Pretend Play in Early Childhood: the Road Between Mentalism and Behaviorism

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Consideration of pretend play in early childhood has given rise to a lively debate about what playful behavior may tell us about children's cognitive development.[1] Simple acts of pretend play can already be observed in children that are less than two years old (see Piaget 1945/1962, Howes & Matheson 1992, Lillard 2002). The question thus arises as to how to account for pretend play in terms of the cognitive abilities that children possess at this early age. In response to this question, two radically different explanations have been proposed. Alan Leslie observes that two-year-olds already understand when others demonstrate a playful type of pretence, such as "filling a cup" by imaginarily holding a teapot over an empty cup. For Leslie, this means that children at this age already grasp the mental states expressed in such behavior, which implies a simple theory of mind and the capacity for basic meta-representational reasoning (Leslie 1987, 1988, 1994). The second, alternative explanation of the cognitive abilities that underlie playful behavior finds clear evidence for a theory of mind and meta-representational reasoning only when children begin to negotiate complex scripts for collective pretend play. Pretend play in younger children, according to this view, does not require such negotiation, and may therefore be just a form of 'acting *as if*' in the hypothetical scenarios that children imagine. "Behavioral" explanations of this kind have been proposed by (Lillard 1993, 1994, 1998, 2001), (Harris & Kavanaugh 1993), (Harris 1994), (Jarrold et. al. 1994), and (Nichols and Stich 2000).

One tacit assumption in the course of this debate has been that pretend play is something obscure. In pretend play, children do things that may strike one as abnormal and/or crazy, like using bananas as telephones or riding buses around the living room. Why would anyone act like this? If we can show that these activities have a straightforward explanation, then the role of pretend play in cognitive development will appear less obscure. On such a straightforward explanation, which I aim to provide here, pretend play helps children to gain

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[1] For a brief summary of the debate, see (Smith 2002).

confidence in doing things that they cannot adequately perform in "realistic," i.e. non-pretend situations. It does not, contra Leslie, provide evidence for the mentalist reasoning capacities of two-year-olds; nor does it reduce to playful behavior in which children substitute reality with imagination, as the behavioral theory suggests.

A middle road between mentalism and behaviorism has already been taken by Hannes Rakoczy, who attempts to proffer an interpretation of the data that is "richer than that offered by behaving-as-if theories but not as rich as that offered by Leslie's meta-representational theory." (Rakoczy et. al. 2004, 397).[2] In a similar vein, Josef Perner and Johannes Roessler have argued that children can understand the rationale of an action before they ascribe beliefs and desires to an agent (Perner 1994, Perner & Roessler 2010). Following this line of thought, I will show how this rationalization might work in the case of pretend play. Three points will be of central importance. First, I contend that pretend play consists of actions that are performed with non-deceptive intentions. Second, I argue that children have the ability to understand such non-deceptive intentions earlier than they can understand deceptive intentions. And third, I suggest a "default principle" that children apply in recognizing pretence in others. These three points provide a foundation for a theory of pretence that aims to escape the pitfalls of both mentalist and behavioral explanations. The most important task for such a theory will then be to explain the connection between pretend play and the role that meta-cognitive feelings play in the development of children's self-awareness.

1. Kinds of pretence

The attention that pretend play has received in recent literature on cognitive development tends to give the impression that pretence and pretend play are more-or-less identical. That impression, however, is misleading. Unlike pretend play, pretence rarely has anything to do with playing games. Pretence is an activity in which agents attempt to deceive others. We find evidence for this in linguistic usage when we say, for instance, that some students *pretend* to be ill when they are afraid to fail an examination, or when we say that guests *pretend* to enjoy an evening, while in fact finding it terribly boring. In such cases, 'to pretend' always means 'to give a false impression'. Since 'to give a false impression' does not necessarily entail that one party is actually deceived, what matters is the *intention* with which the pretender produces the deceptive impression. The student coughs and whines because he intends these

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[2] A different kind of 'middle position' is suggested by (Nielsen and Dissanayake 2000), suggesting that some but not all components of pretend play are dependent on metarepresentational cognition.

actions to convince—that is, deceive—his teacher into believing that he is really ill. Similarly, polite guests do their best to hide the fact that they are bored because they want their host to believe that they enjoy the evening. This kind of pretence might be well motivated, as in the latter case; but even this well-motivated case involves an intention to deceive.

From these standard cases of pretence, two other cases must be distinguished: first, there may be cases of pretence that occur without an agent having any intention to pretend; and second, there may be cases in which an agent has an intention to pretend but no intention to deceive.

The possibility of non-intentional or involuntary pretence arises mainly in connection with behavioral deception in animals. A well-known case is the piping plover, which feigns having a broken wing to distract predators from attacking its nest (see Ristau 1991). This case is generally considered to be one of pretence. But it may be misleading to attribute an *intention* to deceive to the plover since the plover may not have the goal to give a false impression. The plover's distracting behavior may be driven by a non-intentional mechanism whose function is to protect its offspring. I do not mean to suggest that deceptive behavior in animals is always or necessarily non-intentional. Even the piping plover may be an intentional deceiver, if one can show that his response exhibits the adaptability and flexibility that is characteristic of intentional activities. My point is simply that there is a distinction to be recognized; namely, that pretence can be of two kinds: intentional and non-intentional.

A very different case, again, is pretence that is intentional, but non-deceptive. Arguably, pretend play, as we know it from human behavior, falls into this category. Although playful pretence may also occur in other species, I leave that possibility aside, since it would complicate rather than clarify our present concerns. I also set aside mixed cases in which pretend play may overlap with deception. My concern here is with simple games played by young children that seem to be clear cases of a non-deceptive form of pretence. Take, for instance, a child playing a doctor's game with her mother, where the mother is a doctor and the child a patient. A child who knows how to play this game will behave just like a person who wants to deceive: she will cough, hold her belly, ask for medicine, etc. Her actions are clearly intentional, as is evident from the child's creativity in performing her appropriate role. But the child does *not* intend to deceive her mother. Indeed, that would be counter-productive; for if the child succeeded in deceiving her mother, the pretend game would end with her being put to bed with care and medicine.

Summing up, we can and should distinguish between different kinds of pretence along two dimensions: intentional and non-intentional cases, on the one hand; and deceptive and

non-deceptive cases, on the other. This gives us four possible cases of pretence, at least in principle. Since I here take playful pretence to be inherently intentional, however, I commit myself only to the three cases depicted in table 1:

TABLE 1

Pretence

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Non-intentional   intentional

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non- deceptive   deceptive

(pretend play)

In what follows, I will argue that this classification also reveals a developmental progression from simpler to more complex cases of pretence. This progression becomes evident when we consider the different intentions that distinguish pretend play from deceptive pretence.

As we have already seen, in the case of deceptive pretence, the agent's intention is to give a false impression. Like a communicative intention, an intention to give a false impression is always and necessarily directed at another person. Unlike communicative intentions, however, the pretender does not intend to inform another person about what is actually the case. On the contrary, the pretender knows something or presumes to know something that he does *not* want to share with others. We can put it more precisely in this way:

An agent has an intention to deceive another person B if and only if (i) A believes that p, (ii) A wants to bring it about that B does not know that p, and (iii) A intends to bring this about by acting as if not-p.

Given this definition of deceptive pretence, how should we formulate a *non-deceptive* intention to pretend? Non-deceptive intentions are simpler than deceptive intentions to pretend, in that they lack the communicative structure that is characteristic of deceptive intentions. This is an important fact that has gone unnoticed in the recent literature, since children usually play games when other people either observe or collaborate in the game that

they play. In the presence of others, children generally aim to occupy their attention and/or make them partners in the games that they play. Such other-directed intentions are not, however, necessarily part of the intention to pretend *per se*. The basic intention involved in pretend play is to engage in behaviors that fit one's imagination even if they may not fit the world as one actually believes it to be. If this is all that a person intends to do when she pretends, we get a case of non-deceptive pretence:

> An agent A has a non-deceptive intention to pretend that *p* if and only if (i) A imagines that *p*, (ii) A sets aside any beliefs that may be incompatible with *p*, and (iii) A intends to act as if *p*.

The two quasi-formal definitions just provided enable us to recognize two crucial differences between deceptive and non-deceptive intentions to pretend. The first difference is that deceptive behavior has its basis in one's beliefs, whereas imagination provides the basis for non-deceptive pretend behavior. The second and more important difference is that non-deceptive pretence requires only a simple intention to do something, while deceptive pretence requires the more complex intention to do something that will affect others' beliefs. The phenomenon of acting on stage may elucidate the point I wish to make here. An actor who pretends to be murdered has no intention to make his audience believe that he is really dead. He simply imagines to have been murdered and acts accordingly—that is, in accordance with his imagination. He may do this, of course, with the intention to entertain the audience, and therefore desire the audience to both understand what he is doing and grasp the moral of the play. The actor's communicative intentions are something over and above his intention to act in accordance with his imagination, however; and they can therefore be separated from the pretend intention as such.

When we apply these considerations to the pretend play of children, they suggest the following pair of working hypotheses about cognitive development: the first hypothesis is that children have simple, non-deceptive intentions to pretend before they can form more complex intentions to deceive other people. The second hypothesis is that children can also understand a non-deceptive intention to pretend in others before they can understand somebody's more complex intention to deceive.

I now want to discuss these two hypotheses in the context of the recent debate about pretend play in developmental psychology. This will first require some reconstruction of the two main positions involved in this debate. The novel aspect of my reconstruction will be to

emphasize the importance of distinguishing deceptive and non-deceptive pretence. This will lead me to reject the two extant explanations of the cognitive bases underlying pretend play, and to seek for a better theory to account for the following three questions: What does it take to form a simple, non-deceptive intention to pretend? What does it take to recognize such intentions in others? And finally, why should children have a non-deceptive intention to pretend before their cognitive system is sufficiently developed to engage in deceptive pretence?

2. The mentalist approach

Pretend play may strike one as a curious phenomenon because it violates a basic rule of rationality: act in accordance with your beliefs. Consider a little girl who feeds her teddy bear. She knows very well that teddy is not really hungry, and does not expect him to open his mouth when she raises an empty spoon to it, as if to feed him. Why does she attempt to feed her teddy if she knows that the spoon is empty and that her teddy could not eat anyway, even if the spoon were not empty?

Alan Leslie takes such "distortions of reality", as he calls it, to be the main feature of pretend play that a cognitive theory of pretence has to explain. "How is it possible", he asks, "that young children can disregard or distort reality in any way and to any degree at all?" (Leslie 1987, 412). It is important to note the way in which Leslie phrases this question. As a cognitive psychologist, he is interested in how a cognitive system must be designed in order to mix imagination and reality to generate meaningful pretend behavior. A cognitive system that is only designed "to get things right" would not be able to pretend in the way that two-year-olds pretend. So it is not just the question *why* children pretend that Leslie is interested in, but also *how* they manage to do so at the cognitive level. Now, this question may again be interpreted in one of two ways. On a narrow reading, the question is how children know what to *do* when they want to pretend something. This would be the question how children form an intention to pretend. But Leslie argues for a wider reading that also includes an understanding of pretence: "Understanding pretense in others", he says, "is part and parcel of being able to pretend oneself." (Leslie, 416). So the question that concerns Leslie is this: how is it possible that a two-year-old can understand what other people do when they engage in acts of pretence?

In framing the issue in this way, Leslie paves the way towards his main claim that pretence requires a cognitive system that is equipped with a mental module for interpreting

other people's minds. The argument that Leslie offers for this claim is highly complex and rests on a number of theoretical assumptions about the nature of cognition that I can mention only briefly. Like David Marr and Jerry Fodor, Leslie assumes that the human mind consists of specialized modules that compute information encapsulated in mental representations (see Leslie 1994, 412). These computational processes produce new concepts that we learn by experience. For instance, a child may learn the concept 'telephone' by computing information about how people use these devices for talking to each other across distances. That children are essentially embedded in reality *as such* is a fundamental requirement for their ability to form concepts; for misinformation about reality might distort the concepts that they acquire. It is precisely in virtue of this requirement that pretend play appears to be problematic from Leslie's developmental point of view. He expresses the problem by considering a child who sees her mother holding up a banana up to her ear, as if she were on the phone. If this occurs while a child is still in the process of developing a concept of what telephones are, the child might take this observation to be relevant to the extension of the concept. But evidently this does not happen. Children do not succumb to this problem of 'representational abuse", as Leslie calls it (1987, 415); and so we need a theory to explain how they avoid "going bananas" (Leslie 1988, 22).

Leslie's question therefore seems to come down to the following: How do children avoid being *deceived* by others when they observe their pretend activities? Do children have to realize that others do not act with an intention to deceive them in pretend play? When one considers Leslie's theory, it appears that this is the capacity he attributes to children who know that the banana is not *really* a telephone.

According to Leslie's theory, to avoid representational abuse children must be equipped with a cognitive system that employs meta-representations. The argument for this claim runs as follows: First, the cognitive system of the child will produce a mental representation of the state of affairs that this banana is (also) a telephone. Second, the child's cognitive system must treat this representation as a secondary representation that does not have the primary function of representing what is real. Third, the cognitive system must use this secondary representation to form a complex thought of the form, "Mommy pretends that *p*". And finally, this complex thought has to be integrated into a general theory about how other people think and act. For instance, once they know that Mom *only pretends that* the banana is a telephone, they may infer from this that Mom does not *(actually) believe that* it is a telephone, and most importantly that she does not *intend to make them believe* that it is a (real) telephone. At this stage, children will understand that mother is only *representing* the

banana as a telephone, which means that they grasp a representational relationship. Whether they do this explicitly or implicitly, some minimal form of meta-representational reasoning seems to be required.

With this claim, Leslie challenges the widely held view that clear evidence for meta-representational modes of processing can be found only at the age of four years (see Perner 1991). Unimpressed by the arguments of his critics, Leslie underscores the advanced cognitive abilities of much younger children, including meta-representational capacities. (see Leslie 1994, German & Leslie 2001; Friedman & Leslie 2007). This disagreement about the development of meta-representation is, in my view, symptomatic of a deeper problem that underlies Leslie's mentalist theory.

Rather than merely reiterate the objections of others, I wish to draw attention to a crucial difference in how children may understand the non-deceptive intentions that is characteristic of pretend play. Children might realize that

(1)   agents who pretend do not have an intention to deceive.

Alternatively, they might realize that:

(2)   agents have a non-deceptive intention to pretend.

These two interpretations differ in the follow way. On the first reading, children would have to know what an intention to deceive is. Only then could they rule out that an agent has such an intention, and thus avoid the danger of being deceived. On the second reading, children can take the intention of the pretender for what it is, namely, an intention to act *as if* things were different from what they in fact are. That no deception is involved in this case simply follows from the fact that no further intention is attributed to the agent.

Leslie's claim that understanding pretence requires meta-representation is perfectly in line with the first interpretation. If a child has to guard against being deceived by a pretender, this requires the kind of complex reasoning described above. In particular, children must understand that the other does not intend to give a false impression, which produces a correspondingly false belief. It remains open to Leslie to concede that children's meta-representational capacities may still be limited at this point in their development, since they do not fully understand that beliefs are internal mental states that serve a representational

function.[3] What Leslie must assume on this interpretation, however, is that children know that the appearance created in pretend play is not meant to be deceptive.

If we interpret children's capacities along the lines of (2), however, then their cognitive competence may not go as far as (1) would seem to require. There is therefore no reason why a two-year-old who recognizes when her mother non-deceptively pretends that the banana is a telephone must employ cognitive machinery that enables her to understand deception of any kind, intentional or not. For this reason, I think that any attempt to defend Leslie's mentalist explanation of pretence is doomed to fail. Children can have a basic understanding of non-deceptive intentions to pretend that requires no meta-representational skills. This is also the contention of the behavioral theory of pretence to which I now turn.

3. The behavioral theory of pretence

As we have seen, Leslie's theory focuses on the problem of how children understand pretence in others. This is what makes pretend play puzzling for Leslie, because children are thought to have to make sense of the deceptive impressions that are created by others in pretend play. Behavioral theories move in the opposite direction. They consider pretence to be primarily a practical problem, in that children have to figure out how to act in a world as they imagine it to be. They may learn this by observing others, but not necessarily by observing their pretended actions. A child may, for instance, imitate her mother's behavior of feeding a real baby by feeding her teddy bear. The thought guiding the behavioralist explanation is that it is only after children know how to engage in pretend play that they will be able to recognize pretence in others.

Shaun Nichols and Stephen Stich have advocated this behavioral approach to pretence. "The most obvious fact about pretence", they say, "is that pretenders actually *do* things – they engage in actions that are appropriate to the pretence". (Nichols & Stich 2000, 26). Their main concern is to explain how "the pretenders determine what behavior to engage in during an episode of pretence. How do they know that they should walk around making jerky movements and saying 'Chugga chugga, choo choo' when pretending to be a train?" (ibid.) Starting at the other end—namely, with solitary pretend play—it is not suprising that Nichols and Stich arrive at a theory of pretence that is quite different from the one that Leslie defends.

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[3] Leslie introduces the term 'M'-metarepresentation to denote a form of metarepresentation that does not necessarily understand beliefs *as* representational mental states. (see Leslie 1994, and Friedman & Leslie 2007, fn 3). This weaker notion of metarepresentation must not be confused, however, with the notion of metacognition that I will discuss in section 6 below.

But before I detail the differences of the behavioral approach, I will point out an important thesis that is common to both the behavioral and mentalist models.

The fundamental idea that both theories share is the notion of "quarantining" mental contents. We encountered this notion earlier in Leslie's conception of secondary representations. Leslie claimed that secondary representations are required for one to pretend that a state of affairs obtains without also believing that it actually obtains. Nichols and Stich employ a model that is grounded on the same idea: they add to the functional architecture of a belief-desire system a "possible world box" (PW-box for short). This box contains such mental contents as the proposition, 'I am a train', thought the child neither believes nor desires this proposition to be true. This proposition is thus a secondary representation, in Leslie's sense of the term. The mental system metaphorically "quarantines" such imaginary propositions by putting them into the PW-box, the appropriate functional node for all such imaginary or pretended propositions (see Nichols & Stich 2000, 26ff.)

Where Nichols and Stich differ from Leslie is in claiming that such a quarantining system is *all* that children need to engage in simple forms of pretence. The contrast between the two emerges from the fact propositions can be retrieved and used in computations without making a mental record of the retrieval process that brought them about. That is to say: a child can retrieve the proposition 'p' from her belief box—in other words, activate her belief that *p*—without forming the complex thought, 'I believe that *p*'. The same point applies when a child retrieves a proposition from her PW-box. In computing the quarantined proposition 'I am a trian', the child can pretend to be a train without thinking, 'I am pretending to be a train'. This observation contradicts Leslie's claim that forming such complex thoughts is essential to the cognitive processes that avoid representational abuse (see Nichols and Stich 2000, 50ff.).

A second and more profound difference emerges when we consider how Nichols and Stich explain children's capacity to understand pretence in others. Indeed, it is this explanation that makes their theory *behavioral,* in the sense meant here. To see this difference, consider a child that pretends to be a train who aims to incorporate another person into the train game. In her solitary play, Nichols and Stich suggest, the child will use the content of her PW-box to produce the command:

Act in a way that would be appropriate if you were a train.[4]

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[4] This cannot be quite correct, since the appropriate way to act on this command would be to leave the house and run to the tracks. Probably, what Nichols and Stich should say here is that the child should act in a way that is appropriate to the purpose of *appearing* to be a train. See Friedman & Leslie (2007, 115ff.) for making a similar point.

In social play, when a child wants another agent to pretend to be a train, she will direct this command to the other person. But if a child merely observes another person acting as if she were a train, then it will produce instead of a command a description of the other person's behavior (see Nichols & Stich 2000, 53):

> This person acts in a way that would be appropriate if she were a train.

In this way, Nichols and Stich try to show that the capacity to produce pretend-behavior is also sufficient for pretence-understanding. The same cognitive machinery that produces a "command" to act as if – i.e. an intention to pretend – can also produce a description of another person's pretend behavior. But is this plausible? Doesn't recognizing an intention to pretend require more than just forming such an intention? This worry shows that one can accept the first part of Nichols' and Stich's behavioral theory concerning the production of pretence, but reject the second part of their theory concerning their explanation of how children recognize pretence in others.

The way in which I would defend their first claim is as follows. In order to form an intention to pretend, all that children need to do is to activate a quarantined proposition and use it like a belief. That does not require that the child make an additional plan as to *how* she will realize her intention. Indeed, such planning might be needed only if the child's intention is to *deceive* somebody. If her goal, however, is merely to engage in pretend behavior, then she need only act like a train, for instance, without having a concept of what she is doing. But how should one understand that another person is pretending without having a concept of what it means to pretend? As Friedman & Leslie have pointed out, there is an additional problem involved in this (see Friedman & Leslie 2007, 110ff). How can children distinguish between a person who pretends that *p*, and a person who mistakenly believes that *p*? Imagine, for instance, two people viewing their bodies in a trick mirror that distorts the proportions of their visual representations. One of them knows about the trick and pretends that everything looks normal to him. The other person does not, and is genuinely shocked by his distorted image, which leads him to announce that he must definitely go on a diet. Both reactions, however, satisfy the same description: they both act as if they were as fat as they appear in the mirror. Of course, one might consider one reaction as appropriate and the other one as strange. But if so, the reaction of the shocked person seems to be more appropriate than the person who seems to be satisfied with his mirror image. From a behavioral point of view, it therefore seems impossible to say which of them is pretending and which one is deceived by the mirror.

In response, Nichols and Stich might argue that this example is too complex for a two-year-old to process. And they might be right that in this case a two-year-old child can only recognize the similarity in behavior. But there are cases, as we shall see in the next section, where a difference between pretending and acting on a false belief is recognizable even by two-year-olds. This shows that they have an understanding of pretence that is more powerful and more accurate than the behavioral theory allows it to be.

4. The evidence for a third way

The discussion so far has left us with the uncomfortable choice between a mentalist and a behavioral theory of pretend play. But we need not remain trapped in the apparent dichotomy between these two approaches. I will now argue that there is a third way to answer the questions that are pertinent to explain the competence that young children possess: How do children learn to act with a non-deceptive intention to pretend? And how do they interpret the pretend actions of others? The question *why* children develop this abilitiy at all, I postpone for later. First I want to discuss the evidence in favor of the two hypotheses stated at the end of section 1: children form pretend-intentions before they learn how to intentionally deceive others; and they understand such intentions in others before they realize an intention to deceive them.

In a series of imitation experiments with 25 to 38 month-old children, Hannes Rakoczy and his colleagues have successfully retrieved such evidence by using a task that required both understanding and the production of pretend actions (see Rakoczy 2007). Children had to reproduce an action that had been demonstrated to them and that could be interpreted in one of two ways. For instance, when the demonstrator used a pen that did not work this could mean either that he pretended to write, or that he genuinely tried to write something, but could not. Before the demonstration by the adult, children were allowed to examine the objects used in the demonstration and noticed, for instance, that the pen was covered with a cap. The children were also given clues as to whether the demonstrator genuinely intended to write, or merely pretended to write. When the demonstrator merely pretending to write, his overall expression was playful, and he produced sounds such as, "Ahh…," while looking at the (non-existing) graphics that he pretended to have produced. By contrast, when the demonstrator

made an unsuccessful attempt at writing, he showed frustrated expressions (e.g., a furrowed brow) and emitted sounds such as, "Hmm…" and "What is wrong here?"[5]

Children were then asked to imitate what they had observed. Those who recognized that the demonstration involved pretence would show this by producing a similar pretend action themselves; e.g., they would also express delight at invisible marks on the page. Similarly, those who noticed when the demonstrator seriously tried to use the pen, but could not, showed this by producing similar signs of frustration while using the capped pen. Children that showed neither of these reactions or took off the cap apparently did not understand the intention of the demonstrator. They were unable to pretend that the pen works in the first case, and to pretend and intention to seriously try to write in the second case.

Figure 1 gives the results reported by Rakoczy from his first experiment.

INSERT FIGURE 1 ABOUT HERE.

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[5] One might think that children observed here pretence in both cases, since in the second case too the demonstrator only pretended to make a serious attempt at writing since he knew that the pen did not work. That turns out to be irrelevant, however, when one considers the example from the point of view of the children. The children did not know that the demonstrator was specifically instructed to show signs of frustration. They had no reason to doubt that he was really frustrated and thus really tried to write with the pen.
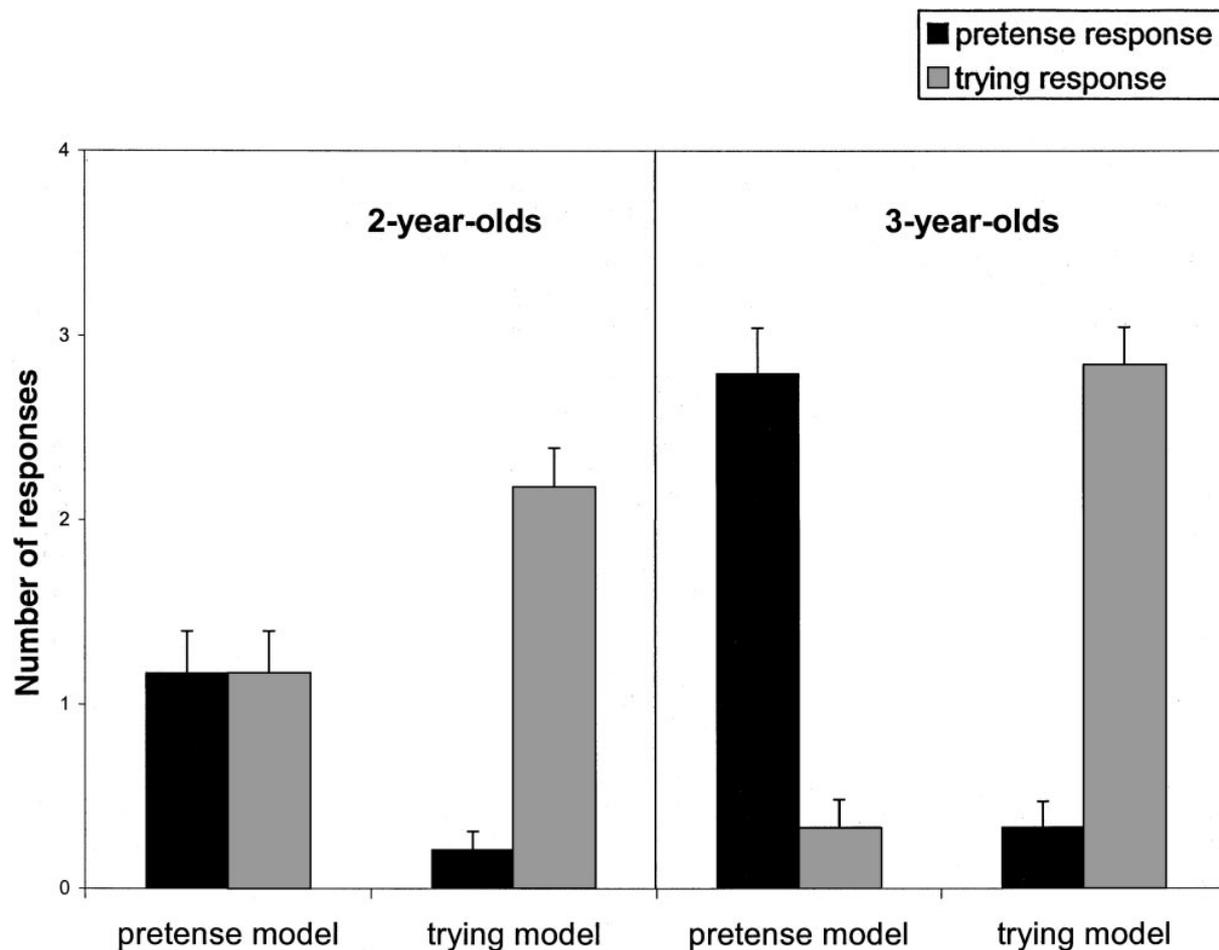
As one can see, three-year-olds mostly responded in the correct way. That is, they pretended that the pen worked when imitating a pretend action, and pretended to make a serious effort when imitating the demonstrator's serious attempt to write. In the case of the two-year-olds the results were mixed. In responding to an unsuccessful action, two-year-olds performed just as well as the three-year-olds. They equally often responded inappropriately to a pretend action by acting as if the demonstrator had simply shown them how to use the pen, but without success. However, even two-year-olds often acted as if they had an intention to pretend, and did this much more often when the imitated action was meant to be a pretend action. This warrants the conclusion, as Rakoczy points out, "that 2-year olds differently perceive and respond to pretending and trying as intentionally different forms of behaving-as-if." (Rakoczy 2007, 396).

How can we explain these results? If one applies the standard, folk-psychological explanation of intentions, one remains trapped in the mentalist-behavioral dilemma. The standard view is that intentions are grounded in desires and instrumental beliefs. Children would therefore have to grasp these underlying mental states if they understood the intention of an agent. More precisely, they would have to realize that the pretender acts in accordance

with a true belief (that the pen is not working), while the frustrated person acts in accordance with a false belief (that the pen works, or should work). One might think that the only alternative to such mentalist explanations is to deny that young children fail to grasp the difference between genuine and pretend intentions of the demonstrators. But then why would the children respond differently to actions that express such incompatible intentions? On the behavioral account, only one type of behavior is demonstrated: acting as if the pen worked. The explanation why children succeed in these tests would therefore have to assume that they react to the different verbal cues accompaning this behavior. But how should they know how to interpret these cues if they had no idea of the intentions expressed in them?

Apparently what we need to question here is the standard conception of intentions. Joseph Perner and Johannes Roessler have shown that this conception is problematic for other reasons as well (see Perner 1994, Perner & Roessler 2010). A thorough discussion of their argument would lead us too far afield here, so I will limit myself to a basic outline of their view.[6]

Perner and Roessler propose that children have an objective conception of goals as states of affairs that are worth pursuing. They can use this conception in one of two ways. They can use it to form intentions to do things in order to reach their goals; or they can use it to understand the actions of other people. When they realize that an agent might do things in order to reach such a goal, they understand such actions to be intentional. Perner and Roessler describe this as a primitive way to "rationalize intentional action" that does not require the attribution of beliefs and desires. This may be the way in which young children first grasp the intentions of other agents—a way that neither the mentalist nor bahavioristic interpretations can accommodate.

To make this account work, Perner and Roessler must explain how this conception of intentional action can accomodate the fact that agents have different preferences at different times and in different situations, and therefore do not always pursue the same goals. I might prefer to sit and dine outdoors, while you might prefer to sit and dine inside. Therefore, I am heading for a table on the terrace, while you try to get a table in the restaurant. Each of us may lay claim to some "objective reason." But what really matters are our subjective preferences; for it is our subjective preferences that give rise to our different intentions and explain why we do different things. The question remains: how can one explain this without appealing to

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[6] In particular, I cannot discuss here the "prelief-theory" that Perner has advanced to make room for such a middle position. See (Perner et. al. 1994).

the standard conception that intentions arise from subjective reasons—namely, from the individual desires of agents and their instrumental beliefs?

Perner and Roessler deal with this objection at great length. They consider what they call a 'hybrid solution' that mixes objective and subjective reasons, but find this solution unattractive on both empirical and theoretical grounds (see Perner & Roessler 2010, sect. 4). What they propose instead is to consider the possibility of "relativizing" objective reasons to individual agents or groups of agents. This is a very different idea that may be best explained by considering a specific example. In the so-called "broccoli-experiment," children were asked to make a choice for another person. Researchers placed crackers and broccoli on a table, and asked children to give to another person something to eat. What made this task difficult for children was the fact that the other person had previously indicated a strong preference for broccoli, which ran strongly against the children's own preference for crackers. Most children up to eighteen months solved this problem by ignoring the other's preference and by handing him what they considered to be the right choice: a cracker. Children older than eighteen months, however, generally chose to give broccoli to the other person, apparently in order to satisfy her specific preferences (see Repacholi & Gopnik 1997).

The hybrid theory that Perner and Roessler reject would take these results to provide evidence that children older than eighteen months give up the view that crackers are 'objectively good,' and replace it with a more nuanced conception of subjective desires: "I like crackers, but others might like broccoli instead." Perner & Roessler offer a different explanation (2010, sect. 6.1): children might simply take into account that people are different when they figure out what the *objective* purpose of their actions might be. When they are told that the other person loves broccoli, they might take this to be information about what is objectively good for that particular person. Although we generally consider this to be a psychological fact that is grounded in subjective desires, for the child it may be no different from saying that grass is good for cattle—but not, for instance, for cats. In this way, the goal to get yummy food could be relativized to individual people without making use of a subjective conception of desire.

With this proposal, Perner and Roessler steer an attractive course between a mentalist and a behavioral construal of children's competences.[7] I now want to connect this idea with

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[7] The tendency to argue in terms of this dichotomy is particularly strong in Leslie's work when he takes the position advanced by Perner as a variant of a mentalist theory of pretence, and when he dismisses Rakoczy proposal as a variant of a behavioral theory of pretence. (See Friedman and Leslie 2007, fn. 5 and p. 119) The present discussion should make clear that neither of these classifications is justified.

the main point about pretend play that I have been emphasizing throughout: that children's pretend play is behavior based on non-deceptive intentions. These intentions, I suggest, can be understood in terms of the objective goal to do things in the way in which they are supposed to be done.

5. Inconclusive evidence explained

The important connection between pretend play and understanding actions in a teleological manner hinges on the fact that agents participating in such games do not hide their intentions, as they would if they intended to deceive others. The example I used to illustrate this point was a game in which a child's parent plays the role of a doctor, while the child plays the role of a patient. It is in the interest of the child that no one mistakenly thinks that she is really sick. Why, then, does she not make an explicit effort to communicate her intention? She could, for instance, announce her pretend-intention by saying, "I am only pretending to be sick." Why do children only rarely make such utterances? The answer that Perner and Roessler's theory suggests is that children play games with an objective goal in mind, and since objective goals are public, they stand in no need of special announcement.

Pace mentalist and behavioral accounts, we should not conceive of the pretend play of young children as involving agents hiding their true intentions from each other. Rather, the pretend play of young children is markedly similar to cases in which agents' intentions are absolutely clear. Take, for instance, a queue of people lined up in front of an ice-cream parlor. If one knows that the shop is the kind of place where one can get ice cream, then it is obvious why people would be standing there on a hot day. There is no need for the agents to declare their intentions to someone who shows an interest to joining the line for the requisite understanding to obtain.

Pretending to do something is like getting ice cream: it is something that attracts every child. Before I try to explain why this is the case, I first want to introduce a general principle that children may apply when they "discover" that another person engages in an act of pretence:

> If (i) a person acts as if p although it is clearly not the case that p, and (ii) if the person acts in circumstances that are suitable for acting playfully, then this person is likely to do this with a non-deceptive intention to pretend.

The first clause requires that a child must know from previous experience that one can act as if one did not know the facts. This corresponds to the condition that a child must know from previous experience that lining up in front of the ice cream parlor is the right way to get some ice cream. The second clause requires that children recognize situations in which playful behavior may be expected from another person. This corresponds to knowing what an ice-cream parlor looks like. If a child satisfies these two conditions, she will realize when someone playfully acts as if he were sick, just as she realizes what people do by standing in front of the parlor.

This principle may explain much of the inconclusive evidence that one gets in testing children's early understanding of pretend play. Take for instance the mixed success of two-year old children in the experiment of Rakoczy previously described. Two-year-rolds are very good at imitating demonstrators' attempts to write with a faulty pen. They were not so good at imitating pretended attempts to write with a faulty pen. A plausible explanation of this fact is that two-year-olds still lack requisite experience for acting in a way that conradicts their knowledge. It therefore simply may not occur to them that one can "write" with a faulty pen, i.e. ignore the fact that the pen is actually not suited for writing.

More of such inconclusive evidence comes from an older experiment conducted by Angeline Lillard (see Lillard, 1993). Here too, I think, the default principle shows us how to interpret this evidence. In Lillard's experiment, children between the ages of four and five were introduced to a troll named Moe who did not know anything about rabbits. He never had seen a rabbit, and hence did not know that or how rabbits hop. The children then observe Moe hopping like a rabbit, at which point the experimenter asks: "Is Moe pretending to hop like a rabbit?" Most four- and five-year-olds answered, "Yes." Apparently they did not realize that pretending to do *F* requires one to know how to *F*. Otherwise the children would have realized that Moe could not pretend to perform an action about which he had no knowledge.

Lillard takes this data to provide strong evidence against Leslie's mentalist theory of pretence. If even five-year-olds have great difficulties understanding what it means to have an intention to pretend, why should we expect from a two your old child that she can recognize such intentions? But does this support a behavioral explanation of pretence, as Lillard suggests? I do not think so, since the evidence is inconclusive exactly for the reasons that the default principle predicts.

The difficulty that deceives children in this test arises from the lack of information in the story told to them. There is nothing in it that could explain Moe's strange behavior. He cannot pretend or intend to hop like a rabbit because he lacks the concept of what it means to

do that. And yet he seems to engage in rabbit-like behavior intentionally. As experienced folk-psychologists we know how to deal with such a case: we assume that Moe must have some subjective reason for acting like this, and that we do not know that subjective reason. For a four-your-old child, however, this subjectivist explanation may cause problems if children are used to understanding intentional action in term of objective reasons. That may excuse children for neglecting the fact that Moe could not be pretending to be a rabbit. After all, the children want to understand what Moe is doing, and need to give an answer to the experimenter. The natural incentive to accept the hint provided by the question "Does Moe pretend to hop like a rabbit?" looses its force only when the children are offered another, alternative explanation. In a follow-up experiment to Lillard's original experiment, children were told that Moe was walking on hot pavement (see Richert and Lillard, 2002). This added information lead to much better performance in gauging Moe's behavior, since children know that avoiding burns is good reason for hopping like a rabbit. Given that added information, the children need not assume by default that Moe must be pretending to hop like a rabbit.

What Lillard's experiment seems to show, on this interpretation, is how entrenched the default principle has become at the age of four years. This provides further support for a teleological explanation of pretence as a genuine alternative to a mentalist and a behavioral explanation. Children who follow this principle do not grasp a mental attitude of 'pretending that p', but they understand that agents have a *reason* in acting as they do. Hence, even when they initially make a mistake in applying the concept of pretence, they have the cognitive resources to correct their mistake. Although it has not been tested in the Moe experiment, it is likely that even younger children would revise their answers if one told them that Moe wanted to be a rabbit or seriously thought he were a rabbit. While we would take this to be subjective reasons, children may construe them objectively: it is good for rabbits to hop like rabbits, and so it is good for Moe to do what anyone does who thinks like or wants to be a rabbit.

The default principle proffers an explanation that steers a course between overestimating and underestimating the competence of young children. But we cannot be sure that there is such a middle way between mentalism and behaviorism before we know *why* children become so attracted to pretend play. How could pretending be as common a good as having ice cream?

6. Metacognitive feelings and self-awareness

Pretend play is not as obscure as the mentalist and behavioral theories might lead us to believe. The apparent abnormality seems to be a projection from our adult perspective. Children may find it very normal to engage in pretend play and see nothing awkward in it. In a certain sense, then, they may not have a *problem* with pretend play at all. But why is this the case? Why could children think that pretending is a normal goal that people have, like eating and drinking? What is so good about pretending?

The basic question here that we have to answer is why pretend play develops at all. It cannot be purely accidental that pretence behaviors arise in one form or another in all cultures. It must have a positive effect that makes it a constant feature in children's behavior. If children somehow grasp this positive effect, that may be why they seek the experience of pretending early on so that they can apply the default principle in recognizing the pretend play of others.

Developmental psychologists have offered quite different explanations of the possible function that pretend play may have for cognitive development. Piaget thought that what matters is play with "symbols"—using a piece of cloth, for instance, to play the role of a pillow (Piaget 1962). Since all cultures use symbol-systems that children must learn, this might explain the ubiquity of pretend play. Another explanation about the significance of pretend play forms the basis of Leslie's theory. Leslie claims that pretend play activates a basic module for attributing mental states to others. This competence, on his view, is also a crucial part of human culture; and so one might explain pretend play as a necessary step that children need to take to acquire this competence.

Neither of these explanations seems persuasive, however, if one takes into account the non-deceptive character of pretend play. We can then see that pretend play does not raise the same problems of misuse and misrepresentation with which Piaget and Leslie are concerned. If someone uses a symbol saying that an A is a B, we take this to be a piece of information that needs to be confirmed. This is part of what it means to understand symbols as items that symbolize reality. The same can be said about other people's thoughts. If someone thinks or plans to bring it about that A is B, we need to check whether his thought or intention is realistic. It is not realistic if he just has some fanciful ideas with no connection to reality, or if he sets himself goals that he will never achieve. But why should one locate pretend play in this context? I have argued in this paper that we need to understand how children come to have *non-deceptive* pretend intentions and how they can grasp such intentions before they

begin to intentionally deceive others and before they become aware that others might intentionally deceive them. That naturally leads to a quite different explanation of the possible function of early pretend play.

The explanation that I want to venture is that in pretend play, children learn how to correctly do things as they are done in their culture. They have to learn how to eat with a spoon, how to fill a cup and drinks from it, how to take a bath, bake a cake, make a telephone call, and thousands of other things. At the age of two years, these activities are mostly beyond the means of a child. Watching adults or older siblings tells them how much they have to learn to be a successful member of their family and larger community. Clearly they want to practice these things as soon as possible, and pretend play would seem to provide an ideal opportunity for such practice. Neither an intention to deceive others nor an intention to do something abnormal plays any role here. On the contrary: children want to do those things exactly in the way in which they ought to be done, and also wish to demonstrate this desire to others. Non-deceptive pretend play brings about both of those ends.

Considered from this perspective, pretend play gains significance for young children because it allows them to figure out how things are done correctly. Children therefore need feedback on failures and successes in pretend play just as much as they need this feedback in other contexts. The relevant kinds of feedback may come from others who applaud their success or assist them in their play. It may also be provided by their own cognitive system in the form of meta-cognitive feelings. Psychologists have studied such feelings, mostly in adults and older children, in connection with memory tasks and the 'tip of the tongue' phenomenon (see Dunlovsky and Metcalfe 2009). The models that explain the production of such meta-cognitive feelings are not limited to such phenomena, however. Meta-cognitive feelings might be quite common and emerge quite early in children's development. Even two-year-olds may have such feelings not only to check their knowledge, but more importantly to assess their skill in acting. This would explain why they get confidence from feelings of success, while feelings of failure will motivate them to keep practicing a certain task.

If this conjecture is correct, we can draw an important conclusion about the connection between pretend play and the development of children's self-awareness. Some psychologists have proposed that the emergence of pretend play may be closely linked with the acquisition of a self-concept (see Lewis & Ramsay 1999, 2004). They refer to evidence that pretend play develops in children at the same time as when they begin to pass mirror self-recognition tests.[8] This correlation suggests, as Ramsay and Lewis argue, that children at this age have a

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[8] For confirmation of this evidence see Nielson & Dissanayake 2004

self that "knows that it knows," and presume that such self-directed knowledge is involved also in pretend play. As our critical discussion of Leslie's meta-representational theory of pretence has shown, such claims must be treated with care. Ramsay and Lewis presuppose in their interpretation of the data the correctness of Leslie's theory: they ascribe to children the ability to comment on their own activities with thoughts of the form, 'I am only pretending that *p*.' Thus they also succumb to the same mistake as Leslie: overestimating children's cognitive abilities at this stage of development.

In contrast to Ramsay & Lewis, I take this correlation to show that there is a more basic connection between pretend play and the emergence of self-awareness. Having a self-concept is important for self-reflective thinking, but there is more to self-awareness than just this. Self-awareness also forms the basis of human agency; for the development of agency depends on agents having confidence in their own abilities based on assessments of what they are really capable of doing. If children are overconfident, this may lead them into disaster (and parents will quickly have to rush forward to prevent such disaster.) If they have too little confidence, they will refrain from trying out new things and from exploring the complex world that lies ahead of them. Striking this balance is a difficult but crucially important task. It is also a risky task and it is therefore enormously helpful that children can turn to playful behavior to test their self-confidence. Pretend play could be one of the best solutions that nature has found for this problem.

Once again, it is crucial here to avoid the pitfalls of mentalism and behaviorism in explaining this crucial feature of pretend play. Leslie's mentalist theory suggests that children who engage in pretend play already use an articulated self-concept in pretend play. Behavioral explanations have nothing to offer to explain the correlation between pretend play and mirror self-recognition. The middle way is to appeal to the meta-cognitive feelings that are generated in pretend play. Therefore it is of essential importance at this point that meta-cognitive feelings can be separated from meta-representational knowledge. Following Joelle Proust, this distinction may be explained as a distinction between conceptual and non-conceptual skills (see Proust 2007, and this volume). To form a thought of the form, "I know how to pretend," requires not just a concept of pretence and a concept of oneself, but also a concept of knowledge. These conceptual skills are difficult to acquire, and even older children show much uncertainty about how to use the concept of knowledge (see Kloo et. al., this volume.) Meta-cognitive feelings do not raise this difficulty when one explains them in terms of non-conceptual processes of cognitive control. Children may therefore profit from these feelings well before they begin to understand conceptually what these feelings tell them.

7. Conclusion

The recent debate about the emergence of pretend play in early childhood has been focused on the question whether this form of behavior is based on cognitive processes that can be described as meta-representational, in the way Leslie uses the term. An unfortunate effect of making this question central has been the stark contrast between mentalist and behavioral explanations of pretend play. In this paper I have aimed to show how much needs to be done to correct this mistake. I have argued that three major changes have to be made in the analysis of pretend play. First, a clear distinction has to be made between deceptive and non-deceptive pretence. Secondly, it must be recognized that intentions can be grounded in objective reasons to act in a certain way. And third, the function of pretend play has to be explained in terms of the confidence that children get when they successfully do things in pretend play that are normally beyond their means. Looking back now, after our relatively long journey, it seems as if a much quicker route could have taken us to the same result. We might have replaced at the outset Leslie's conception of meta-representation with the much weaker conception of meta-cognitive feelings. This would have been a simpler way to steer the course between mentalism and behaviorism. However, taking this shortcut would not have saved us from the labor to explain what makes this move from meta-representation to meta-cognitive feelings a significant one. It also would not have exposed the view that pretend play is an obscure form of behavior for what it is: a projection and prejudice, not a fact.[9]

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