

Children's changing understanding of wicked desires: From  
objective to subjective and moral

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Abstract

Previous work makes two conflicting claims about children's developing judgements of the emotions of an actor committing a desired but immoral act: children's judgements change (1) from sad to happy, as they come to appreciate desire as a subjective mental state, or (2) from happy to sad, as children acknowledge the role of moral values in emotion. In 3 experiments designed to explain this conflict, 3-10 year-olds judged emotions of actors committing neutral and immoral acts. Experiment 1 rules out procedural differences as an explanation of conflicting findings. Experiment 2 shows an age change from sad, to happy, to sad (remorseful), integrating the conflicting claims. Experiment 3 shows that 5- but not 3-year-olds can judge ill-doers pleased with their success or remorseful at their wrongdoing, depending on the salience of moral issues. We discuss the roles of cognitive development, moral understanding and moral climate in influencing children's understanding of moral emotions.

## **Children's changing understanding of wicked desires: From objective to subjective and moral**

Research in theory of mind has shown that children's understanding of the concept of desire begins to become well-established at around the age of 2-3 years. Children in this age range can predict a person's action on the basis of a desire (Wellman & Woolley, 1990) and conceive of other people as intentional agents whose actions are directed at achieving goals. However, these early achievements do not constitute a full understanding of the concept of desire. Children also need to appreciate the consequences of fulfilled and unfulfilled desires. For example, Yuill (1984) argued that one aspect of understanding desire is to appreciate the consequences of desire satisfaction for emotion: people should generally be pleased when they achieve what they want and displeased when they do not. She showed that this understanding was present in children as young as 3, who made appropriate emotion judgements for actors who either achieved or did not achieve a desired end. This result has since been replicated (e.g. Hadwin & Perner, 1991).

However, there are limitations to young children's understanding of desire. Although they judged appropriately in Yuill's study for situations involving neutral desires (wanting one of two potential recipients to catch a ball), they showed a different pattern when desires were negatively valued. Given a character who wanted to hit another child with a ball, 3-year olds judged the character as sad, even though he achieved what he desired. Yuill suggested that when cues were present that could be judged in isolation (e.g. a bad outcome), young children would attribute emotion on the basis of these cues rather than coordinating information about desire in relation to outcome. By the age of 7, children in her study were able to ignore such evaluative information and judged a character pleased when he got what he wanted, regardless of the value of the outcome.

A more general account of developmental changes in understanding of desire was proposed by Perner (1991), who characterised the 3-year-old's conception of desirability as 'objective': that is, desirability is an objective property of objects or situations, rather than a relation between a particular person and that situation. Put simply, the view implies that 'spinach is nasty' rather than 'I don't like spinach (but some other people do)'. As Perner (1991) points out, objective desirability is a reasonable default position often adopted unthinkingly by adults, but they also have the option of taking a more considered view when they encounter different reactions to the same event, by appealing to individual differences in desires. Young children's inability to transcend the objective position is shown by their responses to bad-motive stories, rather than neutral stories. In neutral stories, they make suitable responses on this basis: they know that people feel happy when in a desirable situation, and in these neutral stories, while there is no initial information about whether 'Person X catching the ball' is objectively desirable, the mere fact that 'Person A wants X to catch the ball' is enough for the situation to be labelled desirable. Young children's difficulty is only apparent in bad-motive stories: given an actor with an objectively bad desire (wanting to hit someone), children judge the actor as sad on achieving the desired

outcome, because the outcome is objectively undesirable. The information that a character wants that outcome to occur still does not make it desirable. It is only later that children come to understand desire as a subjective property, relating an individual person to a situation: that is, an actor's emotion is judged according to whether or not an outcome fits the internal, desired state, not by some objective standard of whether such an outcome might be generally desirable.

As Yuill (1984) suggested, the difficulty young children have is when an outcome has some predetermined value, independent of the actor's desire. For example, hitting someone is objectively an undesirable act, and anyone producing such an outcome is judged sad because of that, even if they are described as wanting to produce it. Older children understand that actors may feel pleased at achieving something objectively bad, if that was what they *wanted* to do. Thus, when judging the emotional consequences of desired bad outcomes, these children judge the character as pleased, rather than sad. The developmental picture, then, is from attribution of negative to positive emotions in such situations.

On the face of it, this evidence conflicts with work in moral development, on the understanding of moral emotions. Nunner-Winkler and Sodian (1988; henceforward referred to as N&S) reported a series of studies that apparently contradicts the picture presented in the results of Yuill as further interpreted by Perner (henceforward this interpretation is referred to as Y&P). Four to eight-year-olds were asked to judge characters who intentionally performed immoral acts. In Experiment 1, 4-year-olds judged such a character to experience positive emotions, while 8-year-olds, and some 6-year-olds, attributed negative emotions. Experiments 2 and 3 both showed that 5-year-olds attributed positive feelings to an actor who successfully misbehaves. The developmental picture presented by these authors is that children change from positive to negative judgements of emotion for such characters. This contrasts with the pattern reported in 3-7-year-olds by Yuill, showing the change from 'sad' to 'pleased' judgements. In each case, the authors presented plausible rationales for these patterns of response. N&S argued that older children judge a malefactor to be sad, because they take into account moral considerations, such as the actor's feelings of shame or remorse. In contrast, Y&P presented a judgement of sad as being an immature response, because it consists in judging an actor on the objective value of an outcome rather than on an integration of outcome and personal desire. The young child, having an objective conception of desirability, judges that as the outcome is objectively bad, so the actor must be sad. Correspondingly, for N&S, a 'pleased' judgement in these circumstances is immature because it does not take into account moral factors, whereas Y&P argue that such an attribution shows a more sophisticated, subjective understanding of desire.

We therefore have two views in direct conflict but each one is internally consistent. The reason why these differing predictions were made is clear: N&S were interested in children's ability to take moral factors into account in judging emotion, and Y&P were concerned with the understanding of desire, as expressed in judgements of emotional reactions. An adult given such a story could

argue that both judgements of pleased and sad are defensible, but from different standpoints. That is, the different judgements reflect different *stances* that could be adopted when attributing emotions for the outcomes of morally-relevant actions. The *moral stance* produces a judgement of sadness because morally responsible people are expected to express remorse or shame for their wrongdoings. The *personal stance*, given an understanding of desire as subjective, leads to a judgement of satisfaction at a fulfilled desire. Adults accept that either stance could be taken: which one is adopted may depend on situational factors and expectations, although the moral stance might become more likely in children as age increases because of growing concern with socio-moral evaluation: judging an ill-doer as happy may reflect badly on one's moral standing. A third approach that might be adopted is based on the understanding of desire as *objective*, as described earlier. The adoption of this view by young children, we argue, is conditional not on situational factors but on cognitive limitations.

Just as the two papers above gave different predictions, each found results supporting their respective expectations. The present paper examines the ways in which the idea of different stances can reconcile this apparent conflict. In Experiment 1, we look at some methodological differences between the two studies, that N&S presented as accounting for one of the discrepancies between the studies. We then investigate whether the purported age sequence from judgements of sad to happy to sad exists (Experiment 2). Finally, we look at influences on the adoption of a moral or a personal stance (Experiment 3).

### **Experiment 1: Influence of story context on emotion judgements**

In Yuill's study, 3- and 5-year-olds judged an ill-motivated actor to be sad when a bad outcome occurred, despite its being intended, whereas 5-year-olds in the study by N&S judged such an actor to feel positive emotions. Yuill concluded that the 5-year-olds could not yet coordinate motive and outcome in judgements of emotion when bad motives were involved. However, the children in N&S were quite capable of this.

N&S suggest two possible reasons for this age discrepancy. First, they argue, Yuill's story context (hitting a child with a ball) might be 'less plausible' than their story frames (riding a bicycle at another child). A further complication in Yuill's study, they argue, was the use of four-point scales for children's judgements of emotion and morality, rather than a simple judgement of whether the actor felt happy or sad, and whether the actor was bad. Against this claim, the children in Yuill's study succeeded in responding appropriately using these same response scales in the neutral stories. However, it is possible that the scale did increase the cognitive demands of the task when added to the extra complexity of the bad motive stories, which can be assigned moral values independently of the particular motives of the actors. But consideration of the *way* in which Yuill used the rating scale renders this account untenable. In effect, children in Yuill's study were required to make the same dichotomous choice between happy and sad as those in the

N&S study, and only after that were they required to rate how happy or sad the protagonist felt, on a 4-point scale. Had the rating scale been introduced as soon as children were asked how the protagonist felt, then the argument might be more convincing. However, the way the rating scale was used could only improve children's chances of discriminating between the different situations. For example, if a child judged characters with bad motives as pleased, whether or not they succeeded or failed in their aims, but rated the character who failed as *less* pleased than the one who succeeded, the child appears to be using intentionality to discriminate between the emotions of the two characters, even though the distinction is not made across the happy/sad divide. Such a judgement may indeed reflect a child's opinion that any character who is unpleasant enough to have a bad motive might feel somewhat happy at hurting another character, even though they were not the intended victim!

Given that the differences in rating scales are unlikely to account for the discrepant results of the two studies, the present experiment tests whether the results may be due to differences in story context, by comparing emotion judgements for a 'ball' story, as in Yuill's study, and a 'bike' story, as used by N&S.

## Method

### Subjects

Ten 3-year-olds (mean age 3;7), 10 4-year-olds (mean age = 4;3) and 10 5-year-olds (mean age = 5;6) took part in the experiment. There were equal numbers of boys and girls at each age except that there were 6 girls and 4 boys in the oldest age group.

### Design

Each child judged four stories in each of two contexts (ball and bike). Within each context, two stories had neutral motives and two had negative motives. For each of these motive values, one story was a **match** (the outcome happened to the intended recipient) and one was a **mismatch** (the outcome happened to another recipient). Stories were presented in random order except that neutral and bad motives were alternated. The neutral stories were used to ensure that children understood the relation between motive and outcome. The 'bike' stories had to be extended and modified to fit the neutral motive conditions.

### Materials:

Examples of the different story types and context follow:

**Ball context, neutral motive, match:** This boy was playing ball. He saw the boy in the yellow jumper was not doing anything. He wanted to throw the ball to the boy in yellow, so that he could play catch. He threw the ball. The boy in yellow caught the ball and was happy to play with it.

**Bike context, neutral motive, mismatch:** These children are cycling on the playground. This boy in brown likes the boy in yellow and wants to give him a fun bump. Fun bumps are

nice. The boy in yellow likes fun bumps. The boy in brown by mistake misses the boy in yellow and gives the girl in red a fun bump. The girl in red is happy.

**Bike context, bad motive, match:** These children are cycling on the playground. This boy in green does not like the boy in yellow. He is going to annoy him. He is going to give him a big bump. The boy in green gives the boy in yellow a big bump. The boy in yellow falls off his cycle and hurts his leg. He is sad and cries.

**Ball context, bad motive, match:** This boy was playing ball. He did not like the boy in the green jumper. He wanted to throw the ball at him to hit him on the head. He threw the ball. It hit the boy in green on the head and made him cry.

### **Procedure**

Children were interviewed individually. Each story was presented as a series of three pictures, depicting motive, action and outcome, and the child was asked probe questions (e.g. 'What does the boy with the ball want to do?') to encourage their participation in the story-telling.

After each story, the child was asked two questions in this order:

**Emotion judgement:** Is the boy who threw the ball/gave a big/fun bump happy or sad, or in between?

**Moral judgement:** Is the boy who threw the ball/gave a big/fun bump good or bad? (All children answered this appropriately and these responses are not discussed further.)

The order of mentioning happy/sad and good/bad was randomised for each subject and each question.

## **Results**

### **Neutral-motive stories**

The patterns of responses for the ball stories are shown in the top half of Table 1. All age groups chose the correct pattern (match-happy, mismatch-sad) at greater than chance levels, all binomial  $p$ s  $< .02$ , although four of the youngest group failed to discriminate between the two stories, choosing 'happy' both times. The results for the bike story are in the lower half of the same table. The 4- and 5-year-olds still chose the appropriate response pattern at above chance levels (binomial  $p$ s  $< .02$ ), although a substantial minority chose 'happy' both times. The youngest group, however, chose the indiscriminate 'happy' pattern more often than would be expected by chance (binomial  $p < .02$ ).

Table 1: Number of children choosing each response pattern for neutral motive stories: Experiment 1

Story type and emotion judgement		Age		
<b>BALL CONTEXT</b>				
match feels	mismatch feels	3yrs	4yrs	5yrs
happy	sad	6	10	10
happy	happy	4	0	0
sad	sad	0	0	0
sad	happy	0	0	0
<b>BIKE CONTEXT</b>				
match feels	mismatch feels			
happy	sad	2	7	6
happy	happy	6	3	4
sad	sad	1	0	0
sad	happy	1	0	0

*Bad-motive stories*

These results are displayed in Table 2. For the ball context, in the upper half of the table, the two older groups mostly judged by intention, with the match actor as happy and the mismatch actor as sad, while the majority of the youngest group judged both characters to be sad, consistent with the objectivist stance (all binomial  $p < .01$ ). The results for the bike story, shown in the lower half of Table 2, are similar to those for the ball story for the 3- and 5-year-olds, showing objective and subjective judgements respectively (binomial  $p < .02$ ), but the 4-year-olds differ: for this story, their judgements were more like those of the objectivist younger children: both characters were judged to be sad regardless of the match of intention and outcome,  $p < .003$ .

Table 2: Number of children choosing each response pattern for bad motive stories: Experiment 1

Story type and emotion judgement		Age		
		3yrs	4yrs	5yrs
<b>BALL CONTEXT</b>				
match feels	mismatch feels			
happy	sad	3	7	8
happy	happy	0	1	1
sad	sad	7	2	1
sad	happy	0	0	0
<b>BIKE CONTEXT</b>				
match feels	mismatch feels			
happy	sad	2	3	8
happy	happy	0	0	1
sad	sad	6	7	1
sad	happy	2	0	0

### Discussion

N&S speculated that 5-year-olds in Yuill's study may have found the ball context implausible, and hence performed less well in the bad motive stories than children of the same age in their own study. The present experiment incorporated both story contexts and found that 5-year-olds made emotion judgements for bad-motive stories on the basis of the match of intention and outcome in both contexts. This supports the contention by N&S that children of this age can judge bad motive stories in terms of the match of desire and outcome. However, there was no evidence for their other claim, that the ball story was implausible and therefore hard to judge. In fact, the ball context seems to support subjective judgements rather better than the bike context: 4-year-olds made subjectivist judgements in the ball context but persisted with objectivist judgements in the bike context. It is hard to know why the bike story should be less likely to elicit subjective judgements. One possibility is that the outcome was judged to be more severe than that in the ball story and thus the objective badness of the outcome became more salient.

Unexpectedly, the neutral-motive version of the bike story attracted fewer judgements integrating desire and outcome than the corresponding version of the ball story. The reasons for this difference may be related to the modifications made to the bike story to fit the neutral context. In order to make clear that a 'fun bump' was innocuous, the neutral bike stories stated that 'fun



bumps are nice'. This wording may have suggested that such an outcome has an inherently positive value, and thus tempted children to attribute emotions simply on the basis of this positive cue, rather than on an integration of motive with outcome. Another possibility is that the neutral bike and ball stories differ in the implications of a mismatch for the protagonists. Playing ball involves relinquishing control of an object in the expectation that the catcher might return it. If the ball goes to the 'wrong' recipient, there may be a risk either that they will not return it or that you will have to play with someone with whom you did not intend to play. In the bike story, giving one person a fun bump does not have any implications for whether you can do the same to another person. It is therefore not irrevocable in the same sense as the ball-throwing story is. In other respects, though, the results fit those of the previous study by Yuill, in that 3-year-olds discriminate between match and mismatch stories in neutral-motive contexts but not bad-motive contexts.

The present results show that children of 4-5 years of age can judge an actor's emotions in relation to intention even in a negative context. The results do not explain the discrepancy with the original study by Yuill (1984), where 7-year-olds, but not 5-year-olds, could do this. Given that the present experiment used a method quite similar to that used by Yuill, this difference may be attributed to sample variability.

### **Experiment 2: Three-phase changes in judgements of ill-doers' emotions**

Given that methodological differences do not account for the 'sad' responses given by younger children in Yuill's experiment, our own account, of a three-phase sequence from judgements of sad to happy to sad, becomes more plausible. However, we need to establish the existence of this age sequence in responses. It is not possible to show the sequence on the basis of previous studies because no one study has included a broad enough range of ages to cover all three stances. Yuill studied 3-7-year-olds, N&S looked at 4-8 year-olds and another relevant study, by Barden, Zelko, Duncan & Masters, 1980, cited as supporting N&S, used 4-10-year-olds. N&S claimed that children change from judgements of happy to sad, Yuill claimed the reverse. By studying children across the age range covered by both studies, we can establish whether these two apparently conflicting claims are in fact just two parts of the same jigsaw. This jigsaw, we argue, should show a three-phase sequence. First, children take an objective view: a character's emotions are determined by the objective value of the outcome, if it has such a value. Thus, they will judge people to be sad about a bad outcome. This occurred in 3- and 5-year-olds for negative events in Yuill's study, although it was not shown by 4-5 year-olds in the study by N&S. Next, children adopt a subjective stance: people's emotions are determined entirely by the relation between their personal desires and an outcome. The 7-year-olds in Yuill's study seemed to adopt this position, judging an ill-doer as pleased. The third phase incorporates moral considerations into the judgement, as suggested by N&S's results: children judge an ill-doer as sad because of shame

or remorse at the bad deed. Eight-year-olds, and some 6-year-olds, in the study by N&S seemed to take this moral stance. Although this account seems to produce a plausible integration of the two sets of findings, no study has examined the three-phase sequence. Experiment 2 simply assesses whether the sequence of emotion judgements, from sad to happy to sad, actually exists. The age discrepancies between the different studies are considered later, in Experiment 3.

## Method

### Subjects

Twelve 3-year-olds (mean age 3;6), 12 5-year-olds (mean age = 5;1), 12 7-year-olds (mean age = 7;3) and 12 10-year-olds (mean age = 10;0) took part in the experiment. There were equal numbers of boys and girls at each age.

### Design

Each child judged six stories. Two stories concerned actors with neutral motives, one in which the outcome happened to the intended recipient (match), and one in which it happened to another recipient (mismatch). These were similar to the stories used by Yuill (1984), and were included to ensure that children understood the relation between motive and outcome. The other four stories featured a bad-motive-match scenario, i.e. actors wanted to hurt another character and did so. Order of presentation was randomised for each subject. Children also heard another 2 stories in the same interview session, as part of a separate study.

### Materials

The stories were based on those used by Yuill (1984), and similar to Experiment 1, above, as in the example below.

*Bad motive, match:* This boy was playing ball. He did not like the boy in the green jumper. He wanted to throw the ball at him to hit him on the head. He threw the ball. It hit the boy in green on the head and made him cry.

### Procedure

Each subject was interviewed individually. The experimenter acted out the story, using small dolls and cartoon 'think' bubbles to represent motives. Sex of the protagonists was matched to that of the subject. As in the first experiment, children were encouraged to help tell the story by being asked probe questions about the motives and outcomes of the main protagonist in each story. After each story, children were asked to judge the actor's emotional reaction: 'How does s/he feel?', and were then asked 'Does s/he feel anything else?', until the child responded no. These open-ended questions were used to give children the opportunity to mention a mixture of positive and negative reactions.

## Results

### *Neutral-motive stories*

In line with Yuill's findings, it was expected that most children should judge appropriately that the neutral-motive match character was happier than the corresponding mismatch character. For the 12 children in each age group, the numbers making this choice were 8,9,12 and 12 for the 3-, 5-, 7- and 10-year-olds respectively. The figures for the 5-10-year-olds were significantly different from chance using the binomial test, at  $p < .01$ , but the 3-year-olds' data were marginal at  $p < .053$ .

### *Bad-motive match stories*

Children could judge the characters in these stories as having positive, negative or mixed feelings. If children attributed positive feelings, this was always because they saw the character as achieving the desired end, so these responses were categorised as *subjective*. If children attributed negative or mixed feelings, we needed to establish whether this represented an understanding of the immorality of the action (i.e. a moral stance) or not, in which case we assumed conservatively that it reflected an *objective* response. We only classified responses as *moral* if they mentioned emotions such as guilt, sorrow, regret or shame. (The children did not have to use complex vocabulary: examples of moral responses using simple vocabulary are given in the discussion.) Unlike N&S, we did not classify a response as moral if it mentioned fear of punishment, although this was infrequent in our data, since such a response seems to us to be outcome-oriented. Considering the responses over all four bad-motive match stories, we categorised children according to their dominant mode of response, i.e. a particular response shown for at least three of the four stories. This allowed us to categorise all the subjects. The numbers of children in each category are shown in Table 3.

Table 3: Number of children adopting each of the three stances: Experiment 2

Age	Stance		
	objective	subjective	moral
3yrs	6	6	0
5yrs	1	10	1
7yrs	1	10	1
10yrs	0	0	12

As the table shows, the two middle age-groups were almost all in the 'subjective' category, the oldest children were all in the moral category, and the youngest group evenly divided between the objective and subjective categories. Although the even division of the 3-year-olds was somewhat surprising, given previous work showing their objective bias, the distribution of their responses was significantly more biased towards objectivism than subjectivism than for the other age groups combined, Fisher Exact test  $p < .02$ . As is clear from the table, the oldest group, in comparison to the three younger groups combined, were significantly more likely to give moral than subjective responses, Fisher's Exact test  $p < .001$ .

## Discussion

The results for bad-outcome stories provide support for the hypothesised sequence from objective to subjective to moral responses. The 3-year-olds were more likely to give objective responses than the older groups, while the 10-year-olds were more likely than any other group to consider the influence of moral considerations on an actor's emotions. This sequence could be found in the present study because we used a broad age-range, unlike previous studies which may have failed to find children in all three response categories because a narrower age-range was sampled.

Justifications given for moral responses showed the extent to which children can attribute mixed emotions to the story characters. The 10-year-olds almost always attributed mixed feelings and used a wide variety of terms in describing guilt feelings. For example, Gareth (9;10) stated 'his plan went as he wanted but he knows he did wrong', while Laura (10;2) said 'she feels guilty, and cross with herself for doing it'. Several other children in this age group mentioned feeling guilt, shame, embarrassment, sorrow or pity for the victim. The two younger children classified as moral, although not using such moral terms explicitly, made clear reference to the actor's moral rumination: the 5-year-old classified as moral noted that the actor 'thinks she shouldn't have done it'. Some of the 'subjective' children clearly had a dawning awareness of the impact of moral values on emotion, as witnessed by one 7-year-old who judged the actor pleased with her misdeed on 3 occasions but on the final story, judged the actor happy, but then sad, because 'she wanted to hit the girl but now she thinks it's a wrong thing to do cos she (the victim) is crying'. Other children who were classified as subjective used their limited emotion vocabulary in inventive ways to describe mixed feelings. In particular, a 5-year-old and a 7-year-old used the term 'naughty-happy', apparently to describe wicked glee at achieving an action that was known to be wrong but consistent with a desire. (Of course, the German-speaking children in the study by N&S would have had available a precise term for this: Schadenfreude refers to just such a wicked glee.) Justifications for objective responses were largely uninformative ('she's sad because she's sad') or repetitive of the outcome ('because she's crying'). The two children judged as objective who were not in the 3-year-old group were categorised conservatively: one gave no reason for his judgements of sadness, and the other, a 7-year-old, argued that the actor 'wanted

to do it but didn't mean to': while this boy knew that the outcome matched the desire, he seemed unable to attribute pleasure in such circumstances but could not say clearly why.

It is somewhat surprising that half of the youngest group gave subjective responses: the 3-year-olds in the study by Yuill (1984), and those in Experiment 1, above, rarely gave such responses. One reason may lie in the fact that some of the children in the present study were relatively old. If this age group is split in half by age, then 5 of the 6 young half (mean age 3;3 years) are classed as objective and 5 of the 6 old half (mean age 3;8 years) are subjective.

The results for the neutral-motive stories support Yuill's claim, now well-replicated, that young children can judge emotions on the basis of satisfaction of desires. However, the performance of the youngest group was not as high as that in Yuill's study. This may have been because of differences in response mode between the studies. In the present study, children judged characters primarily as happy or sad, and were not invited to make gradations, whereas Yuill explicitly asked children how happy or sad the characters were, using a 4-point scale. In the present study, then, children might judge both characters happy, but if asked, might agree that the mismatch character is less happy than the match one. In fact, three 3-year-olds and one 5-year-old judged both characters happy, although surprisingly, one and two children in the respective age-groups judged both characters to be sad. An inspection of Yuill's original data shows that for the youngest group, 12 of the 48 pairs of responses (2 pairs each for 24 children) to neutral-motive match and mismatch stories would not have shown a differentiation if a simple dichotomous scale (including neither gradations of happy or sad nor an in-between point) had been used.

### **Experiment 3: Salience of moral and personal issues**

Experiment 2 shows that the main conflict between N&S and Y&P can be resolved by assuming a progression from sad to happy to sad. However, there is a further discrepancy between the studies of N&S and Yuill, related to the issue of stances discussed above. In N&S, the 8-year-olds, and many of the 6-year-olds, judged ill-doers by moral standards rather than by whether they achieved personal satisfaction of their desires, whereas in the study by Yuill, 7-year-olds adopted the latter form of reasoning, judging an ill-doer as pleased in getting what he wanted. Clearly, there is a developmental change towards morally-oriented attributions, as N&S propose in their paper, some time between the ages of 4 and 8, as children increasingly take into account the impact of moral standards on emotions. However, it is still surprising that the 7-year-olds in Yuill's study took a subjective, rather than a moral, orientation. Understanding this difference in results may also help in understanding the impact of the 'situational variations' cited by N&S as influencing children's attributions of moral emotion. While children's judgements of moral emotion will depend partly on cognitive developmental level (e.g. comprehension of desire as subjective), they also reflect what children see as important influences on emotion (e.g. the morality of one's actions) and on what standard of judgement they adopt for a particular purpose (e.g. moral or personal).

A clue to the reason for the discrepancy is provided by examining the aims of the two studies. While Yuill was concerned with using emotions as an index of children's understanding of the implications of desire as a subjective property of the human mind, N&S were addressing the issue of children's moral understanding. These divergent frameworks guided the two sets of studies in subtly different ways. N&S presented stories that involved transgressions and were understandably concerned that children in their studies understood the wrongness of the acts depicted. They therefore asked children a control question about whether the actions described were good or bad, *before* the emotion judgement task. This procedure, and the fact that all stories concerned transgressions, made moral issues highly salient. In Yuill's experiment, each child heard a mix of bad and neutral stories, and the issue of whether an outcome matched a motive or not was made salient by the way in which this factor varied between stories. Many of the subjects found it entertaining during the story to anticipate whether the actor would achieve the desired goal or not.

Also, although children were asked to make moral judgements of the characters, this judgement was only made *after* the emotion judgement. Yuill suggested that this order of questioning may in fact have accounted for the fact that the youngest children in her experiment tended to judge the neutral-motive mismatch character as less good than the neutral-motive match character: these children may have associated the former character's 'sadness' with 'badness'. Thus, this experiment was set up in such a way that personal issues were more salient than moral ones, in contrast to the N&S study. That study may have found an earlier use of a moral stance because the experimental set-up encouraged such a stance, whereas the study by Yuill encouraged a personal stance.

However, just as adults would acknowledge that emotions in the negative-match story can be determined by both moral and personal considerations, so children, once they can understand desirability as a subjective property, might be able to adopt different stances in a flexible way. The three-phase sequence mentioned above can be seen as two somewhat independent developments: (1) a cognitive developmental change from objective to subjective conceptions of desire, permitting children to realise that emotions need not fit the objective value of a situation and (2) a social-cognitive shift in emphasis from egocentric, personal concerns to sociomoral concerns that make children more likely to give moral than personal (subjective) responses, although both responses are available to them because they understand the subjective nature of desire. Experiment 3 assessed whether an explanation in terms of salience could account for the discrepancy in judgements of such situations, and at what age children can adopt these different stances.

## Method

### Subjects

Thirty-two 3-year-olds (mean age = 3;5, 16 girls) and 32 5-year-olds (mean age = 5;5, 13 girls)

from 5 schools and nurseries took part in the experiment.

### **Design**

Equal numbers of children in each age group were assigned randomly to either the 'moral' or the 'personal' salience condition. Each child judged nine stories, all in the 'ball' context as used in the previous experiments. Three stories were neutral-motive match stories, three were neutral-motive mismatch, and three were bad-motive match. The three stories of each type differed only in the identities of the protagonists, who were depicted in randomly-assigned different-coloured clothing. The stories were presented in three randomly-ordered blocks of three – one story of each type within a block.

### **Materials**

The materials were the same as those used in Experiment 2, except that picture sequences (as in Experiment 1) rather than dolls, were used, and there was a different variety of clothing colours.

### **Procedure**

Each child was interviewed individually in a quiet room. For some of the younger children, two sessions were required to avoid loss of concentration. After each story, children were asked, 'How does (the protagonist) feel? Happy or sad or in between?' with the order of happy and sad randomised for each presentation. After this judgement, children were shown a 4-point pictorial scale indicating the degree of emotion of a particular type. For example, the 'happy' scale showed four faces of increasing size, labelled 'in between' (i.e. neither happy nor sad), a little happy, quite happy and very happy. Children were given a short practice in the use of the scale at the start of the experiment.

In the **moral salience** condition, after the story was related, but before the emotion judgement, the child was asked: 'Was that a good thing or a bad thing for the boy/girl to do?' In the **personal salience** condition, this question was replaced with: 'Was that what the boy/girl wanted to happen or not what s/he wanted to happen?'. All children answered correctly. Each emotion judgement was assigned a score from 1 (= very sad) to 7 (= very happy), with the in-between point scored as 4.

## **Results**

### *Neutral-motive stories*

To establish whether children distinguished between match and mismatch conditions in the neutral-motive stories, we performed an analysis of variance with age (3 or 5 years) and salience condition (moral or personal) as between-subjects factors and story type (match or mismatch) within subjects, on the combined emotion judgements for the six neutral-motive stories. In addition to the main effects for age,  $F(1, 60) = 4.04, p < .05$ , and story type,  $F(1, 60) = 236.7, p < .0001$ , there were interactions between these two factors,  $F(1, 60) = 47.54, p < .0001$ , between

story type and salience,  $F(1, 60) = 16.23$ ,  $p < .0002$ , and between story type, age and salience,  $F(1, 60) = 6.88$ ,  $p < .01$ .

### Figure 1 about here

A separate analysis of variance for each age shows why this 3-way interaction occurred: for 5-year-olds, there was just a main effect for story type,  $F(1, 30) = 300$ ,  $p < .0001$ , other  $F$ s  $< 1$ . As can be seen from Figure 1, this age group consistently rated the mismatch character as less happy than the match character. Nonparametric analyses support this picture: 25 of the 32 5-year-olds rated match characters as happier than mismatch ones for all 3 sets of stories, and the remaining 7 children did so on two out of three occasions. For 3-year-olds, while there was also a main effect for story type,  $F(1, 30) = 30.73$ ,  $p < .0001$ , there was also an interaction between story type and salience,  $F(1, 30) = 18.86$ ,  $p < .0001$ . As Figure 1 shows, the differentiation between match and mismatch was clear for the personal salience condition, but not for the moral salience condition. Fourteen of the children in the personal salience condition rated the match character as happier than the mismatch one on two or more occasions, while only 4 children did so in the moral salience condition. Possible reasons for this are considered in the discussion.

### Figure 2 about here

#### *Bad-motive stories*

To assess the impact of salience on judgements of ill-doers' emotions, we conducted an analysis of variance on the combined emotion ratings with age and salience between subjects and story type within subjects. Because there was a main effect for age,  $F(1, 60) = 4.67$ ,  $p < .05$ , and for salience,  $F(1, 60) = 3.92$ ,  $p < .05$ , we conducted separate analyses for each age group. For 5-year-olds, there was a main effect of salience,  $F(1, 30) = 5.35$ ,  $p < .05$ . As Figure 2 shows, the protagonist was judged less happy in the moral salience condition than in the personal salience condition. This was supported by nonparametric analyses: Table 4 shows the contingency between salience condition and the predominant emotion response. In the personal salience condition, 13 of the 16 5-year-olds judged the character to be happy on at least two of three occasions, and only two children ever gave a 'sad' rating, in just one of the three stories. In contrast, eight of the 16 children in the moral salience condition rated the character sad at least twice. The difference in conditions for predominantly happy and sad ratings was significant, Fisher's Exact test  $p < .005$ . For the younger group, there was no such effect, either in the parametric analysis,  $F$  for salience  $< 1$  (see Figure 2), or in the non-parametric analysis (see Table 4). The responses for this age-group were more variable, both within and between subjects, than for the older group, and considerably fewer children gave the same type of response three times in a row, unlike the older children. There was no significant difference between salience conditions in the predominant type of response.



Table 4: Number of children in each condition and age giving majority of responses of each type: Experiment 3

	Response type		
	happy	in between	sad
3 year-olds			
Personal	9	3	4
Moral	7	2	6
5 year-olds			
Personal	13	2	0
Moral	8	0	8

*Notes.* Majority of responses = 2 or 3 responses out of 3 in one category  
 One child at each age gave no majority response: these are excluded

### Discussion

The results for the bad-motive stories clearly support the idea that judgements of an ill-doer's emotions are influenced by salience of moral or personal issues for 5-year-olds but not for 3-year-olds. Five-year-olds judged such a person to be happy when personal considerations were salient, with an average score just over the 'quite happy' point, in keeping with the results for the 7-year-olds in Yuill's 1984 study. In contrast, 5-year-olds in the moral salience condition judged emotions to be less positive for such situations than the children in the personal salience condition did, agreeing more with the results by N&S, who found that 60% of 6-year-olds judged an ill-doer to feel negative emotions. For three-year-olds, there was no such difference: the average score for both salience conditions was around the 'in-between' point of the scale. Thus, the 5-year-olds judged by an apparently subjective stance in the personal condition and by an apparently moral stance in the moral condition. Children of this age seem able to modify their judgements flexibly according to different standards. The three-year-olds, however, did not do so: as in the study by Yuill, their judgements hovered around the midpoint of the scale, despite the fact that they rated the match characters in the neutral-motive stories as happy.

The results for the neutral stories confirm the general picture presented earlier that children from the age of 3 can judge emotions on the basis of desire. However, the youngest children's ability to do this was adversely affected in the moral salience condition: while they judged the match character more pleased than the mismatch one in the personal condition, they did not do so in the moral condition. This is presumably because children associated the answer to the

moral control question, that the character was good rather than bad, with a positive emotional state. This is akin to the manner in which children in Experiment 1 may have judged the neutral mismatch character in the cycle story as happy because of an association with the positive nature of a 'fun bump'. The youngest children in Yuill's original study may also have judged the neutral mismatch character as less good than the match one because they had just judged the former to be less happy.

The different stances to judging emotion were adopted by 5-year-olds not simply because those children in the moral condition judged actors' emotions on the basis of the moral value of their actions: in the neutral-motive stories, children most often judged actors to be sad when they had a comparatively nice motive that was not achieved. The present results show that the appearance of a moral stance can be influenced by what is salient in a particular situation, but only when children are capable of understanding the subjective nature of desire.

### **General Discussion**

Judgements of emotion in the types of situation used in the present studies rely on three sources of knowledge: an understanding of desire in relation to outcomes, of how desire satisfaction influences emotion, and of how moral reflection influences emotional reactions. Furthermore, one can take different stances or attitudes to judging such emotions. The ability to take different views may well be a precursor of children's understanding of mixed emotions: once they understand desire as a subjective feature, they should in principle be able to see that, just as two people can have different desires with respect to the same object, so one person can have different desires towards the same object, and hence, conflicting emotions. This recognition might be further aided if children are aware of the discrepancy between judgements of emotion based on objective and subjective conceptions of desire. If a subjective conception of desire emerges at around 4-5 years, as the data suggest, it could well be a precursor of a more general ability to attribute conflicting emotions. Previous research by Harris and by Harter and colleagues (e.g. Harris, 1983; Harter & Buddin, 1987) suggests that children do not spontaneously accept the existence of simultaneous conflicting emotions until the age of about 8-10, and this fits well with the present Experiment 2, where only the 10-year-olds spontaneously attributed mixed positive and negative feelings. The different feelings engendered by immoral acts may be an important starting point for a fuller understanding of mixed emotions, particularly as those emotions are so different in valence: delight at achieving a goal, remorse at causing distress, fear of punishment, anger at the self for violating a moral principle.

Given that older children are more likely to take a moral stance than younger children are, other things being equal, and that 5-year-olds can switch between two different standards of judgement, the results suggest that the standards adopted by young children in particular can be influenced by prevailing social mores. This possibility lays an important responsibility on all those

concerned with moral development and education of young children. For example, educators may need to consider how the value placed on fulfilment of individual achievements and gains can be integrated with the moral implications of those achievements for others. The comments of two of the 5-year-olds in Experiment 3 bear witness to children's awareness of different standards and their ability to adopt different positions flexibly. Both children were in the personal salience group, and judged the wrongdoer as maximally happy, but when asked at the end of the study how the actor *should* feel, responded 'sad'.

An important factor that may influence children's willingness to adopt one standard or the other is the social construction of a child as a moral agent. Semin & Papadopoulou (1989) asked mothers about their own and their 4- to 12-year-old children's reactions to potentially embarrassing events and found a shift in responsibility from mother to child. When young children commit a social faux pas such as breaking a bottle in a supermarket, it is primarily the *mother* who shows embarrassment, as if on behalf of the child, because the child is not yet seen as morally responsible. Mothers of older children attribute more embarrassment to the *child* than to the self, because, the authors argue, responsibility shifts to the child as moral agent. The attributions of some of the children in the present studies seem to mirror these changes in maternal attributions: those children who mentioned fear of sanctions seemed to lay the entire burden of moral responsibility onto the adult world (usually in the person of a teacher), arguing that the actor would feel pleasure as long as there was no-one there to rebuke them, whereas other children attributed anger with the self for committing an immoral act, thereby treating actors as moral judges of their own behaviour. Thus, just as theories of moral development trace the growing internalisation of moral standards (Hoffman, 1988), so children may first assign different emotions to different people (self is pleased, teacher is angry, victim is sad), and then attribute these emotions to a single person, the actor, who functions not just as a rational being, responding to the fulfilment of a desire, but also as a moral judge of self, reacting to the anticipated distress of others.

This change in social responsibility for moral emotions raises a more general issue of the multiple reasons for developmental change. Judgement of emotions as studied here requires understanding something about the nature of desire, of emotion and of morality, but also an appreciation of what principles should guide behaviour. As Nunner-Winkler and Sodian (1988) conclude, young children might understand the validity of moral principles but use different principles as a guide for behaviour. The principles children use may derive from their social status as dependent, amoral beings or independent moral agents. Children's judgements of moral emotions thus tap cognitive development, social understanding and the transfer of moral responsibility from adult to child, as well as the influence of the prevailing mores of a particular society as to the nature of moral emotions and the moral status of the child. As Higgins and Parsons (1983) argue, theories of cognitive development need to consider not only how social factors can provide opportunities

for growth, but also how different phases in the social life of the child contribute to changes in social-cognitive development.

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Figure 1. Mean emotion ratings for 3- and 5-year-olds in neutral motive match and mismatch stories

Figure 2. Mean emotion ratings for 3- and 5-year-olds in bad motive match stories