# The Wonderful World of Disney:

# The Impact of the Meaningful Movie *Coco* on Cultural Openness and Global Citizenship



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#### **Abstract**

The aim of this study was to examine whether children and parents both experience more meaningfulness after watching a meaningful movie compared to a pleasurable movie. Children and parents were exposed to either the meaningful movie Coco or the pleasurable movie Despicable Me 3. Moreover, after watching the meaningful movie, levels of cultural openness for children and parents and global citizenship for parents were compared to the pleasurable condition. This experiment involved 142 participants, of whom 83 children and 59 parents. Participants were invited to come to the theatre to watch a movie. Participants in the experimental condition watched Coco, a meaningful movie, while participants in the control condition watched the pleasurable movie *Despicable Me 3*. Afterwards, children's and parents' level of cultural openness and parents' level of global citizenship were assessed by a questionnaire. A regression analysis revealed that parents who watched *Coco* held higher levels of valuing diversity, social and environmental sustainability, and intergroup helping (prosocial values of global citizenship) in comparison with parents who watched the pleasurable movie. No significant effects were found for cultural openness, neither for the children as the parents. Findings of the study indicate an effect of watching a meaningful movie on parents' feelings of connectedness towards humanity.

**Keywords**: Disney; animated movies; cultural openness; global citizenship; prosocial values; positive media psychology

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#### Introduction

"The world es mi familia." – Miguel in Coco (2017)

Despite many changes in the media industry in the last decades, such as the development of several forms of new online media, television remains one of the most popular media platforms (Rideout, Foehr, & Roberts, 2010; Wennekers, de Haan, & Huysmans, 2015). Although previous studies primarily focused on the negative effects of television, such as the possible harm of watching televised violence (Mares & Woodard, 2005), television can also bring about positive effects. Along with the institution of the positive psychology (Seligman & Csikszentmihalyi, 2000), there has been an increasing interest in these positive purposes. For instance, watching prosocial media has been found to have a positive effect on people's altruistic- and helping behaviour (Ostrov, Gentile, & Crick, 2006). More specifically, media psychologists began studying the ways in which media, and movies in particular, can be meaningful and help humans flourish (Oliver, Hartmann, & Woolley, 2012; Oliver & Raney, 2011; Wirth, Hofer, & Schramm, 2012).

According to Oliver, Hartmann, and Woolley (2012), meaningful movies carry out human values and explore issues of life purpose. Therefore, they provide the viewer with an improved understanding of their lives (Oliver & Bartsch, 2010). Furthermore, as Janicke and Oliver (2015) argued, meaningful movies have the potential to increase experiences of connectedness. A higher feeling of connectedness can ultimately enhance our concern about the well-being of others, and motivation to love and be good to humanity, even to strangers. In addition, they can increase awareness of the importance of human bonds and love in life.

Likewise, watching a meaningful, inspiring short movie has been found to induce higher feelings of connectedness with those from a diversity of racial/ethnic groups (Oliver et al., 2015). This connection is also associated with more favourable attitudes towards other cultures. In addition, hostility and prejudice can be reduced through contact between different cultures (Appiah, 2006). Through movies, people can learn about these other cultures. When feelings of connectedness between different ethnicities are heightened and attitudes become more favourable, other cultures might be more easily accepted and be considered less as 'different'. This is of great importance, since the number of migrants with a non-Western background in the Dutch population has risen considerably. Of these non-Western migrants, about 50% experience feelings of racial prejudice (Sociaal Cultureel Planbureau, 2014). This might be reduced when people become more open towards other cultures (cultural openness) by watching

meaningful movies due to an increase in feelings of human connectedness. Also, when human connectedness is higher, embracing and valuing of cultural diversities, also known as moral global citizenship, might be heightened (Veugelers, Derriks, & de Kat, 2008). Thus, a higher cultural openness and/or feelings of global citizenship can be of great importance to make today's multicultural global society as coherent as possible and to increase mutual acceptance.

The effects of meaningful movies on cultural openness and global citizenship should be further examined for several reasons. For one thing, because the finding that meaningful movies can lead to a higher connectedness towards diverse others is based on short movies (Oliver et al., 2015). It is therefore of interest to ascertain whether this effect also emerges after watching a full-length movie. Also, researchers have thus far predominantly emphasized on the positive media psychological effects on adults, while little is known of these effects on children (de Leeuw & Buijzen, 2016; de Leeuw & van der Laan, 2017). A meta-analysis showed that watching television can realise an increase in children's prosocial behaviour (Mares & Woodard, 2005), implying that positive effects also exist for children. Third, children's movies have also remained underexposed, while these constitute a substantial portion of children's media time (Rideout, Foehr, & Roberts, 2010). Consequently, this study focused specifically on the effects of a full-length meaningful children's movie on not only adults, but also children.

More specifically, a Disney • Pixar animated movie will be examined, as they are extremely popular among young children and adults (Coyne & Whitehead, 2008; Mason, 2017), and children often watch these movies many times (Dreier, 2007). Moreover, they can be considered as meaningful for several reasons. For one thing because, according to Ward (2002), Disney movies can teach children important moral values. Secondly, they contain positive prosocial messages (Padilla-Walker, Coyne, Fraser, & Stockdale, 2013). And ultimately, as Brode (2005) argues, because Disney promotes acceptance of other cultures by embracing differences between fellow people while simultaneously embracing a shared connectedness between humans. While there have been some studies on behalf of the positive effects of Disney movies thus far (de Leeuw & van der Laan, 2017; Padilla-Walker, Coyne, Fraser, & Stockdale, 2013), no studies have examined the effects of Disney movies on levels of cultural openness and global citizenship. The question that is being sought to answer with this study is as follows:

RQ: Does watching a meaningful Disney movie contribute to levels incorporation of cultural openness and global citizenship?

#### Theoretical background

#### The Relation between Watching a Meaningful Disney Movie and Cultural Openness

It is important to understand to the fullest in what way the moral values as portrayed in Disney movies, like the embracing of differences and a shared connectedness between humans (Brode, 2005), are incorporated by the viewer, and what the limitations or – maybe even more important – what the possibilities of meaningful Disney movies are. A reason why moral values are incorporated by the viewers, can be sought in the Self-Determination Theory (Ryan & Deci, 2000). According to this theory, people have psychological basic needs of autonomy, competence and relatedness. When these basic needs are met, it benefits the personal growth, integrity, and well-being of people. The need for relatedness is stated as the desire to interact with, be connected to, and experience caring for other people. Our actions and daily activities involve other people and through this, we seek the feeling of belongingness (Ryan & Deci, 2000). This feeling of belongingness is often recognised in a higher feeling of connectedness with close others (Ryan, Huta, & Deci, 2006). Moreover, based on recalling a meaningful movie compared to a pleasurable movie, Janicke and Oliver (2015) revealed that a meaningful movie can increase feelings of connectedness with all humanity and, even more important, with a diversity of racial/ethnic groups (Oliver et al., 2015).

A way in which people can feel more related or connected to the other ethnic groups, is by *cultural openness*. Cultural openness can be defined as the extent to which an individual is open to, and interested in, the similarities and differences between their own and other groups (Nesdale & Todd, 2000). Intergroup contact is thought to reduce ethnocentrism, which enhances openness to other groups (cultural openness) and positive intergroup attitudes (Drapela, 1975; Nesdale & Todd, 2000). Thus, a higher cultural openness might ensure a higher well-being of people (Ryan & Deci, 2000), which is why it is favourable for everyone to be good and open towards one another.

According to Oliver and Bartsch (2010), a distinction can be made between movies that elicit feelings of mere enjoyment, and movies that can bring about meaningful experiences. A criterion of meaningful movies is that they are both cognitively as well as affectively challenging (Oliver & Bartsch, 2010). In many types of meaningful movies, portrayals of moral virtues can be recognised (Oliver & Bartsch, 2011; Oliver, Hartmann, & Woolley, 2012). When these virtues are recognised, feelings of elevation, like inspiration or feeling a lump in the throat, can be experienced. Elevation increases motivations to incorporate the portrayed moral virtues, for instance being a better person or helping others (Oliver, Hartmann, & Woolley, 2012).

Disney movies can be considered as meaningful. For one thing, they have been found to elicit higher feelings of relatedness for children towards close others (de Leeuw et al., 2018), which might ultimately enhance feelings of connectedness with all humanity, including those from another culture. This is in line with Dahle's (2017) findings, who argues that many values can be found in Disney movies, including that people should be tolerant ant not judge others by race or appearance. In addition, according to Oliver et al. (2015), meaningful movies in which connectedness, kindness, and loyalty are portrayed positively affect perceptions of shared human goodness, which can lead to a higher feeling of connectedness with humanity and towards diverse others. These portrayed values help children flourish, as they shape the children's outlook on the world (Ward, 2002). An important way to teach these moral virtues to children, can be sought in Disney movies (Ward, 2002). This highly popular and important educator teaches specific roles, values, and ideals.

A good example of a Disney movie containing these portrayals of care and loyalty, is the newest Disney • Pixar animated movie *Coco* (2017). In *Coco*, the protagonist is a Mexican boy, Miguel, who has the dream to be a musician, but due to an ancestor that has left the family because of music, his family does not allow music in their lives (De Leon, 2017). The story depicts Miguel's adventure into the world of the dead, searching for his great-grandfather, "the greatest Mexican musician of all time". Ultimately, he is very loyal to his family and manages to bring music back into his family's lives (King, 2017).

Furthermore, according to Mares and Woodard (2005), stereotypical views of ethnicity can be reduced by showing counter-stereotypical views. While Disney movies are said to have a tendency to show stereotypical views of cultures, it is argued that *Coco* achieved a high level of Mexican authenticity and accurate cultural representation rarely seen in animated features set in a specific cultural context (de Leon, 2017), hence being counter-stereotypical. However, considering that the knowledge on the connectedness with other cultures after seeing a movie with a different-cultured protagonist is very limited, the effect of a meaningful movie on cultural openness is an interesting topic to investigate. Based on this body of research, the following hypotheses are predicted:

H1a: Watching a meaningful Disney movie, like Coco, will increase levels of cultural openness for children

H1b: Watching a meaningful Disney movie, like Coco, will increase levels of cultural openness for parents

#### The Relation between Watching a Meaningful Disney Movie and Global Citizenship

Similar to the described process for cultural openness, cosmopolitanism could play a role in this process. Cosmopolitanism occurs when someone experiences a sense of belonging to humanity in general, which is stronger than any sense of national or regional identity, or as a sense of belonging to "the world as a whole" (Schueth & O'loughlin, 2008). Such a solidarity is also regarded as *global citizenship*. In previous studies, many different definitions of global citizenship can be found, some being interchangeable, and others clear distinct (Reysen & Katzarska-Miller, 2013). For instance, it is equated to international and world citizenship (Golmohamad, 2008), while Haugestad (2004) argues that a global citizen is mainly concerned about social justice, a world citizen about trade and mobility, whereas an earth citizen cares most about ecological sustainability. In this study, the definition of Reysen and Katzarska-Miller (2013) is used: "Global citizenship is defined as awareness, caring, and embracing cultural diversity while promoting social justice and sustainability, coupled with a sense of responsibility to act". When comparing the definition of global citizenship in various studies, these aspects of global citizenship relate most to human connectedness, as no effect is expected on aspects such as trade, mobility, or ecological sustainability.

Reysen and Katzarska-Miller (2013) demonstrated that highly identified global citizens score higher on six prosocial values; they express empathy for others, aid others outside one's group, embrace cultural diversity, promote social justice and environmentally sustainable living, and feel a responsibility to act to help others for the betterment of the world. In the present study, endorsement of these six prosocial values of a global citizen are expected after watching a meaningful Disney movie.

According to Appiah (2006), there are two conditions for ensuring this global citizenship: knowledge about the lives of others (other cultures) and being able to bring about an effect. Thanks to the existence of global media, it has become easier for people to acquire more knowledge about other cultures and to make global connections with others (Appiah, 2006). By means of radio, television, telephones and the Internet, man can bring affection to another and learn about cultures anywhere in the world. Through the Disney • Pixar animated movie *Coco*, viewers can learn about the Mexican culture due to the counter-stereotypical narrative (de Leon, 2017).

Whereas for cultural openness an effect is expected for both children and parents, an effect of watching a meaningful Disney movie on global citizenship is only expected for parents. The definition of global citizenship as used in this study (Reysen & Katzarska-Miller, 2013) includes, among others, a responsibility to act, which is only possible starting from a

higher age (Veugelers, Derriks, & de Kat, 2008); hence, this definition does not apply to children. Also, children are less interested in being a global citizen (Veugelers et al., 2008).

H2: Watching a meaningful Disney movie, like Coco, will increase adults' levels of the six prosocial values (intergroup empathy; valuing diversity; social justice; environmental sustainability; intergroup helping; responsibility to act) of global citizenship

#### The Moderating Effect of Previous Exposure to the Movie

Another factor that might have an effect on the relation between watching a movie and values held afterwards, is the repetition of exposure. According to Mares and Woodard (2013), children can attain a higher understanding of the watched movie when they are repeatedly exposed to it. This is in line with the Social Cognitive Theory (Bandura, 2001), which suggests that the more often a viewer is exposed to certain judgments or values in the media, the more likely the behaviours and cognitions will be incorporated. For these reasons, moral values such as valuing cultural diversity as displayed in *Coco*, might be recognised and understood better by children after watching the movie several times. Therefore, the more often children have seen the movie, the more likely it is that the effects are stronger. Although children watch Disney movie many times again (Dreier, 2007), thus have a high experience with these movies, adults on the other hand might have many more years of experience with these movies and their portrayed moral values. Therefore, for adults it is also expected that the more often they have seen the movie, the more likely it is that the effects are stronger. This leads to the following hypotheses:

H3: The effect of watching a meaningful Disney movie, like Coco, on levels of cultural openness will be stronger for viewers (parents and children) who have watched the movie before

H4: The effect of watching a meaningful Disney movie, like Coco, on levels of the six prosocial values of global citizenship (intergroup empathy; valuing diversity; social justice; environmental sustainability; intergroup helping; responsibility to act) will be stronger for adults who have watched the movie before

#### Method

#### Sample Characteristics

The final sample consisted of 142 participants, of which 83 children and 59 parents. Children were between 7 and 14 years old (M = 10.83, SD = 1.10) and 54.2% of them were girls. The majority of the children were born in the Netherlands (94.0%). Parents were between 33 and 57 years old (M = 46.49, SD = 5.17), of whom the majority (72.9%) were women, and 88.1% of participants identified as native to the Netherlands.

#### Research Design and Procedure

The research question and hypotheses are tested by means of an experiment. The manipulation that was different between the groups was whether participants watched either the meaningful Disney • Pixar animated movie or a pleasurable Universal animated movie. This way, predicted effects of a meaningful Disney movie on the cultural openness on children and parents and global citizenship on parents could be tested (Field, 2005; Wester, Renckstorf, & Scheepers, 2006).

To invite children and their parents to participate in the study, elementary schools near the movie theatre were asked by phone for permission to hand out letters to the school's children. In total, 16 of the 29 approached schools were willing to participate. Letters were handed in person to the children of the highest two grades – in which most children are aged between ten and twelve years old – of elementary school, after a recruitment talk was conducted to motivate them to participate (Appendix 4). As a cover story, children were told that the study was about their opinions on animated movies. Letters were handed out to 1,033 children. These letters contained a description of the study, emphasized that all information would be processed as confidential, and concluded with an invitation to participate. In addition, flyers were distributed in locations near the cinema. Parents could send an email when they agreed to participate with their children. In response to their email they received a free ticket to the movie theatre, which included a form of consent of all family members that had to be signed. In this way, consent of participation for all the minors was received prior to the study. Families were randomly assigned to either the meaningful movie (Coco) or the pleasurable movie (Despicable Me 3), based on order of signing up for the study. All participants received an email to remind them of their participation in the study a day prior to the experiment.

Data collection took place in May 2018, during spring break, to increase chances of children and their parents being able to participate. The two different movies were shown at the same theatre. When the participants entered the movie theatre, they were asked to hand in their

ticket, including their form of consent. They were then given a clipboard and a closed envelope, which contained a questionnaire, a pen, and a Sudoku in case they finished the questionnaire early after the movie to keep them from talking to other participants. Parents and children were given a comparable questionnaire. All participants were told not to open the envelope until the end of the movie. To preclude any disappointment about the assigned movie, participants did not know which movie they would see until they were seated and the movie started. After the movie ended, the researchers announced that they could start filling in the questionnaires individually. When all the questions were completed, the participants were thanked for their participation.

Of the 85 families who signed up for the study, 19 families cancelled their participation and 7 families were no-shows. The cancellations were mainly due to the other plans because of the extremely nice weather the day of the study (n = 13) and illnesses (n = 5). In total, 59 families showed up at the movie theatre, accounting for 145 participants. Of these participants, 3 were excluded from the analyses because they were not parents of the children, but an older sister or grandparent. After the data collection and analyses were complete, all the parents who participated received a newsletter about the findings of the study. Ultimately, the study was approved by the ethical committee of the Faculty of Social Sciences, Radboud University.

#### Description of the Movies

Coco is an animated movie produced by Pixar Animation Studios and distributed by Walt Disney Pictures in November 2017. The total length of the movie was 105 minutes. Despicable Me 3 is an animated movie produced by Illumination Entertainment and distributed by Universal Pictures. The total length of this movie was 90 minutes.

For the meaningful movie condition, Coco was chosen for several reasons. For one thing because *Coco* portrays a clear message about the importance of family relationships and human connectedness (Common Sense Media, 2017b; Rotten Tomatoes, 2017b). This has been found to be typical for meaningful movies (Oliver & Bartsch, 2010; Janicke & Oliver, 2015). Secondly because the narrative takes a deeply affecting approach to culture, family, life and death (Common Sense Media, 2017b; Rotten Tomatoes, 2017b). Therefore, it provides the viewer with a greater insight with regard to general lessons of life value, which is another feature of a meaningful movie (Oliver & Bartsch, 2010; Oliver, Hartmann, & Woolley, 2012). Moreover, *Coco* received the 2017 Greater Good's 'Purpose Award' due to the way it portrays the power of long-term, meaningful goals to shape our lives (Smith, Abdullah, Antin, Eva, Simon-Thomas, & Suttie, 2018). Ultimately, with all mentioned characteristics in combination

with its unexpected plot twists (Smith et al., 2018), *Coco* meets the criterion of being both cognitively as well as affectively challenging, hence can be considered as a meaningful movie (Bartsch & Hartmann, 2017).

For the pleasurable movie condition, the movie *Despicable Me 3* was chosen. Pleasurable movies have a typical amusing and entertaining character (Oliver & Raney, 2011). Although also containing messages about the importance of family, *Despicable Me 3* fits to this category of movies due to its mainly comical character and typical zany humour (Common Sense Media, 2017a; Rotten Tomatoes, 2017a). Except for this important difference, both movies are alike on various levels. They are both highly popular animation feature movies. In fact, they are 2017's number 1 and 2 worldwide highest-grossing animation movies, respectively with \$1,034,799,409 for *Despicable Me 3* and with \$805,839,032 for *Coco* (IMDb, 2017). Furthermore, both movies received the advised minimum age of 6 from the Dutch motion picture rating system (Kijkwijzer, 2017). In this way, participants in both conditions watched a full-length animated movie of the last year, which were both very popular.

A pretest among 64 adults ( $M_{\rm age} = 21.7$ , SD = 5.56; 71.9% female) demonstrated that Coco was indeed more intellectually (t [df = 63, N = 64] = 15.96, p < .001;  $M_{\rm Coco} = 4.29$ , SD = 1,30;  $M_{\rm Despicable\ Me\ 3} = 2.39$ , SD = 1.44, on a scale from 1-6) and affectively challenging (t [df = 63, N = 64] = 17.94, p < .001;  $M_{\rm Coco} = 5.39$ , SD = 1.33;  $M_{\rm Despicable\ Me\ 3} = 3.06$ , SD = 1.56, on a scale from 1-6) than  $Despicable\ Me\ 3$ , meaning that  $Coco\$ can indeed be considered as a significantly more meaningful movie than  $Despicable\ Me\ 3$ .

#### Measures

Cultural Openness. Cultural openness after watching was measured by a Dutch translation of the Cultural Openness Scale (Strizhakova, Coulter, & Price, 2008). This scale contains four seven-point Likert scale items ('strongly disagree' – 'strongly agree'). The original items were used for the adults' questionnaire (Table 1), and a simplified version of the items was used for the children's questionnaire (Table 2). All changes made were checked by peer review to ensure the items were still adequate.

A factor analysis on the four items showed that for both the parents and the children's group there was one factor, respectively with an eigenvalue of 3.32 (83.0% of the variance), and an eigenvalue of 2.19 (54.6% of the variance). Because there is only one factor with high factor loadings (Table 1; Table 2), a new variable with the mean of the four items was created. A higher score on the scale means a higher score on cultural openness. A reliability test showed

high Cronbach's alpha's ( $\alpha$  = .93;  $\alpha$  = .72), which makes the constructed unidimensional scale highly reliable (Field, 2005; de Heus, van der Leeden, & Gazendam, 1995).

Global Citizenship. Global citizenship was measured among the parents with the Global Citizenship Model (Reysen & Katzarska-Miller, 2013), containing 22 seven-point Likert scale items (Appendix 1; 'strongly disagree' – 'strongly agree'), with nine different factors. As demonstrated by Reysen and Katzarska-Miller (2013), the first three factors (Normative Environment, Global Awareness, and Global identification) were found to be antecedents of the prosocial factors (Intergroup Empathy, Valuing Diversity, Social Justice, Environmental Sustainability, Intergroup Helping, and Responsibility to Act), thus an effect on these antecedents is not expected in this study. However, the items of these subscales were measured and analysed as well to ensure validity of the total scale.

Contrary to expectations, a principal component analysis with oblique rotation (direct oblimin) showed a solution in only five factors with an eigenvalue over Kaiser's criterion of 1 and in combination explained 74.91% of the variance. However, these factors are not interpretable on a good and valid level based on Reysen and Katzarska-Millers' (2013) findings. Therefore, a fixed-factor analysis with an established number of the nine expected factors was conducted. Once again, interpretation of these factors was not fully in accordance with previous findings. The data suggested that two of the six expected prosocial factors (Social Justice and Environmental Sustainability) actually load on the same factor. For this reason, a new fixedfactor analysis with an established number of eight factors was conducted. This time, factors were interpretable according to both the analysis and the literature, as these two factors have often been found to stand in relationship of mutual reinforcement (Dobson, 1998). The factors Social Justice and Environmental sustainability were converged to Social and Environmental Justice. The solution in eight factors explained 86.38% of the variance, with .58 as the lowest Eigenvalue. Only one item did not load on the expected factor (Normative Environment): If I called myself a global citizen most people who are important to me would approve. It was therefore excluded, also resulting in a higher Cronbach's alpha ( $\alpha_{pre} = .85$ ;  $\alpha_{post} = .92$ ). The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis (KMO = .76), also indicating distinct and reliable factors (Field, 2005; Hutcheson & Sofroniou, 1999).

Except for the converged factor, the final factors are named the same as Reysen and Katzarska-Miller (2013) named them (Table 3) Because all the scales show acceptable to highly reliable Cronbach's alphas (Table 3) variables were constructed for all factors separately and all scores were then averaged (Field, 2005; de Heus, van der Leeden, & Gazendam, 1995). A

higher score indicating higher positive attitudes concerning the named dimensions. The factor loadings after the final oblique rotated (direct oblimin) factor analysis can be found in Table 3.

Table 3 Factor loadings based on principal components analysis with oblimin rotation for 21 items from the Global Citizenship Model (N = 59)

	Factor Loadings							
Items	1	2	3	4	5	6	7	8
Normative Environment ( $\alpha = .92$ )								
(1)	84							
(3)	89							
(4)	92							
Global Awareness ( $\alpha = .78$ )								
(5)		56				.37		
(6)		41						.50
(7)		83						
(8)	.36	44		.44				
Global Citizenship Identification								
$(\alpha = .89)$								
(9)			.59					
(10)			.67					
Intergroup Empathy ( $\alpha = .86$ )								
(11)				.82				
(12)				.76				
Valuing Diversity ( $\alpha = .64$ )								
(13)					78			
(14)					40			
Social and Environmental Justice								
$(\alpha = .89)$								
(15)						.57		
(16)					37	.55		
(17)						.86		
(18)						.87		

Intergroup Helping (α =	= .64)	
(19)		.95
(20)		.35 .85
Responsibility to Act (o	$\alpha = .78)$	
(21)		.56
(22)	.48	.40

*Note*. Factor loadings <.35 are suppressed

Previous exposure to the movie. Previous exposure to either Coco or Despicable Me 3, depending on the experimental condition the participant was in, was measured by asking the participants whether they had watched this movie before. Response options ranged from 'never', 'one time', 'two times', to 'more than two times' (de Leeuw & van der Laan, 2017). Because this variable was not normally distributed, previous exposure was changed into a dichotomous variable (0 = never watched before, 1 = watched before).

Ethnicity. To measure the ethnicity of the participants, two items were used. Participants were asked in what country they were born, and also in what country their parents were born. The country of origin of their parents was especially important for children, since they are younger and are therefore more likely to be born in the Netherlands. Response options for both items were either 'The Netherlands' or 'Different'. If 'Different' was answered, participants could fill in the country as an open response option. In this way, an effect might be (partially) explained by participants' backgrounds. For the analyses, the country of birth was added as a control variable for both children and parents, and the country of birth of their parents for only children. Both variables were transformed into a dichotomous one (0 = born in the Netherlands, 1 = not born in the Netherlands; 0 = parents born in the Netherlands, 1 = parents not born in the Netherlands).

Level of education. One item was used to measure the level of education of the parents, on which a score of 1 = primary education, 2 = VMBO/MAVO, 3 = HAVO, 4 = VWO, 5 = MBO, 6 = HBO, and 7 = WO. A higher score on this scale means a higher level of education of the parents (Nuffic, 2018).

Extra measures. To check whether the manipulation between the movies succeeded, levels of meaningfulness and pleasurableness was measured by the Audience Response Scale (Oliver & Bartsch, 2010). Meaningfulness was measured using four items, and pleasurableness was measured using three items, all on seven-point Likert scales ('strongly disagree' – 'strongly agree'). Meaningfulness was measured by items such as 'I was really moved by the movie,

whereas the items of pleasurableness were stated for example as 'the movie was funny' (Appendix 2). Cronbach's alphas were high for both meaningfulness ( $\alpha_{children} = .87$ ;  $\alpha_{parents} = .96$ ) and pleasurableness ( $\alpha_{children} = .82$ ;  $\alpha_{parents} = .91$ ), thus two variables were constructed and scores were averaged. To check to what extent the participants appreciated the movie, they were asked to rate the movie they watched on a scale ranging from 1 - 10, with a higher score meaning a higher level of appreciation of the movie.

#### Strategy of Analyses

Descriptive statistics were calculated, and t-tests and  $\chi^2$ -tests were subsequently conducted to examine whether the randomization resulted in a balanced distribution across conditions of sex, age, ethnicity, level of education, and prior exposure to the movie. The relation between watching the meaningful movie Coco on cultural openness for all participants and subscales of global citizenship for parents was tested with linear regression analyses. The potential moderating effect of previous exposure on this relation was examined with the PROCESS tool (Hayes, 2017). In all analyses, sex, ethnicity, level of education (only for parents), and previous exposure to the shown movie were included as control variables.

#### **Results**

#### **Descriptive Statistics**

Descriptive statistics demonstrated that the movie Coco was new for 54.5% of the children and for 73.3% of the parents, whereas  $Despicable\ Me\ 3$  was new for only 15.8% of the children and for 53.6% of the parents. While no difference in the level of enjoyment (on a scale from 1-10) between the movies was found for children ( $t\ [df=6,N=83]=3.02,p=.807;M_{Coco}=8.70,SD=1.27;M_{Despicable\ Me\ 3}=8.28,SD=1.43$ ), the level of enjoyment of parents was significantly higher for Coco than for  $Despicable\ Me\ 3$  ( $t\ [df=57,N=59]=-4.16,p<.001;M_{Coco}=8.68,SD=1.11;M_{Despicable\ Me\ 3}=6.79,SD=2.25$ ). However, no differences in levels of happiness (on a scale from 1-7) were found, for parents ( $t\ [df=56,n=58]=-1.96,p=.055;M_{Coco}=6.23,SD=.78;M_{Despicable\ Me\ 3}=5.68,SD=0.98$ ) nor children ( $t\ [df=81,N=83]=0.37,p=.710;M_{Coco}=5.86,SD=1.05;M_{Despicable\ Me\ 3}=5.95,SD=1.02$ ), meaning they were equally happy after watching the movie. Descriptive statistics of both children and parents for all model variables by condition are displayed in Table 4, correlations of variables for children are presented in Table 5, and correlations of variables for parents are presented in Table 6.

Table 4

Descriptive Statistics for All Model Variables by Condition

	Coco	Despicable Me 3
	$n_{\text{children}} = 43$	$n_{\text{children}} = 39$
	$n_{\text{parents}} = 31$	$n_{\text{parents}} = 28$
Prevalence		
Had watched movie before		
Children <sup>1</sup>	45.5%	84.2%
Parents	26.7%	46.4%
Male		
Children <sup>2</sup>	30.2%	61.5%
Parents	32.3%	21.4%
Native country other than the Netherlands		
Children	2.3%	10.3%
Parents	6.5%	17.9%
Native country of participants' parents other than the		
Netherlands		
Children <sup>3</sup>	11.6%	35.1%
Parents	19.4%	25.0%
Mean (Standard Deviation)		
Age		
Children	11.05 (.93)	10.59 (1.23)
Parents	46.26 (5.20)	46.75 (5.23)
Level of appreciation of the movie (on a 1-10 scale)		
Children	8.70 (1.23)	8.28 (1.43)
Parents	8.68 (1.11)	6.79 (2.25)
Rating of meaningfulness (on a 1-7 scale)		
Children <sup>4</sup>	5.16 (1.23)	3.41 (1.78)
Parents <sup>5</sup>	5.87 (1.26)	2.85 (1.39)
Rating of pleasurableness (on a 1-7 scale)		
Children	6.00 (1.30)	6.03 (1.30)
Parents <sup>6</sup>	6.35 (0.83)	5.43 (1.50)
Cultural openness (on a 1-7 scale)		

Childre	en	4.93	(1.08)	4.96 (1.03)
Parents		5.53	(1.02)	5.07 (1.49)
Global citizens	ship parents (on 1-7 scales)			
1-Norm	native Environment	4.23	(1.62)	4.30 (1.32)
2-Glob	al Awareness	4.66	(1.21)	4.64 (1.02)
3-Glob	al Citizenship Identification	4.26	(1.61)	4.39 (1.39)
4-Inter	group Empathy	5.56	(1.09)	5.07 (1.32)
5-Valu	ing Diversity	4.97	(1.18)	4.45 (1.07)
6-Socia	al and Environmental Justice	6.25	(0.82)	5.75 (0.92)
7-Inter	group Helping	5.55	(1.04)	4.79 (1.35)
8-Resp	onsibility to Act	4.50	(1.58)	4.52 (1.27)

<sup>1</sup>Differences previous exposure between children in the meaningful movie condition and children in the pleasurable movie condition were significant ( $\chi^2$  [df = 1, n = 82] = 13.20, p < .001); <sup>2</sup>Also differences in sex were significant ( $\chi^2$  [df = 1, n = 82] = 8.05, p = .004); <sup>3</sup>Differences in the country of birth of children's parents were also significant ( $\chi^2$  [df = 1, n = 80] = 6.30, p = .012); <sup>4</sup>Differences in level of meaningfulness were significant for children (t [df = 67, n = 82] = -5.13, p < .001); <sup>5</sup>Differences in level of meaningfulness were also significant for parents (t [df = 55, N = 59] = -8.86, p < .001); <sup>6</sup>Differences in level of pleasurableness were significant for parents (t [df = 41, N = 59] = -2.90, p = .006); No other significant differences were found between conditions.

Table 5

Correlations Between all Model Variables for Children

	1	2	3	4	5	6
1-Condition <sup>1</sup>						
$2$ -Sex $^2$	.33**					
3-Age	.20	.03				
4-Country of birth <sup>3</sup>	24*	.09	12			
5-Country of birth of parents <sup>4</sup>	28*	01	.02	.01		
6-Previous exposure to the movie <sup>5</sup>	41***	.02	34**	.17	.17	
7-Cultural openness	02	19	00	09	.05	.01

 $<sup>^{1}0</sup>$  = *Despicable Me 3*, 1 = *Coco*;  $^{2}0$  = boy; 1 = girl;  $^{3}0$  = born in Netherlands, 1 = born elsewhere;  $^{4}1$  = parents born in Netherlands, 2 = parents born elsewhere;  $^{5}0$  = never watched before, 1 = watched before;  $^{*}p$  < .05;  $^{**}p$  < .01;  $^{***}p$  < .001

Table 6

Correlations Between all Model Variables for Parents

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1-Condition <sup>1</sup>														
2-Sex <sup>2</sup>	12													
3-Age	05	19												
4-Level of education <sup>3</sup>	13	.11	.05											
5-Country of birth <sup>4</sup>	18	01	05	29*										
6-Previous exposure to the movie <sup>5</sup>	21	18	.09	.17	.05									
7-Cultural openness	.18	05	07	.12	05	.04								
8-Normative Environment	03	12	.23*	.16	05	08	.33*							
9-Global Awareness	.01	28*	.14	.13	05	02	.35***	.42***						
10-Global Citizenship Identification	04	27*	.15	.18	.19	07	.43***	.62***	.59***					
11-Intergroup Empathy	.20	28*	.02	.07	04	.03	.48***	.30*	.61***	.57***				
12-Valuing Diversity	.23	12	.36	.11	.14	00	.47***	.42***	.51***	.59***	.42**			
13-Social and Environmental Justice	.28*	.02	.20	.13	06	.01	.55***	.36**	.45***	.39*	.57***	.54***		
14-Intergroup Helping	.31*	.03	.05	05	.03	12	.49***	.27*	.39**	.37**	.31*	.57***	.52***	
15-Responsibility to act	01	02	.09	.13	.18	16	.42***	.54***	.71***	.68***	.46***	.67***	.49***	.57***

<sup>&</sup>lt;sup>1</sup>0 = Despicable Me 3, 1 = Coco; <sup>2</sup>0 = male; 1 = female; <sup>3</sup>1 = Primary education, 2 = VMBO/MAVO, 3 = HAVO, 4 = VWO,

<sup>5 =</sup> MBO, 6 = HBO, 7 = WO, ranging from low to high level of education;  $^40 = born$  in Netherlands, 1 = born elsewhere;  $^50 = born$  never watched before, 1 = born elsewhere; 1 = born e

#### Randomization Tests

No differences were found between children in the meaningful movie condition and the pleasurable movie condition in terms of their age (t [df = 80, n = 82] = 4.33, p = .041) and their country of birth ( $\chi^2$  [df = 2, N = 83] = 5.54, p = .063). However, significant differences were found between children in the meaningful movie condition and children in the pleasurable movie condition in terms of sex ( $\chi^2$  [df = 1, n = 82] = 8.05, p = .004), country of birth of their parents ( $\chi^2$  [df = 1, n = 80] = 6.30, p = .012), and previous exposure to the movies ( $\chi^2$  [df = 1, n = 82] = 13.20, p < .001). Children had watched *Despicable Me 3* significantly more often than the children in the *Coco* condition had watched *Coco*. Therefore, sex, country of birth of their parents, and previous exposure to the movie were included as control variables.

No differences were found between parents in the meaningful movie condition and the pleasurable movie condition in terms of their sex ( $\chi^2$  [df = 1, N = 59] = 0.87, p = .350), country of birth ( $\chi^2$  [df = 1, N = 59] = 1.83, p = .176), previous exposure to the movie they watched (t = 1, t = 10] = 2.47, t = 10, age (t = 1, t = 10] = 0.13, t = 10, and level of education (t = 1, t = 10] = 0.70, t = 10, meaning that the randomization succeeded for these variables. See Table 4 for descriptive statistics of these variables.

#### Manipulation check

To test whether the manipulation of the movies was successful, a t-test was conducted on the levels of meaningfulness and pleasurableness of Coco and  $Despicable\ Me\ 3$ . A significant difference in levels of meaningfulness in both children ( $t\ [df=67,\ n=82]=-5.13,\ p<.001$ ) and parents ( $t\ [df=55,\ N=59]=-8.86,\ p<.001$ ) was found, implying that  $Coco\ (M_{parents}=5.87,\ SD=1.26;\ M_{children}=5.16,\ SD=1.23)$  was indeed more meaningful than the pleasurable movie ( $M_{parents}=2.85,\ SD=1.39;\ M_{children}=3.41,\ SD=1.78$ ). No significant difference was found in the extent to which children rated the movies as pleasurable ( $t\ [df=66,\ n=82]=-0.17,\ p=.867;\ M_{Coco}=6.00,\ SD=1.30;\ M_{Despicable\ Me\ 3}=6.03,\ SD=1.30$ ). However, parents significantly rated  $Coco\$ as more pleasurable than  $Despicable\ Me\ 3$  ( $t\ [df=41,\ N=59]=-2.90,\ p=.006;\ M_{Coco}=6.35,\ SD=0.83;\ M_{Despicable\ Me\ 3}=5.43,\ SD=1.50$ ), implying that parents find more pleasure in watching a meaningful movie. See Table 4 for descriptive statistics of these variables.

#### The Effect of Watching Coco on Cultural Openness of Children

To examine whether watching the meaningful Disney • Pixar animated movie *Coco* enhanced cultural openness in children (H1a), a linear regression analysis was conducted. The results

showed no significant effect (b = 0.28, p = .347), while controlling for children's sex, previous exposure to the movie, and country of birth of both themselves and their parents, meaning that Hypothesis 1a is not supported. Watching the meaningful movie Coco does not increase the openness to other cultures of parents more than watching the pleasurable movie Despicable Me 3. Furthermore, no significant effects were found for the covariates, meaning that children's initial levels of sex, age, country of birth of both themselves and their parents, and previous exposure to the movie did not result in different levels of cultural openness. Findings from the regression analysis are presented in Table 7.

#### The Effect of Watching Coco on Cultural Openness of Parents

To examine whether watching the meaningful Disney • Pixar animated movie Coco enhanced cultural openness in parents (H1b), linear regression analysis was conducted. Findings showed no significant effect (b = 0.53, p = .151), while controlling for parents' sex, age, level of education, country of birth, and previous exposure to the movie, meaning that Hypothesis 1b is not supported. Watching the meaningful movie Coco does not increase the openness to other cultures of parents more than watching the pleasurable movie  $Despicable\ Me\ 3$ . Moreover, no significant effects were found for the covariates, meaning that parents' initial levels of sex, age, level of education, country of birth, and previous exposure to the movie did not result in different levels of cultural openness. Findings from the regression analysis are presented in Table 7.

# The Moderating Effect of Previous Exposure to Coco on Cultural Openness for Children and Parents

Hypothesis 3 predicted that the effect of watching the meaningful Disney • Pixar animated movie Coco on levels of cultural openness would be stronger for viewers (parents and children) who have watched the movie before. No moderating effect was found for watching the movie previously, neither for children (b = 0.57, 95% CI [-0.55, 1.70], t = 0.75, p = .311) nor parents (b = -0.10, 95% CI [-1.61, 1.41], t = -0.13, p = .898). This means that having seen the meaningful movie Coco multiple times, does not induce stronger effects of watching the movie on the levels of cultural openness for both children and parents.

Table 7
Findings from Linear Regression Analyses on the Relation between Watching Coco and Cultural Openness for Children and Parents

	Cultural openness of	childre	en <sup>1</sup>	Cultural openness parents <sup>2</sup>			
	b (95% CI)	SE	t	b (95% CI)	SE	t	
Condition	0.28 (-0.31, 0.86)	.29	0.95	0.53 (-0.20, 1.25)	.36	1.46	
Previous exposure	-0.02 (-0.56, 0.51)	.27	-0.09	0.04 (-0.74, 0.81)	.39	0.10	
Sex	-0.48 (1.00, 0.03)	.26	-1.89	-0.17 (-0.98, 0.64)	.40	-0.41	
Country of birth	-0.18 (-1.27, 0.92)	.55	-0.33	0.28 (-0.88, 1.45)	.58	0.49	
Country of birth of	0.22 (-0.35, 0.79)	.29	0.76	-	-	-	
parents							
Level of education	-	-	-	0.31 (-0.08, 0.69)	.19	1.58	
Age	-	-	-	-0.02 (-0.09, 0,05)	.04	-0.52	

*Note.* b = regression coefficient; SE = standard error; See Table 5 and Table 6 for units of variables;  ${}^{1}R^{2} = .06$ ;  ${}^{2}R^{2} = .06$ 

### The Effects of Watching Coco on Parents' Global Citizenship

Hypothesis 2 predicted that watching the meaningful Disney • Pixar animated movie *Coco* would increase adults' levels of the six prosocial values (Intergroup Empathy; Valuing Diversity; Social Justice; Environmental Sustainability; Intergroup Helping; Responsibility to Act) of global citizenship. Because Social Justice and Environmental Sustainability were converged to Social and Environmental Sustainability, and three additional factors were added based on a higher validity, eight factors were tested by means of linear regression. In all analyses on the direct effects, sex, age, level of education, country of birth, and previous exposure to the movie were included as control variables.

Findings from linear regression analyses demonstrated that watching Coco did not, as expected, increase levels of Normative Environment (b = .04, p = .933), Global Awareness (b = .06, p = .854), and Global Citizenship Identification (b = -.07, p = .867). However, contrary to expectations, also no significant effects were found for Intergroup Empathy (b = .42, p = .236) and Responsibility to Act (b = .17, p = .662). Compared to watching the pleasurable movie  $Despicable\ Me\ 3$ , parents who watched the meaningful movie  $Coco\ did$  not increase: The way in which their friends and family approve of them being a global citizen (Normative Environment); knowledge and awareness of the world (Global Awareness); identification with

being a global citizen (Global Citizenship Identification); a felt connection and concern for people outside one's ingroup (Intergroup Empathy); an acceptance of moral duty or obligation to act for the betterment of the world (Responsibility to Act).

In line with expectations, watching the meaningful movie Coco increased levels of Valuing Diversity (b = .71, p = .028), Social and Environmental Justice (b = 0.61, p = .012), and Intergroup Helping (b = .82, p = .022). Compared to watching the pleasurable movie  $Despicable\ Me\ 3$ , parents who watched the meaningful movie Coco were more likely to have higher positive prosocial values concerning fair and equal treatment of all humans, equally caring for and protecting the natural environment (Social and Environmental Justice) and higher acceptance of a moral responsibility to act for the better of the world (Responsibility to Act) for parents. Findings from the regression analyses are presented in Table 8.

#### The Moderating Effect of Previous Exposure to Coco on Global Citizenship for Parents

Hypothesis 3 predicted that the effect of watching the meaningful Disney • Pixar animated movie Coco on levels of the six prosocial values of global citizenship would be stronger for parents who have watched the movie before. However, no moderating effects was found for watching the movie previously, for any of the prosocial values: Normative Environment (b = .25, p = .729), Global Awareness (b = .67, p = .303), Global Citizenship Identification (b = .59, p = .476), Intergroup Empathy (b = .43, p = .547), Valuing Diversity (b = .40, p = .541), Social and Environmental Justice (b = -.44, p = .371), Intergroup Helping (b = .09, p = .901), and Responsibility to Act (b = .28, p = .724). This means that having seen the meaningful movie Coco multiple times, does not induce stronger effects of watching the movie on the prosocial values of global citizenship of parents.

Table 8

Findings from Linear Regression Analyses on the Relation between Watching Coco and the Factors of Global Citizenship for Parents

	b (95% CI)	SE	t
Normative environment ( $R^2 = .10$ )			
Condition <sup>1</sup>	-0.03 (-0.83, 0.77)	.40	-0.09
Sex <sup>2</sup>	-0.38 (-1.27, 0.52)	.45	-0.84
Age	0.05 (-0.03, 0.13)	.04	1.29
Level of education <sup>3</sup>	0.28 (-0.15, 0.71)	.21	1.32
Country of birth <sup>4</sup>	0.09 (-1.20, 1.37)	.64	0.14
Previous exposure <sup>5</sup>	-0.52 (-1.38, 0.34)	.43	-1.21
Global Awareness ( $R^2 = .14$ )			
Condition	-0.06 (-0.68, 0.57)	.31	-0.19
Sex	-0.81 (-1.51, -0.10)*	.35	-2.29
Age	0.01 (-0.05, 0.07)	.03	0.37
Level of education	0.26 (-0.07, 0.59)	.17	1.57
Country of birth	0.11 (-0.89, 1.11)	.50	0.22
Previous exposure	-0.32 (-0.98, 0.35)	.33	-0.95
Global Citizenship Identification ( $R^2 = .15$ )			
Condition	-0.07 (-0.87, 0.73)	.40	-0.17
Sex	-1.00 (-1.90, -0.09)*	.45	-2.21
Age	0.00 (-0.08, 0.08)	.04	0.04
Level of education	0.29 (-0.13, 0.72)	.21	1.39
Country of birth	1.13 (-0.15, 2.40)	.63	1.78
Previous exposure	-0.55 (-1.40, 0.30)	.42	-1.30
Intergroup Empathy ( $R^2 = .11$ )			
Condition	0.42 (-0.28, 1.11)	.35	1.20
Sex	-0.73 (-1.51, 0.06)	.39	-1.86
Age	-0.01 (-0.08, 0.06)	.03	-0.18
Level of education	0.10 (-0.27, 0.47)	.18	0.09
Country of birth	0.07 (-1.04, 1.17)	.55	0.02
Previous exposure	-0.01 (-0.75, 0.74)	.37	-0.00
Valuing Diversity ( $R^2 = .16$ )			

Condition	0.70 (0.08, 1.33)*	.31	2.27
Sex	-0.22 (-0.92, 0.48)	.35	-0.63
Age	0.01 (-0.05, 0.07)	.03	0.39
Level of education	0.30 (-0.04, 0.63)	.17	1.78
Country of birth	1.00 (-0.01, 2.00)	.50	1.98
Previous exposure	-0.10 (-0.77, 0.57)	.33	0.77
Social and Environmental Justice ( $R^2 = .20$ )			
Condition	0.61 (0.14, 1.09)*	.24	2.59
Sex	0.13 (-0.40, 0.66)	.27	0.48
Age	0.03 (-0.02, 0.08)	.02	1.36
Level of education	$0.27 (0.02, 0.53)^*$	.13	2.14
Country of birth	0.33 (-0.44, 1.09)	.38	0.86
Previous exposure	-0.01 (-0.52, 0.50)	.25	-0.04
Intergroup Helping ( $R^2 = .12$ )			
Condition	0.82 (0.13, 1.52)*	.35	2.37
Sex	0.18 (-0.60, 0.96)	.39	0.47
Age	0.02 (-0.05, 0.09)	.04	0.60
Level of education	0.10 (-0.27, 0.48)	.19	0.54
Country of birth	0.49 (-0.63, 1.61)	.56	0.87
Previous exposure	-0.21 (-0.95, 0.54)	.37	-0.55
Responsibility to Act ( $R^2 = .12$ )			
Condition	0.17 (-0.59, 0.92)	.38	0.44
Sex	-0.18 (-1.03, 0.67)	.42	-0.43
Age	-0.01 (-0.08, 0.07)	.04	-0.22
Level of education	0.37 (-0.04, 0.77)	.20	1.81
Country of birth	1.23 (0.01, 2.45)*	.61	2.03
Previous exposure	-0.67 (-1.48, 0.14)	.41	-1.66

Note. b = regression coefficient; See Table 5 and Table 6 for units of variables; p < .05; p < .01; \*\*\* p < .001

## **Conclusion and discussion**

#### Conclusion

The current study set out to examine to what extent watching a meaningful movie contributes to the cultural openness of parents and children and on global citizenship of adults, compared

to watching a pleasurable movie, and to what extent previous exposure to the movie enhances the effects on cultural openness and global citizenship. In accordance with expectations, a pretest and a manipulation check demonstrated that viewers indeed considered the Disney • Pixar animated movie *Coco* as meaningful entertainment, while the Universal animated movie *Despicable Me 3* was considered as a movie that elicits mere pleasure, which is also in line with expectations.

More importantly, the results of the present study revealed that watching the Disney • Pixar animated movie *Coco* could be a meaningful experience for parents, as after watching the meaningful movie they were more likely to have higher prosocial values of valuing diversity, social and environmental justice, and intergroup helping, compared to parents who watched the pleasurable movie (H<sub>2</sub>). The effects remained after controlling for parents' sex, age, level of education, country of birth, and previous exposure to the movie. Also in accordance with expectations, watching the meaningful movie *Coco* was not found to induce an effect on the antecedents of global citizenship – normative environment, global awareness, and global citizenship identification – in comparison with watching a pleasurable movie.

Contrary to expectations, watching the meaningful movie did not make parents more likely to have higher levels of all the expected prosocial values in comparison with parents who watched the pleasurable movie, as parents were not more likely to hold higher prosocial values of intergroup empathy and responsibility to act for the better of the world (H2). Also, children and parents who watched *Coco* both did not have higher levels of cultural openness than children and parents who watched the pleasurable movie (H1). This implies that while watching a meaningful movie does make parents more likely to hold some prosocial values on a higher level, parents and children are not more likely to be more open towards other cultures, meaning that children seem to be not effected by the meaningful movie at all. Finally, also in contrast with the expectations, having seen the movie previously did not strengthen the relation between watching the meaningful movie and children's and parents' levels of cultural openness and parents' levels of global citizenship (H3; H4).

In conclusion, watching a meaningful movie does not contribute to the cultural openness, for children nor parents, whereas it does contribute to certain levels of prosocial values of global citizenship for adults, which is not enhanced by previous exposure to the movie (RQ).

#### Discussion

#### Interpretation of the Findings

The findings of this study can contribute to studies on the impact of meaningful movies. Firstly, as many previous studies on meaningful movies primarily focused on the effects on adults (de Leeuw & Buijzen, 2016), the present study can contribute to this by having examined children as well. It is demonstrated that children, just as adults, recognize a meaningful movie by acknowledging it as more affectively and cognitively challenging than the pleasurable movie (Oliver & Bartsch, 2010). Knowing this, it is interesting to further investigate if children experience meaningful movies in the same manner as adults do.

Furthermore, expanding on the findings of Janicke and Oliver (2015), the present study showed that full-length meaningful films that portray connectedness, kindness, and loyalty not only can make viewers feel more connected with all humanity, but can also make them embrace differences between various cultures, increase their willingness to help others from a diverse ethnicity or race, and heighten their values towards a higher equality and fair treatment of all human beings and natural resources. The latter is in line with Haugestad's (2004), who argues that a global citizen is primarily concerned about social justice. Thus, meaningful movies do not only make people feel certain prosocial values, but can also make them want to act upon them by helping fellow humans of other, less fortunate, cultures.

However, contrary to expectations, watching a meaningful movie did not make adults more likely feel a higher responsibility to act for the betterment of the world. Whereas they did score higher on intergroup helping, they did not feel a higher responsibility to help others. Watching meaningful media content has been found to have a positive effect on people's altruistic- and helping behavior (Ostroy, Gentile, & Crick, 2006). Perhaps intergroup helping is considered more as an act of altruism, whereas a responsibility to help others might be understood more as an act of duty. This explanation would also be in line with the SDT (Ryan & Deci, 2000), which states feelings of autonomy as a basic psychological need. As stated before, for personal growth to exist, the basic psychological needs have to be met. This might explain why the expected effect on responsibility to act is not found.

Also, by watching a meaningful movie, parents nor children were found to be more likely to be open towards other cultures. As argued, intergroup contact is thought to reduce ethnocentrism, which enhances cultural openness (Drapela, 1975; Nesdale & Todd, 2000). Perhaps for the effect on cultural openness to be established, watching a meaningful movie in which other cultures are portrayed does not meet the criterion of intergroup contact, as watching a movie might not account as contact between two groups, but is aimed in one way. In addition,

as no effect on cultural openness was found for both children and parents, it might be argued that another scale should have been used to measure cultural openness. Because no scale of cultural openness was specifically adapted to measuring effects of a movie, a scale for measuring cultural openness among employees was used. This seemed to have been a valid choice, but was perhaps not most favourable. A scale that measures cultural openness on a more in-depth level is recommended.

Interestingly, previous exposure to the movie does not make effects more likely to occur. On the one hand, this means that watching a single meaningful movie has enough impact to induce an effect on levels of global citizenship, which is a very interesting thing to note. On the other hand, while children often watch Disney movies many times again (Dreier, 2007), the repetition of the movie does not strengthen this relationship. However, children do recognise the movie as being meaningful compared to children who watched the pleasurable movie. Knowing that this is the first study to examine if children also consider movies to be meaningful, this is an interesting finding.

Moreover, strikingly, children rated about the same level of appreciation of the meaningful and the pleasurable movie. This is contrary to adults, who appreciated the meaningful movie a lot higher than the pleasurable movie, implying that parents find more pleasure in watching a meaningful movie.

#### Limitations and Future Research

While the present study contributes significantly to the field of the positive media psychology, several limitations of the study are recognized. Firstly, the experiment took place inside a movie theatre, on a very warm day. Due to the warm weather, several families cancelled their participation. Perhaps mostly typical movie fanatics did show up to the movie theatre, whereas families that are less interested in watching movies might have cancelled their participation. This might have resulted in a sample of families that was in a way distorted. Thus, it is recommended for future studies to take the weather into account when setting a date for data gathering, for instance in a month with average temperatures.

Another result of the experiment being in a movie theatre, was that participants were seated right next to each other. This allowed participants to communicate with one another while completing the questionnaire. In this way, environmental factors cannot be excluded, since they were sometimes helping each other and asking questions about the questionnaire (Wester et al., 2006). While some parents helped their children to understand the questions

better, most participants quietly completed their questionnaires. Still, it is recommended for future studies to perhaps create an individual table setup to preclude communication.

In the present study, levels of cultural openness and global citizenship were measured only once, right after the movie was shown. A highly recommended suggestion for future research would be to expand on this research, by including the same measurement of these levels (Reysen & Katzarska-Miller, 2013; Strizhakova, Coulter, & Price, 2008) prior to the study. In this way, participants' baseline levels of both constructs will be known, and can be compared with levels of the same construct after watching the movie. By doing this, all analyses can be controlled for baseline levels, resulting in a better insight on the effect of watching a meaningful movie. Moreover, as it is argued that emotions are generally conceptualized as being rather short-lived, any influence of media exposure might be unfortunately fleeting (Oliver et al., 2015). On the other hand, there is some research that points to the idea that elevation due to meaningful entertainment may produce longer-term outcomes (Cox, 2010). Therefore, a posttest would be interesting, as it can measure the effects after a longer period of time. Any ware-off effects will be demonstrated by doing this, which would ultimately show an effect closer to the effect that would be found in the reality, thus resulting in a higher ecological validity (Wester, Renckstorf, & Scheepers, 2006).

Furthermore, global citizenship was not measured among children in the present study, as the scale (Reysen & Katzarska-Miller, 2013) would be too difficult for them, and they could not act upon each construct, such as willingness to help others who are less fortunate (Veugelers, Derriks, & de Kat, 2008). Given this, not measuring global citizenship among children was a valid choice. However, it is somehow unfortunate as research on the effects of meaningful movies on children is still scarce (de Leeuw & Buijzen, 2016). Because of this, and because this study demonstrated that meaningful movies can enhance prosocial values of global citizenship, it is highly recommended that in future studies, a scale should be developed which can be applied to children to compare the results with the findings for adults as in this study.

Moreover, in this study, the participants were randomly assigned to either a meaningful or a pleasurable movie. Due to this, participants were not able to choose a movie themselves, resulting in a slightly lower ecological validity (Wester, Renckstorf, & Scheepers, 2006). Therefore, a recommendation for future research is that an experiment in an even more natural setting should be created than in the present study. It is proposed that participants get to willingly choose a movie in the cinema, with options between various meaningful movies, in various genres (e.g., dramas, children's movies). In this way, any found effects are more representative for the community.

Finally, cultural openness and global citizenship were measured by means of self-report. It is possible that answers were given in a more socially desirable manner. While these answers should not differ much from their true values, and in this study scores of a meaningful movie and a pleasurable movie were compared, the found results can be considered as valid. However, it would be highly interesting to examine whether watching a meaningful movie can induce global citizenship by means of an experiment in which behaviour, such as intergroup helping, is tested. After participants have watched a meaningful movie, a situation can be created in which participants have the option of either helping a person of another culture of not helping them. Such behavioural experiments have, to the knowledge of the researchers, not been examined thus far.

#### **Practical Implications**

To ensure a higher well-being of students, the Dutch Ministry of Education, Culture, and Science (2004; 2005) has indicated that Dutch schools should pay attention to global citizenship education – mostly at the social level. The main focus should be on a moral global citizenship, which is based on moral categories such as equality and human rights that recognize the responsibility for the world as a whole. It is clear that this is highly compatible with the results of the present study, which show that a meaningful movie can heighten global citizenship's prosocial values of social justice, which recognizes human rights and equality between all humans. Schools could use this information when educating global citizenship to students.

"Faith I have, in myself, in humanity, in the worthwhileness of the pursuits in entertainment for the masses" – Walt Disney

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#### **Appendix 1** Items Measuring Global Citizenship

- (1) Most people who are important to me think that being a global citizen is desirable;
- (2) If I called myself a global citizen most people who are important to me would approve;
- (3) My friends think that being a global citizen is desirable;
- (4) My family thinks that being a global citizen is desirable;
- (5) I am aware that my actions in my local environment may affect people in other countries:
- (6) I believe that I am connected to people in other countries, and my actions can affect them;
- (7) I try to stay informed of current issues that impact international relations;
- (8) I understand how various cultures of this world interact socially;
- (9) I would describe myself as a global citizen;
- (10) I strongly identify with global citizens;
- (11) I am able to empathize with people from other countries;
- (12) It is easy for me to put myself in someone else's shoes regardless of what country they are from;
- (13) I would like to join groups that emphasize getting to know people from different countries;
- (14) I am interested in learning about the many cultures that have existed in this world:
- (15) Those countries that are well off should help people in countries who are less fortunate;
- (16) Basic services such as health care, clean water, food, and legal assistance should be available to everyone, regardless of what country they live in;
- (17) People have a responsibility to conserve natural resources to foster a sustainable environment;
- (18) Natural resources should be used primarily to provide for basic needs rather than material wealth;
- (19) If I had the opportunity, I would help others who are in need regardless of their nationality;
- (20) If I could, I would dedicate my life to helping others no matter what country they are from;
- (21) Being actively involved in global issues is my responsibility;
- (22) It is my responsibility to understand and respect cultural differences across the globe to the best of my abilities.

### **Appendix 2** Tables of Factor Analysis Cultural Openness

Table 1
Factor Analysis on Cultural Openness Parents

Item	Factor Loading
I engage in opportunities to meet people from other countries	.83
I like to learn more about other countries	.91
I enjoy meeting and interacting with people from foreign countries	.79
I like to learn about foreign cultures and customs	.99
Eigenvalue	3.32
$R^2$	83.0%
N	59

Table 2
Factor Analysis on Cultural Openness Children

Item	Factor Loading			
When I can, I like to meet people from other countries	.62			
I like to learn more about other countries	.83			
I enjoy talking to people from other countries	.76			
I like to learn about other cultures	.73			
Eigenvalue	2.19			
$R^2$	54.6%			
N	81			

#### **Appendix 3** Invitation Letter



Onderwerp: Naar de film voor de wetenschap Nijmegen, 24 april2018

Aan de ouders/verzorgers van de leerlingen uit groep 7 en/ of 8,

#### Naar de film

Veel kinderen kijken graag en vaak naar films. Toch weten we nog heel weinig over de mogelijke positieve invloed van films op kinderen en wat ze ervan opsteken. Ook is het onbekend wat ouders van de films vinden die ze samen met hun kinderen kijken. Vandaar dat we dit onderzoek zijn gestart. Voor dit onderzoek willen we u uitnodigen om **samen met uw kind(eren) uit groep 7 en/ of 8** op woensdag 9 mei (in de meivakakantie) **naar de bioscoop** te komen om een film te komen kijken.

#### Het onderzoek

Op 9 mei krijgen jullie samen een film te zien in "VUE", Hoogstraat 10 in Arnhem. Welke film dit is blijft een verrassing. We kunnen wel vast verklappen dat het een **ontzettend populaire animiatiefilm** is. Verder worden jullie gevraagd direct na de film een vragenlijst in te vullen. Het invullen van deze vragenlijst zal maximaal 30 minuten duren.

De zaal gaat om 15.30 uur open en de film begint om 16.00 uur. De film zal geheel bekostigd en verzorgd worden door de Radboud Universiteit en duurt ongeveer 1 uur en 40 minuten. Daarna kunnen jullie nog nagenieten van de film!

#### Hoe kunnen jullie deelnemen?

U kunt zich aanmelden voor dit filmonderzoek door een mail te sturen naar <u>bioscooponderzoek@outlook.com</u>. Vermeld in deze mail welke ouder mee zal komen en de voornaam en leeftijd van uw kind(eren) uit groep 7 of 8. Vermeld ook op welke school de kinderen zitten. Jullie deelname is bevestigd zodra u per mail een ticket van ons ontvangt.

Meld u zo snel mogelijk aan, want <u>VOL = VOL</u>. Aanmelden kan tot uiterlijk dinsdag 1 mei.

Aan de hand van de aanmeldingen wordt een gastenlijst gemaakt. Wanneer u geen ticket van

ons heeft ontvangen, kunnen we u dus geen toegang geven tot de bioscoop.

De vragenlijst en vertrouwelijkheid van de gegevens

De vragenlijsten bevatten onder andere vragen over welke films jullie hebben gezien en wat

jullie van de film die jullie gekeken hebben vonden. Het is belangrijk om te benadrukken dat

alle gegevens anoniem verwerkt en vertrouwelijk opgeslagen zullen worden. Bij het

verwerken van de resultaten zijn de namen van de deelnemers onbekend. Er zal daarnaast

zorgvuldig worden omgegaan met de kinderen, zodat zij niet het gevoel krijgen beoordeeld te

worden of te moeten presteren. Ook kunnen alle deelnemers op elk moment stoppen met het

onderzoek wanneer ze niet meer mee willen doen.

**Tot slot** 

Na afloop van het onderzoek worden jullie volledig op de hoogte gesteld en ontvangen jullie

informatie over de belangrijkste bevindingen.

Wanneer u nog vragen heeft, kunt u contact opnemen met de onderzoekers via

bioscooponderzoek@outlook.com.

Met vriendelijke groet,

Marloes Cattel

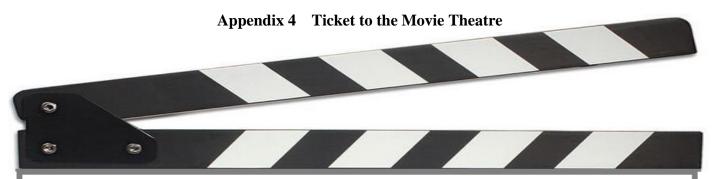
Lindy den Hoed

Lisa Korthals

**Rutger Schols** 

Dr. Rebecca de Leeuw

40



#### BIOSCOOPTICKET

Hierbij ontvangen jullie het bioscoopticket dat toegang geeft tot een gratis animatiefilm. Jullie worden verwacht op 9 mei om 15:30 uur bij de VUE in Arnhem (Hoogstraat 10). De film zal om 16:00 beginnen.



Zaal: X Rij: X Stoel: X-X

Door dit ticket te ondertekenen, geven jullie toestemming om deel te nemen aan dit onderzoek.

#### **VOOR DE MINDERJARIGE:**

Handtekening

Ik doe WEL/ NIET mee aan het onderzoek.

Ik heb uitleg gekregen over het onderzoek. De brief over het onderzoek heb ik goed gelezen. Ik heb mijn vragen over het onderzoek gesteld (als ik die had). Ik heb goed nagedacht over of ik aan het onderzoek wil deelnemen. Ik mag op ieder moment stoppen met het onderzoek als ik dat wil.

Naam :	
Geboortedatum:	
Handtekening :	Datum:
VOOR DE OUDER/VER	ZORGER:
onderzoek goed geleze Mijn vragen zijn naa bovenvermelde persoo	eid over het onderzoek geïnformeerd. Ik heb de brief met de informatie over het en. Ik ben in de gelegenheid gesteld om vragen over het onderzoek te stellen. ar tevredenheid beantwoord. Ik heb goed over deelname (van mij en on) aan het onderzoek kunnen nadenken. Ik heb het recht mijn toestemming op te trekken zonder dat ik daarvoor een reden behoef op te geven.
Ik stem WEL/ NIET toe n	net deelname van mezelf en van bovenvermelde persoon aan het onderzoek.
Achternaam & voorlet	ters:
Relatie tot deelnemer	:
E-mailadres	:



: ...... Datum: .....

### Appendix 5 Questionnaire Children



# Film onderzoek

### Vragenlijst na de film

Versie: Kind

#### Introductie

Hallo, wat fijn dat je wat vragen wilt beantwoorden!

Bij het beantwoorden van de vragen gaat het erom wat jij vindt, dus er is geen goed of fout antwoord. Kies bij elke vraag voor 1 antwoord.

Ook zal niemand, behalve de onderzoeker, ooit weten wat jij hebt ingevuld.

Lees goed wat er staat en vul alle vragen in.

Alvast heel erg bedankt! ©

### Vragen over andere culturen

In de onderstaande vragenlijst zijn een aantal stellingen te vinden. Bij elke stelling kun je aangeven hoeveel je het **op dit moment** met de stelling eens bent. Dit kun je doen door een cijfer te omcirkelen, waarbij je het er bij (1) helemaal niet mee eens bent, bij (4) neutraal en bij (7) ben je het er helemaal mee eens. Als je het er een beetje mee eens bent, kun je bijvoorbeeld (5) of (6) omcirkelen.

	Helemaal mee oneens			Neutraal			Helemaal mee eens
	1	2	3	4	5	6	7
Als het kan wil ik graag mensen uit andere landen ontmoeten							
Ik leer graag over andere landen							
Ik praat graag met mensen uit het buitenland							
Ik leer graag over buitenlandse culturen en gebruiken							

### Vragen over de film

De volgende vragen gaan over de film die je net gezien hebt.

### Wat vond je van de film?

Niet goed										Heel goed
	1	2	3	4	5	6	7	8	9	10

	Helem aal mee oneens	2	3	Neutra al	5	6	Helem aal mee eens
Het was leuk om de film te kijken							
Ik had plezier tijdens het kijken van deze film							
De film was grappig							

Ik vond de film betekenisvol										
Ik was geraakt door de film										
De film liet mij nadenken										
Ik heb iets geleerd van de			П							
film										
De film was spannend										
Ik zat op het puntje van mijn										
stoel tijdens het kijken										
Hoe vaak had je de film al g	ezien? (I	)us voord	at ie mee	deed aan	dit onder	rzoek.)				
□ Nooit	,021011 (2	ous voore	ar je me			200110)				
☐ Eén keer										
☐ Twee keer										
☐ Meer dan twee keer										
A 1										
	Algemene vragen									
Ben je een jongen of een meis	je?									
□ Jongen										
□ Meisje										
	_									
Hoe oud ben je?										
·										
jaar oud										
jaar oud										
·						_				
jaar oud  In welk land ben je geboren?		a land dat i	is):			-	-			
jaar oud  In welk land ben je geboren?  □ Nederland		aland dat	is):							
jaar oud  In welk land ben je geboren?  □ Nederland		aland dat	is):							
jaar oud  In welk land ben je geboren?  □ Nederland		aland dat	is):							
jaar oud  In welk land ben je geboren?  □ Nederland □ Anders, namelijk (schrijf hie	er op welk	aland dat	is):							
In welk land ben je geboren?  □ Nederland □ Anders, namelijk (schrijf hie  In welk land zijn je ouders ge □ Nederland	er op welk									
jaar oud  In welk land ben je geboren?  □ Nederland □ Anders, namelijk (schrijf hie	er op welk									

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### **Appendix 6 Questionnaire Parents**



# Film onderzoek

### Vragenlijst na de film

Versie: Ouder

### Introductie

Hallo, wat fijn dat u wat vragen wilt beantwoorden!

Bij het beantwoorden van de vragen gaat het erom wat u vindt, dus er is geen goed of fout antwoord. Kies bij elke vraag voor 1 antwoord.

Ook zal niemand, behalve de onderzoeker, ooit weten wat u heeft ingevuld.

Lees goed wat er staat en vul alle vragen in.

Alvast ontzettend bedankt! ©

### Vragen over andere culturen

In de onderstaande vragenlijst zijn een aantal stellingen te vinden. Bij elke stelling kunt u aangeven hoeveel u het **op dit moment** met de stelling eens bent. Dit kunt u doen door een cijfer te omcirkelen, waarbij u het er bij (1) helemaal niet mee eens bent, bij (4) neutraal en bij (7) bent u het er helemaal mee eens. Als u het er een beetje mee eens bent, kunt u bijvoorbeeld (5) of (6) omcirkelen.

	Helemaal mee oneens			Neutraal			Helemaal mee eens
	1	2	3	4	5	6	7
Als het kan wil ik graag mensen uit andere landen ontmoeten							
Ik leer graag over andere landen							
Ik praat graag met mensen uit het buitenland							
Ik leer graag over buitenlandse culturen en gebruiken							

### Vragen over Wereldburgerschap

Lees de volgende stellingen over Wereldburgerschap en geef aan in hoeverre u het ermee eens bent. Wereldburgerschap wordt gedefinieerd als bewust zijn van, zorg voor, en het omarmen van culturele diversiteit, het bevorderen van sociale rechtvaardigheid en duurzaamheid, gekoppeld aan een gevoel van verantwoordelijkheid om ernaar te handelen.

	Helemaal mee oneens			Neutraal			Helemaal mee eens
	1	2	3	4	5	6	7
De meeste mensen die belangrijk voor mij zijn, denken dat een wereldburger zijn wenselijk is							
Als ik mezelf een wereldburger zou noemen, zouden de meeste mensen die							

belangrijk voor mij zijn dit goedkeuren				
Mijn vrienden denken dat het wenselijk is om een wereldburger te zijn				
Mijn familie denkt dat het wenselijk is om een wereldburger te zijn				
Ik ben me ervan bewust dat mijn daden in mijn lokale omgeving mensen in andere landen kunnen beïnvloeden				
Ik geloof dat ik verbonden ben met mensen in andere landen en dat mijn daden van invloed kunnen zijn op hen				
Ik probeer op de hoogte te blijven van actuele kwesties die van invloed zijn op internationale relaties				
Ik begrijp hoe verschillende culturen van deze wereld op een sociale manier met elkaar samenhangen				
Ik zou mezelf beschrijven als een wereldburger				
Ik identificeer me sterk met wereldburgers				
Ik ben in staat om me in te leven in mensen uit andere landen				
Ik kan me gemakkelijk in andermans schoenen verplaatsen, ongeacht uit welk land ze komen				
Ik zou me graag bij groepen willen aansluiten die het belangrijk vinden om mensen uit				

verschillende landen te				
leren kennen Ik vind het interessant om te leren over de vele culturen die hebben bestaan in deze wereld				
De landen die het goed hebben, zouden mensen in minder begunstigde landen moeten helpen				
Basisvoorzieningen zoals gezondheidszorg, schoon water, voedsel en juridische bijstand zouden beschikbaar moeten zijn voor iedereen, ongeacht in welk land ze wonen				
Mensen hebben de verantwoordelijkheid om natuurlijke hulpbronnen te behouden om een duurzaam milieu te bevorderen				
Natuurlijke hulpbronnen moeten in de eerste plaats gebruikt worden om in de basisbehoeften te voorzien in plaats van voor materiële rijkdom				
Als ik de kans had, zou ik anderen die in nood zijn helpen, ongeacht hun nationaliteit				
Als ik kon, zou ik mijn leven wijden aan het helpen van anderen, ongeacht uit welk land ze komen				
Actief betrokken zijn bij wereldwijde kwesties is mijn verantwoordelijkheid				

Het is mijn				
verantwoordelijkheid				
om culturele				
verschillen over de				
wereld zo goed				
mogelijk te begrijpen				
en te respecteren				

## Vragen over de film

De volgende vragen gaan over de film die u net gezien heeft.

### Wat vond u van de film?

Niet goed										Heel goed
	1	2	3	4	5	6	7	8	9	10

	Helem aal mee oneens	2	3	Neutra al	5	6	Helem aal mee eens
	1	4	3	4	3	U	7
Het was leuk om de film te kijken							
Ik had plezier tijdens het kijken van deze film							
De film was grappig							
Ik vond de film betekenisvol							
Ik was geraakt door de film							
De film liet mij nadenken							
Ik heb iets geleerd van de film							
De film was spannend							
Ik zat op het puntje van mijn stoel tijdens het kijken							

Hoe vaak had u de film al gezien? (Dus voordat u meedeed aan dit onderzoek.)					
□ Nooit					
☐ Eén keer					
☐ Twee keer					
☐ Meer dan twee keer					

## Algemene vragen

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Wat	IЧ	$\mathbf{n}$	OPC	1ac	nr ′
, , at	10	CZ YY		uc	1100

□ Man
□ Vrouw
Hoe oud bent u?
jaar oud
Wat is uw hoogst afgeronde opleiding?
□ Basisonderwijs
□ VMBO/ MAVO
□ HAVO
□ VWO
$\square$ MBO
□ HBO
$\square$ WO
In welk land bent u geboren?
□ Nederland
☐ Anders, namelijk (schrijf hier op welk land dat is):
In welk land zijn uw ouders geboren?
□ Nederland
☐ Anders, namelijk (schrijf hier op welk land dat is):

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