real world. However, this does not mean that we think that the fictional event really happened in real life. A study by Rozin, Millman, and Nemeroff (1986) with adult subjects demonstrates how, even for adults, what we clearly know to be true about something does not always dictate our behaviour towards it. Subjects were shown two bottles, and sugar was poured into each. Then subjects were told to place a “sodium cyanide” label on one bottle and a “sugar” label on the other. Later, despite knowing that they had made an arbitrary choice of bottles, and that both really contained the same thing, subjects were reluctant to eat from the bottle labelled “sodium cyanide.” Hence the presence of a label had similar effects as imagining (Woolley & Wellman, 1993, make the same point. See also Lillard, 1990). We see the same phenomena after strong dreams: If we dream something happened, we sometimes feel like it happened, and those feelings can drive our behaviour, even though we know the dream was not real. The cause of one’s behaviour in such cases might in part be due to increased incognitiveness (Johnson & Harris, in press), but the more important cause might be the emotional aftermath of the imagined situation.

In sum, knowledge about what is real does not always insulate the emotional system from the power of suggestion (see Walton, 1990, for a discussion of emotional participation in make-believe). However, adults feeling fearful, and occasionally desiring to leave the theatre, do not constitute their lack of a reality--fiction boundary. Just as some children prefer not to play monster because it’s too scary, some adults prefer to avoid horror films. Reports of young children having difficulty with the real--pretend boundary are rare. Most of the examples are anecdotal, and may be the exceptions rather than the rule. Most of the experimental examples were collected in emotionally charged situations, in which the child’s behaviour may stem from the fear itself rather than from uncertainty about reality. Indeed, children must be fairly good at maintaining a real--pretend boundary or they would be sorely confused about real-world relations (Leslie, 1987). Every instance of watching an adult pretend an x was a y would result in a misrepresentation of x’s identity and/or function. Hence, at least by three years of age children appear to have a good grasp of the fact that the pretend world is separate and different from the real world, and that the pretend representation is different from reality. Emotional arousal appears to throw this judgement off somewhat, but this is an apparent rather than a real problem, possibly caused by children’s desire to exit the fear-evoking situation.

DiLalla and Watson (1988) maintain that another form of breakdown of the real-pretend boundary occurs when children slip out of and abandon a given pretence. However, this could also simply demonstrate lack of interest in pretence. In any case, a follow-up study by Golomb and Kuersten (1992), using a modified procedure, found better performance among three-year-olds on a task very similar to that used by DiLalla and Watson (1980).
UNDERSTANDING PRETENCE REPRESENTATIONS

The preceding section concerned children's understanding that in pretence there is a pretend situation contrasting with, and clearly separate from, the real situation. This section deals with children's understanding of another of the defining features of pretend described earlier: When do children understand that pretence is based on mental representation? Pretence is of special interest to theorists in this area because of its similarity to false belief. Pretence is similar to false belief in that actions stemming from both mental states (Harris & Kavanaugh, 1993, p. 1) "are directed at situations that do not actually obtain." In both cases, someone is mentally representing something that is in fact not true. The primary means for probing children's understanding of false belief is the now classic false belief task, originally reported by Wimmer and Perner (1983). For example, in the deceptive box version of a false belief task, children are shown a band-aid box that contains a cow, and are asked what someone who has never seen inside the box before would think was inside. Children under age four tend to fail such tasks, by persistently claiming that anyone and everyone would think the box contained a cow even if they had never looked inside the box. Young children's failing such tasks is thought to be caused by their not understanding that the mind represents the world (Flavell, Green, & Flavell, 1990; Ferguson & Gopnik, 1988; Perner, 1991). To understand mental representation is to understand that the mind uses internal symbols that stand for and yet are largely independently of objects, events, and situations in the real world. The child needs to understand that a person would mentally represent the band-aid box as containing band-aids, even though it actually contains a cow. Young children's failure to understand mental representation is thought to explain their difficulty not only on false belief tasks but on several other types of tasks as well, such as appearance-reality, visual perspective-taking, and conceptual perspective-taking tasks. These tasks will involve understanding that the same object or situation can be construed or mentally represented in more than one way (Flavell, 1988; Flavell et al., 1990; Gopnik & Astington, 1988; Perner, 1991; Taylor, 1988).

However, pretend play seems to be in strict opposition to this hypothesis, since in pretence one routinely bears two different representations of a situation in mind—the real situation, and the pretend one (see Lillard, 1993b, for discussion). The fact that children pretend, and appear to understand pretence in others, as early as 18 months of age, would seem to indicate that they do understand mental representation at least in pretence contexts (Flavell, 1988; Ferguson, 1989; Siegler, 1991). As suggestive evidence for the claim that pretence and false belief understanding are supported by a single ability, it has been noted that children with autism both tend to fail false belief tasks and do not engage in spontaneous pretend play (Baron-Cohen, 1987, 1991; Leslie, 1991).

In several recent experiments I have addressed the question of whether young children have an advanced understanding of mental representation as part of their conceptualisation of pretence. Two of these experiments (Lillard, 1993a, Experiments 3 and 4) are discussed next. Both experiments pit the possibility that young children understand that pretence requires mental representation against the alternative possibility that children have a simpler, nonrepresentational conceptualisation of pretence as action.

One experiment tested this indirectly, by presenting children with protagonists who did not know about and therefore could not mentally represent some crucial aspect of an animal. Four- and five-year-olds were shown a troll and were told, for example, "This is Moe, and he's from the Land of the Trolls. Moe's hopping around, kind of like a rabbit hops. Moe doesn't know that rabbits hop like that; he doesn't know anything about rabbits. But he is hopping like a rabbit." To ensure that children had correctly heard the premises, they were asked two control questions: "Does he know that rabbits hop?" and "Is he hopping like a rabbit?" Then children were asked, "Would you say he's pretending to be a rabbit, or he's not pretending to be a rabbit?" In effect, then, children were asked whether mental representation or action was the more important factor to consider in judging whether a character was engaging in pretence. Each child received four such tasks, and after the fourth they were administered a standard false belief task. For this task, they were shown a band-aid box and were asked, "Do you know what's in here?" After they responded, "Band-aids," the experimenter said, "Let's look," and opened the box, which contained a cow. She showed the cow to the child, exclaiming, "Hey—there's a cow in here! Imagine that, a band-aid box with a cow inside!" Then the box was closed and children were asked, "If [a child in their class] came in here right now and saw this box, all closed up like this, what would she [or he] think was inside here?" The purpose of including this task was to ensure that the children were normal for their age with regard to a benchmark "theory of mind" test.

Most children answered all four pretend questions the same way: of 16 4-year-olds, 9 always said the troll was pretending, and 3 always said he was not pretending. Of 16 5-year-olds, 4 always said the troll was pretending, and 6 always said he was not pretending. If we set passing criteria at 3 tasks, only 37% of the 4-year-olds (6 of the 16) passed the pretend tasks; 5-year-olds performed somewhat better, with 68% (11 of the 16) passing (see Table 10.1). In other words, 4-year-olds tended to claim that even though Moe did not even know that rabbits hop, he was pretending to be a rabbit when he was hopping like one. This suggests that 4-year-olds might have a low-level,
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<td>19(3)</td>
</tr>
<tr>
<td>Pass</td>
<td>6(1)</td>
</tr>
<tr>
<td>Total</td>
<td>25(4)</td>
</tr>
</tbody>
</table>

A nonrepresentational understanding of pretence as action. It seems that 5-year-olds might be beginning to grasp that, in order to pretend to be a rabbit by hopping, one would have to know that rabbits hop. However, the 5-year-olds' level of performance was not significantly higher than that of the 4-year-olds on the pretend tasks, and so the possibility of a developmental advance occurring between these ages is speculative. The children were not simply delayed with regard to mental state understanding, because 13 of the 16 4-year-olds and 12 of the 16 5-year-olds passed the false belief task. Indeed, significantly more children \((n=10)\) failed the pretend tasks but passed the false belief task than showed the reverse pattern \((n=2, P < 0.05, \text{ binomial distribution})\). At the very least, this result indicates that this sample of children was not simply slow to acquire theory-of-mind-related knowledge. It might also indicate that children understand mental representation in the domain of belief even earlier than they understand it in the domain of pretence.

These results were pursued further in a second experiment. This experiment addressed the possibility that children might have been confused by the troll (perhaps trolls are always pretending), as well as the possibility that they might be prone to answer any question about pretence in the affirmative. It also attempted more directly to address the contention that the four-year-olds' poor performance in the first experiment was due to their not understanding pretence as based on mental representation. In a sense, the causal chain in the first experiment went from knowledge (knowing that rabbits hop) to mental representation (being able to represent a hopping rabbit) to pretence (projecting a hopping-rabbit representation onto one's own hopping). Perhaps children's confusion stemmed not from failing to understand the link between the latter two components (mental representation and pretence) but rather from a difficulty with the link between the former two (knowledge about rabbit behaviour and having a mental representation of a hopping rabbit). To circumvent this problem, in the second experiment mental representational information was more directly specified. Four-year-olds were presented with photographs of other children, who were variously described as thinking (or not thinking) about being a rabbit, and hopping (or not hopping) like a rabbit. They were asked to tell Wolfie, a dog puppet who was particularly ignorant about pretending, if the children were pretending or not. Along with providing a more direct test of understanding the mental representational component of pretence than was provided by the first experiment, this method also avoided the problem of children possibly answering incorrectly in the earlier experiment because they were swayed by the presence of a salient action (since in this experiment still photographs of children's faces were used).

Two training trials were presented in which the child in the photo was described either as both thinking about being a lion and growling like a lion, and therefore as pretending to be a lion, or as not thinking about being a monkey and not swinging like a monkey, and therefore as not pretending to be a monkey. Following training, 12 test trials were presented. Four of these were controls of the type used in training, in which the child was described as both thinking about being and hopping like a rabbit (for example) or as not thinking about being and not hopping like a rabbit. Four were test trials, in which the child was described as hopping like a rabbit, but not thinking about being a rabbit. The remaining trials were ambiguous with regard to pretence: the child was thinking about being a rabbit, but was not hopping like one. As in the first experiment, children were consistent in their responses to a given type of task: 19 of the 24 children responded in the same way to all 4 test tasks; the remaining 5 responded in the same way to 3 of the 4. In addition, most of those responses indicated a nonrepresentational understanding of pretence: of the 24 4-year-olds, 15 (or 63%) claimed on at least 3 or 4 trials that the protagonist was pretending to be an x when the action was consistent with that pretence but the mental state was not; only 9 made the opposite claim, that the child was not pretending in such circumstances (see Table 10.2).

Because all the children passed the control trials, we know that they were not simply biased to answer yes to any question concerning pretence. In fact, nine children who claimed the protagonist was pretending on all four test trials also claimed the protagonist was not pretending on all four ambiguous trials. In other words, they claimed the protagonist was pretending whenever and only when an action was designed, regardless of the protagonist's mental state. Only two children, on the other hand, relied solely on mental state information, and claimed that the protagonist was pretending whenever and only when the mental state was compatible with pretence, regardless of action.
TABLE 10.2
Experiment 2: Percentages (and Ns) of 4-year-olds Claiming
Protagonist is Pretending or Not Pretending for 4 Conditions in
Experiment

<table>
<thead>
<tr>
<th>Condition</th>
<th>Child's Judgement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretending</td>
</tr>
<tr>
<td></td>
<td>100(24)</td>
</tr>
<tr>
<td>+</td>
<td>63(15)</td>
</tr>
<tr>
<td>+</td>
<td>25(6)</td>
</tr>
<tr>
<td>-</td>
<td>0(0)</td>
</tr>
</tbody>
</table>

These experiments indicate that children do not understand that pretending is based on mental representation, and they suggest instead that children’s earliest understanding of pretense might be as acting-as-if. This result runs counter to the notion that the mental representational underpinning of pretense is understood early. It is surprising because it seems reasonable to assume that children’s understanding of pretense does entail understanding mental representation—that in watching someone pretend a sand pie was a cherry pie, children understand the person to be mentally representing cherry pie. Another reason it is surprising is that pretense seems to be an area of early proficiency. For example, children do better on syllogistic reasoning tasks when they are put in a pretend context (Dias & Harris, 1990). And finally, it is surprising because it has been thought, even by those who believe that children under four years of age do not understand representation, that once representation is understood in the domain of belief it should be understood across the board (see Zaitchik, 1990). In contrast, even children who passed the false belief task tended to fail the pretend tasks in the first experiment; had such a task been administered in the second experiment, those four-year-olds probably would have passed it as well, since four-year-olds generally do pass such tasks (see also Lillard, 1993a, Experiments 1 and 2).

These studies suggest that there is a décalage in understanding mental representation, such that children understand it with regard to some mental states before others. Children might learn gradually about mental representation, first in domains that they really could not otherwise understand, like false belief. When children first learn about pretense, they do not yet understand mental representation, and therefore they understand it nonrepresentationally, as acting-as-if. Because adults usually act out their pretense when they pretend with young children, this understanding is perfectly useful and does not cause any disequilibrium.

Around age four, children begin to understand mental representation. However, because they have a useful understanding of pretense as acting-as-if, they do not revise their concept of pretense to include mental representation for a year or more.

A pertinent question to raise here is what might motivate children’s understanding of pretense to change from an activity-based understanding to a mental representational one. Fisher, Gleitman, and Gleitman (1991) recently put forth the hypothesis that semantic advances may be led by syntactic insights (see also Landau & Gleitman, 1985). They present evidence of some parallels between structural and semantic properties of verbs, and posit that syntax might sometimes bootstrap children’s semantics. Most verbs pertaining to cognition and perception, for example, are used in “sentence complement frames”: “He ______ that ______.” Extrapolating from their hypothesis, one might say that during the fourth and fifth years children learn that mental verbs have a certain syntax, and, because pretend shares this syntax, children eventually come to view it as a mental verb rather than as an action verb. This insight would cause them to revise their concept of pretense to include mental representation.

OTHER STEPS IN ACHIEVING AN UNDERSTANDING OF PRETENCE

The foregoing discussion concerned three aspects of preschool children’s understanding of pretense. First, the ability to negotiate the real–pretend boundary implies understanding that pretense involves some reality that is different from the pretense (the second component in the definition given earlier). The experiments addressed two other components of understanding pretense. They both addressed the third component: that pretense is based on mental representation. To some degree the second experiment also addressed the fourth feature: that the mental representation is intentionally projected onto reality. One must be thinking about being a rabbit and about how to make one’s own motions match one’s idea of how rabbits hop in order to pretend to be a rabbit by hopping. The experiments indicate that preschoolers do not understand these two features of pretense. There is certainly much more to be understood about how and when children understand pretense—more concerning these features as well as more concerning several aspects of the other three necessary features. Regarding these three features, when do children first identify some acts as pretense acts rather than real ones? When do they first construe an adult mimicking eating as pretending to eat? And when do children understand that mental representation is not only necessary to pretense but that it is also sufficient, such that one can pretend in the absence of any actions at all? In addition,
there are also several unresolved questions concerning the other three features of pretence discussed earlier.

One such question is when children understand that pretence necessarily involves a pretend— an animate, mindful being who puts up the pretence. Pretence is the province of animates. Trees in the dark are not pretending to be monsters, and chairs with sheets thrown over them are not pretending to be ghosts. On the other hand, precisely what types of animates we might attribute pretence to is open to question. For example, is the plover pretending to have a broken wing when it leads predators away from it? Whether it is pretending hinges on what sort of mind one is willing to attribute to the plover (if any). Is the plover representing its wing as broken, or, at the other extreme, is it simply carrying out a behaviour that it is genetically programmed to carry out in the face of predators near its progeny? Is the cat who bats a spool of thread around pretending the spool is a mouse? Whether other species engage in pretence is uncertain (see Byrne & Whiten, 1991, and Mitchell, 1993, for discussion). Regardless, there is agreement that living human beings pretend, and that nonliving objects do not. The fact that pretence is something that only animals do, and that inanimates do not do, might be one of the first things young children understand about pretence. Since children seem to understand animacy fairly early (Gelman, Spelke, & Meck, 1983; Poulin-Dubois & Shultz, 1988), and begin to engage in pretence around 18 months of age, it seems they have the necessary information to understand that only animates pretend quite early. Alternatively, however, children might think of pretence in other ways. For example, they might first think of it as pure physical movement. For example, if pretending to be a log is the equivalent of the physical behaviour of rolling, then a pencil rolling down an incline would be thought of as pretending to be a log. Perhaps young children think of pretence as any external manifestation, so that a lamp with a sheet tossed over it would be thought of as pretending to be a ghost. Hence, a question for future research is when children understand that pretence is the province of animate, mindful beings.

Another question concerns components five and six of the features of pretence outlined earlier. When do children realise that people who are engaged in pretence are actively trying to enact the pretence—that they are aware of what they are doing, and that they are doing it intentionally? As stated earlier, pretence actions are in the absence of intention are not pretend. If I hop because the tarmac is burning my feet, I am certainly not pretending to be a rabbit. I must be hopping with the intention to hop like a rabbit.

Discussion of intention is often fraught with confusion because intention has several closely related but different meanings: Intentionality meaning “aboutness” (as used in the philosophy of mind literature, see Searle, 1983), intention as a plan (characterising the mind, in Bratman’s, 1987, terms), and intentionally in the sense of having done something on purpose (characterising an action, according to Bratman). Pretence entails intention in all three senses, but the focus here is on the latter two. Understanding pretence as an action requires that one understand mental representation, because the very nature of a plan is that it is a representation of some future state of affairs and how to bring it about. However, understanding pretence in the sense of doing something on purpose does not require understanding mental representation (see Astington, 1991). One can understand that Bill kicked the ball on purpose without seeing Bill as mentally representing himself kicking the ball before he kicked it. One can understand “on purpose” as having an attitude of conviction. One could think of these two species of intention in temporal terms, with the planning sense being “intention in the future” and the on purpose sense being “intention in the present” (see Bratman, 1987).

How does intention figure in pretence? Intention in the future or the planning sense is involved when a group of children decide play house, and they plan out what will happen, where the house is, and so on, prior to beginning the pretence. The plans are mental representations of the future state of affairs, and they drive the pretence. Intention in the present or on purpose sense is seen when the children actually enact those characters. For example, when a boy who is pretending to be the baby is crying, he does so on purpose, intentionally enacting the behaviours he associates with babies. He might not have explicitly planned to cry beforehand, but he does cry on purpose.

When do children understand that pretence involves intention? Because intention in the planning sense rests on understand mental representation, it is probably a later acquisition: The experiments described earlier indicate that the mental representation underpinnings of pretence (such as knowing and thinking about the pretend object) are not understood until at least the sixth year. But understanding intention as doing something on purpose might be acquired prior to understanding mental representation, and might be part of younger children’s conceptualisation of pretence.

Children appear to have an early nonrepresentational understanding of intention in the sense of doing something on purpose. Shultz (1980), for example, has shown that three-year-olds discriminate between intended and unintended actions. Children might also have an early grasp of the fact that pretence actions are done on purpose. There are several facets to such an understanding. First, if some other purpose for doing something has been specified, children might understand that the activity is not pretend. For example, if a girl is jumping up and down because she is trying to see inside a high window, children might understand that she is not pretending to be a kangaroo. Second, if someone is doing something inadvertently, children
might understand that the person is not pretending. For example, if someone accidentally trips, children might understand that the person was not pretending to have a limp. Third, since one cannot intend two contrary things at once (Bratman, 1987), children might understand early on that one who is pretending to be a rabbit is not simultaneously pretending to be a kangaroo. Fourth, children might understand that a change in intention accompanies a change in pretence or from pretence to not pretence. For example, a little girl wearing a tiger suit at a birthday party, who was earlier growling on all fours, and is later crying and asking to go home, is probably no longer pretending to be a tiger at the second point, even if she is still wearing the tiger suit. In order to be pretending, one must be purposefully evoking a certain situation.

A further issue regarding children's understanding of pretence is the extent to which children regard it as a mental state at all, as opposed physical behaviour. Although the experiments described earlier suggest they conceptualise it more as an action than as a mental representational state, there are several degrees of mentalness, in between these two poles, at which children might put pretence. For example, do young children categorise pretence with other mental states or with behaviours? Johnson and Wellman (1982) found that over the preschool years, children increasingly distinguish a category of mental processes that is distinct from overt behaviour in that children think the former but not the latter require a brain. By five years of age, most children understand that the brain is needed to think, dream, and remember, but they do not yet realise that the brain is needed to walk or to tell a story. Pretence is an unusual mental state in that, unlike thinking or remembering, it is frequently accompanied by actions. As stated earlier, children might at first equate pretending with external actions (and other manifestations) and not attend to the fact that it is a mental activity. Given that young children do not seem to understand that the brain is used for actions, but do seem to understand that it is used for mental processes, Johnson and Wellman's method applied to pretence could provide indirect evidence as to whether children conceptualise pretence as a mental state or as an activity. In ongoing work we are presenting three-to five-year-olds with pictures of other children who describe according to mental states or activities, for example, as thinking, pretending, or swimming. For each, we ask if a brain is needed for the activity. We are interested in whether children will cluster pretence with mental states or activities. If they cluster it with the mental states by claiming that all these states require a brain, this will suggest that they have at least some inkling that pretence is mental rather than purely physical. If this is the case, then in further work we plan to add propositions to the verbs (thinking about a fish, pretending to be a fish, swimming like a fish), to see whether children's judgements change under such circumstances. It might be that when children can easily envision an activity that would portray a pretence, they abandon whatever notion they might have of pretending as a mental process.

**SUMMARY**

This chapter began with a working definition of the mental state of pretence and then discussed children's understanding of several components of pretence. A review of literature on children's ability to negotiate the real-pretend boundary suggests that at least by about three years of age, most children in most circumstances appear to have a clear sense that reality and pretence are separate and different. In emotional situations, children's judgements on these issues can waver, but such uncertainty is better explained as their response to fright than as true confusion about reality. However, despite their apparent understanding that pretence and reality are different, children seem not to understand a crucial aspect of pretence until at least the sixth year: that pretence is based on mental representations. Rather, young children appear to conceptualise pretence as acting-as-if at least when actions and mental states are discrepant. Ongoing and future work will address several other aspects of the early understanding of pretence, such as its being the province of animates, being done on purpose, and belonging to a category of mental states rather than behaviours.

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