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ABSTRACT

Factors such as an expected reward have been shown to severely undermine individuals' intrinsic interest in a given task. This "overjustification effect," or "discounting principle," has been demonstrated across the life span, except in the case of young children, who have been shown to be incapable of engaging in this cognitive process. This study investigated whether the negative effect resulting from socially-learned stereotypes of work and play would lead to decreasing intrinsic interest in a given task. A total of 27 3- to 5-year-olds were asked to complete 10 illustrated-story pairs of tasks. Each pair of tasks consisted of one activity that pretesting had shown preschoolers considered "fun" and one considered "not so fun." The children were instructed to give a reward to one of the two dolls in each pair that performed the tasks, and to determine which doll was working and which was playing. Unexpectedly, while children were able to distinguish between work and play tasks, they were no more likely to reward the doll who was working than they were the doll who was playing. The results appear to demonstrate that young children have not yet developed an understanding that rewards are typically paired with undesirable, work-like activities. (MDM)

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CHILDREN'S CONCEPTIONS OF WORK AND PLAY:
EXPLORING AN ALTERNATIVE TO THE DISCOUNTING PRINCIPLE

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Abstract

Factors such as expected reward can severely undermine intrinsic interest. This "Overjustification Effect" has been demonstrated across the life span and is often explained by the Discounting Principle. Yet young children have been shown to be incapable of engaging in this cognitive process. The present study investigated whether negative affect resulting from socially-learned stereotypes of "work" may lead to decrements in intrinsic interest. White, Asian, and Black preschoolers, while generally unable to discount, were observed to have developed "work"/"play" scripts. Unexpected was the finding that subjects were no more likely to reward a working than a playing doll. These findings call into question an affective explanation for the undermining of intrinsic interest.

Children's Conceptions of Work and Play:

Exploring an Alternative to the Discounting Principle

Research has firmly established that factors such as expected reward can severely undermine subjects' intrinsic interest in a task. This phenomenon, known as the "Overjustification Effect", has been demonstrated across the life span and is most often explained by the Discounting Principle (Kelly, 1973; Kruglanski, 1975). When adults and older children are presented with stories which give several adequate causes for a hypothetical character's behavior, they consistently discount possible internal motivation and attribute behavior to external causes such as rewards, commands, obligations, and threats (DiVitto and McArthur, 1978; Morgan, 1981; Smith, 1975). Very young children also experience decreased interest in an activity after being rewarded (e.g., Amabile, Hennessey, and Grossman, 1986; Lepper, Green and Nisbett, 1973) which at first glance seems to indicate that they are also discounting. For example, in an investigation conducted by Green and Lepper (1974), preschoolers were allowed to play with markers under one of the three conditions; no reward, unexpected reward, and expected reward. When compared with their unexpected-reward and non-rewarded peers, children in the expected reward condition spent significantly less time using the markers when given the opportunity to draw in a subsequent free-play period. Despite the fact that this behavior parallels nicely that evidenced by

adults, children in this age range (3 - 7) have consistently been shown to lack the cognitive capabilities necessary for weighing multiple sufficient causes and employing discounting (e.g., Shultz, Butkowsky, Pearce and Shanfield, 1975; Smith, 1975). In fact, some studies have indicated that many young children seem to employ an additive algorithm and interpret the expectation of reward as an augmentation of intrinsic interest (e.g., DiVitto and McArthur, 1978; Morgan, 1981).

A great deal of research attention has focused on the apparent discrepancy between young children's inability to discount and the fact that their behavior mirrors that of adults and older children experiencing overjustification. Two competing explanations for this phenomenon have been offered. The first is that the testing procedures used to evaluate discounting ability may be too abstract, or they may require memory and verbal skills which are too demanding for younger children. In other words, current assessment methods may be underestimating the abilities of young subjects. This position is not without empirical support, as researchers who have sought to simplify the testing process have had some success in increasing the amount of discounting evidenced by preschoolers (Kassin and Gibbons, 1981; Kassin, Gibbons and Lowe, 1980; Peterson and Gelfand, 1984; Shultz and Butkowsky, 1977). However, even the most developmentally appropriate procedures have failed to reveal any consistent discounting ability among children under the age of 6.

Responding to this fact, a growing number of researchers contend that, because young children seem unable to apply a cognitive analysis to their own or another's behavior, an explanation for the undermining of intrinsic interest based on something other than an attributional/self-perception framework must be found. One group of theorists has explored the possibility that the mechanism underlying the reduction of intrinsic interest may rely more upon "feeling", "emotion", or "arousal" than on thoughts or cognitive analysis. Children may react negatively to a task as "work" when their behavior is controlled by socially imposed factors (such as rewards), and they may react positively to a task as "play" when there are no constraints imposed. Negative affect resulting from socially-learned stereotypes (scripts) of "work" may be what leads to decrements in intrinsic interest (see Morgan, 1981; Ransen, 1980).

While very few investigations have directly tested this proposition (see Amabile, Hennessey, and Grossman, 1989, Study 1), there is evidence that even very young children can and do develop scripted knowledge about the differences between work and play. Tucker (1980) has identified three distinct stages in the developmental sequence of acquiring these work and play concepts. Children as young as age 3 have been shown to consistently label activities as falling into one or the other category; and by age 5 or 6, they have acquired simple

representational sets about activities they identify as work or play.

The present investigation was designed to explore the proposition that even very young children have learned that rewards are delivered to those who complete undesirable work-like tasks. It was hypothesized that while unable to discount, preschoolers would be able to distinguish between work and play activities. Further, it was expected that subjects would be more likely to reward a character engaging in work rather than play. This study improved upon earlier methodologies in that fewer cognitive demands were placed on subjects. Rather than asking children to speculate about the reactions and interests of hypothetical characters who either had or had not been promised some incentive, participants were asked to actively deliver a reward to either working or playing dolls.

Method

Subjects were 27 children ranging in age from 3:8 to 5:7. All participants met individually with the same female experimenter on two occasions. During Session I, children were tested for discounting ability using a standard interview procedure (Divitto and McArthur, 1978; Smith, 1975). In Session II, subjects were presented with 10 illustrated story pairs (Table 1). Half of these story pairs were set in the home and half took place in a school environment. Each set of stories contrasted two activities that needed to be done. Importantly,

Insert Table 1 about here

pretesting had determined that preschoolers consistently perceived one of the tasks in each pair as "fun" and the other as "not so fun". Subjects were asked to decide which of two paper dolls (matched with gender of subject) was to perform each of the activities. They then were instructed to give a sticker (e.g., ice cream cone, toy) to the doll whom they believed most deserved a reward. Next, they were asked which of the two dolls really liked what she/he was doing. Finally, the experimenter commented: "One of these dolls was working and one was playing. Point to the doll that was working. Point to the doll that was playing."

Results

As expected, the majority of children evidenced little if any discounting ability. Of the 27 subjects tested, 4 scored as discounters, 10 as transitional, and 13 as nondiscounters (or additive). There were no significant effects of age or sex on this (or any other) dependent measure. Chi-square analyses did reveal that subjects had developed scripts for work and play. Across the 10 story pairs, those activities which in pretesting had been identified as "not so fun" were consistently labelled as work (all p 's < .001).

Chi-square analyses further revealed that when asked which

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of the dolls really liked what she/he was doing, children were more likely to choose the doll they believed to be playing than they were the doll they had labelled as working. While performance on this measure was not flawless, subjects chose the "player" significantly more often than they did the "worker" in 6 of the 10 scenarios presented (all p 's $< .01$); and their performance on a seventh scenario approached significance at the $p=.08$ level. Unexpectedly, while children were able to distinguish between work and play tasks, they were no more likely to reward the doll who was working than they were the doll who was playing. Chi-square analyses indicated that subjects performed no better than chance on each of the 10 story pairs presented (all p 's $> .05$).

Discussion

Subjects performed as predicted on tests of discounting and work/play understanding, yet it is difficult to explain why they were no more apt to reward working than they were playing dolls. It appears that, contrary to expectation, these children had not yet developed an understanding that rewards are typically paired with undesirable activities. Importantly, this failure to make a connection between the promise of reward and the attractiveness of a task does not appear to stem from an inability to accurately speculate about how the dolls felt about the activities they were performing. When asked which of the two dolls really liked what she/he was doing, subjects were far more likely to nominate the

doll they believed to be playing.

Why then is the interest of young (pre-discounting) children undermined by the expectation of reward? Our hypothesis that the mechanism underlying the reduction of intrinsic interest may rely more upon "feeling", "emotion", or "arousal" than on thoughts or cognitive analysis was not supported. Our results clearly indicate that our subjects did not yet recognize the manipulative intent behind the offer of reward. Given the fact that this highly structured testing situation failed to reveal such an understanding, it is unlikely that the actual promise of a reward in a real-life situation would trigger in these children a negative reaction and the realization that the activity they are being asked to perform is more like work than it is like play. Nevertheless, the possibility remains that some mechanism other than the reward contingency triggers negative affect in an expected reward situation.

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Table 1

Activities Paired in Story Presentation

| Work | Play |
|---------------------------------------|----------------------|
| (Home Activities) | |
| 1. pick up clothes and put away | blow bubbles |
| 2. wash hair | read a favorite book |
| 3. clear dirty dishes from table | watch TV |
| 4. sweep floor | go to movies |
| 5. take out smelly trash sprinkler | run through |
| (School Activities) | |
| 6. put paper scraps away | build with clay |
| 7. wipe paint off table | draw with markers |
| 8. put blocks away | throw balls in field |
| 9. sit quietly on mat | swing on swings |
| 10. throw away snack trash | put together puzzles |