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## Helping behavior in Disney animated movies and children's helping behavior in the Netherlands

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### ABSTRACT

This study is the first to examine whether Disney animated characters can inspire children to help others immediately upon exposure. This experiment involved 113 Dutch children ( $M = 9.03$ ;  $SD = .738$ ) and their friends. Children in the experimental condition were exposed to a Disney clip in which the main character helped a friend, while children in the control condition watched a clip without helping behavior. Afterward, children's helping behavior toward their friends was assessed during a puzzle challenge. A regression analysis revealed that children exposed to the helping Disney character were more likely to help their friends than children who did not watch this. The findings indicate a short-term effect of watching a helping Disney animated character on children's helping behavior.

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## Introduction

"Finishing first isn't as important as finishing like a winner."

- Amber Whitener (2012) about the Disney • Pixar movie *Cars*

After the dawn of positive psychology (Seligman & Csikszentmihalyi, 2000), media psychologists started to devote increased attention to examining how media content, particularly movies, can be meaningful and help humans flourish (Oliver, Hartmann, & Woolley, 2012; Oliver & Raney, 2011; Wirth, Hofer, & Schramm, 2012). One quality found to be associated with flourishing is prosocial behavior (Lyubomirsky, King, & Diener, 2005; Peterson & Seligman, 2004), which is defined as voluntary behavior meant to benefit another (Eisenberg, Fabes, & Spinrad, 2007; Padilla-Walker, Coyne, Fraser, & Stockdale, 2013). Among children, prosocial behavior has already been found to be related to thriving. For instance, prosocial children are liked more, have more close friends, and are happier than less social children (Cillessen & Rose, 2005; Clark & Ladd, 2000; Hastings, Utendale, & Sullivan, 2007; Holder & Coleman, 2008; Östberg, 2003). Prosocial behavior is even a forerunner of later academic achievement, probably by fostering supportive social and intellectual relationships (Caprara, Barbaranelli, Pastorelli, Bandura, & Zimbardo, 2000; Moore & Allen, 1996).

Evidence has revealed that prosocial behavior in children can also be enhanced by watching television (Mares & Woodard, 2005, 2012). As television still dominates children's media

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lives (Rideout, Foehr, & Roberts, 2010), this might be a promising way to contribute to their well-being. In the current study, it was examined whether Disney movies can encourage children to help others, which is important because (I) Disney movies are extremely popular (Brand Finance, 2016; Brode, 2005; Buckingham, 1997; Fischer, Schwartz, Richards, Goldstein, & Rojas, 1991; Forgacs, 1992) and (II) contain a vast amount of prosocial messages (Padilla-Walker et al., 2013; Ward, 1996, 2002).

## Theoretical background

### *The world of Disney*

The popularity of Disney can be well illustrated by the fact that young children between three and six years old are already able to recognize Disney based on its brand logo (Fischer et al., 1991). Especially Disney's animated movies are popular, and children do often watch these movies repeatedly (Dreier, 2007). In addition, most parents studied adore Disney and accept it as quality family entertainment (Brode, 2005; Buckingham, 1997; Forgacs, 1992). In popular culture research, Disney has been identified as an important storyteller as its movies are among the first stories young viewers use to learn about the world. Ward (1996, 2002) argued that Disney movies are an important moral educator with (mythic) narratives promoting moral values. According to Giroux (1994), Disney movies inspire at least as much cultural authority and legitimacy for educating specific roles, values, and ideals as other important socialization sources, such as the family and schools.

Yet existing studies on Disney movies have focused predominantly on the presence of negative content. For instance, Disney movies have been repeatedly criticized for containing aggression (Coyne & Whitehead, 2008), depicting romantic relationships as being created simply from "love at first sight" and easily maintained (Tanner, Haddock, Zimmerman, & Lund, 2003), portraying women in gender-typed roles (England, Descartes, & Collier-Meek, 2011; Tanner et al., 2003; Ward, 2002), marginalizing mothers (Tanner et al., 2003; Worthington, 2009), portraying the elderly in a negative way (Robinson, Callister, Magoffin, & Moore, 2007), delivering the what-is-beautiful-is-good stereotype (Bazzini, Curtin, Joslin, Regan, & Martz, 2010), demonizing bad behaviors (Fouts, Callan, Piasentin, & Lawson, 2006), and containing high levels of negative verbalizations about mental illness (Lawson & Fouts, 2004). In sum, most existing research puts Disney movies in a rather negative light.

Nevertheless, some studies have demonstrated that Disney movies depict large numbers of prosocial behaviors—mostly altruistic acts motivated predominantly by others' needs and welfare (Padilla-Walker et al., 2013; Ward, 1996, 2002). Ward (1996, 2002) described how Disney's narratives can promote moral values such as honesty and openness that help truth win out. Moreover, Brode (2005) argued that Disney promotes multiculturalism with a prophetic vision of a world in which the uniqueness of all others is respected while simultaneously celebrating a shared human core. And a content analysis revealed that Disney animated movies are overwhelmingly prosocial in nature (Padilla-Walker et al., 2013). More specifically, this study demonstrated that Disney movies depict on average approximately one prosocial act per minute. Compared to children's television programming, the amount of prosocial behavior in Disney movies is nearly seven times higher (cf. Smith et al., 2006). Furthermore, most prosocial acts depicted in Disney movies are not accompanied by aggression (Padilla-Walker et al., 2013). Notably, compared to the quantity of violence in children's television

programs, aggression in Disney movies is quite low (Coyne & Whitehead, 2008). Another study revealed that Disney movies also contain strong messages about the meaning of family relationships and that family members in Disney movies are found to make huge sacrifices for each other, putting the family's well-being before their own (Tanner et al., 2003). Related to this, it is important to note that an in-depth study by Coyne and Whitehead (2008) demonstrated that, although Disney movies contain relational aggression, not only is the amount comparably low compared to the extent of violence in children's television programs, but these aggressive behaviors are also often committed by "bad" characters, which would reduce the chance of facilitating imitation.

### *Disney movies and children's prosocial behavior*

Not only has research focused merely on the negative content of Disney movies, the number of empirical studies on the effects of Disney movies on children is also scarce, especially concerning possible favorable effects. To our knowledge, only one study examined the potential beneficial effect of Disney on children empirically. In this longitudinal study, it was examined whether engagement with Disney princess media and products were related to prosocial behavior among toddlers (Coyne, Linder, Rasmussen, Nelson, & Birkbeck, 2016). Findings of this study demonstrated that engagement with Disney princesses predicted future prosocial behaviors, but only for boys with high levels of parental active mediation. The current study extends this earlier work by examining children's observed helping behavior immediately upon exposure to Disney, which is important as both short-term and long-term media effects are found with each having different underlying mechanisms explaining the effects (Bushman & Huesmann, 2006). Short-term effects are found mostly due to the *priming* of existing scripts, schemas, or beliefs, while long-term effects require the *learning* of these scripts, schemas, or beliefs. The current study aims to extend the literature by examining whether Disney can inspire helping behavior in children on the short-term.

Previous exposure to Disney might play a role in the short-term effects of Disney movies as well. An often-applied theory for explaining the impact of prosocial television on children's prosocial behavior is social cognitive theory (Bandura, 2001, 2004; Padilla-Walker et al., 2013), which explains that human behavior is learned directly not only by experience, but also from observing role models, which can also be Disney characters. In light of social cognitive theory, and in line with the long-term effects described by Bushman and Huesmann (2006), Disney movies are an interesting phenomenon to examine. Given that Disney movies are often watched repeatedly (Dreier, 2007), it is likely that children may come to understand the messages better (Bandura, 2001, 2004; Mares & Woodard, 2012; Padilla-Walker et al., 2013). Therefore, in the present study, it is examined if the short-term effects of Disney are stronger for children with higher previous exposure.

To evoke moral reasoning upon exposure, it is important not to focus on low-cost helping behaviors because these are often trivial behaviors by habit (Eisenberg, 1992). On the contrary, high-cost actions are clearly inconvenient to the initiator and may result in punishment or loss. Although Padilla-Walker et al.'s (2013) content analysis demonstrated that most depicted prosocial acts in Disney were of low cost, the number of acts high of cost is substantial (29%, compared to 71% for low cost). Moreover, these high-cost acts are more likely to involve behaviors as helping and sharing instead of verbal forms of prosocial behavior, such as complimenting and encouraging. More specifically, helping and sharing are often

visible upon a clear instrumental need (Dunfield, 2014) and visibly inconvenient for the Disney character (Padilla-Walker et al., 2013). In short, helping and sharing are interesting to examine as these behaviors are high of cost and often portrayed in Disney movies.

### *Developmental challenges of children in middle childhood*

In this study, children in middle childhood were included because this is an age group that is largely understudied concerning the effects of prosocial television (Mares & Woodard, 2005; Strasburger, Wilson, & Jordan, 2009). During middle childhood, children become more concerned about the welfare of others. Considering Lawrence Kohlberg's stages of moral development, middle childhood is an important phase of life as most children then move from the first level—the preconventional level—to the next level—the conventional level. An individual at the conventional level is living up to what is expected by others, for whom “being good” is important (Kohlberg, 1976). This milestone was also acknowledged in the work about prosocial reasoning and behavior by Eisenberg (1992). Her findings indicated that, during middle childhood, children not only become increasingly altruistic toward others, but this behavior is also more often grounded in genuine feelings of empathy. In conclusion, the moral development during middle childhood is characterized by increases in concern for others and actual prosocial behavior toward others, which are exactly the values depicted in Disney movies (Padilla-Walker et al., 2013; Tanner et al., 2003; Ward, 1996, 2002). Bandura (2004) argued that media can help people prepare for the challenges they will encounter in life by modeling such situations and effective ways of overcoming them. Considering the developmental challenges that children face during middle childhood (Eisenberg, 1992; Kohlberg, 1976), Disney movies, with their rich content of depictions of characters acting altruistically (Brode, 2005; Padilla-Walker et al., 2013; Ward, 1996, 2002), may function as such a source of inspiration.

### *Measuring actual helping behavior*

In previous studies on prosocial television, helping behaviors were typically measured by bringing children into a laboratory and inviting them to play a game after watching a video. During the game, children's behaviors were observed to determine if they were altruistic or selfish (Mares & Woodard, 2005). Strikingly, among children in middle childhood, a few studies examined actual helping behavior. In two notable exceptions (i.e., Poulos, Rubinstein, & Liebert, 1975; Sprafkin, Liebert, & Poulos, 1975), children were invited to watch a television program. In the experimental condition of these classic studies, children watched a boy risking his life to save a puppy while children in the control conditions were not exposed to altruistic behaviors. Afterwards, the children were challenged to play a game while simultaneously taking care of a dog kennel a few miles away. If the children heard the dogs barking, indicating they were in distress, they could press a button; however, this would give them less time to play the game. Children who saw the boy rescuing the dog pushed the help button nearly twice as often as children who did not see this. In Disney movies, prosocial acts most often occur between friends (Padilla-Walker et al., 2013). People are also more likely to help friends in real life (Padilla-Walker & Christensen, 2011; van Rijsewijk, Dijkstra, Pattiselanno, Steglich, & Veenstra, 2016). Therefore, in the present experimental study,

children were challenged to play a game, during which help was warranted from a friend. To create a naturalistic setting, this friend was sitting next to them.

In sum, we examined whether exposure to a prosocial Disney clip predicts children's helping behavior toward their friends. Children in the experimental condition were invited to watch a clip from the Disney • Pixar movie *Cars*, in which the main character, Lightning McQueen, helps Strip "The King" Weathers finish the race after he broke down. This clip was chosen for the relatively high costs of helping, as Lightning McQueen loses the championship due to his efforts to help Weathers (Padilla-Walker et al., 2013). Nevertheless, when pushing Weathers over the finish line, the crowd is cheering to him, which can be seen as a reward for his helping efforts, which may further increase the likelihood of modeling (Bandura, 2001, 2004; Padilla-Walker et al., 2013). The movie *Cars* was also chosen because of its high popularity (Box Office Mojo, 2006; IMDb, 2016). Children in the control condition were also exposed to a clip from *Cars*, although without prosocial content. Afterwards, children were observed on their actual helping behavior during a puzzle challenge. This setup was inspired by previous experimental studies on the impact of prosocial behavior on television (Mares & Woodard, 2005; Poulos et al., 1975; Sprafkin et al., 1975).

### ***The hypotheses of the present study***

In this study, it was hypothesized that children exposed to the prosocial Disney clip ( $H_1$ ) would help their friends more often and ( $H_2$ ) would spend a longer amount of time helping others than children who watched the clip without prosocial behavior. Moreover, it was expected that ( $H_3$ ) the effects of the prosocial Disney clip on children's helping behavior would be stronger for children with higher levels of prior exposure to Disney movies and the movie *Cars* in particular. In the analyses, we controlled for children's sex, age, initial levels of prosocial behavior (Eisenberg, 1992; Eisenberg et al., 2007), and appreciation of the movie clip (Clifford & Gunter, 1995).

## **Methods**

### ***Sample characteristics***

The study was conducted at five primary schools in the eastern and southeastern region of the Netherlands. The final sample consisted of 113 children between 7 and 11 years of age ( $M = 9.03$ ;  $SD = .738$ ), 46.0% of whom were boys. The majority of the children had been born in the Netherlands (94.7%). These 113 children were paired with 113 other children who were not analyzed as part of the study.

### ***Design and procedure***

After gaining consent to participate from the headmaster of the schools, a letter was sent to the parents of the 243 children in the fifth and sixth year. This letter included a description of the study along with the request to give passive consent for their children to participate. Parents could return the forms within two weeks if they refused to agree to the participation of their children. The letter emphasized that all information would be treated as confidential. Only one parent did not give permission. Before the experiment, teachers were asked to

form pairs of children who were friends as humans are more inclined to help friends (Eisenberg, 1992; Padilla-Walker & Christensen, 2011; van Rijsewijk et al., 2016). Previous findings indicated that teacher nominations can be a good alternative to peer nominations for social preference and popularity (van den Berg, Lansu, & Cillessen, 2015). Of the 242 children, four were not able to participate because they were not present. Moreover, six pairs were excluded because one of the children had to go to the bathroom during the experiment or were *ad hoc* paired to a classmate who was not their friend. Children were excited about participating in the study, and *ad hoc* pairing enabled all children to participate. Pairs were randomly assigned to either the experimental or control condition.

Data collection took place in April and May 2016. Children participated at their schools during school hours. As a cover story, children were told that the study was about Disney movies and participants' opinions about them. The first questionnaire captured children's demographic characteristics, initial levels of prosocial behavior, and prior exposure to Disney animated movies; it was filled out by the children individually in the classroom. Afterward, children were, in pairs, invited to come to a separate room. Once in the other room, the pairs watched a clip from the Disney movie *Cars*.

In the experimental condition, the clip showed the protagonist Lightning McQueen in the middle of a car race with Chick Hicks and Strip "The King" Weathers. At one point, Hicks sideswipes Weathers and sends him into a dangerous spin, triggering his breakdown. Upon seeing this, McQueen stops just short of the finish line, allowing Hicks to win, and drives back to push Weathers over the finish line. In the control condition, the clip showed the beginning of the race, where nothing special happens; a part of a race was also shown in this condition, because a race itself may trigger thoughts of competition, which subsequently might affect children's helping behavior. In this way, children in both conditions were exposed to competition. Both clips included the same three characters and were both 99 s in length.

When the clip ended, the children were challenged to complete a puzzle assignment. Both children received 20 find-the-difference puzzles. Each puzzle consisted of two almost identical pictures from the movie *Cars* with only one difference. The children had to try to find the difference between the pictures, circle it, and then move on to the next puzzle. Children were told that they had to complete as many puzzles as possible within the time-frame of three minutes. This situation was created to suggest that the task was a competition, in order to keep the outcome measure equivalent to the depicted behavior (Mares & Woodard, 2005; Strasburger et al., 2009). However, the instructions did not include anything about competition, nor was there a prize for the winner. They were also told that both children received different puzzles and that all puzzles had different levels of difficulty. If they could not find the difference, they were allowed to ask their friend to help. An important rule was that the children could not start a new puzzle without finishing the previous one. After the rules were clear, the experimenters counted from three to zero before the children could start working on the puzzles.

The differences between the pictures in the first two puzzles were so easy to find that none of the children had to ask for help. However, to create a situation in which helping was warranted, puzzle number three in the stack of one child had no difference in it. To continue, children with this unsolvable puzzle had to ask for help. If the child still did not ask for help after searching for 30 s, the experimenters repeated the message that asking for help was allowed. The other children in the pairs had only easy puzzles, so for them there was no need

for assistance. Only the helping behavior from the children who had the solvable puzzles was observed, and the focus of the observation was whether these children would choose to continue to play the game or try to help their friends. More specifically, the measures for helping included how many times a child helped the other child in the pair and the total amount of time spent on helping (in seconds).

After the puzzle assignment was finished, the children had to fill out the last questionnaire individually. In line with the cover story, the questionnaire contained questions about the movie clip and the characters. Upon completing the questionnaire, children received a sheet of stickers or a tiny notebook from Disney and were accompanied back to the classroom. Children were debriefed after all pairs were tested. After the data collection and analyses were complete, children and parents were informed about the results of the study.

## **Measures**

### ***Helping behavior outcomes***

Inspired by previous experimental studies on the impact of prosocial behavior on television, children's helping behavior was assessed by inviting children to play a game and observing what happens if help is warranted (Mares & Woodard, 2005; Poulos et al., 1975; Sprafkin et al., 1975). Specifically, helping behavior was captured with (i) the number of times they helped and (ii) the total time they spent on helping their friend in seconds. Because the variable concerning the amount of time on helping was not normally distributed, with a skewness of 1.446 and a kurtosis of 3.287, quartiles were made for the analysis.

### ***Prior exposure to Disney animated movies***

Children's exposure to Disney movies was assessed by presenting all of the most recently released animated Disney movies. Along with each title, the cover was presented to help children recognize the movie. For each movie, children were asked whether they had seen each movie, with the response options "never," "one time," "two times," and "more than two times" (see also Sargent, Dalton, Heatherton, & Beach, 2003). Answers were summed, with higher scores indicating higher exposure to Disney movies. Children were also asked whether they had seen the movie *Cars* before.

### ***Potential confounders***

In the analyses, children's sex, age, and initial levels of prosocial behavior were taken into account. Initial levels of prosocial behavior were captured using the prosocial scale of the Strengths and Difficulties Questionnaire (SDQ) (Goodman, Meltzer, & Bailey, 1998). This scale contains five questions, such as "I am helpful if someone is hurt, upset or feeling ill," which could be answered with "not true," "somewhat true," or "certainly true." The Cronbach's alpha was .57. Finally, appreciation of the clip was included based on children's indication of whether they liked the clip or not (with five response options ranging from "totally disagree" to "totally agree").

### ***Strategy of analyses***

After calculating descriptive statistics, *t*-tests and  $\chi^2$ -tests were conducted to examine whether randomization resulted in a balanced distribution of children's sex, age, prior

exposure to Disney movies, and initial prosocial behavior across conditions. The impact of the prosocial Disney clip on children's helping behavior was examined using linear regression analyses. In the analyses, children's sex, age, initial prosocial behavior, prior exposure to Disney movies and appreciation of the clip were included as covariates. Afterwards, the potential moderating effect of exposure to recently released Disney movies was examined.

## Results

### *Descriptive statistics*

Descriptive statistics demonstrated that 76.1% of the children had seen at least half of the most recently released Disney movies once or more. The movie *Cars* had already been watched by 53.9% of the children, most often by boys  $\chi^2$  [df = 3,  $N = 113$ ] = 23.06,  $p < .001$ ). Boys also appreciated the movie clip more than girls ( $t$  [df = 110.925,  $N = 113$ ] = 2.540,  $p = .012$ ). Almost all children helped their friends try to solve the puzzle (98.2%). The number of times the children helped varied between one and seven times ( $M = 1.95$ ;  $SD = 1.16$ ). Children spent on average 58.43 ( $SD = 36.72$ ) seconds on helping efforts. Of the friends, 85.5% asked for explicitly for help, which varied between one and five times ( $M = 1.12$ ;  $SD = .75$ ). No differences were found between children in the experimental condition and the control condition in terms of children's sex ( $\chi^2$  [df = 1,  $N = 113$ ] = -1.487,  $p = .223$ ), age ( $t$  [df = 111,  $N = 113$ ] = -1.406,  $p = .163$ ), exposure to the most recently released Disney movies ( $t$  [df = 111,  $N = 113$ ] = -.186,  $p = .853$ ), exposure to the movie *Cars* before the experiment ( $t$  [df = 108.73,  $n = 112$ ] = -1.477,  $p = .143$ ), or appreciation of the clip ( $t$  [df = 111,  $N = 113$ ] = .581,  $p = .563$ ). Children in the experimental condition also did not differ in how many times they were asked for help by their friend compared to children in the control condition ( $t$  [df = 111,  $N = 113$ ] = .637,  $p = .525$ ). However, a  $t$ -test demonstrated a significant difference between children in the experimental condition and children in the control condition on their initial prosocial behavior ( $t$  [df = 111,  $N = 113$ ] = -2.317,  $p = .022$ ), indicating that children in the experimental condition scored higher on their initial levels of prosocial behavior. Descriptive statistics for all model variables are presented in Table 1; correlations are presented in Table 2.

### *The impact of prosocial Disney content on children's helping behavior*

Findings from linear regression analyses demonstrated that children in the experimental condition were significantly more likely to help their friends with trying to solve the puzzle than children in the control condition, including when controlling for children's sex, age, initial prosocial behavior, prior exposure to Disney movies, and appreciation of the clip. More specifically, children who watched the prosocial Disney clip more often provided help ( $b = .510$ ,  $p = .012$ , one-tailed) and spent more time helping ( $b = .411$ ,  $p = .034$ , one-tailed) than children who watched the Disney clip without the helping behavior. R squares indicated small effects: 5.3% of the total variance in the number of times children spend on helping could be explained by exposure to the helping Disney character and 3.5% of the total variance in the time spent on helping. Strikingly, no significant association was found between children's initial levels of prosocial behavior and their helping behavior during the

**Table 1.** Descriptive statistics for children’s characteristics and outcome variables by condition.

	Total (N = 113)	Experimental condition (n = 57)	Control condition (n = 56)
<i>Prevalence</i>			
Boys	46.0%	40.4%	51.8%
Prior exposure to Disney <sup>a</sup>	76.1%	77.2%	75.0%
Had seen <i>Cars</i> before	53.9%	51.8%	57.1%
<i>Mean (Standard Deviation)</i>			
Children’s age	9.03 (.738)	9.12 (.73)	8.93 (.74)
Initial prosocial behavior <sup>b</sup>	2.73 (.30)	2.79 (.31)	2.67 (.28)
Appreciation of the clip	3.73 (1.41)	3.65 (1.45)	3.80 (1.38)
Number of times helping <sup>c</sup>	1.95 (1.16)	2.21 (1.35)	1.68 (.86)
Amount of time spend on helping (in seconds) <sup>d</sup>	58.43 (36.72)	63.67 (34.61)	53.11 (38.33)

<sup>a</sup>Defined as having watched at least half of the most recently released Disney movies once or more.

<sup>b</sup>A two-sided *t*-test demonstrated a significant difference between children in the experimental condition and children in the control condition on their initial levels of prosocial behavior ( $t [df = 111, N = 113] = -2.317, p = .022$ ).

<sup>c</sup>A *t*-test demonstrated a significant difference between children in the experimental condition and children in the control condition on the number of times they helped their friends ( $t [df = 95.11, N = 113] = -2.512, p = .007$ , one-tailed).

<sup>d</sup>A *t*-test demonstrated a significant difference between children in the experimental condition and children in the control condition on the time they spend on helping ( $t [df = 111, n = 113] = -2.007, p = .023$ , one-tailed). Further, no significant differences were found between conditions.

**Table 2.** Correlation between the model variables.

	1	2	3	4	5	6	7	8
1- Children’s sex <sup>a</sup>								
2- Children’s age	-.02							
3- Initial prosocial behavior	.21*	.07						
4- Prior exposure to Disney	.20*	-.06	-.01					
5- Had seen <i>Cars</i> before	-.45**	.12	.04	.26**				
6- Appreciation of the clip	-.23*	.12	.13	.22*	.41**			
7- Condition <sup>b</sup>	.12	.13	.28**	.03	-.12	-.05		
8- Number of times helping	.11	-.07	.01	-.05	-.08	-.12	.20*	
9- Amount of time spend on helping (quartiles)	.11	.07	-.02	.01	-.12	-.08	.19 <sup>†</sup>	.09

<sup>a</sup>0 = boy; 1 = girl.

<sup>b</sup>0 = control condition; 1 = experimental condition.

\*\* $p < .01$ ;

<sup>†</sup> $p < .05$ .

experiment. In addition, no effects were found for prior exposure to Disney movies and children’s helping. Findings from the regression analyses are presented in Table 3, which also presents the unadjusted associations between the independent variables and outcomes, enabling a comparison of the impact of all predictors on the outcomes with and without the (potential) impact of the others. No moderating effect of prior exposure to Disney movies was found on the relationship between the condition and children’s helping.

Finally, during the game, children also appeared to spontaneously help, without their friends asking for it. Therefore, we calculated the number of times children helped minus the number of times their friends asked for it explicitly and repeated the analyses. The findings of this additional analysis indicated that, compared to children in the control condition, children who watched the prosocial Disney clip more often provided help spontaneously ( $b = .608, p = .014$ , one-tailed). For this association, also no moderating effect was found for prior exposure to recently released Disney movies.

**Table 3.** Findings from linear regression analyses on the relation between watching prosocial Disney content and children's helping behavior.

	Number of times helping		Amount of time spend on helping (quartiles)	
	<i>b</i>	SE	<i>b</i>	SE
Unadjusted				
Children's sex <sup>a</sup>	.19	.22	.25	.21
Children's age	-.08	.15	.09	.14
Initial prosocial behavior	.11	.36	-.10	.35
Prior exposure to Disney	-.01	.02	-.01	.02
Had seen <i>Cars</i> before	-.06	.08	-.12	.08
Appreciation of the clip	-.09	.08	-.04	.08
Condition <sup>b</sup>	.53**	.21	.42*	.21
Full model ( <i>N</i> = 112)				
Children's sex <sup>a</sup>	-.15	.28	.16	.27
Children's age	-.11	.15	.07	.15
Initial prosocial behavior	-.07	.39	-.30	.38
Prior exposure to Disney	.01	.02	-.01	.02
Had seen <i>Cars</i> before	.02	.11	-.07	.10
Appreciation of the clip	-.06	.09	.01	.09
Condition <sup>b</sup>	.52*	.23	.41*	.22

Note: *b* = regression coefficient; SE = standard error.

<sup>a</sup>0 = boy; 1 = girl.

<sup>b</sup>0 = control condition; 1 = experimental condition.

\*\**p* < .01; \**p* < .05, one-tailed.

## Discussion

The present study is the first to reveal that exposure to a prosocial Disney clip is related to children's subsequent helping behavior. More specifically, the findings demonstrated that watching a Disney clip in which the main character provides help and, as a result, loses a race instead of winning it, increased the likelihood of children's helping behavior toward a friend compared to children being exposed to a Disney clip from the same movie without helping behavior. Although the effect sizes were small, the effects remained after controlling for children's sex, age, initial prosocial behavior, exposure to recently released Disney movies, and appreciation of the clip. In line with the hypotheses, children exposed to the helping character helped their friends in need more often ( $H_1$ ) and longer ( $H_2$ ), at the expense of their own chances of completing as many puzzles as possible, compared to children who did not see this character committing this generous deed. Finally, in contrast to the expectations ( $H_3$ ), the effects of the prosocial Disney clip on children's helping behavior were not stronger for children with higher levels of prior exposure to Disney movies or for children with a high exposure to the movie *Cars* in particular.

## Interpretations of the findings

The findings of this study contribute to the relatively small number of studies on the impact of prosocial media on children (Christakis et al., 2013; Mares & Woodard, 2005, 2012) by adding that exposure to prosocial Disney content can inspire children to help their friends, even spontaneously, directly after watching the content. Disney movies contain important lessons about life (Ward, 1996, 2002) and abundant depictions of altruistic behaviors (Padilla-Walker et al., 2013), and the present findings imply that children apparently also act upon

what they have seen, at least in the short term. Although the mission of The Walt Disney Company (2016, p. 1) is striving “to be one of the world’s leading producers and providers of entertainment and information,” the accumulated knowledge points to the idea that Disney is perhaps not just entertainment. However, it is important to note that, although the current findings demonstrated a short-term effect (Bandura, 2001, 2004; Mares & Woodard, 2005, 2012), prior exposure to recent Disney movies did not play a role in children’s helping. Furthermore, no significant relationship was found between prior Disney exposure and children’s initial prosocial behavior.

For these non-significant findings concerning prior exposure to Disney and children’s helping, several explanations are possible. In this study, children’s television viewing behaviors in general were not taken into account while previous research demonstrated that the total time of watching television is negatively related to prosocial behavior (Mares & Woodard, 2012). It may be the case that the promising effects of Disney are overshadowed by a higher exposure to negative content, not only from Disney movies but also other television programs. For future research, it would be interesting to disentangle to what extent the content matters and to what extent screen time itself is related to prosocial skills. Modifying children’s media content is found to be a promising method to improve young children’s behavior (Christakis et al., 2013), nonetheless, other “real-life” experiences appear to be crucial for children to improve their social skills as well (Uhls et al., 2014).

Also the role of parents was not included, although parents’ active mediation has been found to play a key role in the effects of media on children (Coyne et al., 2016; Valkenburg, Piotrowski, Hermanns, & de Leeuw, 2013). Moreover, the measures for initial prosocial behavior and prior exposure may not have been optimal in the present study. Our measure for initial prosocial behavior was found to have a relatively low alpha value, and our measure for prior exposure to Disney movies only included the most recently released ones. Although it is likely that children predominantly watch the most recent movies, not all these movies were included in the previous content analysis on prosocial behavior (Padilla-Walker et al., 2013). In other words, it is not known how prosocial these movies exactly are. To address this issue, future research should extend this content analysis with the most recent Disney movies. Findings from a complete content analysis on all Disney movies can, combined with movie questions such as those asked in the current study, be used to assess children’s actual exposure to prosocial Disney content (Sargent et al., 2003). Subsequently, these levels of actual prior exposure to Disney movies can be linked to children’s prosocial behaviors.

### ***(More) directions for future research***

Perhaps the most essential direction for future research is to include the role of the viewing children themselves. As stated by Hall (1993), before a mediated message can have an “effect” it must first be decoded as meaningful by its viewers. Meaningfulness is shaped by personal frameworks of knowledge, experiences, and moral values. These viewer characteristics allow for various interpretations of the same act featured on screen (Livingstone, 1990; Zillman, 2006). A challenge for future research would be to examine how children interpret the altruistic acts portrayed in Disney movies and decode it as meaningful. Also the moral development of children should be considered in this respect. In this study, we assumed that the values depicted in Disney movies (Padilla-Walker et al., 2013; Tanner et al., 2003; Ward, 1996, 2002) perfectly match with children’s increase in concern for others and their wish for “being

good" (Eisenberg, 1992; Kohlberg, 1976), however, this assumption should be actually investigated. Also the context of the portrayed behavior should not be neglected. Findings from Coyne and Whitehead (2008) indicate that "bad" characters often commit aggressive behaviors. The idea is that this would reduce the chance of facilitating imitation. In the present study, actually some first evidence is found for this as the prosocial movie clip also contains aggression by a "bad" character: Hicks sideswipes Weathers and sends him into a hazardous spin, causing him to crash. However, on average, children were more likely to be inspired by the heroic Lightning McQueen and helped their friends as well.

Moreover, the role of parents should also be taken into account. It is essential to know how parents shape meaningfulness out of (Disney) movies and how they help their children with this, especially when children are young. Parents can strengthen the (moral) messages that they consider important or mediate those not consistent with their beliefs (see also Bandura, 2001, 2004; Coyne et al., 2016; Tanner et al., 2003). If parents do this in an autonomy-supporting manner, children are more prone to be prosocial (Valkenburg et al., 2013). Concerning the role of viewer characteristics, it is important to emphasize that the movie *Cars* was appreciated more by boys than girls. Interestingly, girls were found to be more prosocial in general (Eisenberg, 1992; Eisenberg et al., 2007), however, their helping behavior during the puzzle was, compared to boys, not significantly higher. Perhaps the images of the helping McQueen are more meaningful for boys who watched *Cars* previously and who liked it. Therefore, it would be crucial to replicate this study using a movie that is more appreciated by girls.

Despite its multidimensional character, prosocial behavior was, in the present study, only captured with children's helping behavior (Dunfield, 2014; Eisenberg et al., 2007; Mares & Woodard, 2005). Future research should also include other forms of prosocial behavior to provide a more nuanced picture of Disney's impact on children's prosocial behavior, such as by also including verbal prosocial behaviors as complimenting and encouraging (Padilla-Walker et al., 2013). Related to this point, we aimed to create a situation in which helping was warranted; however, the children could not help successfully as the puzzle was unsolvable. In other words, children were able to provide help to their friends, but without really benefitting them (Eisenberg et al., 2007). Emerging evidence indicates that acting kind yields many rewarding benefits for the giver (Keltner, Kogan, Piff, & Saturn, 2014), but the question arises as to whether the helping itself or the helping to be successful is rewarding. During the experiment, some children did not (directly) ask for help with solving the puzzle, but expressed experiencing the puzzle as difficult, saying, for example, "This one is really tough!" or "I really do not see the difference!" It would be interesting to examine this phenomenon along with explicit requests for help and how children react to this in a structured way in a future study. At the same time it is important to reduce social desirable behaviors and observe children's helping behavior with hidden cameras instead of having an observing adult.

Finally, although the study was conducted in an environment familiar to the children, participating in such an experiment is clearly different from children's real-life situation. Therefore, it would be fascinating to observe children when they watch a Disney movie at home. It is also important to examine the impact of watching an entire Disney movie in order to take into account the potential effects of negative behaviors. Although the levels of aggression in Disney movies may be low and are often committed by "bad" characters (Coyne & Whitehead, 2008), exposure to violence is found to diminish subsequent helping behavior

(Bushman & Huesmann, 2006). Considering the small effect sizes found in the current study, one might wonder whether the positive effects remain under these conditions.

Conducting research at home also makes it possible to observe children when they are watching together with their siblings. The role of siblings is particularly important not only because children often watch television with their siblings (Lawrence & Wozniak, 1989), but also because siblings play a vital role in the development of prosocial behavior (Dunn & Munn, 1986; Pepler, Abramovitch, & Corter, 1981). Examining the role of birth order is an interesting avenue for future studies as well as older siblings are found to comfort younger siblings while watching a suspenseful scene together (Wilson & Weiss, 1993).

### **The world of Disney for the good?**

The question that arises now is whether Disney is “good” or “bad” for children. Based on the current knowledge, it is difficult to provide a straightforward answer to this. On the one hand, Disney movies, with their rich content of moral values and behaviors (Brode, 2005; Padilla-Walker et al., 2013; Ward, 1996, 2002) may actually inspire children to help each other, at least on the short term. On the other hand, it is important to emphasize that the effect sizes of the present findings were small and that no significant relationship was found between exposure to Disney movies in general and children’s prosocial behavior. Also Disney movies have been recurrently criticized for containing negative portrayals (Bazzini et al., 2010; Coyne & Whitehead, 2008; England et al., 2011; Fouts et al., 2006; Lawson & Fouts, 2004; Robinson et al., 2007; Tanner et al., 2003; Ward, 2002; Worthington, 2009). Interestingly, the effects of this on children have been hardly examined. Only in the study from Bazzini et al. (2010), also the effects of these portrayals on children were examined. Findings did not found evidence for movie exposure on children’s use of the beauty–goodness stereotype. All together, more research is warranted to provide an answer to the question whether Disney can inspire children for the good.

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All authors have no conflicts of interest to disclose.

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