

## Young People's Reasoning about Exclusion in Novel Groups

## Abstract

This study examined children's and adolescents' reasoning about the exclusion of others in peer and school contexts. Participants (80 8-year-olds, 85 11-year-olds, 74 14-year-olds, and 73 20-year-olds) were asked to judge and reason about the acceptability of exclusion from novel groups by children and school principals. Three contexts for exclusion between two groups were systematically varied: unequal economic status, geographical location, or a control (no reason provided for group differences). Regardless of condition, participants believed that exclusion was less acceptable in peer than school contexts, and when children excluded rather than principals. Participants also used more moral and less social conventional reasoning for peer than school contexts. In terms of condition, whereas 8-year-olds rated exclusion based on unequal economic status as less acceptable than when based on geographical location or no reason when enacted by a principal, 14-year-olds rated the unequal economic condition as more acceptable than the other two contexts. Eleven- and 20-year-olds did not distinguish economic status differences. The findings suggest that children and adolescents are sensitive to context and take multiple variables into account, including the type of group difference (socioeconomic status or other reasons), authority status of the perpetrator of exclusion, and setting (school or peer). Patterns may have differed from past research because of the socio-cultural context in which exclusion was embedded and the contexts of group differences.

**Keywords:** peer exclusion; domain theory; social reasoning developmental theory

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Children are often excluded from peer and institutional contexts based on their social group membership. Children reason differently about social exclusion based on the situational specificity of the exclusion, such as the social groups involved (e.g., gender versus ethnicity, Killen, Lee-Kim, McGlothlin, & Stangor, 2002; Malti, Killen, & Gasser, 2012), the perpetrator of exclusion (teachers versus peers, Møller & Tenenbaum, 2011), and the social context in which it occurs (school versus peer groups, Tenenbaum, Leman, & Aznar, 2017). Children often justify gender exclusion, for example, using conventional reasons such as traditions (e.g., girls have never played with trucks before) or stereotypes (e.g., girls are not good at math so it's okay not to let her in the math club). Justifications for racial exclusion are less likely to be about conventions and more often based on stereotypic attributes of individuals based on race. Explanations for rejecting exclusion are often in the form of the unfairness or psychological harm to the excluded individual. However, individuals also reject social exclusion for conventional reasons (e.g., It's wrong to exclude the boy from soccer because they will win if he's on the team.) Determining how youth evaluate different types of exclusion is necessary for understanding which factors contribute to social exclusion that generate negative outcomes for children and adolescents.

Recently, a series of studies by Elenbaas and her colleagues have investigated children's perceptions of exclusion from valuable opportunities based on socioeconomic conditions, varying the wealth status (high, low) of the target groups (Elenbaas & Killen, 2018). Specifically, in one study the researchers examined whether children ages 8- 14 years expected high-wealth groups to provide opportunities to those from low- or high- wealth groups (Elenbaas & Killen, 2018). The results revealed that children expected high wealth groups to be motivated by selfishness and low-wealth groups to be motivated by concerns stemming from broader economic inequality. These findings indicate that economic status is

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a salient group membership category for children and adolescents, one that is relatively under-studied in contrast to categories such as gender and race.

To extend the literature, the current study investigated young people's reasoning about exclusion based on economic status (high or low), and compared this form of exclusion to one that was not associated with groups (e.g., geographical location, such as living in two cities), and a control condition (e.g., no reason provided for group differences). Given that wealth status is a salient group membership, it is important to know whether children and adolescents view it differently from other non-wealth related categories. We introduced two other contextual factors, whether the exclusion was school- or peer-based, and whether the perpetrator was an authority figure (e.g., principal) or peers, to determine the situations in which different types of exclusion might be viewed as more or less wrong. These contextual factors have been shown to bear on evaluations of gender and racial exclusion, but no research has analyzed these factors in the context of exclusion based on novel groups.

Social reasoning developmental (SRD) theory guided this study (Killen, Elenbaas, & Rutland, 2015; Rutland & Killen, 2017). This theory draws from developmental social identity theory (Abrams & Rutland, 2008) as well as social domain theory (Smetana, Jambon, & Ball, 2014). The theory proposes that understanding how individuals evaluate intergroup contexts requires an analysis of group identity, contextual features of exclusion situation, and forms of reasoning that are brought to bear on the evaluation (the latter two variables stem from social domain theory). Context matters because an act of exclusion that might be condoned in one context might be rejected in another context. This does not mean that judgments are not generalizable, however. Instead, it means that each situation provides different salient factors that change the interpretation of the consequences of exclusion because of the relative priority afforded each consideration. For example, in one context,

social exclusion may be condoned because the need to maintain group identity (and group

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loyalty) is high, and the potential for the act to involve harm to the excluded individual is very low. In other situations, when the harm to an excluded individual is high then the group functioning concerns surrounding group identity may be viewed by individuals as irrelevant. Reasoning about acts in various contexts reveal how individuals balance these different considerations (as moral, societal, or psychological) (see Killen, et al., 2015).

We propose that children's reliance on moral reasons to evaluate exclusion based on ethnicity, nationality, and minority religious groups may be influenced by their explicit or implicit knowledge that these groups also vary in economic status (Bigler, Averhart, & Liben, 2003; Olson, Shutts, Kinzler, & Weisman, 2012). Indeed, past studies on social exclusion examining these issues have focused on economically and historically disadvantaged groups, such as African-Americans in the U.S. (Brown, Mistry, & Bigler, 2007), Serbians in Switzerland (Malti, Killen, & Gasser, 2011), and Muslims in Denmark (Møller & Tenenbaum, 2011). The question thus arises over whether participants judge and reason differently about group-based exclusion when groups are presented as differing in economic status or differing based on other reasons.

In the present study we used novel rather than pre-existing groups because it is difficult to tease apart whether children condemn exclusion of pre-existing groups as a result of inequality or because they have views about the wrongfulness of prejudice based on particular groups (including their own group). For example, when children older than 7.5 years were shown differential allocation of cookies to African-American versus European-American children, they tended to adopt a strategy of rectifying the situation by providing more cookies to the group portrayed with fewer cookies (study 1). However, when the participants were either Asian-American versus European-American children, or children wearing different colored shirts, children chose to perpetuate the inequalities by giving more

cookies to children portrayed with more cookies (studies 2 and 3) (Olson, Dweck, Spelke, & This is an accepted manuscript of an article published by Elsevier in Journal of Experimental Child Psychology, available online at <https://www.sciencedirect.com/science/article/pii/S0022096517304964>. It is not the copy of record. Copyright © 2018, Elsevier.

Banaji, 2011). Participants' differential patterns may stem from demand characteristics similar to the way children avoid explicit labelling of skin color by age 10 to 11 years (Apfelbaum, Sommers, & Norton, 2008).

In the U.S., ethnic minority households are more likely to live in poverty than are White households (Kaiser Family Foundation, 2016). Thus, use of pre-existing groups may have confounded participants' reasoning in the Olson et al. (2011) study. Similar to the U.S., the rate of living in a low-income household is greater for people from ethnic minority backgrounds than it is for White people in the U.K. (Kenway, 2007). For this reason, we told young people aged 8, 11, 14, and 20 years about novel groups of individuals who differed in economic status, geographic location, or for no reason (control). Using a similar paradigm, Horwitz et al. (2014) told 4- to 5-year-old children about imaginary people who differed in wealth. In the present study, we asked young people to evaluate exclusion by children and school principals in peer and school contexts. Based on previous research (Killen et al., 2002; Malti et al., 2012; Møller & Tenenbaum, 2011), we expected young people to be less accepting of exclusion based on economic status than based on location or no reason, and to use less social conventional reasoning in the former than the latter conditions.

Critically, little past work has examined whether contextual variations in children's evaluation of exclusion varies with the perpetrator of exclusion. In one exception, Møller and Tenenbaum (2011) found that 8- to 12-year-old children judged it less fair when teachers rather than groups of students ordered peer exclusion. This finding follows from research on moral development in which children judged it better to abide by a moral act ordered by a peer than an immoral one ordered by a teacher (Kim, 1998). One limitation in Møller and Tenenbaum's (2011) study is that both teachers and peers excluded children from peer contexts. Thus, it is unknown whether children thought it was worse because authority

figures were condoning exclusion or because children believed that authority figures should

restrict their decisions to contexts in which they have authority (e.g., schools). Indeed, children are apt to believe that friendship concerns should be considered personal issues that are under children's jurisdiction (Smetana & Asquith, 1994; Smetana & Bitz, 1994). Young people become more concerned with making their own decisions in the personal domain between the ages of 11 and 14 years (Darling, Cumsille, & Martinez, 2008) so we would expect the 14- and 20-year-olds to not be accepting of the legitimacy of adult authority in peer contexts. In addition, we would expect the older three age groups to use more social conventional reasoning when discussing exclusion perpetrated by a principal in peer contexts. We selected young people aged 8, 11, and 14 years to be comparable to past research, which has found increased concern for autonomy with age (Darling et al., 2008). Moreover, adolescents begin to weigh up considerations of group functioning and ingroup loyalty (Killen & Rutland, 2011) and have a greater understanding of group norms than younger children (Abrams, Rutland, Pelletier, & Ferrell, 2009). We chose to also include 20-year-old students to see whether any developmental patterns we found continued to be present in an older age group.

Age may also influence other aspects of judgements and reasoning, which we evaluate with two related sets of empirical findings: distribution of resources and social exclusion. Research on distribution of resources suggests that children tend to use fairness norms to allocate resources equally (Gummerum, Keller, Takezawa, & Mata, 2008; Shaw & Olson, 2012; Ulber, Hamann, & Tomasello, 2015) and prefer children who follow fairness norms (Cooley & Killen, 2015). Of note, however, there are some developmental differences with older children disapproving more of economic inequalities than younger children. For example, Elenbaas and Killen (2016) found that children aged 10 to 11 years were more likely than children aged 5 to 6 to rectify past unequal resource allocation to hospitals serving

African-American children by allocating more resources to hospitals serving African-

American than European-American children. This literature suggests that in general children, and especially older children, should be more disapproving of economic inequality than younger children.

In sum, in the present study we investigated 8, 11-, 14- and 20-year-old's reasoning about exclusion from peer groups and school contexts in novel groups that differed based on unequal economic status, geographical location, or no reason. The advantage of novel groups was that participants reasoned about third-party exclusion in which they were not members of either group. We present two sets of hypotheses. First, based on Møller and Tenenbaum (2011), we hypothesised that young people would condemn exclusion more in school than in peer contexts and to be more apt to condemn exclusion when the perpetrator was a principal rather than a child. However, we also predicted an interaction effect in which young people would judge exclusion by a principal as worse in peer contexts than in school contexts because of their belief that friendship falls under the personal domain (Smetana & Asquith, 1994) and this to be especially true of those over 11 years who are more concerned with autonomy (Ruck, Tenenbaum, & Willenberg, 2011). In terms of condition, we expected that young people would view exclusion as less acceptable when they evaluated the unequal economic status condition than the other two conditions. We expected that this would be especially true of children and adolescents over 8 years based on Elenbaas and Killen (2016).

Second, in terms of reasoning, based on Killen et al. (2002) and Møller and Tenenbaum (2011), we expected young people to use more moral reasoning when the context was school rather than peer groups and when a principal excluded than when a child excluded. In contrast, we expected children to use less social conventional reasoning when the context was school rather than peer groups and when a principal excluded than when a child excluded. We also hypothesized that 14- and 20-year-olds would use more social conventional reasons than

would 8-year-olds in the peer contexts when the exclusion was condoned by principals. In



terms of condition, we expected that young people would use more moral reasoning when they were allocated to the condition in which exclusion implicates differences in unequal economic status than in the other conditions. In contrast, we expected participants to use social conventional reasoning less when allocated to the condition in which exclusion implicates differences in unequal economic status than in the other conditions.

## Method

### Participants

The sample consisted of 312 participants from the greater London, U.K. Urban Area ranging in age from 7 to 25 years. The sample was divided into four age groups: 8 years ( $M = 8$  years, 9 months,  $SD = 6.90$  months; range 7 years, 10 months to 9 years, 11 months; 50 males, 30 females), 11 years ( $M = 11$  years, 6 months,  $SD = 6.39$  months; range 10 years, 6 months to 12 years, 6 months; 29 males, 56 females), and 14 years ( $M = 13$  years, 9 months,  $SD = 4.72$  months; range 13 years, 0 months to 14 years, 11 months; 18 males, 55 females), and 20 years ( $M = 20$  years,  $SD = 1.29$  years; range 19 years to 25 years; 10 males, 63 females). The 8-year-old group attended primary schools and the 14-year-old age group attended secondary schools. The 11-year-old group came from either primary or secondary schools. The 20-year-old group were psychology students at a state university.

To recruit the child sample, email messages were sent to principals of state schools in London and counties in southeast England. Principals who agreed for students to be interviewed were sent parental information and consent forms to be distributed in Years 4, 6, and 9. All children whose parents returned a signed consent form were interviewed. The sample was representative of the UK population (88.2% of this part of England is White; Home Office, 2007). The majority (84.8%) of 8- to 14-year-olds

identified as White British, 2.7% as mixed race, 5.9% as Asian British (mostly of Indian

and Pakistani descent), 5.4% as Black African or Black Caribbean British, and 1% as Chinese or East Asian British.

We examined the socio-economic status of the neighborhoods from which schools drew their students. All 32,844 neighborhoods in England can be ranked by their multiple deprivation scores (Department for Communities and Local Government, 2015), which combine data from income, employment, health deprivation, education skills, barriers to housing and services, crime, and living environment. These scores are reported in deciles with one being the most deprived and 10 being the least deprived. The neighbourhoods from which the schools in this study drew children from neighbourhoods that had deciles ranging from 5 (average for the UK) to 10 (highest decile) with a mean decile of 8. As much as possible, we chose primary schools that were feeder schools for the secondary schools. As a result, there were no differences in multiple deprivation scores between the primary and secondary schools. Thus, children came from just below the middle to the top of the economic social strata in the UK.

The adult sample was recruited using a psychology subject pool in which students who participate are allowed access to the subject pool for their final-year research projects if they complete 20 hours of studies.

### **Procedures and Materials**

The University of [blinded] granted the project, “There has to be Room for Everybody to Join: Children’s Reasoning about Social Groups in Peer and School Contexts” EC/2014/38/FAHS) ethical approval for those under 18 years and SAFE 160708-160702-14008249 for those 18 years and over. For the sample that was under aged 18 years, letters describing the study to parents were sent home through the children’s schools. Parents provided written consent and their children gave verbal assent before being interviewed. Children were interviewed individually in a quiet room or area

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in their school. Eight hypothetical vignettes were presented to each child. Table 2 presents the vignettes used in the study.

Participants were randomly assigned to one of three conditions (economic status, geographical location, control) in a between-subjects design. Each condition had eight vignettes. For this study we used novel groups. Participants were asked to imagine a place where people were different colors (e.g., for four vignettes people were either blue or green and for the other four people were either yellow or red). For the unequal economic status condition, children were told that one group had lots of money, whereas the other people were poor. For four of the vignettes, the group with more money excluded the group with less money. For the other four vignettes, the group with less money excluded the group with more money. In the different location condition, participants were told that the two groups of people lived in different cities. In the control condition, participants were not told any prior information about the groups and were simply told “Imagine two groups of people, Blues and Greens (Yellow and Reds). I am going to tell you eight stories about them. Let’s see what you think.” Table 2 shows the exact wording for the unequal economic status and location conditions. The colors of children in the hypothetical vignettes varied across the participants and vignettes.

The perpetrator of the exclusion and context in which exclusion occurred varied, with two vignettes for each type of vignette. In other words, there were two vignettes for each type involving 1) a principal excluding a child from a school context, 2) a principal excluding a child from a peer context, 3) children excluding another child from a school context, and 4) children excluding another child from a peer context for a total of eight vignettes.

The research assistants read each vignette to the child participants. After the presentation of each vignette, children were asked whether it was ok or not ok for the

story character to exclude the child on a 5-point Likert scale from *no a lot* (1) to *yes a lot*

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(5). In addition, participants were asked to provide a rationale or justification for their response. Probes were used to help participants clarify their specific responses and thinking (e.g., “Can you explain what you mean by that?”, “Tell me a little more about that.”). Children were individually interviewed for approximately 15 minutes. All interviews were audio-recorded and transcribed. The order of presentation of the vignettes was counterbalanced.

In contrast to the younger participants, information was presented to the university students in an online format using Qualtrics. Space was left for participants to explain their reasoning after each vignette. They were not allowed to proceed to the next question without typing an answer into the free text space after the vignette. On average, it took university participants 10 minutes and 14 seconds to complete the online questionnaire.

### **Coding and Reliability**

Based in part on past research (Møller & Tenenbaum, 2011) and a close reading of the interviews, a justification coding system was developed. The coding system was based on two categories, which included: (a) *moral*, which refers to fairness and equality of rights (e.g., “The Red child should be able to play because she has the same rights as the Yellow children”); (b) *social convention*, which refers to authority (e.g., “it’s like his school and his rules so he decides”; “they have the same opinion as their mummy and daddy do about what school they should go to”), societal norms (e.g. “there is like boys’ and girls’ schools boys and girls aren’t allowed to go over and the same yellow and reds.”) and group functioning (e.g., “if they are trying to segregate groups because there have been arguments in the past that is ok”). Children could use more than one category. Participants’ answers (i.e., *moral* or *social convention*) were coded as 0 when not using category, .5 when partially using a

category, or 1 when using a category fully. When two justifications were used, each

justification was coded as .5 (see Malti, et al., 2010). No other scores were permissible. Because participants were asked two questions of each type (e.g., principals excluding in a peer context), scores ranged from 0 to 2. To obtain inter-rater reliability, the first and third authors met and coded 20 interviews together over the course of a few hours. These authors then coded 62 interviews (20% of the data set) separately. Uncertainties or discrepancies in the coding were resolved through discussion. Cohen's kappa ( $\kappa$ ) was calculated as a measure of inter-rater agreement. Inter-rater agreement was .73, which indicates a good level of agreement (Bakeman & Gottman, 1997). The third author coded the remaining transcripts.

## **Results**

For each of the major variables of interest, results are presented separately for endorsements and justifications. Only main effects and interactions related to the hypotheses are reported. For each vignette, endorsement scores could range from 1 (not at all ok) to 5 (ok). Note that we created a mean for each of the four types of vignettes by summing the two vignettes involving 1) a principal excluding a child from a school context, 2) a principal excluding a child from a peer context, 3) children excluding another child from a school context, 4) children excluding another child from a peer context. Thus, there were four types of vignettes investigated in the current study.

### **Endorsements**

To examine the first set of hypotheses, we conducted a 2 (Context: School, Peer) x 2 (Perpetrator: Children, Principal) x 3 (Condition: Unequal Economic Status, Location, Control) x 4 (Age: 8, 11, 14, 20) mixed-design ANOVA. Context and Perpetrator served as within-subjects factors, and Age and Condition served as between-subjects factors. The mean ratings on whether it was ok to exclude served as the DV. Table 3 shows mean endorsement ratings by perpetrator and context.

*Descriptive Statistics.* Across the eight vignettes, participants did not support exclusion ( $M = 1.43, SD = .54$ ). There was a main effect of age,  $F(3, 300) = 11.22, p < .0001, partial \eta^2 = .10$ . Follow-up tests with a Bonferroni correction indicated that 11-year-olds ( $M = 1.38, SD = .42, p < .0001$ ), 14-year-olds ( $M = 1.38, SD = .45, p < .0001$ ), and 20-year-olds ( $M = 1.26, SD = .51, p = .001$ ) thought it was even less acceptable to exclude children than did 8-year-olds ( $M = 1.71, SD = .67$ ). The older age groups did not differ from one another.

*Context and Perpetrator.* First, there was a main effect of Context,  $F(1, 293) = 11.36, p = .001, partial \eta^2 = .04$ . In contrast to the hypothesis that participants would condemn exclusion more in school than in peer contexts, participants thought it was less acceptable for children to be excluded from peer ( $M = 1.32, SD = .38$ ) than school ( $M = 1.46, SD = .51$ ) contexts.

Second, there was a main effect of Perpetrator,  $F(1, 293) = 22.80, p = .0001, partial \eta^2 = .07$ . Again, contrary to the hypothesis that participants would be more apt to condemn exclusion when the perpetrator was a principal than children, participants thought it was less acceptable when children ( $M = 1.37, SD = .52$ ) excluded someone than a principal ( $M = 1.50, SD = .67$ ).

The perpetrator effect was further qualified by significant Perpetrator x Age,  $F(3, 293) = 4.99, p = .002, partial \eta^2 = .05$ , interaction effect. Using .01 as a corrected  $p$ -value, four separate repeated-measures one-way ANOVAs were conducted for each of the three age groups to tease apart the Age x Perpetrator interaction. Perpetrator served as repeated-measures factor. The 20-year-olds,  $F < 1$ , did not differentiate between the perpetrators. Eight-year-olds,  $F(1, 79) = 15.96, p = .0001, partial \eta^2 = .16$ , 11-year-olds,  $F(1, 84) = 4.46, p = .01, partial \eta^2 = .05$ , and 14-year-olds,  $F(1, 73) = 7.39, p = .008, partial \eta^2 = .09$ ,

believed that it was less acceptable for children (8-year-olds:  $M = 1.57, SD = .66$ ; 11 year-

olds:  $M = 1.36$ ,  $SD = .45$ , 14-year-olds:  $M = 1.30$ ,  $SD = .37$ ) to exclude than a principal (8-year-olds:  $M = 1.84$ ,  $SD = .81$ , 11-year-olds:  $M = 1.46$ ,  $SD = .55$ , 14-year-olds:  $M = 1.47$ ,  $SD = .64$ ).

These effects were also qualified by a significant Perpetrator x Context x Age,  $F(3, 300) = 4.48$ ,  $p = .004$ ,  $partial \eta^2 = .04$ . To examine this interaction effect in relation to the hypothesis that young people would judge exclusion by a principal as worse in peer contexts than in school contexts, we conducted four one-way repeated measures ANOVAs (.01 was the protected alpha level) separately for each age group with perpetrator held as a constant to see if children thought it worse for a principal to exclude in the peer than the school context. Eight-year-olds,  $F < 1$ , and 11-year-olds,  $F(1, 84) = 5.56$ ,  $p = .02$ ,  $partial \eta^2 = .06$ , did not distinguish between principals' decisions in school and peer contexts. As hypothesized that the older age groups would judge exclusion by a principal as worse in peer contexts than in school contexts, 14-year-olds,  $F(1, 73) = 6.15$ ,  $p = .01$ ,  $partial \eta^2 = .08$ , and 20-year-olds,  $F(1, 72) = 9.97$ ,  $p = .002$ ,  $partial \eta^2 = .12$ , thought it was worse for a principal to exclude in peer (14 year-olds:  $M = 1.36$ ,  $SD = .58$ ; 20 year-olds:  $M = 1.2$ ,  $SD = .45$ ) than in school contexts (14 year-olds:  $M = 1.57$ ,  $SD = .87$ ; 20 year-olds:  $M = 1.37$ ,  $SD = .82$ ). No age group distinguished between school or peer exclusion when the perpetrator of exclusion was children, 8 year-olds:  $F(1, 79) = 3.00$ ,  $p = .09$ , 11 year-olds:  $F(1, 84) = 3.46$ ,  $p = .07$ , 14 year-olds:  $F < 1$ , and 20-year-olds:  $F(1, 72) = 1.54$ ,  $p = .22$ .

*Condition.* Although the hypothesized Condition effect in which we expected that children assigned to the unequal economic status condition would rate exclusion as worse than children assigned to either the location or control conditions was not significant,  $F < 1$ , there was a significant Condition x Age,  $F(6, 300) = 3.38$ ,  $p = .003$ ,  $partial \eta^2 = .06$  interaction effect. However, the two-way interaction was qualified by a significant Perpetrator x Condition x Age,  $F(4, 300) = 4.09$ ,  $p = .001$ ,  $partial \eta^2 = .08$  interaction effect. This is an accepted manuscript of an article published by Elsevier in Journal of Experimental Child Psychology, available online at <https://www.sciencedirect.com/science/article/pii/S0022096517304964>. It is not the copy of record. Copyright © 2018, Elsevier.

To untangle the Perpetrator x Condition x Age interaction effect, eight one-way ANOVAs in total were conducted. These ANOVAs were separately for each age group and perpetrator with condition as a between-subjects factor. For all age groups, there was no effect of condition on the children as perpetrator vignettes (8 year-olds:  $F < 1$ ; 11 year-olds:  $F < 1$ ; 14 year-olds:  $F(1, 71) = 2.26, p = .11$ ; 20-year-olds,  $F(1, 70) = 1.03, p = .36$ ).

When the principal was the perpetrator, there was an effect of condition for 8-year-old children,  $F(2, 77) = 6.07, p = .004, partial \eta^2 = .14$  and 14-year-old children,  $F(2, 71) = 5.97, p = .004, partial \eta^2 = .14$ . When the principal was the perpetrator there was no effect of condition for 11-year-old or 20-year-old participants, both  $F_s < 1$ . As hypothesized, Bonferroni follow-up tests indicated that 8-year-old children believed that exclusion was less acceptable when they were assigned to the unequal economic status ( $M = 1.44, SD = .58$ ) than location ( $p = .02, M = 2.02, SD = .76$ ) or control ( $p = .008, M = 2.11, SD = .96$ ) conditions. In contrast, 14-year-olds thought exclusion was even less acceptable when they were assigned to the location ( $p = .02, M = 1.36, SD = .55$ ) or control ( $p = .006, M = 1.26, SD = .36$ ) conditions than unequal economic status ( $M = 1.83, SD = .82$ ) conditions. Children assigned to the location and control conditions did not differ from one another in either age group. Figure 1 shows these means.

## **Reasoning**

To examine reasoning, we conducted two 2 (Context: School, Peer) x 2 (Perpetrator: Peer, Principal) x 3 (Condition: Unequal Economic Status, Location, Control) x 4 (Age: 8, 11, 14, 20) mixed-design ANOVAs separately on the numbers of times children used Social Conventional and Moral Reasoning. Context and Perpetrator served as within-subjects factors, and Age and Condition served as between-subjects factors. We followed Malti et al. (2012) in assigning partial credit when more than one justification was used. Table 4 shows mean ratings of moral and social conventional reasons separately by perpetrator and context. This is an accepted manuscript of an article published by Elsevier in Journal of Experimental Child Psychology, available online at <https://www.sciencedirect.com/science/article/pii/S0022096517304964>. It is not the copy of record. Copyright © 2018, Elsevier.



Effects related to the hypotheses are reported. Note that children's total answers across all eight vignettes could range from 0 to 8 and for each type of vignette from 0 to 2.

### ***Social Conventional Reasoning***

*Context and Perpetrator.* In contrast to the hypothesis that participants would use less social conventional reasoning when the context was school rather than peer groups, participants used more social conventional reasoning in the school context ( $M = 1.37$ ,  $SD = 1.14$ ) than peer groups ( $M = 1.12$ ,  $SD = .98$ ),  $F(1, 299) = 12.22$ ,  $p = .001$ , partial  $\eta^2 = .04$ .

Also in contrast to the hypothesis, participants were more likely to view exclusion by a principal ( $M = 1.34$ ,  $SD = 1.00$ ) as a social conventional issue than by children ( $M = 1.15$ ,  $SD = 1.01$ ),  $F(1, 299) = 8.52$ ,  $p = .004$ , partial  $\eta^2 = .03$ . This effect, however, was qualified by a significant Perpetrator x Age interaction effect,  $F(1, 299) = 2.91$ ,  $p = .04$ , partial  $\eta^2 = .03$ , and significant Perpetrator x Context interaction effect,  $F(1, 299) = 74.79$ ,  $p < .0001$ , partial  $\eta^2 = .20$ . Using .01 as the protected alpha level, four repeated-measures ANOVAs were conducted separately for social conventional reason to examine whether participants at different ages reasoned differently when the perpetrator varied. Supporting the hypothesis for 20-year-olds only, participants used more social conventional reasons when principals ( $M = .95$ ,  $SD = 1.22$ ) rather than children ( $M = .50$ ,  $SD = .90$ ) were the ones to exclude,  $F(1, 72) = 8.80$ ,  $p = .004$ , partial  $\eta^2 = .11$ . However, there were no significant differences in 8 year-olds:  $F(1, 79) = 5.87$ ,  $p = .02$ , 11 year-olds:  $F < 1$ , 14 year-olds:  $F < 1$ .

We followed up the significant Perpetrator x Context interaction effect with two within-subjects with perpetrator as a repeated factor separated by context. Although we had predicted only the two older age groups would view exclusion in peer contexts as more of social conventional issue when the perpetrator was a principal than a child, the effect was found across the age groups. Participants used more social conventional reasoning when the

principal ( $M = .73$ ,  $SD = .69$ ) rather than children ( $M = .39$ ,  $SD = .52$ ) enacted peer exclusion,  $F(1, 310) = 8.80$ ,  $p < .001$ , partial  $\eta^2 = .18$ .

*Condition.* Contrary to the hypothesis that young people would use less social conventional reasoning when they were allocated to the condition in which exclusion implicates differences in unequal economic status than in other conditions, there was not a main effect of Condition,  $F(6, 299) = 2.14$ ,  $p = .12$ . There was, however, a significant Condition x Age Group interaction,  $F(6, 299) = 2.20$ ,  $p = .04$ , partial  $\eta^2 = .04$ . Using .01 as a protected alpha level, this effect was followed up by conducting ANOVAs with condition as an IV and social conventional reasoning as a DV. There were significant effects on social conventional reasoning for 11-year-olds,  $F(2, 82) = 4.06$ ,  $p = .02$ , partial  $\eta^2 = .09$ , and 14-year-olds,  $F(2, 70) = 4.58$ ,  $p = .01$ , partial  $\eta^2 = .12$ . Bonferroni follow-ups indicated that 11-year-olds were more likely to invoke social conventional reasoning for the unequal economic status ( $M = 3.03$ ,  $SD = 1.53$ ) than control condition ( $M = 1.85$ ,  $SD = 1.60$ ,  $p = .02$ ). Those assigned to the location condition ( $M = 2.70$ ,  $SD = 1.81$ ) did not differ from the other conditions. Similarly, Bonferroni follow-ups indicated that 14-year-olds were more likely to invoke social conventional reasoning for the unequal economic status ( $M = 3.31$ ,  $SD = 1.27$ ) than control condition ( $M = 2.08$ ,  $SD = 1.27$ ,  $p = .01$ ). Those assigned to the location condition ( $M = 2.68$ ,  $SD = 1.48$ ) invoked this type of reasoning an intermediate amount. Participants assigned to the location condition did not differ from participants assigned to other conditions. The other age groups did not invoke different amounts of social conventional reasoning based on the condition to which they were assigned (8-year-olds:  $F < 1$ , 20-year-olds:  $F(2, 70) = 1.30$ ,  $p = .28$ ).

### ***Moral Reasoning***

*Context.* There was a main effect of context in which young people were more likely to use moral reasoning for the peer ( $M = 2.31$ ,  $SD = 1.14$ ) than school ( $M = 1.94$ ,  $SD = 1.32$ ) contexts,  $F(1, 299) = 24.98$ ,  $p < .0001$ , partial  $\eta^2 = .07$ .

*Perpetrator.* Contrary to our expectation that young people would use more moral reasoning when a principal excluded than when children excluded, young people used more moral reasoning when children ( $M = 2.24$ ,  $SD = 1.17$ ) than a principal ( $M = 2.00$ ,  $SD = 1.22$ ) excluded,  $F(1, 299) = 15.47$ ,  $p < .0001$ , partial  $\eta^2 = .05$ . This effect was, however, qualified by significant Perpetrator x Age,  $F(2, 299) = 2.79$ ,  $p = .04$ , partial  $\eta^2 = .03$ , and Context x Perpetrator,  $F(1, 299) = 66.71$ ,  $p < .0001$ , partial  $\eta^2 = .18$ , interaction effects. Using .01 as the protected alpha level, four repeated-measures ANOVAs were conducted separately for each perpetrator. Following the previously described pattern, 8-year-old,  $F(1, 79) = 8.96$ ,  $p = .004$ , partial  $\eta^2 = .10$ , and 20-year-old,  $F(1, 72) = 9.58$ ,  $p = .003$ , partial  $\eta^2 = .12$ , participants used less moral reasoning when principals (8:  $M = 1.71$ ,  $SD = 1.13$ , 20:  $M = 1.39$ ,  $SD = 1.28$ ) rather than children (8:  $M = 2.08$ ,  $SD = 1.14$ , 20:  $M = 1.80$ ,  $SD = 1.36$ ) were the ones to tell their peers that they could not play. However, there were no significant differences in 11 year-olds:  $F < 1$ , or 14 year-olds:  $F(1, 72) = 2.97$ ,  $p = .09$ .

To take apart the Context x Perpetrator interaction effect, two repeated-measures ANOVA models were conducted on person holding context constant. Young people were more likely to use moral reasoning when discussing principals ( $M = 1.03$ ,  $SD = .76$ ) than children ( $M = .91$ ,  $SD = .75$ ) in school contexts,  $F(1, 311) = 8.77$ ,  $p = .003$ , partial  $\eta^2 = .03$ . In contrast, young people were less likely to use moral reasoning when discussing principals ( $M = .97$ ,  $SD = .70$ ) than children ( $M = 1.34$ ,  $SD = .67$ ) in school contexts,  $F(1, 311) = 72.69$ ,  $p < .0001$ , partial  $\eta^2 = .19$ .

*Condition.* Contrary to the hypothesis that young people would use more moral reasons when they were allocated to the condition in which exclusion implicates differences

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in unequal economic status than in other conditions, there was no effect of Condition on young people's moral reasoning,  $F(2, 299) = 1.06, p = .35$ .

### **Discussion**

This study extends knowledge of how young people in the UK consider different types of exclusion. It is important, first, to point out that participants did not condone exclusion. The mean scores indicated that participants' evaluations of exclusion ranged from strongly disagreeing to somewhat disagreeing with exclusion. That being said, there were striking variations in participants' judgments and reasoning based on age and contextual differences across the vignettes. In addition, many of findings the differed from previous research.

Participants in this study were sensitive to economic status differences in the vignettes, but not always in the hypothesized direction. Contrary to the hypothesis that young people would view exclusion as less acceptable when evaluating the unequal status condition than the other conditions, only 8-year-old children thought it was worse for a principal to exclude when children evaluated the unequal economic status condition than the other conditions. In contrast, 14-year-olds believed exclusion by a principal was most acceptable when there were economic status differences than when there were not. Finally, 11- and 20-year-olds did not show differences in their exclusion judgements based on the condition to which they were assigned. Contrary to the hypothesis that young people would use less social conventional and more moral reasoning when assigned to the unequal economic status condition than the other conditions, both 11- and 14-year-olds used more social conventional reasoning when evaluating the unequal economic status condition than the other conditions. The 11-year-olds, thus, demonstrated an intermediate pattern with their reasoning being similar to 14-year-olds, but not their ratings.

The age-related findings in the present study may also suggest that economic inequality might not be perceived as unfair compared to other reasons for social exclusion once young

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people reach early adolescence (Starmans, Sheskin, & Bloom, 2017). From 18 months of age, children distribute resources, such as marbles, equally (Ulber, Hamann, & Tomasello, 2015). Between the ages of 3 and 8 years, children continue to distribute resources, such as erasers, equally to the point of discarding a resource to create equality (Shaw & Olson, 2012). Young people between the ages of 9 and 17 years tend to share equally (Gummerum, Keller, Takezawa, & Mata, 2008). Furthermore, children between the ages of 3 to 6 years prefer peers who allocate resources equally (Cooley & Killen, 2015). Children even prefer equality when they stand to gain from unequal distribution of resources (Cooley & Killen, 2015; Gummerum et al., 2008). Thus, from a young age people tend to prefer fairness.

At the same time, children do not always favour those with less. Indeed, young children prefer individuals pictured with more resources, such as play-dough (Li, Spitzer, & Olson, 2014, study 2). Children also prefer those pictured in more expensive houses than less expensive houses (Horwitz et al., 2014). Thus, the findings are somewhat equivocal.

Moreover, when additional information, such as effort is included, slightly older children prefer to reward differential effort with a matching distribution of resources (Shaw & Olson, 2012; Wimmer, Wachter, & Perner, 1982). With age, children are better able to take additional factors into account when deciding distribution of resources, such as effort and intention (Piaget, 1932). Such an ability may be why adolescents do not favor a purely equal distribution of wealth (Arsenio & Willems, 2017). Inequality and fairness become even more distinct concepts with developmental increases in the ability to incorporate a range of factors into resource allocation. It seems, as Starmans et al. (2017) have argued, that inequality and fairness are distinct concepts that are often conflated in research studies.

One way past research has conflated economic inequality and fairness is through using social groups that vary in access to wealth. By examining exclusion based on economic

inequality without invoking social groups, in this study young people considered economic

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inequality without recourse to discrimination based on social groups. Not surprisingly, children do not accept economic inequalities when they vary with ethnicity, suggesting that children view such relationships as unfair (Elenbaas & Killen, 2016). However, when ethnicity is separated from economic inequality, children over 9 years from middle-class backgrounds in the UK support income disparities (Emler & Dickinson, 1985) arguing that income differentials are fair. Beginning at age 9 years, English children show implicit biases towards members of lower-social classes compared to members of upper-social classes (Tenenbaum & MacNamara, 2017).

In contrast, however, British children age 8 years old do not support income differentials (Emler & Dickinson, 1985). Moreover, 90% of US African-American and White 8-year-old children from a mixture of socio-economic statuses did not think poverty was fair with only 12% attributing internal causes (e.g., psychological characteristics) to the causes of poverty (Chafel & Neitzel, 2005). Thus, it seems that societal income equality becomes a distinct concept from fairness in resource allocation after age 8 years.

Why might children start to separate fairness from economic inequality with age? As we mentioned, one reason may be cognitive and moral advances that enable children to integrate multiple pieces of information into a situation to evaluate it (Gummerum et al., 2008; Piaget, 1932). From an intergroup perspective, children also evidence a greater understanding of how groups function and an increased social theory of mind at 9 to 11 years than at 6 to 8 years (Abrams et al., 2011). By 11 years, children rely more on social conventional norms in their reasoning than at younger ages (Killen et al., 2002). Thus, they begin to understand societal groups differently. At 14 years of age, children in this study had consistent reasoning and rating patterns, which may result from increased understanding of groups that surpassed even the 11-year-olds' understanding. Indeed, with age children may

expect groups to benefit themselves (Elenbaas & Killen, 2018). When asked to imagine how

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low- and high-income children would allocate a limited resource (i.e., camp places), there was an increase between 8 and 14 years in children believing that others would benefit the ingroup more than the outgroup by allocating more places to their own group. Moreover, past work has suggested that children from higher income families (Elenbaas & Killen, 2018), such as the young people in this sample, tend to expect that groups will benefit themselves. The young people may have simply expected groups to exclude people from other groups.

Young people in this study, however, viewed exclusion differently depending on the group from which the protagonist was excluded. Disconfirming the hypotheses that participants would believe that exclusion was worse in school than in peer contexts, participants from the four age groups thought exclusion was worse in peer than in school contexts. Participants also used more moral reasoning for peer contexts than for school contexts. Conversely, participants used more social conventional reasoning for school than peer contexts. In a past study, British young people between 8 and 14 years supported single-gender schools (Tenenbaum et al., 2017). Thus, British young people seem to perceive school segregation as acceptable and a social conventional issue. Taken together, these findings suggest that young adolescents in the UK are apprenticed into accepting the organisation of societal institutions.

Additional support for the view that young people in the UK accept the structure of society is their relative acceptance of authority compared to children in this study. Although we had predicted that young people would not accept principals' authority over children's authority and that they would use fewer social conventional reasons for the vignettes in which principals rather than peers were perpetrators of exclusion, we again found the opposite pattern. Instead, young people supported principals more than peers and used more social conventional reasons for the former than the latter. This finding differs from work conducted

in Denmark in which 8- to 12-year-olds thought it was worse for a teacher than a child to

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exclude (Møller & Tenenbaum, 2011), and in the USA where 8- to 14-year-olds rated it less acceptable when parents than children excluded (Killen et al., 2002). There are at least three possible explanations for these findings. First, Denmark has a more equal society than the UK based on the Gini index (World Bank, 2018). Thus, the cultural discourse may vary, particularly insofar as it relates to issues of equality and inequality.

Related to issues of equality, the UK has a long history of state schools segregated by gender and faith (see Tenenbaum et al., 2017, for a discussion of how this may influence young people's reasoning). In contrast, until 2006, the USA had not allowed single-gender state schools for more than three decades (No Child Left Behind Act, 2001); numbers of single-gender schools remain low. As a result of seeing school segregation, young British people may come to accept structural segregation in society. Preliminary support for the view that societal segregation may influence acceptance of authority also comes from Saudi Arabia in which most institutions are strictly gender segregated (Alhareth, Alhareth, & Al Dighrir, 2015). In a recent study, Saudi children supported religious-based peer exclusion enacted by fathers more than by peers, and justified the latter with social conventional reasoning (Alsamih & Tenenbaum, 2018). To understand how cultural discourses may influence children across the world, we need to conduct research in other cultural communities, especially communities that have institutional segregation, larger economic disparities, and even more hierarchical organization than the ones studied in most of the literature (Nielsen, Haun, Kärtner, & Legare, 2017).

Third, the present study used third-party exclusion in which participants were not members of either group. Adults tend to evaluate first-party moral transgressions less harshly compared to third-party transgressions, and regard first-party transgressions as less severe (Haviv & Leman, 2002; Wark & Krebs, 2000). Moreover, 5- to 6-year-old children judge resources allocation as more unfair when their group compared to another group is



disadvantaged (Elenbaas, Rizzo, & Killen, 2016). Children aged 10 to 11 years do not make this distinction. Children's moral judgments might therefore differ when evaluating first- and third-party depending on their knowledge of groups and of their own membership of groups.

Support for authority was tempered in peer groups in the two older age groups who rated it as less acceptable for principals to exclude in peer contexts than in school contexts. Surprisingly, the older age groups were not generally more accepting of peer exclusion nor did they use more social conventional reasoning than younger children. We had expected that they might be more accepting of peer exclusion because of a greater understanding of group functioning (Killen & Rutland, 2011; Mulvey, 2016). The older age groups did, however, believe that it was worse for a principal to exclude in peer than in school contexts. This finding suggests that the older age groups, who are frequently more concerned with autonomy (Ruck et al., 2011), view exclusion in peer groups as an issue that should not be within the jurisdiction of authority (Smetana & Asquith, 1994; Smetana & Bitz, 1994; Darling et al., 2008).

One final age-related difference is worth noting. Unlike previous research, the older participants were less accepting of exclusion than were 8-year-old children. One reason this might have been the case is because the vignettes were about third-party exclusion in which children were not members of either group. Although explicit in-group bias decreases after age 7 years (Raabe & Beelman, 2012), children have an increased understanding of group norms (Abrams et al., 2009) and show increases in social conventional understanding (Killen et al., 2002), which may lead to higher levels of exclusion. Future research will need to compare directly exclusion when children are members of the groups of interest and when they are not.

One potential limitation of the present study is that we used experimental and abstract groups. However, our work suggests that novel groups complement actual groups by

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controlling for historical and personal information about actual (Greenwald, McGhee, & Schwartz, 1998) and minimal groups (Wright, Aron, McLaughlin-Vople, & Ropp, 1997). Moreover, differences in reasoning patterns suggest that children were sensitive to the information contained in the vignettes. A second limitation is that some of the peer contexts, such as eating lunch, occurred in the school, and might have blurred the distinction between pure peer and school contexts. Third, our research followed previous research in having a group of children serve as perpetrators of exclusion (e.g., Malti et al., 2012; Møller & Tenenbaum, 2011; Tenenbaum et al., 2017). However, young people may have felt that it was more difficult to challenge a group of children than a single child. Third, it would have been beneficial to have included other measures, such as attitudes towards inequality, class bias, and children's own socio-economic status.

In sum, our study extended the domain perspective. In contrast to past research (Killen et al., 2002; Malti et al., 2012), young people were less accepting of segregation in peer than schools contexts and when enacted by peers than principals across condition and age groups. Our findings, along with others (Tenenbaum et al., 2017; Alsamih & Tenenbaum, 2018), suggest that young people in societies in which institutions, such as state school are segregated, may come to accept societal segregation and defer to authority in such cases. However, these young people were less accepting of segregation in peer groups than schools and when enacted by children than principals. Thus, these young people did not accept exclusion when it was perceived as under the jurisdiction of interpersonal relationships. Future research is needed to understand how to extend young people's rejection of inequality and exclusion in peer relations to societal institutions to advocate for a more equal society.

## References

- Abrams, D., Rutland, A., Pelletier, J., & Ferrell, J.M. (2009). Children's group nous: Understanding and applying peer exclusion within and between groups. *Child Development, 80*, 224-243. doi: 10.1111/j.1467-8624.2008.01256.x
- Al Alhareth, Y., Al Alhareth, Y., & Al Dighrir, I. (2015). Review of women and society in Saudi Arabia. *American Journal of Educational Research, 3*, 121-125. doi: 10.12691/education-3-2-3
- Alsamih, M., & Tenenbaum, H. R. (in press). Saudi Arabian children's reasoning about religion-based exclusion. *British Journal of Developmental Psychology*. Doi: 10.1111/bjdp.12238.
- Apfelbaum, E.P., Sommers, S.R., & Norton, M.I. (2008). Seeing race and seeming racist? Evaluating strategic colorblindness in social interaction. *Journal of Personality and Social Psychology, 95*, 918-932. doi: 10.1037/a0012835.
- Baron, A., & Banaji, M. (2009). Evidence of system justification in young children. *Social and Personality Psychology Compass, 3*, 918-926. doi: 10.1111/j.1751-9004.2009.00214.x
- Bakeman, R., & Gottman, J.M. (1997). *Observing interaction: An introduction to sequential analysis*. Cambridge: Cambridge University Press.
- Bigler, R.S., Averhart, C.J., & Liben, L.S. (2003). Race and the workforce: Occupational status, aspirations, and stereotyping among African American children. *Developmental Psychology, 39*, 572-580. doi: 10.1037/0012-1649.39.3.572.
- Brown, C.S., Mistry, R.S., & Bigler, R.S. (2007). Hurricane Katrina: African American children's perceptions of race, class, and government involvement amid a national

crisis. *Analyses of Social Issues and Public Policy*, 7, 191-208.

10.1111/j.15302415.2007.00139.x

Cooley, S., & Killen, M. (2015). Children's evaluations of resource allocation in the context of group norms. *Developmental Psychology*, 51, 554- 563.

Cummings, S., & Taebel, D. (1978). The economic socialization of children: A neo-Marxist analysis. *Social Problems*, 26, 198-210. Doi: 10.2307/800282.

Darling, N., Cumsille, P., & Martinez, M.L. (2008). Individual differences in adolescents' beliefs about the legitimacy of parental authority and their own obligation to obey: A longitudinal investigation. *Child Development*, 79, 1103-1118. Doi: 10.1111/j.1467-8624.2008.01178.x

Dickinson, J. (1990). Adolescent representation of socio-economic status. *British Journal of Developmental Psychology*, 8, 351-371. Doi: 10.1111/j.2044-835X.1990.tb00850.x.

Elenbaas, L., Rizzo, M. T., Cooley, S., & Killen, M. (2016). Rectifying social inequalities in a resource allocation task. *Cognition*, 155, 176-187.

Elenbaas, L., & Killen, M. (2018). Children's perceptions of economic groups in a context of limited access to opportunities.. *Child Development*, n/a-n/a.

doi:10.1111/cdev.13024

Elenbaas, L., & Killen, M. (2016). Age-related changes in children's associations of economic resources and race. *Frontiers in Psychology*, 7, 884. Doi:

10.3389/fpsyg.2016.00884

Graham, J., Haidt, J., & Nosek, B.A. (2009). Liberals and conservatives rely on different sets of moral foundations. *Journal of Personality and Social Psychology*, 96, 1029-1046.

Doi: 10.1037/a0015141

- Greenwald, A.G., McGhee, D.E., & Schwartz, J.L (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of Personality and Social Psychology, 74*, 1464-1480.
- Gummerum, M., Keller, M., Takezawa, M., & Mata, J. (2008). To give or not to give: Children's and adolescents' sharing and moral negotiations in economic decision situations. *Child Development, 79*, 562-576.
- Haviv, S., & Leman, P. J. (2002). Moral decision-making in real life: Factors affecting moral orientation and behaviour justification. *Journal of Moral Education, 31*, 121-140.
- Horwitz, S.R., Shutts, K., & Olson, K.R. (2014). Social class differences produce social group preferences. *Developmental Science, 17*, 991-1002. Doi: 10.1111/desc.12181.
- Jost, J.T., Banaji, M.R., & Nosek, B.A. (2004). A decade of system justification theory: Accumulated evidence of conscious and unconscious bolstering of the status quo. *Political Psychology, 25*, 881-919. Doi: 10.1111/j.1467-9221.2004.00402.x
- Kenway, P. P., G. (2007). Poverty among ethnic groups: How and why does it differ? *New Policy Institute. Retrived on 5 January 2017 from*  
*<http://www.npi.org.uk/publications/income-and-poverty/poverty-among-ethnic-groups-how-and-why-does-it-differ/>* .
- Killen, M., & Rutland, A. (2011). *Children and social exclusion: Morality, prejudice, and group identity*. New York: John Wiley & Sons.
- Killen, M., Elenbaas, L., & Rutland, A. (2016). Balancing the fair treatment of others while preserving group identity and autonomy. *Human Development, 58*, 253-272. Doi: 10.1159/000444151
- Killen, M., Lee-Kim, J., McGlothlin, H., & Stangor, C., & Helwig, C.C. (2002). How

children and adolescents evaluate gender and racial exclusion. *Monographs of the Society for Research in Child Development*, 67, (No. 4).

- Kim, J.,M. (1998). Korean children's concepts of adult and peer authority and moral reasoning. *Developmental Psychology*, 34, 947-955. Doi: 10.1037/0012-1649.34.5.947
- Kruger, A.C. (1992). The effect of peer and parent-child transactive discussions on moral reasoning. *Merrill-Palmer Quarterly*, 38, 191-211.
- Leahy, R.L. (1983). Development of the conception of economic inequality: II. Explanations, justifications, and concepts of social mobility and change. *Developmental Psychology*, 19, 111-125. Doi: 0012-1649/83/1901-0111\$00.75
- Leman, P.J., & Duveen, G. (1999). Representations of authority and children's moral reasoning. *European Journal of Social Psychology*, 29, 557-575.
- Leman, P. J. & Tenenbaum, H. R. (2011). Practising gender: children's relationships and the development of gendered behaviour and beliefs. *British Journal of Developmental Psychology*, 29, 153-157.
- Li, V., Spitzer, B., & Olson, K.R. (2014). Pre-schoolers reduce inequality while favouring individuals with more. *Child Development*, 85, 1123-1133. Doi: 10.1111/cdev.12198
- Liben, L.S., Bigler, R.S., & Krogh, H.R. (2001). Pink and blue collar jobs: Children's judgements of job status and job aspirations in relation to sex of worker. *Journal of Experimental Child Psychology*, 79, 346-363. Doi: 10.1006/jecp.2000.2611.
- Lott, B. (2002). Cognitive and behavioural distancing from the poor. *American Psychologist*, 57, 100-110. Doi: 10.1037/0003-066X.57.2.100
- Malti, T., Killen, M., & Gasser, L. (2012). Social judgments and emotion attributions about exclusion in Switzerland. *Child Development*, 83, 697-711. Doi: 10.1111/j.1467-8624.2011.01705.x

- Mistry, R. S., Brown, C. S., White, E. S., Chow, K. A., & Gillen-O'Neel, C. (2015). Elementary school children's reasoning about social class: A mixed-methods study. *Child Development, 86*, 1653-1671. doi:10.1111/cdev.12407
- Møller, S.J., & Tenenbaum, H.R. (2011). Danish majority children's reasoning about exclusion based on gender and ethnicity. *Child Development, 82*, 520-532. Doi: 10.1111/j.1467-8624.2010.01568.x
- Mulvey, K.L. (2016). Children's reasoning about social exclusion: Balancing many factors. *Child Development Perspectives, 10*, 22-27. Doi: 10.1111/cdep.12157.
- Nielsen, M., Haun, D., Kärtner, J., & Legare, C. H. (2017). The persistent sampling bias in developmental psychology: A call to action. *Journal of Experimental Child Psychology, 162*, 31-38.
- No Child Left Behind Act of 2001, P.L. 107-110, 20 U.S.C. § 6319 (2002).
- Olson, K.R., Dweck, C.S., Spelke, E.S., & Banaji, M.R. (2011). Children's responses to group-based inequalities: Perpetuation and rectification. *Social Cognition, 29*, 270-287. Doi: 10.1521/soco.2011.29.3.270
- Olson, K.R., Shutts, K., Kinzler, K.D., & Weisman, K.G. (2012). Children associate racial groups with wealth: evidence from South Africa. *Child Development, 83*, 1884-1899. Doi: 10.1111/j.1467-8624.2012.01819.x
- Piaget, J. (1932). *The moral development of the child*. London: Kegan Paul.
- Ruck, M.D., & Tenenbaum, H.R. (2014). Does moral and social conventional reasoning predict British young people's judgments about the rights of asylum-seeker youth? *Journal of Social Issues, 70*, 47-62. Doi: 10.1111/josi.12046
- Ruck, M.D., Tenenbaum, H.R., & Willenberg, I. (2011). South African mixed-race children's and mothers' judgments and reasoning about children's nurturance and self-

- determination rights. *Social Development*, 20, 517-535. Doi: 10.1111/j.1467-9507.2011.00607.x
- Shaw, A., & Olson, K. R. (2012). Children discard a resource to avoid inequity. *Journal of Experimental Psychology: General*, 141, 382-395.
- Smetana, J.G., & Asquith, P. (1994). Adolescents' and parents' conceptions of parental authority and personal autonomy. *Child Development*, 65, 1147-1162. Doi: 10.1111/j.1467-8624.1994.tb00809.x
- Smetana, J.G., & Bitz, B. (1994). Adolescents' conceptions of teachers' authority and their relations to rule violations in school. *Child Development*, 67, 1153-1172. Doi: 10.1111/j.1467-8624.1996.tb01788.x
- Starmans, C., Sheskin, M., & Bloom, P. (2017). Why people prefer unequal societies. *Nature Human Behaviour*, 1, 0082.
- Tabachnik, B.G., & Fidell, S.L. (2013). *Discriminant analysis. Using multivariate statistics*. Boston: Pearson Education Inc, 201, 377-438.
- Tenenbaum, H. R., Leman, P. J., & Aznar, A. (2017). Children's reasoning about peer and school segregation in a diverse society *Journal of Community & Applied Social Psychology*, 27, 358-365. Doi: 10.1002/casp.2311
- Tenenbaum, H.R., & Ruck, M.D. (2012). British adolescents' and young adults' understanding and reasoning about the religious and nonreligious rights of asylum-seeker youth. *Child Development*, 83, 1102-1115. Doi: 10.1111/j.1467-8624.2012.01755.x
- Tenenbaum, H. R. & McNamara, A. J. (2017). Children's reasoning about class. *Talk presented at the Society for Research in Child Development*. Austin, TX.



- Theimer, C.E., Killen, M. & Stangor, C. (2001). Young children's evaluations of exclusion in gender-stereotypic peer contexts. *Developmental Psychology*, 37, 18-27. Doi: 10.1037//0012-1649.37.1.18
- Turiel, E. (2002). *The culture of morality: Social development , context, and conflict*. Cambridge: Cambridge University Press.
- Ulber, J., Hamann, K., & Tomasello, M. (2015). How 18-and 24-month-old peers divide resources among themselves. *Journal of Experimental Child Psychology*, 140, 228-244.
- Wark, G. R., & Krebs, D. L. (2000). The construction of moral dilemmas in everyday life. *Journal of Moral Education*, 29, 5-21.
- World Bank Gini Index. (2018). Retrieved from <https://data.worldbank.org/indicator/SI.POV.GINI?view=map> on 1 January 2018.
- Wright, S.C., Aron, A., McLaughlin-Volpe, T., & Ropp, S.A. (1997). The extended contact effect: Knowledge of cross-group friendships and prejudice. *Journal of Personality and Social Psychology*, 73, 73-90.



Table 1. Eight Vignettes

Context	
School	Peer
Principal as Perpetrator	
<p>A group of red children are going to school. The principal tells a yellow child that he/she cannot go to their school. This child has to go the school for yellow children.</p> <p>A group of green children are going to school. The principal tells a blue child that he/she cannot go to their school. This child has to go the school for blue children.</p>	<p>A group of red children are playing a game of cards and a yellow child wants to join them. The principal says that the yellow child cannot because only red children can play cards.</p> <p>A group of green children are eating together in the school cafeteria and a blue child wants to join them. The principal says that the blue child cannot because only green children can eat at this table.</p>
Child as Perpetrator	
<p>A group of green children are going to school. They tell a blue child that he/she cannot go to their school. This child has to go to the school for Blue children.</p> <p>A group of red children are going to school. They tell a yellow child that he/she cannot go to their school. This child has to go to the school for yellow children.</p>	<p>A group of red children are going to the cinema together and a yellow child wants to join them. The red children say that the yellow child cannot because only red children can go to the cinema.</p> <p>A group of green children are playing football together and a blue child wants to join them. The green children say that the blue child cannot because only green children can play football.</p>

Table 2. Information Provided to Children in the Conditions

Condition	
Unequal Economic Status	Unequal Economic Status
Version 1. “Imagine two groups of people: Yellows and Reds. The Yellow people have lots of money, whereas the Reds do not have a lot of money. The Yellow people live in big houses and the Red People live in small houses. Now I am going to tell you four stories about these people, let’s see what you think about them.”	Version 2. “Imagine two groups of people: Blues and Greens. The Blue people have lots of money, whereas the Greens do not have a lot of money. The Blue people live in big houses and the Green People live in small houses. Now I am going to tell you four stories about these people, let’s see what you think about them.”
Location	Location
Version 1. “Imagine two groups of people: Yellow and Reds. The Yellow people come from one city and the Red people come from a different city. They both have the same amount of money. Now I am going to tell you four stories about these people, let’s see what you think about them	Version 2. “Imagine two groups of people: Blues and Greens. The Green people come from one city and the Blue people come from a different city. They both have the same amount of money. Now I am going to tell you four stories about these people, let’s see what you think about them.”

Table 3

## Mean Acceptability Ratings Collapsed Across Condition

	Child		Principal	
	School	Peer	School	Peer
Age 8 ( $n = 80$ )	1.66 (.92)	1.48 (.67)	1.81 (.95)	1.86 (1.00)
Age 11 ( $n = 85$ )	1.40 (.67)	1.27 (.39)	1.52 (.71)	1.33 (.49)
Age 14 ( $n = 74$ )	1.32 (.56)	1.28 (.39)	1.57 (.87)	1.36 (.58)
Age 20 ( $n = 73$ )	1.30 (.67)	1.23 (.55)	1.37 (.82)	1.12 (.45)
Total	1.42 (.73)	1.32 (.52)	1.57 (.85)	1.43 (.72)

*Note.* Values demonstrate mean scores across the vignettes. Scores ranged from 1 (not at all ok) to 5 (very ok). Standard deviations are in parentheses.

Table 4

## Number of Moral and Social Conventional Reasons Used to Rate All Vignettes

	Social Conventional				Moral			
	Child		Teacher		Child		Teacher	
	Peer	School	Peer	School	Peer	School	Peer	School
	Age 8	.44 (.56)	.99 (.77)	.89 (.73)	.84 (.69)	1.32 (.64)	.76 (.75)	.89 (.71)
Age 11	.48 (.55)	.81 (.66)	.67 (.64)	.61 (.66)	1.49 (.59)	1.05 (.67)	1.25 (.67)	1.28 (.70)
Age 14	.43 (.48)	.86 (.66)	.81 (.60)	.55 (.53)	1.47 (.55)	1.07 (.67)	1.04 (.62)	1.30 (.62)
Age 20	.17 (.44)	.33 (.66)	.54 (.73)	.41 (.67)	1.05 (.80)	.75 (.87)	.68 (.67)	.71 (.84)
Total	.39 (.52)	.76 (.73)	.73 (.69)	.61 (.66)	1.34 (.67)	.91 (.75)	.97 (.70)	1.03 (.76)

*Note.* Scores are for the number of times each reason was used, which could range from 0 to 2. Standard deviations are in parentheses.

Figure 1. Ratings of exclusion by principals. Values demonstrate mean scores across the principal vignettes. Scores ranged from 1 (not at all ok) to 5 (very ok).

