

## CHILDREN'S EXPERIENCE OF THREE TYPES OF CARTOON AT TWO AGE LEVELS \*

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Three cartoons were shown to 87 children at two age levels: 5-6 years, and 9 years. The children's experience was assessed in interviews. The younger children experienced the cartoons in a fragmentary manner and not as a continuous story, understood less of the cartoons, and tended to base their moral judgements of a character's behaviour on whether or not they identified with that character. Six months later, the younger children remembered best those scenes that had made them the most anxious earlier. A subgroup of children with abundant aggressive fantasies had a lower level of moral reasoning than the other children, preferred violent scenes, became less anxious while watching them and tended to give illogical explanations for the behaviour of the cartoon characters. The degree of anxiety provoked by a cartoon depended not on the amount of explicit violence shown but on the way the violence was presented. One cartoon, which contained no explicit violence, was considered the most frightening one due to its sound effects.

The present study was carried out in order to investigate how children of both sexes in two age groups, some of whom had abundant aggressive fantasies, experienced three types of cartoons.

Whereas much study has been done on the effect of violent films on the behaviour of children, little has been directed at finding out how children experience aggression in TV cartoons - cognitively, ethically and emotionally. Knowledge about how children experience what they see could lead to a better understanding of a film's impact on their behaviour.

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Noble (1975) has analyzed children's experiences of films in terms of the theories of Piaget. He claims that preschool children, who are at the preoperational stage, experience films as a series of separate and fragmentary incidents and not as a continuous story. This is because they lack the ability to reverse operations and hence cannot comprehend concepts such as beginning, middle and end. According to Piaget, age seven is the borderline between the stage of preoperational thinking and the stage of concrete operations (Piaget 1952; Inhelder and Piaget 1958). With this consideration in mind, we felt there may be reason to believe that children younger and older than seven experience films differently. We therefore selected our subjects from two age groups, a few years younger and a few years older than seven.

We postulated a number of hypotheses concerning differences between the two age groups. One of our hypotheses was, accordingly, that the younger children would experience the films more as a series of fragmentary incidents than as a continuous story, while the older children would do so to a considerably lesser extent. In line with this, we expected that the younger children would understand less of the films.

To gain information about possible sex differences, both boys and girls were included. Since in most cultures, violence is considered more acceptable for boys than for girls (Lefkowitz et al. 1977), and since boys have usually been observed to behave more aggressively than girls (Maccoby and Jacklin 1974), boys could be expected to have a greater preference for violent scenes in the films. Other possible differences between boys and girls will be dealt with below.

The subjects were also divided into two subgroups according to whether they had abundantly aggressive fantasies or not. These two subgroups can be expected to react differently to violent films. Earlier studies (Feshbach and Singer 1971; Lagerspetz and Engblom 1979) have shown that the behaviour of aggressive and nonaggressive children is affected differently by violent films. Aggressive children are known to prefer violent films (Heller and Polsky 1976; Eron 1963) and to more often entertain aggressive fantasies (Huesmann et al. 1984). Many studies have used aggressive fantasies as a measure of aggressiveness (e.g. Feshbach 1955); such fantasies have also been shown to correlate with aggressive behaviour (Huesmann et al. 1984).

In studies on the effect of violent films on behaviour, certain factors have proven to be important in enhancing or mitigating the impact of

the film. One such factor is the *experienced realism* of the film.

Huesmann et al. (1984) found that children who thought that TV films resembled real life to a great extent were more aggressive than children who thought they did so to a lesser extent. Boys thought TV films resembled real life more than girls did, and the same was true of young children in comparison with older ones.

In the present study, experiencing the experimental cartoons as resembling real life was considered as having a poor sense of reality. In line with Huesmann et al. (1984), boys were expected to have a lower sense of reality than girls; the same would be true for younger children when compared with older children, and for children with abundant aggressive fantasies in comparison with children with less aggressive fantasies.

Identification with film heroes has proven to be an important point in TV and film studies. Huesmann et al. (1984) found that, in both Finland and the United States, the degree of identification with TV heroes (violent as well as nonviolent) correlated with the aggressiveness of child viewers. In many children's cartoons, the heroes, such as Woody Woodpecker and Donald Duck, behave extremely aggressively. Due to their identification with such heroes, children may be expected to attain a more permissive attitude towards aggressive behaviour. In that way, identification with aggressive film heroes can enhance subsequent aggressive behaviour due to a change in attitudes towards violence.

Two hypotheses concerning identification were proposed. The first one was simply that boys would tend to identify with male characters and girls with female characters. The other hypothesis was related to moral understanding. Kohlberg (1969) and Turiel (1973) have shown that children go through phases of moral development. Younger children could therefore be expected to have a lower level of moral reasoning than older ones. This hypothesis was tested by their interpretation of the behaviour of aggressive film heroes like Woody Woodpecker, whom they were expected to identify with. If they for instance failed to see that Woody Woodpecker was aggressive towards others, and instead considered him to be a positive nonaggressive character, it was interpreted as low moral reasoning. Several items of this type were added together into a summed variable, *moral understanding*.

Children with abundant aggressive fantasies were also expected to have a lower level of moral reasoning than other children, on the

ground that there may be a connection between aggressiveness and deficient moral reasoning.

It is usually thought that young children more easily become frightened than older ones during violent film scenes. The reason for this may be that young children are not yet able to deal with anxiety provoking situations in an adequate way, to judge whether the situations constitute a real threat or not. Whatever the reason, we decided to test the hypothesis that younger children get more anxious during aggressive scenes. Several items were added together to a summed variable, *anxiety*. Since boys are known to be more aggressive than girls (Maccoby and Jacklin 1974), we felt it would be reasonable to expect that they also display less anxiety during violent scenes. The same would be true of children with abundant aggressive fantasies in comparison with children with fewer such fantasies.

As experimental films, we chose children's animated cartoons. By far the most popular films among children are cartoons. This was established in our preexperiments among preschool children in daycare centres.

According to Zusne (1968), children's cartoons that depict violence can most meaningfully be divided into two main groups, 'comedy' and 'drama', depending on how the violence is presented. Whether these two types of cartoons affect children differently is not clear. Apparently, the manner in which violence is presented plays a considerable role. Linné (1976) showed the same film in three versions to adults. The film was edited to achieve different degrees of excitement, for example, by inserting or omitting certain sound effects. The greater the use of these technical effects to produce suspense, the more aggressively her subjects reacted.

Three cartoons were selected as experimental films: (1) one, which we will refer to as the *aggressive humorous* (AH) cartoon, depicted violence in a humorous way, with the consequences of the violent actions either totally ignored or highly unrealistically presented; (2) an *aggressive drama* (AD) cartoon, that depicted violence in a dramatic way, with the consequences of the violence for both the attacker and the victim vividly and realistically presented; and (3) a *nonaggressive* (NA) cartoon that contained no explicit violence but was produced with so many fear-eliciting sound effects that it might be experienced as frightening or threatening by children. In many respects the three cartoons were not compatible, but this was not considered detrimental

to obtaining the kind of information we were seeking. To have had completely compatible cartoons would have meant that we would have had to produce them ourselves, which would have been too costly. But to find suitable experimental cartoons from among those available commercially was not an easy task; many cartoons were screened and tested on children in preexperiments before three were finally selected. Those selected were according to the experimenters the most typical of the three types described above. Furthermore, children who saw them in preexperiments liked them, and all had at one point or the other been shown on Finnish TV. All the cartoons presented a variety of characters with whom identification could be made; in the aggressive films the main such characters were either the aggressor or the victim.

Only rarely have the long-term effects of violent films been studied. Hicks (1965) and Kniveton (1973) reported that children were still able to describe and reenact violent behaviour that they had seen in a film six months earlier. We therefore decided to interview our children six months after they had seen the cartoons to find out what they remembered, how much they remembered, and in what direction their experience of what they had seen had been molded over time. We put forward the hypothesis that the most anxiety provoking scenes (those that the children most often claimed that they became frightened of) would be the scenes best remembered six months later. In addition, we expected that they, in the postinterview, would be able to relate less of the films than they could in the first interview.

### **Summary of problems investigated**

(1) *Age differences.* The two age groups were expected to differ in their experience of the films. They may differ in how much they understand about the plot, how they judge the behaviour of the characters morally, how realistic they think that the films are, and how anxious they become when seeing violence. The younger children may experience the films as a series of incidents rather than as a continuous story.

(2) *Sex differences.* We found it likely that the children would identify with characters of their own gender, when possible. Further, we expected that boys would prefer violent scenes more than girls did, show less anxiety when seeing these scenes, and have a poorer sense of reality.

(3) *Children with abundant aggressive fantasies* were expected to prefer aggressive scenes and to become less anxious than the other children when viewing them, and to have a lower level of moral reasoning.

(4) *What is remembered after six months?* This was a way to test what makes the greatest impression on the children in the films.

(5) *What is frightening in the films?* Is it determined by the amount of violence a film contains, or is the way of presentation more important? The different film types (NA, AD, and AH) were compared.

## The experiment

### Methods

#### Subjects

Forty-five preschool children (24 boys and 21 girls) 5 and 6 years old, and 42 school children (19 boys and 23 girls) all 9 years old, participated in the study. Six months after viewing the cartoons, 35 of the younger and 36 of the older children participated in a second interview.

#### Children with aggressive fantasies

On the basis of postexperimental interviews, those 20 children (13 boys and 7 girls, equally of both age levels), who had the most abundant aggressive fantasies were allocated to a subgroup. These children were compared with the remaining children whose aggressive fantasies were less abundant. Aggressive fantasies were measured with six correlating items ( $\alpha = 0.56$ ). An example of such an item: 'Would you like to turn into an animal like the character in the cartoon did? What kind of an animal would you like to turn into?' If the response to the second question was 'an eagle', 'a lion', 'a wolf', or some other predacious animal, it was interpreted as an example of an aggressive fantasy.

#### Films

The three animated cartoons were from 6 to 7 minutes long.

(1) The AH cartoon was *Round Trip to Mars*, produced by Paul J. Smith (1957), a Woody Woodpecker cartoon. Fifty percent of the film consists of violent scenes. A professor builds a rocket ship in order to get to Mars. Woody Woodpecker becomes for no apparent reason angry with the professor, stops the rocket from reaching Mars, and engages in a lot of meaningless violence against the professor. Woody Woodpecker is portrayed as cruel, and in almost all violent scenes the professor is the object of the violence while Woody Woodpecker is the aggressor. Violence is indirectly glorified, and what the cartoon communicates is that violence pays off and is fun.

(2) The AD cartoon was *Song of the Birds* by Max Fleischer (1935). About 20% of the playing time consists of violent scenes. In contrast to the AH cartoon, it has a clear

message. A little boy shoots at a bird with his play gun and the bird falls to the ground, apparently dead. Realizing what he has done, the boy regrets it deeply. The other birds try in vain to awake the dead bird. At night the boy cannot fall asleep; he tosses and turns in his bed. It starts to rain and, suddenly, the bird wakes up. The boy sees this, becomes very happy and determinedly breaks his gun into pieces. Violence and aggression are shown but the message is clear: one should not harm others by violent behaviour. The consequences for both aggressor and victim are realistically depicted.

(3) The NA cartoon was *Tales from Lapland*, produced by Seppo Putkinen (1977). It contains no explicit violence but an atmosphere of suspense, to some extent even of threat, is created with the use of sound effects. The cartoon, based on folk tales from Lapland, tells about a Laplander who is turned into a wolf by walking three times around a certain magic tree. Before being turned back into a man, he lives as a wolf for two weeks, hunting birds and reindeer with the other wolves and eating the game. The cartoon has a mystical-magical overtone.

#### *Procedure*

The cartoons were shown, with a 16-mm film projector, to groups of five children at a time. After each film the children were interviewed individually. After having been interviewed about the first cartoon, they saw the second cartoon, and so on. The order in which the films were shown to the 18 groups was rotated to eliminate any systematic position effects. The interviews consisted of fixed questions with open alternatives. Half the questions were the same for all the cartoons, and half applied to the specific film.

Most questions concerned six aspects of the viewing experience:

- (1) *Cognition*: How well did the children understand the film? Were they able to understand it as a whole and to follow the plot, or did they experience it only in fragments? How common were misinterpretations?
- (2) *Identification*: Whom would they have liked to have been in the film and why?
- (3) *Moral reasoning*: Whom did they see as the good characters and the bad characters, and for what reasons?
- (4) *Preference*: Which cartoons and scenes did they like and dislike, and for what reasons?
- (5) *Anxiety*: Did they feel frightened at any point, and if so, during what scenes? Since many children do not like to admit becoming frightened, the children were also asked whether they thought children younger than themselves might become frightened by any scenes. A positive answer was regarded as an indication of anxiety.
- (6) *Sense of reality*: Did they think that incidents such as those shown in the cartoon might happen in real life? The less they thought it might happen in real life, the better sense of reality they were thought to have.

Some of the items were added to form summed variables. *Understanding* ( $\alpha = 0.60$ ) was measured with eight items, *moral development* ( $\alpha = 0.57$ ) with six items, *anxiety* ( $\alpha = 0.60$ ) with three items, and *sense of reality* ( $\alpha = 0.50$ ) with six items.

Six months after the film showings, all children that could be reached (81.6%) were again interviewed individually. This time fewer questions were asked, and they centered

on how much the child remembered about the cartoons. To permit comparisons, some of the questions asked in the first interview were repeated.

#### *Statistical methods*

The correlation measures are Pearson's correlation coefficients. The answers to individual questions yielded nominal data, and significant differences between groups were measured with *chi-square* tests. The reliability coefficients of the summed variables are estimated with Cronbach's  $\alpha$ .

#### *Results*

##### *Differences between the age groups*

Children of the two age groups tended to give different answers to single items. An assortment of these is shown in table 1. These are selected because they are of theoretical interest.

As can be seen from the table, the younger children tended to experience the films in a fragmentary manner, and not as a continuous story.

Another item unexpectedly supported the relevance of the theories of Piaget in interpreting children's film experience: In the NA cartoon, a Laplander magically turned into a wolf and then back into a man. All the children understood completely that the Laplander had turned into a wolf, and 98% of the older and 80% of the younger children were able to clearly describe the process by which the magic had taken place. However, compared with 50% of the older children, only 18% of the younger ones gave a positive answer when specifically asked, 'Was the Laplander among the other wolves eating the game?' (table 1). Although they understood perfectly well that the Laplander had turned into a wolf, they were unable to come to a correct conclusion. This was reminiscent of an observation by Piaget (Piaget and Szeminska 1975), who in a well-known experiment showed children at the preoperational level a glass full of beads. He then poured all the beads into a differently shaped glass and asked the children whether both glasses held the same number of beads. The children answered 'no'. Piaget refers to this as the inability to understand the principle of conservation.

The hypothesis that younger children would understand less of what they see in the films was corroborated. The correlation between age and the summed variable *understanding* was high and significant (table 2). Answers to single items (table 1) exemplify this further.

There was no significant negative correlation between age and the summed variable *anxiety*, although there was a tendency ( $p < 0.10$ ) toward less anxiety with increasing age (table 2). However, the younger children were more often than the older ones of the opinion that younger children than themselves would become frightened by the films (table 1). This can be interpreted as a sign of anxiety, although they denied that they personally became frightened. This specific item was to begin with considered to be the best anxiety measure (cf. Lagerspetz and Engblom 1979).

Contrary to expectations, age did not correlate positively with *sense of reality* (table 2). That is, at least with this film material, younger children did not seem to more often

than the older ones think that what happened in the films could also happen in real life.

However, in the case of one film (the AH cartoon), a positive relationship was found (table 1). Significantly more young children than older ones were of the opinion that what happened in this film could well occur in real life.

*Moral understanding* seemed to increase with age (table 2). Answers to single items (table 1) exemplify this: The younger children more often claimed that aggressive film

Table 1

Percentages (raw figures in parentheses) of children of the two age groups giving affirmative answers to some crucial items, and significances of the differences.

	Preschool children ( <i>N</i> = 45)	9-year-old children ( <i>N</i> = 42)	$\chi^2$	<i>p</i> <
<i>'Piagetian' items</i>				
Experienced films in a fragmentary manner	80% (36)	29% (12)	19.72	0.001
Not understanding the principle of conservation: The man who became a wolf	82% (37)	50% (21)	11.45	0.01
<i>Understanding</i>				
Understood the message of film (AD)	42% (19)	79% (33)	12.11	0.002
Understood that the boy in the AD film underwent a change	80% (36)	100% (42)	7.34	0.01
Illogical explanations of film characters' behaviour	25% (11)	5% (2)	10.31	0.01
<i>Anxiety</i>				
'Younger children than me would surely get scared of these films'	60% (27)	26% (11)	15.60	0.001
<i>Sense of reality</i>				
Events in the AH cartoon could have happened in real life	36% (16)	15% (6)	9.01	0.01
<i>Moral understanding</i>				
Claimed that aggressive film hero behaved nonaggressively	89% (40)	50% (21)	16.39	0.001
Claimed that victim of aggressive hero deserved beating	36% (16)	17% (7)	7.71	0.01
<i>Evaluation of film characters</i>				
Could explain why film characters behaved the way they did	56% (25)	81% (34)	6.83	0.05
Could explain reason for identifi- cation with (= would like to be like) certain film character	47% (21)	79% (33)	9.70	0.01
<i>Nonviolent vs violent scenes</i>				
Least liked scene a nonviolent one	16% (7)	55% (23)	16.45	0.001
Most frightening scene a nonviolent one	13% (6)	57% (24)	37.88	0.001

heroes were not aggressive at all, and that the victims of the heroes deserved their beating.

Answers to single items revealed that it was more difficult for the younger children to *evaluate* the film characters' behaviour (table 1). They tended to be unable to explain why they considered certain film characters to be nice or nasty. Neither were they quite able to explain why they identified with certain film characters.

There was a difference between the two age levels concerning their opinions about *nonviolent and violent scenes*. The majority of the younger children considered a violent scene to be the most frightening one, and the same was true when they were to choose the scene that they liked the least. The opposite was true of the older children (table 1).

#### *Differences between the sexes*

Our hypothesis that the children would preferably identify with film characters of the same sex was corroborated. In the NA cartoon, the boys chose a male object for identification, the hero of the film, while the girls identified with a female character although she had only a small part in the film ( $\chi^2(3) = 14.12$ ,  $p < 0.01$ ).

How the children experienced the cartoons seemed, to some extent, to depend on which character they identified with. In the AD cartoon, most girls identified with the little bird that was shot down; about half the boys identified with the bird and the rest with the little boy who shot the bird. The difference between sexes was significant at the 0.02 level ( $\chi^2(5) = 14.29$ ). Their identification with the little boy might be why many boys considered this cartoon the most frightening; for them it was an anxiety-provoking experience. Few girls considered this to be the most frightening film.

In the AH cartoon, the vast majority of boys (74%) and girls (79%) identified with Woody Woodpecker even though he was a male. Their inability to experience this character as aggressive is probably largely explained by this identification.

With this film material, boys did not show any greater preference for violent scenes than girls did.

When asked which scene in all the cartoons was the scariest, roughly 50% of the girls, and only 20% of the boys, named a *non-violent scene* ( $\chi^2(4) = 13.92$ ,  $p < 0.01$ ).

Table 2  
Pearson's correlation coefficients for the summed variables and age.

	Moral understanding	Sense of reality	Anxiety	Understanding	Aggressive fantasies
Age	0.43 <sup>a</sup>	0.05	-0.15 <sup>c</sup>	0.52 <sup>a</sup>	-0.04
Aggressive fantasies	-0.32 <sup>a</sup>	-0.12	-0.11	-0.09	
Understanding	0.31 <sup>a</sup>	0.10	0.00		
Anxiety	0.00	-0.15 <sup>c</sup>			
Sense of reality	0.21 <sup>b</sup>				

<sup>a</sup>  $p < 0.001$ ; <sup>b</sup>  $p < 0.05$ ; <sup>c</sup>  $p < 0.10$ .

The tendency was accordingly similar as when the older children were compared with the younger ones (see above).

The boys did not have a lower sense of reality than the girls, neither did they show less anxiety towards violent scenes than the girls did. There were slight tendencies among the boys towards having a lower level of moral understanding ( $\chi^2(7) = 12.26$ ,  $p < 0.10$ ), and more aggressive fantasies ( $\chi^2(5) = 9.31$ ,  $p < 0.10$ ).

*Differences between children with abundant and children with few aggressive fantasies*

As can be seen from table 3, the children with abundant aggressive fantasies preferred violent scenes more than the other children did. This was established by several items, many of which are not included in the table. The aggressively fantasizing children felt also to a greater extent that the AH cartoon (which consisted of humorous, sketchy violence) was the best film.

Although there was a negative correlation between the summed variable *aggressive fantasies* and *anxiety*, it was not significant (table 2). However, very few of the children with abundant aggressive fantasies claimed that younger children than themselves would become frightened by the films, while the opposite was true of the other children (table 3). Again, this may be a better measure of anxiety than direct questions. Therefore, the hypothesis of aggressive children being less anxious cannot be rejected.

Further, there seemed to be relationship between abundant aggressive fantasies and a low level of moral reasoning (table 2).

Children with abundant aggressive fantasies gave more often illogical explanations of the film characters' behaviour (table 3).

Table 3

Percentages (raw figures in parentheses) of children with abundant and less abundant aggressive fantasies respectively giving affirmative answers to some crucial items, and significances of the differences.

	Aggressive fantasies (N = 20)	Nonaggressive fantasies (N = 67)	$\chi^2$	p <
<i>Preference</i>				
Preferred the AN cartoon from the other films	90% (18)	60% (40)	10.10	0.05
Least preferred scene a nonviolent one	65% (13)	25% (17)	12.72	0.05
Best scene = shooting	45% (9)	1.5% (1)	31.14	0.001
<i>Anxiety</i>				
'Younger children than I would surely get scared'	10% (2)	37% (25)	8.50	0.05
<i>Illogical explanations of the behaviour of cartoon characters</i>				
	35% (7)	9% (6)	8.84	0.05

### *Moral understanding*

The summed variable *moral understanding* correlated negatively with *aggressive fantasies*, but positively with age, *understanding* and *sense of reality* (table 2). Obviously, the ability to grasp moral reasoning is related to a more general ability of understanding.

### *Postinterview*

When the children were interviewed six months after they had seen the cartoons, they were able to describe much less of what they had seen than when they had been interviewed immediately after the film showing. Only 20% of the younger children and 50% of the older ones could even name all the cartoons ( $\chi^2(6) = 14.38$ ,  $p < 0.05$ ). None of the younger children and only 11% of the older ones were able to relate the plot of any of the films. When asked which scene they remembered best, 42% of the younger children and 2% of the older ones named the scene in which the boy shot the bird ( $\chi^2(1) = 15.37$ ,  $p < 0.001$ ). This was the scene which in the first interview was the most anxiety-provoking.

### *Differences between films*

Answers to the question about which cartoon was the most frightening demonstrated that most children experienced the NA film as the most frightening, the AD film as moderately so, and the AH film as the least frightening. This was significant at the 0.001 level ( $\chi^2(2) = 55.23$ ). In the entire population, the degree of fright provoked by a film was not primarily dependent on the amount of violence shown. No general conclusions concerning humorously *vs* dramatically presented violence can be drawn from this observation, however, as the films were comparable neither in content nor in many other respects. What this finding does show is that a film in which no explicit violence is depicted can be more frightening than ones in which 20% or even 50% of the playing time shows violent scenes.

On this point, however, there was a sex difference: most boys considered the AD film to be the most frightening, probably because of the character they tended to identify with. This was discussed in the findings on sex differences.

## **Discussion**

In interpreting the children's experiences of the cartoons, the models of Piaget are of value. Clearly, preschool children who, according to Piaget, are at the preoperational level, experience films as a series of separate and fragmentary incidents rather than as a continuous story. The reason for this, according to Noble (1975), is that since they lack the ability to reverse operations, they cannot fully grasp concepts like beginning, middle and end. A striking example of the younger children's inability to reverse operations and consequently to understand the

principle of conservation was unexpectedly brought out in the interviews. While younger children all understood that, in the NA cartoon, the main character had turned into a wolf, they consistently answered 'no' when asked whether he was eating the game with the other wolves. This is a good example on inability of understanding the principle of conservation (Piaget and Szeminska 1975).

Because younger children experience films in such a fragmentary manner and do not grasp their plot, it is not certain that they necessarily will benefit from a film with a message, such as 'violence does not pay'. Rather, the violent scenes may simply impress them as such and the message might be lost. The younger and older children differed on a number of variables which obviously have to do with their different level of development and maturity. The younger ones had a lower level of general understanding of the films, a lower level of moral reasoning, they more often gave illogical explanations of the film characters' behaviour, and it was more difficult for them to explain why they felt a certain way about specific film characters. They also manifested indications of a lower sense of reality, and of more anxiety than the older ones. Unexpected was the discrepancy between the age levels in their assessments of violent and nonviolent scenes, respectively. While the younger children tended to dislike and become frightened by violent scenes more than by nonviolent ones, the opposite was true of the older children. This may be explained by the older children's better general understanding of the films, and their greater ability to follow the films as continuous stories. They may thus have been better able to anticipate exciting moments of a nonviolent nature which the younger children could not fully grasp. An alternative explanation is that older children are more habituated to looking at violence than younger ones are, and consequently violence makes less impression on them.

There was a corresponding difference between boys and girls; boys preferably named violent scenes as the most frightening ones, while girls named nonviolent ones. This may be due to differences in ability to grasp the films, but on the other hand, no significant differences in understanding was found between the sexes. Another possibility is that the boys, being more aggressive than the girls, focused themselves more on violent scenes and neglected nonviolent ones. They may also have felt anxiety due to aggressive tendencies in themselves.

The expected difference between the two age groups concerning sense of reality in relation to films was not established in this research.

One item, however, gave a very clear indication of an age difference in sense of reality. The film material as such may be decisive. Our films were cartoons; probably even quite young children are able to realize that they do not resemble reality very much.

We expected to find differences between the sexes, but found them only on one variable, identification with the hero. Even in the case of *moral understanding* and *aggressive fantasies*, differences only came very close to being significant. This all indicates that, although there may be differences between the sexes in the way they experience films, these differences do not seem to be prominent, at least at these age levels.

The children with abundant aggressive fantasies clearly preferred to watch aggressive scenes. There was a negative correlation between aggressive fantasies and anxiety, but it was not significant. Children with abundant aggressive fantasies, however, more rarely than others declared that 'children younger than themselves would get scared', which probably can be interpreted as a sign of less anxiety among them. They also gave illogical explanations of the film characters' behaviour more often, although they did not show a lower level of understanding in general. What these children did have was a lower level of moral reasoning.

It is known from earlier research that the behaviour of aggressive children is more affected by violent films than that of nonaggressive children. It is possible that, due to a lower level of moral reasoning, they are more likely to accept the aggressive behaviour of film heroes as proper models of social interaction. Accordingly, they maybe also more readily adopt these patterns of behaviour than other children do. Thus, there may be a link between their lower level of moral understanding and their susceptibility towards being affected by aggressive films.

It is far too often assumed that the amount of violence a film contains will determine the amount of anxiety it induces in the viewer. Our results showed that the amount of explicit violence shown can be of minor importance. Of decisive importance is the manner in which the violence is presented – as in this study – dramatically, humorously, or with special technical effects.

Results of the postinterview showed that certain frightening scenes can have a long-lasting effect on young children. Six months after seeing the cartoons, the younger children remembered best those scenes that had been the most anxiety provoking. It is interesting to note that

the scenes the children like most were not those remembered best.

Identification with aggressive film characters has in many studies (e.g. Albert 1957; Bandura et al. 1963) been shown to enhance imitation of aggressive behaviour. The present study demonstrates that identification with aggressive film heroes affects moral evaluations of their behaviour and thus may lead to attitude changes in the viewer.

In this study, moral judgements by children at the preoperational level of a cartoon character's behaviour tended to depend on whether or not they identified with the character, rather than on separate ethical evaluations of the character's actions. Obviously, when the ability to differentiate between persons and their actions is not yet developed, identification and moral evaluation are both parts of a global 'attitude of general acceptance'. This implies that the highly aggressive behaviour of popular cartoon characters probably tends to teach children at this early level that aggressive behaviour is justified.

It has often been suggested (e.g. Huesmann 1982) that one of the reasons why watching violent films in general leads to increased subsequent aggression is a change in attitudes towards aggression. Our results give an indication of how this attitude change takes place. The key factor seems to be identification with aggressive film characters. Through identification with them, permissive attitudes towards the use of aggression in social interaction is developed. This attitude change can be of either short or long duration. If the same aggressive film heroes (or other film heroes who display a similar type of behaviour in similar situations) are often watched on TV, the new, more permissive, attitudes towards aggressive behaviour may very well become permanent.

In the present study, it was investigated how children cognitively, ethically, and emotionally experienced three cartoons of different types. A number of issues were addressed. It seems likely that the way children experience films may be an important factor in determining the way and the extent to which their subsequent behaviour is affected by these films.

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On montra trois dessins animés à 87 enfants de deux catégories d'âge: un groupe de 5 et 6 ans et l'autre de 9 ans. L'expérience des enfants a été évaluée lors d'interviews. Les plus jeunes enfants ont fait une expérience 'fragmentaire' des dessins animés, et non pas comme un récit continu; ils ont moins compris et ont eu tendance à fonder leurs jugements moraux sur le comportement d'un personnage dans la mesure où ils s'identifiaient ou non à ce personnage. Six mois plus tard, les plus

jeunes enfants se rappelaient le mieux les scènes qui les avaient le plus inquiétés auparavant. Un sous-groupe d'enfants avec fantaisies agressives abondantes avait un raisonnement moral d'un niveau nettement plus bas que les autres enfants; ils préféraient les scènes violentes, devinrent moins inquiets en les regardant et avaient tendance à donner des explications illogiques au comportement des personnages. Le degré d'anxiété provoqué par un dessin animé ne dépendait pas de la quantité de violence explicite, mais de la façon dont la violence était présentée. Un dessin animé qui ne contenait pas de violence explicite, était considéré comme le plus effrayant à cause de ses effets sonores.