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#### ABSTRACT

Children's understanding of dreams as mental states was examined as an instance of their development of a "theory of mind."
Thirty-five children between three and seven years of age were interviewed to determine how well they understood the reality, location, privacy, origin, and controllability of their own dreams, versus that of a fictional character, matched for emotional valence. Children's theory of mind developments (understanding appearance versus reality and perspective-taking) were evaluated as predictors of dream understanding. Findings revealed significant age increases in dream understanding that occur in a logical sequence predicted by Kohlberg (1969). Theory of mind developments were correlated with children's understanding of the unreality and privacy of dreams. The findings suggest that children as young as 6 have learned that Western culture deems dreams to be non-real, private, psychological occurrences. (Author/EV)



# Children's understanding of dreams

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#### Abstract

Children's understanding of dreams as mental states was examined as an instance of their development of a "theory of mind." Thirty five children between the ages of three and seven were interviewed to determine how well they understood the reality, location, privacy, origin, and controllability of their own dream, vs. that of a fictional character, matched for emotional valence. Theory of mind developments in understanding appearance vs. reality and perspective-taking were evaluated as predictors of dream understanding. Results revealed significant age increases in dream understanding that occur in a logical sequence predicted by Kohlberg. Theory of mind developments were correlated with children's understanding of the unreality and privacy of dreams. These findings suggest that children as young as six have learned that Western culture deems dreams to be non-real, private, psychological occurrences.



#### Introduction

Three hypotheses were addressed in this study.

- Kohlberg (1969) argued that children should first understand that dreams are unreal, then that they
  are private, and finally, that they are located internal to the person. Since our sample was a
  middle-class European-American group from the Midwest, unlike that of Shweder & Levine
  (1975), we expected them to conform to this prediction.
- 2. Specific situational factors were expected to affect children's understanding:
  - Emotional dreams were expected to be more difficult to understand than neutral dreams.
     Piaget (1929) and Samuels & Taylor (1994) found that emotionally-laden dreams and pictures were harder for children to differentiate from reality.
  - The personal dreams of children were expected to be harder for them to understand than the dreams of story characters. Woolley & Wellman (1992) found that when preschoolers interpreted the dreams of another person in a story context, that they were much more adept at understanding the nature of the dreams than in past research investigating children interpreting their own dreams e.g., Piaget (1929) and Laurendeau & Pinard (1962).
- Finally, we believed that dream understanding would be related to children's developing theory of mind, i.e., understanding appearance vs. reality and egocentricity.
  - Children who had difficulty understanding the difference between appearance and reality
     (Flavell, 1986) were expected to have difficulty understanding the non-real nature of dreams.
  - Children who performed poorly on perspective-taking tasks, i.e., who assumed that others see
    things the same way that they see them (Flavell, Everett, Croft, & Flavell, 1981), were
    expected to have difficulties understanding the private nature of dreams.

# To summarize, we expected that:

- Children would be much more cognitively advanced in terms of dream understanding than they
  have previously been given credit for, especially when they are distanced from the dream.
- With increasing age, three- to seven-year-old children would become increasingly adult-like in understanding the reality, privacy, origin, location, and uncontrollability of their dreams, and that this would occur in a predictable and logical sequence.



This developmental progress would be related to other theory of mind developments:
 appearance-reality and perspective-taking.

## Method

# **Participants**

There were 13 male and 22 female children between the ages of three and seven in the study.

Ethnic and racial backgrounds were representative of a small midestern college town, most children being white, non-Hispanic. The children were enrolled at the campus child care center and were mostly children of faculty and staff at the college.

	Under 5 years	5.0 to 5.5 years	5.5 to 6.0 years	Over 6.0 years
N	14	7	9	5

# Procedure

# Appearance-reality tasks:

- Mr. Potato Head was made to look like a ghost, by putting a handkerchief over him. Children were asked who Mr. Potato Head "looked like", and "really and truly was."
- A green filter made a yellow sun and a white cloud look green. Children were asked about their apparent and real colors.
- A white note card (surreptitiously backed by a green card) was torn in two behind the green filter.
   Children were asked to select which piece, green or white, came off the torn card.

# Egocentricity/Perspective-taking tasks:

- Two two-sided cards were shown to the child, and then s/he was asked what s/he saw and what the
  experimenter saw.
- An illustration in a picture story book was shown to the child and she was asked whether s/he and the
  experimenter saw it right-side up or upside down.



### Dream interview

Each child was asked to tell us a dream and select a happy, sad, scared or neutral schematic face to show how it made them feel. The following questions were asked:

- Did the dream really happen? Did you really...? (reality status)
- Could I have seen the dream if I had been in the room—sleeping? awake? (privacy)
- What makes you have a dream? (origin: the category of present interest is "psychological", e.g.,
   "something I was thinking about when I went to sleep")
- What is your favorite thing? Could you make yourself have a dream about (favorite thing)?
   (controllability)

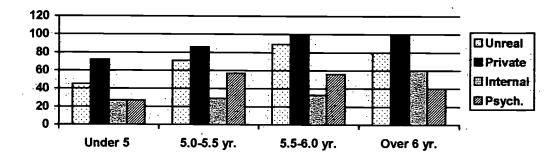
Each child was then told the dream of a fictional character (matched in gender to the child), with the emotional valence of the dream matched to that of the child. The same series of questions was asked about the character's dream.

#### Results

## Age analysis

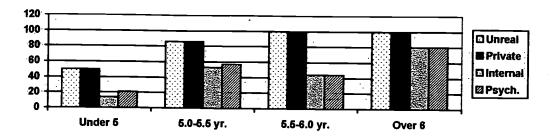
Descriptive statistics indicated that as children aged, they became more likely to judge dreams as not real, private, internal psychological occurrences. A total dream understanding score, based on Kohlberg's hypothesized developmental sequence, (reality+privacy+location) was correlated with age, for both the child's own dream (r (30) = .432, p < .05) and the character's dream (r (33) = .664, p < .01).

# % of responses re: own dream by age group





# % of responses re: character's dream by age group



# Invariant sequence

Children's patterns of responses were analyzed to determine whether they fit the invariant sequence proposed by Kohlberg, i.e., understanding unreality, then privacy, then internal location. Normal approximations to the binomial distribution indicated that the patterns were statistically more likely to conform to this prediction than not.

- . 25 out of 32 children fit this pattern when describing their own dreams
- 33 out of 35 children fit this pattern when describing the dream of a fictional character

## Situational factors

Emotional valence: "Happy" vs. "scared" dreams (of the child's own) were frequent enough to compare for total dream understanding (reality + privacy + location). These means were not significantly different by independent groups t-test.

<u>Presentation format</u>: The total dream understanding score for own dreams (M=5.25) vs. those of a fictional character (M= 5.38) were not significantly different by within subjects f-test.

# Theory of mind and Dream understanding

Appearance vs. reality and Dream Reality. We totaled the appearance vs. reality tasks and also summed the two questions about dream reality ("Was it real?" and "Did you really?")

<u>Perspective-taking and Dream Privacy.</u> All children passed the two-sided card tasks, so children's score on the questions about the orientation of the book were correlated with the sum of their two answers regarding dream privacy (onlooker awake vs. asleep).

Partial correlations, controlling for age and question order (if relevant)



Theory of mind	Dream	Own dream	Character's dream
Appearance-reality total	Reality total	r = .479**	r = .537***
Perspective-taking: book orientation	Privacy total	r .446*	$r = .331^{m}$

# Conclusions

- By the time they were 6 years of age, most children in our sample understood that, in our culture,
   dreams are believed to be unreal, private, internal experiences, with psychological causes.
- In this sample, age-related changes were consistent with the logical progression predicted by Kohlberg: unreality, privacy, and internal location.
- We observed no differences between dreams associated with positive vs. negative emotions. (Neutral
  dreams were too rare to analyze.) Nor was children's level of dream understanding increased when
  discussing the dream of a story character, as opposed to oneself. However, nearly all the age trends
  and correlational patterns were clearer when the data for the story character's dream were considered.
- Understanding dream unreality was correlated with perceptual appearance-reality, whereas understanding dream privacy was related to perspective-taking.
- Caveats: The study and its conclusions take place within a Western framework, which is culturally-specific. Scoring employed primarily yes-no answers, which reduces the richness of data regarding children's thinking about dreams.

To summarize: Children appear to be more sophisticated about their understanding of dreams than early research showed. Their understanding develops in an orderly fashion, correlated with other theory of mind developments.



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