Journal of Experimental Child Psychology 139 (2015) 99–114

Contents lists available at ScienceDirect

Journal of Experimental Child Psychology

journal homepage: www.elsevier.com/locate/jecp

Can that really happen? Children's knowledge about the reality status of fantastical events in television

Hui Li [a,b,*], Katherine Boguszewski [c], Angeline S. Lillard [c]

[a] Academy of Psychology and Behavior, Tianjin Normal University, Tianjin 300074, China
[b] School of Psychology, Central China Normal University, Wuhan, Hubei 430079, China
[c] Department of Psychology, University of Virginia, Charlottesville, VA 22904, USA

ARTICLE INFO

Article history:
Received 1 September 2014
Revised 7 May 2015
Available online 18 June 2015

Keywords:
Preschooler
Cognitive development
Television
Fantasy
Reality judgments
Justifications

ABSTRACT

Although popular children's cartoons are replete with fantastical events, we know little about whether children understand that these events are fantastical rather than real. In Study 1, 54 children ages 4 to 6 years and 18 adults were shown 10 real and 10 fantastical events portrayed in 4 s video clips from a popular cartoon. After viewing each clip, participants were asked to judge the reality status of the event and to explain their judgments. Results indicated that even 4-year-olds have a fairly good understanding of fantastical events in animated cartoons but that they underestimate the reality status of real events in such cartoons. In Study 2, 35 4- to 6-year-olds and 18 adults watched video clips of 10 real and 10 fantastical events performed by real people from a Chinese television show. Once again, 4-year-olds underestimated the reality status of real events shown on television. However, against the "real" backdrop in this study, 4-year-olds also judged nearly half of the fantastical events to be real. The implications for children's reality–fantasy discrimination and their media viewing are discussed.

* Corresponding author at: Academy of Psychology and Behavior, Tianjin Normal University, Tianjin 300074, China.
E-mail address: huilipsy@gmail.com (H. Li).

http://dx.doi.org/10.1016/j.jecp.2015.05.007
0022-0965/

Introduction

Watching television is a common activity for children; one recent study showed that American children under 9 years of age watch nearly 2 h of television a day (Holloway, Green, & Livingstone, 2013). For many children, this television includes animated cartoons, from long-running Looney Tunes entertainment cartoons such as *Road Runner* to newer cartoons aimed at teaching children such as *Super Why*. One feature of animated cartoons is that they easily can, and often do, include magical content. For example, animated cartoons might show a character suspended in mid-air, defying the laws of gravity, or suddenly appearing in a different location, violating the principle of continuity. Past research has shown that some animated cartoons reduce children's levels of executive function immediately after viewing (Li, 2014; Lillard & Peterson, 2011) and that what disrupts executive function are likely the fantastical events (Lillard, Drell, Richey, Boguszewski, & Smith, 2015). An interesting question that arises is whether children watching magical events on television know that what they are watching is not real. When young children watch a show like *SpongeBob SquarePants* that is replete with fantastical events, do they know that some of the events they are watching cannot really happen, whereas others can?[1] And how do they make such judgments?

There is a dearth of research addressing this issue with animated cartoons. Some previous studies (summarized in Table 1) on children's understanding of fantasy examined still pictures or actual events (Johnson & Harris, 1994; Sharon & Woolley, 2004; Shtulman & Carey, 2007). As an example of one earlier study using pictures, Taylor and Howell (1973) simply asked 3- to 5-year-olds to judge whether humans, animals in their natural environments, and anthropomorphized animal characters were real or not. Children's ability to distinguish reality from fantasy in still pictures was poor in young preschoolers but improved with age, with mean scores of 0.69, 2.6, and 4.6 out of 6.0 in 3-, 4-, and 5-year-olds, respectively. Morison and Gardner (1978) asked somewhat older children (kindergarten and Grades 2, 4, and 6) to categorize 40 still pictures of real and fantasy figures as pretend or real. Children were generally quite good at such judgments, correctly sorting 86% of the items. Performance was lowest in the kindergarten group, which still correctly sorted 70%. Overall, approximately a third of errors occurred when unfamiliar real entities (e.g., dinosaur, knight) were deemed to be pretend, and two thirds of errors occurred when fantasy entities (e.g., Big Bird) were deemed to be real. Sharon and Woolley (2004) used both a categorization task and a property attribution task to test 3- to 5-year-olds' differentiation of real and fantasy entities, and they found that correct categorization of real entities improved significantly with age but that all age groups performed at chance levels when categorizing the fantastical entities. However, some of their items, such as a knight, were perhaps not familiar to 3-year-olds. The results from the property attribution task were far better and suggested that 4- and 5-year-olds clearly distinguish fantasy from real entities. In sum, children's basic categorizations of pictured entities into real and pretend categories tends to be accurate by 4 or 5 years of age, although this is less often the case for entities with which children are less familiar or with familiar characters that are anthropomorphized like Big Bird.

Two studies used still pictures of events, rather than mere entities, to address children's categorizations of pretend and real; both studies also examined the influence of emotional valence. Samuels and Taylor (1994) showed 3- to 5-year-olds pairs of real and fantasy events that were emotionally neutral (a woman picking an apple and a moose mixing batter in a bowl) or emotionally charged (robbers threatening a person with a knife and a giant chasing a child), and they asked children to state which could really happen. Children were generally apt at correctly stating which events were real and which were not; when they erred, it was typically to refute the reality status of emotionally charged real events, in essence denying that scary things can happen. Carrick and Quas (2006) found that 3- to 5-year-olds also judged happy events, whether fantastical or real, to be real significantly more often than events that were frightening or conveyed anger. Thus, two studies have shown that preschoolers are competent at categorizing events in still pictures as pretend or real, although these children err in a Pollyanna-like fashion when the events are emotionally charged.

[1] Looking time studies suggest that infants implicitly differentiate between some possible and impossible events. Here we examined verbal children's explicit judgments about what can actually happen.