

The Just Distribution of Educational Resources:
Children's Judgments about Differential Treatment by Teachers

by

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A dissertation submitted in partial satisfaction of the

requirements for the degree of

Doctor of Philosophy

in

Education

in the

Graduate Division

of the

University of California, Berkeley

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Spring 2014

Abstract

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The aim of this study was to examine children's reasoning about the fairness of differential treatment by teachers and to determine if there were circumstances under which children may consider differential treatment to be acceptable. Participants ($n = 76$), ages 6 to 11 years, evaluated hypothetical stories entailing unequal distributions of different educational goods: quantity of work, turns to read aloud, and individual attention from the teacher. The teacher's rationale for the differential treatment was systematically varied in order to determine whether it altered participants' evaluations. In addition to a condition in which no rationale was given, four different rationales were proposed to underlie the differential treatment: differentiating instruction for high achieving students, differentiating instruction for struggling students, preferential treatment for favored students, and preferential treatment for boys.

The findings showed that differential treatment in the form of individual teacher attention was most acceptable to students, followed by differential assigned work, and lastly differential turns to read aloud. Children drew a distinction between the condition in which no rationale for the differential treatment was provided and the conditions in which they were. When a rationale was not presented to explain the teacher's behavior, the majority of participants rejected the differential treatment. When rationales were introduced, participants were significantly more likely to endorse differential treatment for struggling and high achieving students than for favorite students or boys. Participants were also significantly more likely to endorse differential treatment for struggling students than for high-achieving students. Analysis of justifications supporting children's evaluations of differential treatment indicated that children drew a distinction between differentiated instruction and preferential treatment.

The presence of age differences in children's judgments of differential treatment depended upon the particular educational good at stake and the teacher's rationale. When no rationale for the differential treatment was provided, 6-7 year old participants were significantly less likely to endorse differential treatment than either 8-9 year old or 10-11 year old participants. When a rationale for differential treatment was presented, there were only two conditions (out of twelve) in which significant age differences emerged. Although the majority of participants favored modified work for high achieving students, 6-7 year old participants were significantly less likely to favor it for high achievers than 10-11 year old participants. Further,

10-11 year old participants were significantly less likely to favor extra turns for struggling readers than 8-9 year old participants.

Previous research had not yet examined justice reasoning as applied to the distribution of educational opportunities in the form of differential treatment. The present study found evidence that children as young as 6 years did not equate fairness with simple equality of treatment, but recognized that special needs may warrant an unequal distribution of the teacher's individual attention, extra opportunities to read aloud, or a modification of assignments. The findings add complexity to the view that the justice concept of equality emerges earlier in ontogeny than the justice concept of merit or need. In this study, participants across ages 6 to 11 years considered claims to equality, merit, and need (i.e., the acceptability of differential treatment for high achievers and struggling students). The results present a more nuanced picture of children's justice conceptions than has been discussed in earlier work.

Acknowledgments

I would like to thank my dissertation committee members for their guidance and mentoring during the writing of this dissertation. I would also like to thank my family for encouraging me throughout the course of my studies at UC Berkeley. Last, but certainly not least, I extend my deepest thanks to my husband, Benjamin, who provided me with editorial, technological, and graphical support. His thoughtful insights were invaluable in helping me refine many parts of this work.

Introduction

Overview

The goal of this study was to examine children's reasoning about the fairness of differential treatment by teachers and to determine if there were circumstances under which children may consider differential treatment to be acceptable. The context of differential treatment as well as the teacher's rationale was systematically varied in order to determine whether it altered participants' evaluations. The overall proposition guiding this research is that children do not merely equate fairness with strict equality, but consider the educational needs and interests of others when evaluating the acceptability of differential treatment by teachers.

In the present study, children evaluated hypothetical situations in which three kinds of "educational goods" were unequally distributed by a teacher: the teacher's individual time and attention, quantity of work, and turns to participate in a whole-class activity. Children also evaluated the acceptability of four different rationales proposed to underlie each of the three stories of differential treatment, in addition to a condition in which no rationale was given. The teacher's rationale included differentiating instruction for high-achieving students, differentiating instruction for struggling students, preferential treatment for favored students, and preferential treatment for boys. Participants were asked to evaluate each of the rationales in each of the three stories of differential treatment and to justify their responses.

Investigations of children's reasoning about differential treatment have been limited. For the most part, previous studies have analyzed distributive justice reasoning utilizing tasks that ask children to make a fair distribution of a resource, such as money, candy, cookies, or votes. One prevailing theory of the development of distributive justice reasoning proposes that children's notions of justice progress through stages where a self-serving understanding of fair distribution becomes differentiated into notions of strict equality, then equity (merit), and, finally, need (Damon, 1977). If this stage progression holds, results of the present study would show that younger children are more intolerant of differential treatment than older children, preferring equality no matter what the basis of the differential treatment.

Another line of research detailing contextual variations in children's moral judgments, however, would suggest a more complex picture of children's justice development (Helwig, Hildebrandt, & Turiel, 1995; Sigelman and Waitzman, 1991), particularly for justice reasoning about an educational issue. Within a school context, multifaceted issues (including moral, social-conventional, and learning issues) may come to bear on judgments about teacher differential treatment. Furthermore, children's judgments about the just distribution of teacher resources may differ from their judgments about the distribution of other kinds of resources (e.g. money) because they are more familiar with the school context, having spent most of their time outside of the home in the school setting.

The present study differs from previous approaches to studying distributive justice reasoning in its use of social-cognitive domain theory as a basis for analyzing judgments about differential teacher treatment. Social domain theory offers an approach to analyzing both moral and non-moral components that often co-exist in situations. It is expected that within an educational context, children take into account need and merit at an earlier age than has been previously found in studies examining justice concepts in non-educational contexts. Furthermore, it is expected that children consider contextual variations, such as the specific educational good that is unequally apportioned, when making their determination of fairness. Finally, it is hypothesized that children's justifications include multifaceted moral and non-moral issues. The

study contributes nuance to current theories about the global development of distributive justice reasoning by examining the topic as applied to the distribution of educational opportunities.

Background

Little is known about what children consider fair in the classroom context, particularly in regards to differential treatment by teachers. Various forms of differential treatment can exist; teachers' personal preferences for certain students may result in favoritism and cries of unfairness. On the other hand, sometimes teachers legitimately differentiate their instruction to fit individual needs. Although research has shown that children are aware of differential treatment from a young age, and that it has negative consequences on motivation and other student outcomes (Weinstein, 1993), very few studies have explored children's understanding of the morality of differential treatment in the classroom.

A review of research is presented here to motivate the present study and establish its theoretical context. A presentation of philosophical conceptions of key components of the concept of justice is followed by a review of psychological research on children's perceptions of differential teacher treatment, and the development of justice concepts through childhood. Social domain theory is described prior to the statement of the research hypotheses.

The concept of justice. Problems of justice are complex and far-ranging, but they largely arise out of circumstances of scarcity. When only one job opportunity is available and many candidates compete for the same position, or when historically disadvantaged and marginalized individuals or groups make claims for restitution, matters of justice are at stake. Generally, justice issues come to the fore when benefits and burdens, or goods and evils, must be distributed in the context of varying interests and claims.

Philosophers have given a general definition of justice as a moral principle having to do with balancing and adjudicating among competing claims in a way that renders each person his or her due (Pojman, 2005; Miller, 1979). Distributive justice forms one subtype of the broader concept of justice. Distributive justice is concerned with the fair distribution of a particular good or resource—be it a concrete good like wealth or a more abstract good like learning opportunity or happiness. The view of justice presented in the present study holds that justice forms part of an objective moral system that is prescriptive and universally valid. The perspective that objective features of justice can be defined (e.g., proportionality, reciprocity, and impartiality) contrasts with the view that justice is relative to the local norms or conventions of a particular society (e.g., Walzer, 1984).

To refer to justice as the adjudication and balancing among competing claims to render each person their due is to state a formal definition of the concept without giving substance to how a person's due should be determined. Thus, in addition to outlining the general structure of justice, philosophers have also theorized about distributive criteria for how a good should be divided (Pojman, 2005; Miller, 1979; Frankena, 1973). Equality is one criterion for making a distribution. Simple equality would call for equal shares to all people, regardless of individual circumstances. Another criterion for determining a just distribution is one of merit, where goods are distributed in greater proportion to those who exhibit greater productivity, ability, or contribution. Need is a third criterion used to determine a just distribution. This can be seen when, in the name of justice, we call for greater attention and resources for the handicapped. The criterion of need is closely related to the concept of equality, for justice may ask us to help others with special handicaps because only if we help them can they enjoy an equal chance at life

(Frankena, 1973). Finally, sometimes distinctions such as race, gender, or social rank are used to decide how rewards are allocated. These ascriptions or in-born factors could be related to concepts of rights or entitlements, but many philosophers reject these factors as morally irrelevant.

Thus, equality, merit, and need are examples of distributive criteria that one may adopt in order to allocate resources in a just manner. Each of these criteria tends to favor one or another claim that a person might have. While these criteria have been described separately, conceptually they are closely related. And in actual cases, more than one criterion may be adopted and integrated to judge a situation. Furthermore, some criteria may be more appropriate for some situations than others. While not exhaustive (see also the perspectives of Rawls, 1958 or Parfit, 1997), this list of criteria serves to highlight significant claims often connected with justice reasoning.

The definitional aspects of justice described here – its salience in conditions of scarcity, its abstract, objective nature, and distributional principles like merit and need – have been core to previous developmental investigations of distributive justice reasoning.

Research on children's perceptions of differential treatment. Weinstein and colleagues have conducted a number of studies on children's perception of differential teacher treatment (Weinstein & Middlestadt, 1979; Weinstein, 1983; Weinstein, 1993). These studies have shown that children as young as first grade, regardless of sex or academic standing, are aware that differential teacher treatment can exist and, in particular, that perceived high-achieving students receive more favorable treatment than perceived low-achieving students (Weinstein & Middlestadt, 1979; Weinstein, Marshall, Brattensani & Marshall 1982). Weinstein, Marshall, Sharp and Botkin (1987) also found age differences in children's reporting of teacher differential treatment. First and third graders compared to fifth graders reported less negative treatment by teachers in general. Furthermore, younger subjects were less accurate than fifth graders in predicting teacher expectations and in reporting patterns of differential treatment in their own interactions with the teacher. Thus, it appears that the salience of differential treatment become more pronounced as children become older and accumulate more school experience.

Weinstein and colleagues have also found some evidence that children revise their own achievement expectations based on the information they acquire about their ability from the way teachers differentially treat students in the classroom. Brettesani, Weinstein, Marshall (1984) showed that in classrooms where differential treatment was salient, teacher expectations explained more of the variance in children's year-end achievement after prior achievement differences were controlled for. Furthermore, Kuklinski and Weinstein (2000) found heightened risk for teacher expectancy effects in classrooms with greater differential teacher treatment where instructional patterns consistently conveyed rigid expectations to students. Overall, this body of research has demonstrated that elementary-aged children are aware of differential teacher treatment and that differential treatment can have detrimental effects on the expectations students have for themselves, but these studies have not examined whether children think differential teacher treatment can be acceptable under certain circumstances, and whether children may even consider it to be fair or necessary in some cases.

In contrast, a study conducted by Kowal and Cramer (1997) showed that children can perceive preferential treatment to be justified under certain conditions. This study examined preferential treatment in the child-parent context, not the student-teacher context, however. They interviewed children ages 11 to 13 years and found that 75% of the children who acknowledged

that differential treatment occurred in their homes did not find the practice to be unfair. Participants cited rationales such as different needs, different ages, or other personal attributes when explaining the acceptability of differential treatment in the home. The authors concluded that most of their participants did not equate fairness with simple equality of treatment. Kowal and Cramer (1997) did not assess differential treatment evaluations at the younger ages, or in the school context where the authority role of the teacher may be perceived in a different light than that of a parent.

Studies on children's conceptions of justice. Moral development researchers have not paid a significant amount of attention to studying moral judgments concerning differential treatment, but they have had a longstanding interest in the development of justice concepts (Piaget, 1932; Kohlberg, 1981; Damon, 1977). Much of the previous research has attempted to identify shifts in justice reasoning at different ages. In *Moral Judgment of the Child*, Piaget held that the development of children's understanding of fairness was consistent with his broader theory that morality developed from a heteronomous orientation of unilateral respect for adult authority to an autonomous orientation (Piaget, 1932). He argued that heteronomous children possess a pre-moral understanding of fairness, essentially equating it with obedience to the dictates of authority. Piaget reported that younger children (ages 6 – 9) typically regarded any adult order, punishment or favoritism as fair and acceptable. In contrast, older children used notions of equality and reciprocity in thinking about justice. Piaget explained this development by arguing that younger children's experiences are colored predominantly by interactions with authority figures, but as they acquire social experiences of mutual respect and cooperation with peers, they cultivate an understanding of equality. Eventually, the understanding of justice as equality is transformed to "a higher form" of reciprocity or equity, which is not based on mere equality but on real situations of individual need.

The developmental trend revealed by Piaget was later examined by Damon (1977). Building on the structural developmental tradition, Damon engaged in a series of investigations targeted specifically at distributive justice reasoning. In his studies, he asked participants to listen to hypothetical scenarios about other children coming to a windfall reward as a result of working together (e.g., making bracelets, delivering newspapers), and then he asked his participants to allocate rewards to hypothetical children with varying claims (e.g., the child who contributed the most to the task, the poorest, the oldest). Damon found a developmental trajectory similar to that described by Piaget. However, Damon found that the concept of justice as equality appeared earlier in childhood than Piaget had postulated.

Based on studies conducted with children ages 4 to 8 (and later with children up to age 10), Damon discerned six levels of positive justice reasoning wherein egocentric, self-serving understandings of fair distribution were differentiated into notions of strict equality, then equity (merit) and, finally, need. Four-year-old children confused fairness with their own desires, giving justifications that related to self-interests or arbitrary characteristics, with some rudimentary notions of reciprocity observed (e.g., "She'll get mad if I don't share with her"). Five-year-olds considered fairness to be strict equality of treatment. Special considerations of need or merit, and each person's unique intentions or motivations, were not weighed against each other. Six- and seven-year-olds, though unilateral and inflexible in their distribution decisions, did account for merit, which was the only type of claim understood to be deserving of extra reward. Finally, eight-year-olds accounted for a plurality of justice claims, including need and merit. They recognized that need created an inequality and were able to integrate claims of various persons as

well as specific contextual demands. However, they displayed a situational kind of ethic, and did not demonstrate a moral perspective outside of the immediate concrete situation.

Studies following Damon's pioneering work have produced a more complex picture of children's distributive justice reasoning. Damon's developmental findings have been qualified and extended in several ways. Further research has shown that children's judgments about fair distribution depend on situational features such as personal qualities of the reward recipients, their relationship to one another, the context of the situation, and the good to be distributed (McGillicuddy-Di Lisi, Daly, Neal, 2006; Moore, 2009; Lerner, 1974; Fehr, Bernhard, Rockenbach, 2008; Enright et al, 1984). As an example, Sigelman and Waitzman (1991) asked children to make a distributive justice decision similar to Damon's reward-for-work scenario where they had to decide how to divide 9 dollars for selling pots they made. But the children were also asked to make allocations in other contexts: they had to allocate 9 votes among three children, and 90 charitable dollars. Sigelman and Waitzman (1991) found that, consonant with Damon's findings, 5 year olds were insensitive to contextual information and generally preferred to allocate resources equally. In contrast, 9 and 13 year olds accounted for contextual features and were more likely to choose equality as the principle for distributing votes and need as the principle for distributing charity. Context appeared to impact older children's choice of distributional criterion.

Overall, findings related to developmental age patterns in children's justice reasoning have been mixed, with some studies supporting Damon's identified patterns (e.g., Damon, 1980; Enright, et al., 1984; Enright, Franklin, and Manheim, 1980; Sigelman & Waitzman, 1991; McGillicuddy-Di Lisi, Daly, Neal, 2006; Fehr, Bernhard, Rockenbach, 2008; Rochat, et al., 2009), and other studies providing contrary evidence (Peterson, Peterson, McDonald, 1975; Birch and Billman, 1986; Olson and Spelke, 2008; Baumard, Mascaro, Chevallier, 2012). The results have been made even more difficult to evaluate due to varying methods used in the different studies. Furthermore, findings from these studies and others that have examined distributive justice reasoning have generally relied on tasks entailing dividing up the fruits of one's labor, and on procedures involving the distribution of tangible goods like candies, cookies, and money. Children's reasoning about the distribution of educational goods (e.g., teacher's time and attention), on the other hand, may reflect different issues and concerns than those brought to bear in this body of research.

Studies on children's conceptions of justice within the classroom. In a series of studies, Thorkildsen and her colleagues examined children's conceptions of fairness in the classroom setting. Although she has not specifically investigated justice reasoning related to differential treatment, she has looked at children's evaluation of the fairness of classroom practices including acceleration, enrichment, and peer tutoring (Thorkildsen, 1989a), the fairness of teaching practices including having individuals compete publicly or perform work independently (Thorkildsen, 1989b), the fairness of motivation practices including praising excellent performance, encouraging a task focus, or rewarding high effort (Thorkildsen, Nolen, Fournier, 1994), and the fairness of testing practices (Thorkildsen, 1991; Thorkildsen, 2000).

Similar to Damon (1977), Thorkildsen (1989a) delineated levels of justice concepts where notions of equality become differentiated into notions of equity. In this study, she described a scenario where students finished work at different rates and she asked participants which of the following practices they thought would lead to the fairest outcome: peer tutoring with fast workers helping slow workers, extra privileges for the fast workers, fast workers sit and

wait, or all workers move on so that slow workers never finish. In her analysis, Thorkildsen addressed the educational goods that children found most important, specifying these as work, rewards, or learning. She concluded that students under 10-years-old chose as fair the practices producing equality in observable matters, such as opportunities for play and piles of finished work, without mentioning the value of learning. Students from 10 to 18-years-old discussed learning as a good to be equally distributed. At about 18 years, students began to favor acceleration over practices that kept everyone learning the same amount, arguing that high-ability students should be able to learn more than low ability students. Overall, despite the age differences she defined, 97% of her sample reported the peer tutoring practice was most fair out of the options she provided.

The developmental trend that Thorkildsen identified largely replicated the trend that Damon found and demonstrates that the same general developmental pattern occurs with regard to reasoning about the justice of an educational issue (though at a slower rate –in Damon’s study, considerations of need and merit were observed around age 7-8). At the same time, there are reasons to be cautious about Thorkildsen’s conclusions. A limitation of her studies is that she asks students to evaluate classroom practices that are not always clear-cut issues of fairness. She assumes that certain situations have to do with fairness or justice when they might actually be better characterized as pedagogical or social organizational issues.

In Thorkildsen (1989a), students were asked to consider the fairness of the practice of sitting quietly and waiting upon completing an assignment. For some students this practice may simply represent an inefficient way of organizing learning and they may dislike it, but they may not necessarily be concerned about its fairness. Inequality of treatment or a competition of claims at odd with one another is not necessarily apparent. All the children are given the same assignment, and all have the same opportunity to finish their work in an equal allotment of time. That the children who finish first have to wait until others are done may simply be viewed as a matter of expediency for the teacher.

Similarly, in Thorkildsen (2000), students were asked to evaluate the fairness of several options: (a) a short quiz every day (b) longer unit tests every two to three weeks or (c) one standardized test a year. Many children might believe that these are pedagogical decisions that have more to do with learning and assessment goals rather than what is fair or not fair. A practice could be evaluated as good or bad because it is effective in helping children learn, or because it keeps kids busy and on task. Not all evaluations have to do with the standard of fairness, yet it seems that Thorkildsen conflates different types of evaluations as related to matters of justice.

In summary, although some studies have examined children’s fairness evaluations of a variety of teaching practices in the classroom, few of these practices have to do directly with unequal learning opportunities resulting from differential teacher treatment, and many of the practices that have been examined confuse issues of fairness with issues of effectiveness or expediency.

Social domain research related to children’s understanding of differential treatment. In contrast to Thorkildsen’s studies, which have made assumptions about what kinds of issues involve fairness decisions, research using a social domain perspective (Turiel, 1983; Killen et al, 2002; Nucci, 2001; Smetana, 2006) has sought to understand *how* children reason about issues and *whether* moral considerations, among other kinds of considerations, are present. With respect to differential teacher treatment, children may make evaluative judgments based on

fairness concerns, or they may base their judgments on other concerns, such as educational goals or the social conventional aspect of the teacher's authority. Contrary to Thorkildsen's particularistic approach to defining morality, domain theory takes a universalistic and objective view on the moral domain. Domain researchers use criteria such as universality, authority contingency, and alterability to define the boundaries of morality and distinguish it from other domains like social conventions, which are derived from local customs. More than a hundred studies provide strong support for this definition of morality and have consistently shown that individuals evaluate moral issues in accordance with these features (Smetana, 2006).

Building on the tradition of Piaget and Kohlberg, domain theory takes a structural developmental approach to the psychological study of moral development in that individuals are viewed as actively constructing their moral concepts through reciprocal social interactions (Turiel, 1983). Unlike the approach of Piaget and Kohlberg, however, domain theory does not presuppose a unified cognitive structure in which all aspects of thought, both social and nonsocial, are globally interrelated. Research using a domain perspective has found that moral reasoning, as a kind of social knowledge, forms a system distinct from nonsocial knowledge. The distinctions that children draw between domains are used as a basis for analyzing social reasoning.

Stage/level approaches like Piaget's and Kohlberg's have emphasized broad orientations, often neglecting the ways in which children coordinate and prioritize issues in different domains as they reason about social phenomena. These approaches have concluded that young children's morality is characterized by either egocentrism (Piaget, 1932), self-interest (Damon, 1977), or conventional reasoning (Kohlberg, 1981), while only older children display moral reasoning. However, when researchers attend to domain distinctions, even preschool children have been observed to make moral judgments (e.g., Nucci & Turiel, 1978). Evidence from domain studies has strongly suggested that variations in moral judgments are not necessarily determined by moral developmental stage, but rather are better explained by the ways in which children reason about a particular problem, accounting for the context of the situation and weighing and balancing moral and other considerations (Turiel, 2002; Smetana, 2006).

Taking a social domain perspective requires a multifaceted approach to understanding children's judgments about differential treatment. Children's understanding of teacher authority, the particular form of differential treatment, and the teacher's rationale for differentially treating students may all influence children's evaluation of the acceptability of differential treatment. Prior studies using the domain framework have yet to examine differential teacher treatment. To further our understanding on this topic, the next step is to examine how children evaluate unequal treatment by teachers and determine what influences judgments about the fair allocation of educational resources.

Statement of Research Problem

The present study aimed to shed light on the development of distributive justice reasoning in the educational context. Of primary interest was understanding whether there are age differences in the development of reasoning about teacher differential treatment. Previous research using a structural developmental approach suggests that younger children have an equalitarian notion of fairness while older children are more likely to account for individual needs and interests. However, due to the lack of research that has specifically examined children's reasoning about differential treatment, it was difficult to predict the nature of age differences in children's evaluations. Because few studies have directly examined distributive

justice reasoning in the educational context, the present study was guided by a concern with understanding the sources of variability in differential treatment reasoning.

Domain studies have demonstrated that children do not simply conform to the social organizational system of the school, accepting all treatment they receive from those in positions of authority, but rather evaluate the acceptability of commands and rules issued by teachers (Laupa, Turiel & Cowan, 1995; Kim & Turiel, 1996; Laupa, 1991). Studies have also shown that children are critical of unfair rules and recognize limits on the school's jurisdiction (Dodsworth-Rugani, 1983; Smetana & Bitz, 1996; Principe & Helwig, 2002). In regards to differential treatment, then, it was expected that children would be critical of acts that they believe are unfair or harmful, even if they are carried out by a teacher in a position of authority.

Less clear, however, were the kinds of differential treatment children would consider fair. Specifically, would children focus solely on observable matters – the inequality of the treatment itself – or would they find differential treatment to be sometimes acceptable? This question is core to understanding moral reasoning about differential treatment because so little is presently known about how children reason in this area, and whether there are conditions under which they would endorse differential treatment. Two key factors the present study investigated were the context of differential treatment and the teacher's rationale for the differential treatment. Were such factors accounted for in children's developing understanding of the morality of differential treatment? The goal of the study was to answer the following research questions:

- (1) How does the specific educational good that is differentially distributed affect children's evaluation of an act of differential treatment?
- (2) How does a teacher's rationale affect children's evaluation of an act of differential treatment?
- (3) What domains of justifications do children use when evaluating differential teacher treatment? Do they use moral or non-moral reasoning when making their judgments, and what impact does an authority have on judgments of differential teacher treatment?

In the classroom setting, the particular context of differential treatment may vary: teachers may distribute different kinds of educational goods unequally. Depending on the nature of the educational good, children may find the differential treatment more or less acceptable. If the good is not valued, then the differential distribution may matter less to students than if a valued good is unequally apportioned. The first research question explored whether varying the educational good that is unequally distributed has a bearing on children's justice evaluations. This study considered three "goods" that teachers may differentially apportion to students: different quantities of work, individual time to help a subgroup of students, and turns to participate in reading. These are three prototypical "goods" whose unequal distribution may result in unequal learning opportunities. Based on results of previous research demonstrating contextual variation in moral judgment (Sigelman and Waitzman, 1991; McGillicuddy-Di Lisi, Neal, Daly, 2006; Helwig, Hildebrandt, & Turiel, 1995), it was hypothesized that children's judgments about differential treatment would vary by the specific educational good that is the subject of the teacher's differential treatment. It was expected that children would be more critical when teachers give extra turns or different assignments to selected students than when they choose to give individual attention to help certain students; the issue of equality is more salient in the former cases, and the issue of need in the latter case. Such contextual differences were considered to be one possible source of variation in distributive justice judgments for children of different ages.

Another factor that could bear on evaluation of differential treatment is children's understanding of the teacher's rationale or intention. Prior research (Feinfeld et al, 1999; Nelson, 1980; Helwig, Hildebrandt, & Turiel, 1995; Wellman, Cross, Watson, 2001) suggests that elementary aged children are able to consider a teacher's rationale for a decision. Less clear, however, was how they evaluate alternative rationales underlying differential treatment, and which rationales they consider legitimate. Teachers sometimes engage in "differentiation practices" or "differentiated instruction" where they do not deliver one-size-fits-all lessons and assignments to their students, but rather modify elements of a curriculum according to different students' ability or learning profile (Tomlinson, 1999). Examples of differentiation include giving more challenging work to high-achieving students or devoting extra time to struggling students. In contrast, differential treatment might take a more questionable form in the classroom when it is not related to educational goals, but rather result from personal preferences that teachers might have for particular students or for a particular gender. No evidence exists as to whether students can distinguish between differential treatment for reasons of differentiated instruction, on the one hand, and preferential treatment for preferred students or a preferred gender, on the other. Further, little is known about whether students agree with teachers' differentiation decisions, even for justifiable instructional objectives.

For these reasons, one of the goals of the study was to examine how various rationales underlying differential treatment may influence children's evaluations of fairness. The study systematically varied four different rationales: differentiation for high-achieving students (representing the merit claim), differentiation for struggling students (representing the need claim), preferential treatment for favored students, and preferential treatment for boys (both representing non-pedagogical reasons for treating students differently). It was expected that children's reasoning along these distinctions would reveal how they discriminated among rationales and which they considered to be legitimate. Contrary to findings from prior research on distributive justice judgments in non-school contexts, it was hypothesized that even young children in the lower elementary grades could discriminate among varying teacher rationales and accept differential treatment for struggling students. This hypothesis was made on the basis of children's familiarity and experience with resource sharing in schooling contexts.

Finally, to obtain a fuller picture of children's understanding of differential treatment, not only were the circumstances under which children find differential teacher treatment to be acceptable studied, but the reasons underlying their judgments were also assessed. On the basis of previous studies that examined children's judgments about social issues within the school setting (e.g., Dodsworth-Rugani, 1983), it was expected that children would use multiple types of justifications when evaluating the acceptability of teacher differential treatment, including moral issues of fairness, equality, or rights, in addition to social conventional matters concerning school authority or rules, or even issues outside of the social domain, such as learning goals.

In terms of relations between evaluation and domain of justification, it was expected that negative evaluations of differential treatment would be associated with moral justifications, and that positive evaluations of differential treatment would be associated with learning or social-conventional justifications. However, some participants may also give moral and learning justifications for positive evaluations of differentiated instruction for high achieving or struggling students.

To further examine the nature of the justifications that children provided, the study analyzed domain distinctions in children's reasoning to determine whether they reasoned with concepts that they considered moral in the sense of being independent of authority sanctions (e.g.

Nucci & Turiel, 1993; Killen et al, 2002). It was expected that evaluations justified with moral judgments would be maintained regardless of an authority's approval or disapproval; in contrast, justifications related to learning goals or social-conventional reasons would be considered subject to the discretion of a higher school authority.

Method

Participants and Setting

The study included 76 children ages 6 to 11 years. Forty were male and 36 were female. The participants were divided into three age groups: 34 were in the 6-7 year old age group (16 males, 18 females), 21 were in the 8-9 age group (13 males, 8 females), and 21 were in the 10-11 age group (11 males, 10 females). The mean age of the three groups were as follows $M = 6.47$ years, $SD = 0.51$; $M = 8.62$ years, $SD = 0.50$; $M = 10.24$ years, $SD = 0.44$. Children were enrolled in public schools in the San Francisco Bay Area. The ethnic background of the sample (43% European American; 26% Asian American; 13% Hispanic; 4% African American) mostly reflected the ethnic composition of the public schools the participants attended. Participants were recruited from classes in each grade level and all students with parental consent were interviewed. Parents and students were informed that the interviews were confidential, voluntary, and anonymous.

Procedure

All participants received a structured interview, lasting approximately 20 minutes. A trained female researcher conducted all interviews individually in a quiet room in the school, ensuring that all students experienced the same interview conditions. The interviewer began by asking the student to answer mundane questions that had no right or wrong answers to help them adjust to the setting and become familiar with answering open-ended questions. The students were then told they would answer similar questions with no right or wrong answers in the interview. Stories were read to the participants and cue cards with pictures were used to facilitate comprehension and memory. The general format followed the structural-developmental clinical method, which enables interviewers to probe children's reasoning following a standard list of interview questions (Damon, 1977; Turiel, 1983). Participants could decline to answer a question or end the interview at any time, though none did. Interviews were audio-taped and subsequently transcribed.

Design

The interview consisted of three hypothetical stories of differential teacher treatment. The differential treatment stories and the rationales were derived from the author's observations of classrooms, and from consultation with two public school teachers. Stories portrayed classroom situations involving a teacher who distributes an educational good unequally. The stories and rationales were intended to elicit reasoning on a range of claims identified in the philosophical literature as pertinent to concepts of justice (equality, need, merit). Pilot testing with children ages five to 13 was conducted to determine whether the stories indeed elicited concepts of equality, need and merit. Testing also ensured that the stories were interpretable and relevant to both lower and upper-aged elementary school children. The interview protocol was refined after multiple phases of pilot testing.

The basic structure of the research design is outlined in Figure 1. The three hypothetical stories within the interview were selected to represent prototypical forms of differential teacher treatment. Each story depicted a classroom situation in which a teacher differentially treats certain students by allocating to them an educational good that other children in the class do not receive. The educational goods included quantity of assigned work, turns to participate in class, and opportunity to receive individual time and attention from the teacher. Each of these

educational goods represents a learning opportunity in the classroom, and therefore their differential allocation would lead to unequal learning opportunities among students in classroom. One key question the study sought to examine was the extent to which this mattered to the children, and how their judgments about each of the goods – assigned work, turns to participate, and individual teacher attention – varied.

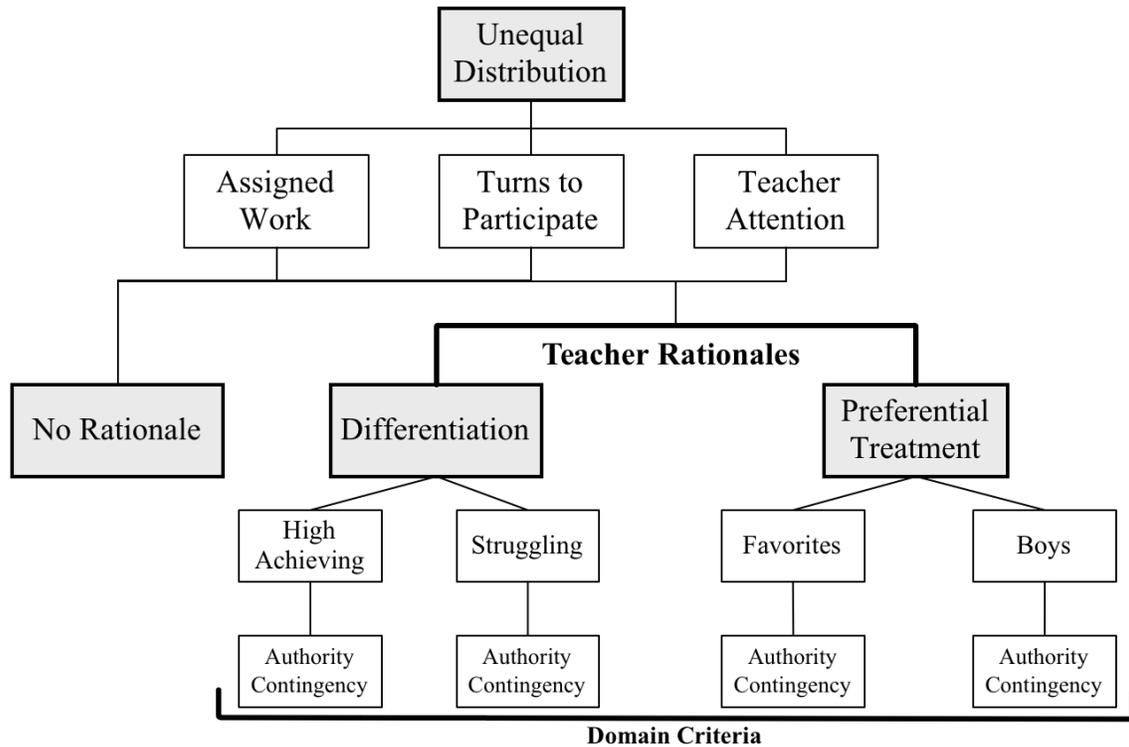


Figure 1. Basic structure of research study

Each story consisted of five conditions. In the first condition, the participant was not provided with a rationale for the teacher’s differential treatment (“No Rationale” case). The examiner described the scenario and asked the participant to evaluate the differential treatment (“Is this OK/not OK?”), and to provide a justification (“Why do you think so?”). In the next four conditions, four alternative rationales for the differential treatment were provided and the participants were asked to re-evaluate the story in light of the rationale and to justify their evaluation. This format in which a “No Rationale” condition is compared to four rationales was used to understand how children evaluate differential treatment in general or abstract cases compared to more contextualized situations when they are made aware of the teacher’s rationale for the differential treatment. This design was adapted from previous social domain research in which reasoning about moral rights in the abstract is compared against reasoning about rights in contextualized situations (e.g., Helwig, 1995).

It was also of interest in the present investigation to determine whether children evaluated differentiated instructional practices differently from preferential treatment. Therefore, of the four rationales underlying the differential treatment that were presented, two were related to differentiation and two were related to preferential treatment. Differentiation for (1) high-achieving students (“High Achieving”) and (2) struggling students (“Struggling”) were chosen to

represent claims to merit and need, as well as simple examples of differentiated instruction for students with different learning needs. The two rationales related to preferential treatment included (1) the rationale that the teacher treated students differently because she liked them the most (“Favorites”) and (2) the rationale that the teacher treated students differently because they were boys (“Boys”). Preferential treatment for students the teacher liked the most was chosen to represent a non-pedagogical and personal reason for treating students differently. Boys were chosen to represent an ascriptive or in-born factor that might be representative of some claim to entitlement. Boys were chosen as the only gender to be included in the hypothetical scenarios because of larger societal norms that have historically favored boys, and the fact that educational settings in some countries continue to limit educational opportunities only to boys. For each of the rationales, the participant was asked to re-evaluate the differential treatment (“Is this OK/not OK?”), and to provide a justification (“Why do you think so?”).

To further examine participants’ judgments of the four rationales for differential treatment, they were asked if the principal’s approval or disapproval of the teacher’s differential treatment had a bearing on their evaluation. If the participant approved of the differential treatment in light of the teacher rationale, he/she was asked if it would still be acceptable even if the principal objected to it. Alternatively, if the participant rejected the differential treatment in light of the rationale, he/she was asked if the differential treatment would *become* acceptable if the principal endorsed the practice. This type of question requires children to make what previous domain researchers have called a criterion judgment, which refers to judgments used to classify an event as belonging to a particular domain, moral or otherwise. Moral rules are considered unalterable and not contingent on authority sanctions, while social conventional rules are context-bound and subject to an authority’s decree. This question was intended to gain insight into whether children view an issue as belonging in the moral domain, or as subject to the rules of an authority and thus belonging in the conventional domain. It is referred to as the “Authority Contingency” question.

The three stories of differential treatment and alternative rationales are provided in Table 1. Probes and criterion questions have been omitted for space, but can be found in the complete interview protocol in Appendix A. Because all the stories and questions followed the same format, only one will be described in detail below.

In the “Turns to Participate” scenario, the participants were read the following story: “In this class all the students love reading out loud. They all raise their hands to get called on. But, day after day, the same three students get more turns at reading out loud than the rest of the class. Is this OK or not OK? Why do you think so?”

After participants gave their evaluation and justification, they were provided with the first of the four rationales underlying the differential treatment and were asked: “What if the three students the teacher calls on are the best readers and the teacher gives these students extra turns because they read nicely? Is this OK or not OK? Why?” (“High Achieving Rationale”)

If a student judged this rationale to be acceptable, they were asked if it would still be acceptable if the principal did not want the teacher to call on the same best readers: “Would it still be OK if the principal didn’t want the teachers calling on the same best readers?” (“Authority Contingency”)

Alternatively, if the student judged the rationale to be unacceptable, they were asked if the rationale for the differential treatment would become acceptable if the principal allowed the teacher to call on the same best readers: “Would it make it OK if the principal said the teacher can call on the same best readers?” (“Authority Contingency”)

Following the high achieving rationale condition and the authority contingency question, the participants were given the second rationale, and told that the teacher called on the three students the most because they struggled with reading: “What if the three students the teacher calls on are the ones who struggle most with reading and the teacher thinks they should get more practice? Is this OK or not OK? Why?” (“Struggling Rationale”)

Based on the participant’s response, they were again asked one of the following “Authority Contingency” questions: “Would it still be OK if the principal didn’t want teachers calling on the same struggling readers? Why?” Or “Would it make it OK if the principal said the teacher can call on the same struggling readers? Why?”

Next, the participant was presented with the “Favorites Rationale” to explain the differential treatment: “What if the teacher likes these three students the most and that’s why she gives them extra turns? Is this OK or not OK? Why?” (“Favorites Rationale”)

Based on the participant’s response, they were asked one of the following “Authority Contingency” questions: “Would it still be OK if the principal didn’t want teachers calling on the students she liked? Why?” Or “Would it make it OK if the principal said the teacher can call on the students she liked? Why?”

Finally, in the fourth rationale, the participants were given another non-pedagogical reason to explain the differential treatment. “What if the teacher gave an extra turn to these three students because they were boys? Is this OK or not OK? Why?” (“Boys Rationale”).

An authority contingency question was once again asked. Depending on whether the participant accepted or rejected the rationale for the teacher’s differential treatment, he or she was asked one of the following questions: “Would it still be OK if the principal didn’t want the teacher calling more on boys? Why?” or “Would it make it OK if the principal said the teacher can call more on boys? Why?”

In addition to the “Turns to Participate” story, participants were read a story in which students were assigned unequal quantities of work (“Assigned Work” story) and a third story in which the teacher gives only some students extra individual time and attention (“Individual Teacher Attention” story).

A within-subjects design was used, with all participants evaluating all three stories. Interviews were systematically counterbalanced as to the order of the differential treatment stories. The rationales were presented in the same order (high achieving, struggling, favorites, boys) so as to not bias the participants by presenting the most unfavorable reasons for differential treatment first. Probes were used, as needed, to clarify participants’ responses.

Table 1

Story 1: Unequal Teacher Attention

In this class all the students like working with the teacher because she helps them learn more things. But every day, during math time, the teacher spends an extra 10 minutes working only with Erin and Pat, while the other kids are doing worksheets. Is this OK or not OK? Why?

- a. What if Erin and Pat have the highest math grades, and the teacher wants to give them “challenge” problems to work on?
- b. What if Erin and Pat are having a hard time in math, and the teacher wants to give them extra help?
- c. What if the teacher liked Erin and Pat more than the other kids and that’s why she wanted to spend more time working with them in math?
- d. What if the teacher gave extra help to Erin and Pat because they were boys?

Story 2: Unequal Turns to Participate

In this class all the students love reading out loud. They all raise their hands to get called on. But, day after day, the same three students get more turns at reading out loud than the rest of the class. Is this OK or not OK? Why?

- a. What if the three students the teacher calls on are the best readers and the teacher gives these students extra turns because they read nicely?
- b. What if the three students the teacher calls on are the ones who struggle most with reading and the teacher thinks they should get more practice?
- c. What if the teacher likes these three students the most and that’s why she gives them extra turns?
- d. What if the teacher gave an extra turn to these three students because they were boys?

Story 3: Unequal Quantities of Assigned Work

In this class, all the kids get math worksheets every week. They have to complete 4 addition (multiplication, for older participants) pages. A few students, however, only have to complete 2 pages. This means that **not** all the students have to do the same assignment. Is this OK or not OK? Why?

- a. What if the students who have to complete 2 pages have the highest math grades? The teacher gives them fewer pages, but the problems are harder.
- b. What if the students who have to complete fewer pages are having a hard time, and the teacher thinks that 4 pages would be too difficult for them?
- c. What if the teacher likes some students more than others and that’s why she assigns them less work?
- d. What if the teacher gave these students less homework because they are boys?

Coding

Participants' evaluations of each story/rationale were coded as negative, positive, or maybe. The positive and maybe responses were eventually combined. It was determined that the negative evaluations should remain separate while the positive and maybe responses combined for several reasons: the majority of evaluations were negative, there were a small number of maybe responses, and fewer children vacillated when rejecting differential treatment compared to when they accepted it thus suggesting that yes/maybe responses were more conceptually linked than no/maybe responses. A dichotomous variable was therefore constructed with negative responses coded as 0 and positive/maybe responses coded as 1.

A coding scheme for justification categories was developed based on a systematic review of 30% of the interview transcripts. Previous coding schemes by Davidson, Turiel & Black (1983) and Dodsworth-Rugani (1983) guided the creation of the coding system for the present study. The construction and development of the coding system (Appendix B) entailed an iterative process of reviewing the transcripts, creating conceptual categories, and fine-tuning the categories until all data could fit cleanly into the categories.

Participants gave a range of justifications for their judgments. Questions related to differential treatment elicited different conceptions of fairness (e.g., need, equality) as well as other moral concerns (e.g., welfare) and educational considerations (see Table 2). Categories making up at least 5% of the justifications given were retained, and eventually collapsed into the four larger conceptual domains of moral, learning, social-conventional, and other.

Table 2
Justification Categories

Category	Description
<i>Moral</i>	
Equality	Includes (1) Any appeal for the equality of all people, regardless of personal characteristics, (2) any appeal for the equality of specified goods such as work, outcomes, job prospects, learning opportunities, and rewards, (3) Any disapproval of inequality or reference to a disequilibrium. ("No one should be at an advantage or disadvantage." "Sexism or favoritism."), and (4) Simple statement of fairness or unfairness. ("It's not fair.")
Need/Equity	Appeal to the needs of struggling or low-achieving students. In particular, the differential treatment is unacceptable because the teacher should help kids who need help in order to make things fair. Alternatively, the differential treatment is acceptable because of the recognition of differing needs and the inherent disequilibrium that this creates. ("The teacher should go around helping the kids who need help the most." "Kids who struggle need to catch up with the rest of the class.")
Other Moral Concerns	Appeals to welfare, harm, rights, and unspecified moral rationales. ("The children will be hurt and feel left out." "You just have to get a turn.")
<i>Learning</i>	
Importance of Learning	Appeals to learning goals or other educational consequences such as the benefits on learning outcomes, or the lost opportunity for the development of skills, the attainment of preparation for the next grade level, task completion, or future job prospects. ("Kids might have questions that won't get answered." "Kids won't get skills they need." "The high kids won't learn anything more if they're given the same assignments." "The students will finish their work and have nothing to do.")
Ability	Appeal to individual attributes like intelligence, the possession of good grades, being a hard worker. ("Since they work hard and passed a lot of levels, they get hard stuff to do.")
<i>Social Conventional</i>	
Roles	Appeal to the teacher's job or role ("A teacher's job is to teach." "The teacher should separate her personal life from her professional.")
Social Tradition	Appeal to social traditions or labels attributed to an individual based on group membership or stereotypes. ("Boys' brains are smarter than girls' brains.")
Authority	Appeal to authority, includes recognition that the principal may have knowledge or expertise that the teacher lacks because of his role. ("The principal is like the king of the school and the teacher needs to listen to her boss.")
Rules	Appeal to rules or laws. ("That's ok because the laws are different.")
Social Organization	Appeal to the need for social organization and classroom management. ("Kids will have free time and cause problems for the teacher.")
<i>Other</i>	Miscellaneous, including appeals to the personal domain or the teacher's individual agency to do as she pleases ("People like some people more.")

Moral justifications for evaluations of stories/rationales included references to fairness, equality, need, welfare/harm, or unspecified moral evaluations. Simple statements of fairness or unfairness were initially coded as a separate category, but eventually combined with the equality justifications because when participants used the word “fair” they often elaborated their responses by appealing to equality. “Equality” was also coded when participants appealed to either the equality of all people regardless of personal characteristics or the need for the equality of work, learning opportunities, rewards, or job prospects. Disapproval of inequality was additionally included in this category. Appeals to the needs of struggling or low-achieving students were coded as a separate moral justification category, “need.” The desire to shift opportunities from high students to students in need is related to notions of equity where equilibrium is achieved when struggling students receive extra help to catch up with the rest of the class. When participants used this category, they appealed to the idea that the different needs of struggling students created a disequilibrium that could be rectified through differential teacher treatment. Finally, participants sometimes referenced other moral concerns, such as welfare or rights, or they made unelaborated references to moral obligations as evidenced by tone and context (“You just have to get a turn.”); these responses were coded as “other moral concerns.”

The learning category consisted of two sub-categories: references to the importance of learning (including references to task completion), and references to intellectual ability. The learning category was coded most frequently when subjects were asked to evaluate differential treatment for high achieving or struggling students. For instance, participants might appeal to the high ability of some students as legitimating their need for further learning through differential teacher treatment; alternatively, participants might appeal to the lost opportunity for learning or the development of skills when teachers give differential treatment to some students over others. Participants’ references to the consequences of differential treatment on educational progress, advancing to another grade level, and future job prospects were also represented within the “importance of learning” sub-category. Finally, participants’ references to the consequences of differential treatment on task or work completion were represented as a sub-category within the broader “importance of learning” category.

Social-conventional justifications included appeals to features of a social organization, such as agreed-upon social rules, the teacher’s role or job duties, or the power of an authority figure like a principal to regulate a teacher’s actions. References to classroom management or the need to control the social organization of a classroom were also coded as social-conventional justifications. Lastly, justifications that appealed to gender stereotypes (“Boys are smarter than girls”) were included in this category, as these justifications referenced conventional ideas of group membership.

Finally, the “other” category included responses that could not be coded into any of the aforementioned categories. Notably, this category included references to the personal domain, such as when the participant appealed to the teacher’s will or individual agency to favor whomever she wants or to do as she pleases. The category also included justifications that appealed to fatigue (“you might get tired working with the teacher”), difficulty of work (“students might think it’s hard”), the personal interests of students (“The students will like it,” “The high students will feel good”), and all other justification categories that were infrequently provided or could not be readily classified into the other categories. Only reasons and justifications were coded; assertions and tangential remarks by participants were treated as uncodeable and excluded from the analysis.

Children were permitted to give more than one justification. Many of these responses combined moral and learning justifications, and occurred more frequently when participants were asked to evaluate differentiation practices. For example, participant responses that stated that differential treatment was both unfair due to inequality and detrimental to students' learning progress would be double-coded as moral and learning.

In response to criterion questions assessing whether children's judgments were contingent on an authority's approval or disapproval, evaluations were coded as positive, negative, or maybe. Additionally, a new coding category of "change" was created. If a participant changed their initial evaluation from positive to negative or negative to positive, their response was given a "change" code of 1. If they did not change their evaluation, their response was coded 0. This analysis assessed the stability of children's evaluations of differential treatment when considering the conflicting views from an authority.

Reliability

Reliability was assessed by randomly selecting 20% of the interviews for coding by a second judge. Using Cohen's kappa, inter-rater agreement for evaluations was .93, $z = 19.26$, $p < 0.001$ (percentage agreement = 97%). For moral justifications, kappa = 0.76 (percentage agreement = 89%); for social-conventional justifications, kappa = 0.92 (percentage agreement = 99%); for learning justifications, kappa = 0.85 (percentage agreement = 94%); for other justifications, kappa = 0.42 (percentage agreement = 93%). The overall percentage agreement for all justifications was 87%.

Results

Plan for Analysis

Results of the current study are presented in three primary sections: analysis of evaluations of differential treatment, analysis of justifications underlying evaluations of differential treatment, and analysis of the impact of authority on the stability of judgments of differential treatment. The relations between justification categories and type of evaluation were also examined.

The analytical and statistical methods of the present study were derived from previous domain studies using a repeated measures design (e.g., Killen, M., Lee-Kim, J., McGlothlin, H., & Stangor, C., 2002; Wainryb, Shaw, Laupa, & Smith, 2001; Ardila-Rey, A., Killen, M., 2001). Exploratory chi-square goodness of fit tests were used to examine the presence of significant differences among demographic variables of interest (race, age, academic performance, gender) and evaluations and justifications. The effects of educational good, rationale, and age on evaluations were examined with a repeated measures ANOVA (Analysis of Variance). The effects of educational good, rationale, and age on each of the four primary justification domains (moral, learning, social-conventional, and other) as well as two justification sub-domains (need, ability) were also examined with a repeated measures ANOVA. Post-hoc comparisons using Tukey's HSD were performed to interpret significant differences in the ANOVAs.

Although loglinear-based approaches are typically deemed most appropriate for analyzing categorical data, Wainryb, Shaw, Laupa, & Smith (2001) and Posada & Wainryb (2008) point out that such approaches are likely to run into an estimation problem when applied to designs in which the experimental manipulation yields a fair number of empty cells. Empty cells represent a constraint as the log of zero is undefined. The standard strategy of adding a small constant to empty cells does not work well with repeated measures designs. Wainryb, Shaw, Laupa, & Smith (2001) indicate that ANOVA models can circumvent this estimation problem, as even minimal variance makes it possible to calculate means and generate estimates. Furthermore, an empirical investigation using the Monte Carlo technique demonstrated that ANOVA-based procedures are robust when used with dichotomous data (see D'Agostino, 1971).

Evaluations of Differential Treatment

General tendencies in evaluations of differential treatment across rationales. For each story and each rationale, participants were asked if differential treatment was OK or not OK. Their evaluations were coded as positive (accepting of differential treatment) or negative (rejecting of differential treatment). Table 3 presents the proportions of negative evaluations given to differential treatment across stories and teacher rationales. This section provides an overview of the data; statistical analyses are in subsequent sections.

Table 3

Proportions of Negative Evaluations for Differential Treatment

	No Rationale	Teacher Rationales			
		Differentiation		Preferential Treatment	
		High achieving	Struggling	Favorites	Boys
Educational Good					
Teacher Attention	0.53	0.40	0.15	0.95	0.96
Turns to Participate	0.81	0.73	0.22	0.96	0.95
Assigned Work	0.72	0.23	0.43	0.99	0.97

When a rationale was not provided, the majority of evaluations of differential treatment were negative. The proportion of negative evaluations varied with respect to the particular educational good (53% of evaluations were negative for “Teacher Attention,” 81% of evaluations were negative for “Turns to Participate,” and 72% of evaluations were negative for “Assigned Work”). Participants were more accepting of differential teacher attention than of differential turns to participate or differential assigned work when no rationale underlying the different treatment was given.

When rationales were provided for the differential treatment, the proportion of negative evaluations differed depending upon the good and the rationale. When it came to struggling students, only 15% of participants’ evaluations rejected allowing teachers to spend extra time with struggling students in the “Teacher Attention” story, and only 22% of evaluations rejected giving struggling students extra turns to read in the “Turns to Participate” story. In contrast, 43% of evaluations disagreed with giving struggling students less work as a form of differentiated instruction. When it came to high achieving students, the majority of participants rejected the practice of giving certain students more turns to participate because they read nicely (73% of evaluations were negative). By contrast, most participants did not find the practice of giving modified work for high achieving students to be problematic, with only 23% of negative evaluations. Participants were divided on whether high achieving students should receive extra teacher attention, with 40% of participants’ evaluations rejecting the practice of giving students with best grades extra individual time with the teacher to do math challenges. Finally, the vast majority of participants thought it was unacceptable for teachers to give preferential treatment to boys or favorite students across all the educational goods (95% - 99% of evaluations were negative).

Sex, race, academic performance differences in evaluations of differential treatment.

To test the significance of demographic variables on evaluation responses, chi-square goodness of fit tests were used to examine whether the results were statistically significant when they were compared to 50% chance. Chi-square tests yielded no sex differences for ages combined, $\chi^2(1) = 0.816, p = .366$, or for individual age groups. For the questions pertaining to preferential treatment for boys, there were also no sex differences in evaluation responses overall, $\chi^2(1) = 2.24, p = .134$, or for any age group (using either chi-square tests or Fisher’s exact test when the cell count was below 5).

Chi-square tests yielded no significant relationships between race and evaluation responses, $\chi^2(1) = 3.084, p = .379$. Age analyses across the dimensions of race and evaluations responses were conducted with significant findings for the 8-9 year old age group according to a chi-square test, $\chi^2(1) = 11.46, p = .003$, but deemed invalid due to the low number of Asian and Hispanic 8-9 year old participants.

Finally, chi-square tests were conducted to determine if there were any significant relationships between level of academic performance and responses to differential teacher treatment questions. Students were divided into two groups: mainly As and Bs or mainly Cs and Ds, per teacher or parent report. According to chi-square tests, there were no significant relationships between academic performance and evaluation responses, $\chi^2(1) = .075, p = .785$. Chi-square tests were also conducted on the questions pertaining to differentiation for high achieving or struggling students, but no significant relationships were found (for the high achieving questions, $\chi^2(1) = .073, p = .787$; for the struggling students question, $\chi^2(1) = .036, p$

= .85). Thus, subsequent analyses combined sex, race, and academic performance categories. Alpha was set at .05.

The overall effects of the educational good, teacher rationale, and age group on evaluations were examined with a 3 x 3 x 5 (age: 6-7, 8-9, 10-11 x good: Turns to Participate, Teacher Attention, Assigned Work x teacher rationale: no rationale, high achieving, struggling, favorites, boys) analysis of variance (ANOVA), with repeated measures on the last two factors. Because the Huynh-Feldt, Greenhouse-Geiser, and Box p-values did not differ markedly from the original ANOVA, it is likely that sphericity was satisfied and therefore the original p-values will be reported. Because all pairs of means were compared, Tukey's HSD test was chosen for post hoc comparisons. Tukey's HSD provides a pairwise comparison that is reasonably conservative.

Effects of educational good on evaluations. It was hypothesized that the particular educational good or context of differential treatment (the "story") would affect participants' evaluations. In particular, children would be less likely to endorse differential treatment for the "Turns to Participate" or "Assigned Work" stories than the "Teacher Attention" story.

The repeated measures ANOVA showed a main effect for educational good, $F(2, 569) = 18.24$, $p < .001$, $\eta^2 = .015$. Thus, proportions of negative evaluations differed significantly by good and post-hoc analyses by Tukey's HSD pairwise comparisons revealed significant differences between all goods. Participants were most critical of differential turns to participate and least critical of differential teacher attention. Children's evaluations were significantly less likely to support differential treatment in the "Turns to Participate" story (27 % endorsed) than the "Teacher Attention" (41% endorsed) or "Assigned Work" (33% endorsed) stories, across all rationales. Children's evaluations were also significantly less likely to endorse differential treatment in the "Assigned Work" story than in the "Teacher Attention" story.

It was hypothesized that children would be more critical when teachers gave extra turns or different work than when teachers gave extra attention, as the issue of equality is more salient in the former cases and the issue of need more salient in the latter case. This hypothesis appears to be supported; varying the educational good that is unequally distributed had a bearing on children's evaluations.

Effects of teacher rationale on evaluations. It was of interest to determine whether children drew a distinction between differentiation practices (differentiating instruction for high achieving or struggling students) and preferential treatment for favorites and boys. The repeated measures ANOVA showed that the effect of teacher rationale was significant, $F(4, 569) = 126.63$, $p < .001$, $\eta^2 = .329$. The presence and the type of teacher rationale significantly affected children's evaluations of differential treatment. Post-hoc analyses by Tukey's HSD indicated that there were significant differences between the group means for all possible combinations of pairs of rationales (no rationale, high achieving, struggling, favorites, boys), with the exception of one non-significant difference between the rationales for preferential treatment for favorites and boys. Specifically, children's evaluations were significantly more likely to support differentiation for high achieving (54%) or struggling (74%) students than favorites (4%), boys (4%), or when no rationale was provided (32%). Children's evaluations were also significantly more likely to support differentiation for struggling students than differentiation for high achieving students. Thus, the hypothesis that children draw a distinction between differentiation practices and preferential treatment was supported, with differentiation for struggling students most acceptable

to participants. Furthermore, children drew a distinction between the condition in which no rationale for the differential treatment was provided and the conditions in which they were.

Interaction between good and rationale on evaluations. A significant interaction effect between rationale and story was also found, $F(8, 564) = 19.34.17, p < .001, \eta^2 = .053$. Post-hoc analyses using Tukey's HSD pairwise comparisons revealed that when no rationale was presented, children were significantly more likely to endorse differential treatment in the "Teacher Attention" story (47%) than the "Turns to Participate" (19%) or "Assigned Work" (28%) stories. When the high achieving rationale was provided, there were significant differences between the group means for all possible combinations of pairs of stories. Participants were more likely to endorse differential treatment for high achieving students in the "Assigned Work" (77%) story than in the "Teacher Attention" (60%) or "Turns to Participate" (27%) stories. Differential treatment for high achieving students in terms of teacher attention was also significantly more likely to be endorsed than differential treatment in terms of extra turns to read aloud. Finally, when differential treatment was rationalized as a support to struggling students, participants were significantly more likely to endorse differential attention from the teacher (85%) or differential turns to participate (78%) than a reduced number of assignments (57%) for struggling students. When differential treatment was presented as benefitting favorite students or boys, there were no significant differences in evaluations between educational goods.

Effects of age on evaluations. Table 4 depicts the proportions of negative evaluations for differential treatment divided by age groups. Evident in the table is that the majority of participants across age groups negatively evaluated preferential treatment for favorite students and boys (86-100%). More variation in evaluations between age groups existed in the "no rationale," high achieving, and struggling students conditions, across educational goods. The analysis of variance did not show a main effect for age, $F(2, 569) = .59, p = .556$. However, significant interaction effects were found between age and educational good, age and rationale, and age, educational good and rationale.

Table 4

Proportions of Negative Evaluations for Differential Treatment by Age Group

Educational Good	Teacher Rationales				
	No Rationale	Differentiation		Preferential Treatment	
		High achieving	Struggling	Favorites	Boys
Teacher Attention					
6-7 years old	0.71*	0.42	0.21	0.91	0.94
8-9 years old	0.43*	0.48	0.14	0.95	0.95
10-11 years old	0.33*	0.29	0.05	1	1
Turns to Participate					
6-7 years old	0.88	0.7	0.24	0.91	0.97
8-9 years old	0.71	0.67	0.10*	1	0.86
10-11 years old	0.80	0.85	0.30*	1	1
Assigned Work					
6-7 years old	0.82	0.33*	0.36	1	0.97
8-9 years old	0.67	0.24	0.48	0.95	0.95
10-11 years old	0.62	0.05*	0.48	1	1

Notes: * denotes significance at the .05 level

Interaction between age group and good on evaluations. A significant interaction effect between age group and story was found $F(4, 569) = 2.62, p = 0.038, \eta^2 = .004$. Post-hoc analyses using Tukey's HSD showed that the evaluations of 10-11 year old participants (47%) were significantly more likely to support the "Teacher Attention" differential treatment story than the evaluations of 6-7 year olds (36%), across all rationales. In contrast, the evaluations of 10-11 year old participants were significantly less likely to endorse the "Extra Turns" story (21%) than the evaluations of 8-9 year olds (33%), across all rationales.

Interaction between age group and rationale on evaluations. A significant interaction effect between age group and rationale was found $F(8, 569) = 2.02, p = .044, \eta^2 = .0105$. Age was divided into three groups: 6-7 year olds, 8-9 year olds, and 10-11 year old participants. Post-hoc analyses using Tukey's HSD showed that in the condition in which no rationale for the differential treatment was given, 6-7 year olds' evaluations (20%) were significantly less likely to endorse the differential treatment than either 8-9 year olds' evaluations (40%) or 10-11 year olds' evaluations (42%).

Interaction between age group and good and rationale on evaluations. A significant interaction effect between age group, good, and rationale was found, $F(16, 569) = 1.63, p = .057, \eta^2 = .009$. Table 4 highlights the significant age differences across good and rationale. In the "Teacher Attention" story, when no rationale was provided, post-hoc analyses using Tukey's HSD showed that 6-7 year old participant evaluations (29%) were significantly less likely to be in favor of differential treatment than either 8-9 year olds' evaluations (57%) or 10-11 year olds' evaluations (67%). In the "Turns to Participate" story, 10-11 year old participants' evaluations (70%) were less likely to be in favor of differential treatment in the form of extra turns for struggling students than 8-9 year old participant evaluations (90%). Finally, in the "Assigned

Work” story, post-hoc analyses using Tukey’s HSD pairwise comparisons revealed that 6-7 year old participant evaluations were significantly less likely to be in favor of modified work for high achieving students (67%) than 10-11 year old participant evaluations (95%).

In summary, the findings demonstrate that there is not a simple progression of increasing acceptance of differential treatment as age increases. With respect to educational good, the youngest age group (6-7 years) was less likely than the oldest age group (10-11 years) to endorse differential individual attention by the teacher, but the oldest age group was less likely than the middle age group (8-9 years) to support giving extra turns to certain students. Further, varying teacher rationales did not produce simple age differences in the acceptability of differential treatment: 6-7 year olds were less likely than 10-11 year olds to support modified assignments for high achievers, but 10-11 year olds were less likely than 8-9 year olds to support extra turns for struggling readers. Thus, age group alone did not predict the acceptability of differential treatment; rather, the particular educational good and presence and type of teacher rationale played a role in age differences in differential treatment evaluations.

Justifications used for Evaluations of Differential Treatment

General tendencies in justifications for evaluations of differential treatment. Table 5 displays the proportions of justifications given for each domain of justification. With the exception of differentiation for high achieving students in the “Teacher Attention” (37%) and “Turns to Participate” (44%) contexts, moral justifications were given the most across the rationales of all stories (53-86%). These moral justifications encompass the sub-domains of need, equality, and other moral concerns (harm, welfare and rights). Among the sub-domains, the category of need (36 - 55%) was used most often for the rationale related to differentiation for struggling students. Justifications related to equality (43-80%) were used most frequently in the “no rationale,” boys, and favorites conditions. Justifications encompassing harm, welfare, or rights (“other moral” concerns) were provided to a lesser degree across the rationales of all stories (7-17%).

Learning justifications were given across rationales for all educational goods (9-55%). Learning justifications were divided into two categories: importance of learning and ability. Ability justifications were used more commonly when rationales for differential treatment were related to differentiating instruction for high achieving students. For example, 25% of justifications referenced students’ ability level as justifying differential treatment for high achieving students in the “Teacher Attention” story. In the “Turns to Participate” story, 10% of justifications referenced students’ ability level as justifying extra turns for the best readers. Ability justifications were also used in the “no rationale” condition across all stories, as well as the favorites condition in the “Turns to Participate” story.

Finally, social-conventional justifications were given for the teacher rationale related to preferential treatment for boys (1-5%) and favored students (1-5%), in addition to the differentiation for struggling students rationale within the “Teacher Attention” story (3%) and the “no rationale” condition of the “Turns to Participate” story. The category of “other” justifications appears across all types of rationales in all stories (3-14%).

Table 5
Proportions of Justifications by Educational Good and Teacher Rationale

Justification	Teacher Attention					Turns to Participate					Assigned Work				
	None	High	Strg.	Fav.	Boys	None	High	Strg.	Fav.	Boys	None	High	Strg.	Fav.	Boys
Moral (total)	0.86	0.37	0.76	0.83	0.77	0.77	0.44	0.59	0.82	0.84	0.76	0.53	0.62	0.82	0.83
Equality	0.43	0.27	0.17	0.62	0.68	0.64	0.38	0.22	0.64	0.80	0.64	0.53	0.20	0.74	0.76
Need	0.39	0.09	0.55	0.05	0.01	0.05	0.05	0.36	0.01	0.01	0.12	-	0.37	0.01	-
Other moral	0.04	0.01	0.04	0.16	0.08	0.08	0.01	0.01	0.17	0.03	-	-	0.05	0.07	0.07
Learning (total)	0.15	0.55	0.24	0.09	0.16	0.14	0.47	0.41	0.17	0.08	0.22	0.32	0.39	0.16	0.11
Learn	0.11	0.30	0.24	0.09	0.16	0.13	0.37	0.41	0.14	0.08	0.18	0.28	0.39	0.16	0.11
Ability	0.04	0.25	-	-	-	0.01	0.10	-	0.03	-	0.04	0.04	-	-	-
Social-conventional	-	-	0.03	0.01	0.01	0.01	-	-	0.04	0.05	-	-	-	0.05	0.05
Other	0.05	0.12	0.08	0.09	0.04	0.09	0.08	0.05	0.03	0.05	0.08	0.14	0.08	0.08	0.05

Note: Strg. refers to struggling students. Fav. refers to favorite students. Responses add up to over 100% because of double-coding. Responses that add up to below 100% are due to rounding error.

Effects of age, good, rationale on four primary justification categories. To determine the effects of rationale, age, and educational good on use of each justification category, a 3 (age groups: 6-7 years, 8-9 years, 10-11 years) x 3 (story) x 5 (rationale) ANOVA with the last two factors as repeated measures was conducted for each justification category as the dependent variable. An exploratory series of chi-square tests of independence was run to examine the effect of background variables on use of the four primary justification categories (moral, learning, social, and other). Significant effects of age group on the use of moral ($\chi^2(2) = 10.82, p = .004$), need ($\chi^2(2) = 6.38, p = .041$), other moral ($\chi^2(2) = 15.55, p < .001$), learning ($\chi^2(2) = 9.753, p = .008$), and other ($\chi^2(2) = 15.39, p < .001$) justifications were found. There were no significant effects of sex, race, or academic performance on any of the justification categories; therefore, subsequent analyses combined sex, race, and academic performance categories.

Moral justifications. On the use of moral justifications, a 3 x 3 x 5 repeated measures ANOVA revealed a main effect for teacher rationale, $F(4, 584) = 31.17, p < .001, \eta^2 = .091$. Post-hoc analyses by Tukey's HSD pairwise comparisons revealed that moral justifications were used significantly more for the "no rationale" (78%), favorites (82%), and boys (81%) conditions than for the high achieving (45%) and struggling students (64%) conditions. Moral justifications were also significantly more likely to be used in the struggling students condition than in the high achieving condition.

The ANOVA also showed a significant interaction effect between teacher rationale and educational good. Specifically, in the "Teacher Attention" story, post-hoc analyses by Tukey's HSD revealed that children were significantly less likely to use moral justifications when the high achieving rationale (37%) was given than in the "no rationale" (86%), struggling (75%), boys (76%) or favorites (83%) conditions. In the "Turns to Participate" and "Assigned Work" stories, moral justifications were significantly more likely to be used in the favorites (82%; 80%) or boys (84%; 83%) condition than in the high achieving (45%; 53%) or struggling students (58%; 59%) conditions. Moral justifications were also significantly more likely to be given in the "no rationale" condition (74%; 75%) than in the high achieving condition.

The justification data gave further support to the hypothesis that children judge preferential treatment for favored students and boys differently than differentiation practices. Participants used moral reasoning significantly more in the "no rationale," favorites, and boys conditions than for the high achieving and struggling students conditions.

Effects of age, good, rationale on need justification category. In order to test the hypothesis that older children are more likely to take into account individual needs, a series of chi-square tests of independence was run. A significant relationship was found between age and the use of need as a justification category, $\chi^2(2) = 6.38, p = .041$. When a repeated measures ANOVA was run, with the use of the need justification as the dependent variable and rationale, educational good, and age group as the factors, several main effects and interaction effects were found.

The 3 x 3 x 5 repeated measures ANOVA revealed a main effect of educational good, $F(2, 584) = 29.46, p < .001, \eta^2 = .032$ and rationale $F(4, 584) = 55.91, p < .001, \eta^2 = .193$. Post-hoc analyses using Tukey's HSD found that the need justification was significantly more likely to be used in the "Teacher Attention" story (22%) than in the other two stories ("Turns to Participate," 10%; "Assigned Work," 10%). Across all stories, the need justification was significantly more likely to be used in the "no rationale" condition (19%) than in the high achieving (5%), favorites

(3%), and boys (1%) conditions. The need justification was also significantly more likely to be used in the struggling students condition (43%) than in all other conditions, across stories.

Two interaction effects were found. There was a significant interaction effect between age group and educational good, $F(4, 584) = 6.02, p < .001, \eta^2 = .013$. In the “Teacher Attention” story, post-hoc analyses using Tukey’s HSD revealed that 10-11 year olds’ justifications (34%) were more likely than 8-9 (21%) or 6-7 (15%) year olds’ justifications to reference need, across all rationales. There were no significant differences between 8-9 or 6-7 year olds’ use of the need justification in the “Teacher Attention” story. There were no significant differences in use of the need justifications between the different age groups in the other two stories, across all rationales.

There was a second significant interaction effect among age group, educational good, and rationale, $F(16, 584) = 1.92, p = .016, \eta^2 = .014$. (See Table 6.) In the “Teacher Attention” story, when no rationale was given, 10-11 year olds’ justifications (67%) were more likely to reference need than 8-9 year olds’ justifications (38%) or 6-7 year olds’ justifications (24%). When the extra teacher attention was rationalized as giving extra time to high achieving students, 8-9 year olds were more likely to use justifications for their evaluations related to need (19%) than 6-7 year olds (0%). Furthermore, when the teacher attention was rationalized as giving extra time to struggling students, 10-11 year olds’ justifications (76%) were more likely to reference need than either 6-7 year olds’ justifications (50%) or 8-9 year olds’ justifications (43%). In the “Turns to Participate” story, 6-7 year olds’ justifications (42%) were more likely to reference need when extra turns were rationalized as benefitting struggling students than 10-11 year olds’ justifications (24%).

In summary, children across age groups gave justifications that appealed to the different interests and needs of others. Depending on the particular educational good and teacher rationale, children at all ages sometimes reasoned that others’ individual needs (in particular, the needs of struggling students) might require differential treatment from the teacher.

Table 6

Proportions of Need Justifications used across Age Groups

Good/Rationale	Age		
	6-7 years	8-9 years	10-11 years
Teacher Attention			
No Rationale	0.24*	0.38*	0.67*
High achieving	0*	0.19*	0.14
Struggling	0.50*	0.43*	0.76*
Favorites	0.03	0.05	0.10
Boys	0	0	0.05
Turns to Participate			
No Rationale	0	0.14	0.05
High achieving	0.03	0.10	0.05
Struggling	0.42*	0.38	0.24*
Favorites	0	0	0.05
Boys	0	0	0.05
Assigned Work			
No Rationale	0.06	0.19	0.14
High achieving	0	0	0
Struggling	0.38	0.43	0.29
Favorites	0.03	0	0
Boys	0	0	0

Notes: * denotes significance at the .05 level

Learning justifications. On the use of learning justifications, a 3 x 3 x 5 repeated measures ANOVA revealed a main effect of teacher rationale, $F(4, 584) = 29.6$, $p < .001$, $\eta^2 = .091$. Post-hoc analyses using Tukey's HSD revealed that, across all stories, the use of learning justifications was more likely to occur in the differentiation for high achieving (43%) and struggling (35%) students conditions than in the "no rationale" case (17%), boys (11%), and favorites (14%) conditions.

There was also a significant interaction effect between rationale and good, $F(8, 584) = 3.68$, $p < .001$, $\eta^2 = .018$. Post-hoc analyses showed that children were more likely to use learning justifications when the teacher rationale for differential treatment was related to differentiation for high achieving students (51%) in the "Teacher Attention" story than in all other conditions. In the "Turns to Participate" story, learning justifications were given significantly more when rationales were related to either high achieving (47%) or struggling students (40%) than in the "no rationale" (14%), favorites (17%), or boys (8%) conditions. Learning justifications were also given significantly more in the "Assigned Work" story when differential treatment favored struggling students (40%) than in the no rationale (22%) or favorites (16%) or boys (11%) rationales. Learning justifications were significantly more likely to be given when modified work was given to high achieving students (32%) than to boys (11%).

Finally, there was a significant interaction effect between rationale, age group, and educational good, $F(6, 584) = 1.65$, $p = .05$, $\eta^2 = .017$. In the "Assigned Work" story, when no rationale was given for the differential treatment, 8-9 year olds' justifications (38%) were

significantly more likely to be related to learning than 6-7 year olds' justifications (12%). When the rationale for modified work was related to differentiation for struggling students, both 8-9 year olds (48%) and 10-11 year olds' justifications (62%) were more likely to be related to learning goals than 6-7 year olds' justifications (21%). Finally, in the "Turns to Participate" story, 8-9 year olds' justifications (67%) were more likely to be related to learning goals than either 6-7 year olds' justifications (41%) or 10-11 year olds' justifications (38%) when differential treatment was given to high achievers.

The hypothesis that children judge preferential treatment for favored students and boys differently than differentiation practices was given additional support. Participants used reasoning related to learning goals significantly more when differential treatment was rationalized as supporting high achieving and struggling students than when no rationale was given, or when differential treatment favored well-liked students or boys.

Effects of age, good, rationale on ability justification category. On the use of the ability justification, 3 x 3 x 5 repeated measures ANOVA revealed a main effect of educational good, $F(2, 584) = 5.12, p = .007, \eta^2 = .001$, rationale $F(4, 584) = 19.73, p < .001, \eta^2 = .087$, and a significant interaction effect between good and rationale $F(8, 584) = 6.55, p < .001, \eta^2 = .035$. Post-hoc analyses using Tukey's HSD found that the ability justification was significantly more likely to be used in the "Teacher Attention" story than in the other two stories. The ability justification was also significantly more likely to be used when differential treatment was rationalized as aiding high achieving students than in the "no rationale," struggling students, favorites, or boys conditions. Furthermore, while there were significant differences in the use of the ability justification for the high achieving condition compared to all other conditions in the "Teacher Attention" and "Turns to Participate" stories, this difference did not approach significance in the "Assigned Work" story. No significant main effect for age group on use of the ability justification was found, and no significant interaction effects involving age group were found.

Social-conventional justifications. When compared to other justification types, participants used social-conventional justifications less often (except in response to the "Authority Contingency" questions, which will be analyzed in a subsequent section). Nonetheless, a 3 x 3 x 5 repeated measures ANOVA revealed a main effect of teacher rationale on use of social-conventional justifications, $F(4, 582) = 4.87, p < .001, \eta^2 = .02$. Post-hoc analyses showed that across all educational goods, social conventional justifications were more likely to be given when the rationale was related to preferential treatment for boys than for the "no rationale" or the high achieving rationale. Social conventional justifications were also significantly more likely to occur for the favorites condition than the high achieving condition.

A significant interaction effect was found between age and rationale, $F(8, 582) = 3.99, p < .001, \eta^2 = .033$. When the rationale for differential treatment was related to favorite students, 10-11 year olds' justifications (11%) were more likely to be related to social-conventional reasons than were 6-7 (0%) or 8-9 year olds' (0%) justifications. When the rationale for differential treatment was related to boys, 8-9 year olds' justifications were significantly more likely to be related to social-conventional reasoning (7%) than 10-11 year olds (2%).

Other justifications. Finally, a 3 x 3 x 5 repeated measures ANOVA showed a main effect for age on the use of justifications in the "other" category, $F(2, 584) = 4.47, p = .015, \eta^2 =$

.014. The 10-11 year old participants were significantly less likely to give justifications in the “other” category (3%) than 8-9 year olds’ justifications (9%) or 6-7 year olds’ justifications (10%). No other significant main effects or interaction effects were found on the use of justifications in the “other” category.

Double justifications. Participants were allowed to give more than one justification for their evaluations. Table 7 shows the proportions of justifications that were a combination of moral-learning, moral-social, and learning-social justifications across the different rationales, collapsed across educational goods. Very few of the justifications combined moral and social justifications (0-2%) or learning and social justifications (0-1%). When two types of justifications were given, they more commonly combined moral and learning reasons. When no rationale was provided, about 6% of the justifications given for evaluations of differential treatment combined moral and learning justifications. When the rationale for differential treatment favored struggling students, about 11% of the justifications given for evaluations of differential treatment combined moral and learning justifications. When the rationale for differential treatment favored high achieving students, 3% of the justifications combined moral and learning justifications. Finally, when the differential treatment benefitted well-liked students, 7% of the justifications combined learning and moral reasons; and when it benefitted boys, 6% of the justifications for evaluations combined learning and moral reasons.

Table 7
Proportions of Double Justifications across Rationales

Rationale	Moral-Learning	Moral-Social	Learning-Social
No rationale	0.06	0	0
High achieving	0.03	0	0
Struggling	0.11	0	0
Favorites	0.07	0.02	0.01
Boys	0.06	0.01	0

Overall, analysis of the justification data indicated that children used moral reasoning when considering preferential treatment for boys and favorites. They used both moral reasoning and reasoning about learning goals when considering differentiated instruction for struggling students and high achieving students. Fewer students used social conventional reasons to justify their evaluations of differential treatment.

Relations between Justifications and Differential Treatment Evaluations

Spearman correlation coefficients were used to determine whether there was a significant correlation between the four primary justification domains and the direction of evaluations. It was expected that moral justifications would be associated with negative evaluations of differential treatment for high achieving, boys, and favorite students. Table 8 shows that this hypothesis was supported. Negative evaluations were moderately, though significantly, correlated with moral justifications for the condition with no rationale provided, and the high achieving, favorites, and boys conditions. Positive evaluations for differential treatment of struggling students were weakly, though significantly, correlated with moral justifications. Learning justifications were significantly correlated with positive evaluations of differentiation

for high achieving students as well as positive evaluations in the “no rationale” condition. Social-conventional justifications were significantly correlated with positive evaluations of differential treatment for boys. Finally, justifications in the “other” category were weakly, though significantly, correlated with positive evaluations in the “no rationale,” favorites, and boys condition. “Other” justifications were weakly, though significantly, correlated with negative evaluations of differential treatment of struggling students.

Table 8

Correlations between Justification Types and Direction of Evaluation

Rationale	Justification domain			
	Moral	Learning	Social	Other
No rationale	-0.26*	0.15*	-0.05	0.20*
High achieving	-0.49*	0.39*	-	0.08
Struggling	0.16*	-0.05	0.06	-0.19*
Favorites	-0.36*	0.06	-0.04	0.33*
Boys	-0.47*	-0.004	0.54*	0.16*

Notes: * denotes significance at the .05 level

Impact of Authority on Judgments of Differential Treatment

Participants made criterion judgments to assess whether or not they viewed an issue as subject to the jurisdiction of an authority. If the participant approved of the differential treatment in light of the teacher rationale, he/she was asked if it would still be acceptable even if the principal objected to it. Alternatively, if the participant rejected the differential treatment in light of the rationale, he/she was asked if the differential treatment would *become* acceptable if the principal endorsed the practice. This type of question was referred to as the “Authority Contingency” question. Participants’ evaluations of differential treatment following the “Authority Contingency” question were coded as negative or positive. The proportions of negative evaluations of differential treatment following the principal’s objection or endorsement are presented in Table 9. The large majority of participants continued to reject preferential treatment for boys and favorite students (87-97%). A smaller majority opposed differentiated instruction for high achieving students (65-77%). Participants were divided in their opposition to differential treatment for struggling students (38-66%).

Table 9

Proportions of Negative Evaluations of Differential Treatment following “Authority Contingency” question

Educational Good	Rationale			
	High achieving	Struggling	Favorites	Boys
Teacher Attention	0.65	0.38	0.87	0.91
Turns to Participate	0.77	0.50	0.88	0.92
Assigned Work	0.66	0.66	0.91	0.97

A coding category of “change” was created. If a participant changed their initial evaluation from positive to negative or negative to positive, their response was given a “change” code of 1. If they did not change their evaluation, they were given a “change” code of 0. The following analysis assessed the stability of children’s evaluations of differential treatment when considering the conflicting views from an authority.

Stability of judgments by teacher rationale. Table 10 shows the proportions of differential treatment evaluations that changed after children were asked to consider (depending upon their initial evaluation) either a principal’s endorsement or objection of the teacher’s differential treatment. Forty-seven per cent and 43% of evaluations changed when children were asked to consider the principal’s opposing viewpoint on differentiation practices for high achieving and struggling students, respectively. In contrast, 18% and 16% of the evaluations changed when children were asked to consider the principal’s opposing viewpoint on matters of preferential treatment for favorite students or boys, respectively. A chi-square test yielded a significant finding ($\chi^2(3) = 73.31, p < .001$) with respect to whether a participant’s evaluation of differential treatment changed in the face of the principal’s opposition or endorsement, depending on the rationale provided. Judgments of preferential treatment appear to be more stable than judgments about differentiated instruction. Following the presentation of the authority’s viewpoint, a greater proportion of children’s evaluations changed when it came to differentiation practices, than when it came to evaluations of preferential treatment.

Table 10
Proportions of answers that changed following “Authority Contingency” question by Rationale and Initial Evaluation

Initial Evaluation	Rationale			
	High	Low	Favorites	Boys
All evaluations				
% change, principal objection/endorsement	0.47	0.43	0.18	0.16
Initial positive evaluation				
% change, principal objection	0.65	0.45	0.88	1
Initial negative evaluation				
% change, principal endorsed	0.26	0.38	0.11	0.07

Stability of judgments by initial evaluations. When participants initially endorsed differential treatment, 59% of evaluations changed when it was said that the principal opposed the differential treatment. In contrast, when participants initially objected to the differential treatment, 16% of evaluations changed when it was said that the principal endorsed the differential treatment. Thus, participants who started out accepting differential treatment had less stable judgments in the face an authority’s approval/disapproval than those who started out rejecting differential treatment.

Table 10 displays the percentages of evaluations that changed when the initial evaluation was either positive or negative, across different rationale types. When participants initially endorsed differential treatment, a greater proportion of their evaluations changed in the favorites (88%) and boys (100%) conditions than in the high achieving (65%) or struggling students (45%) conditions. In contrast, when participants started out rejecting differential treatment, a

greater proportion of their evaluations changed in the high achieving (26%) and struggling students (38%) conditions than in the favorites (11%) or boys (7%) conditions.

Use of justification types and stability of judgments. It was hypothesized that participants who viewed differential treatment as a moral issue were more likely to have stable judgments than those who viewed it as a non-moral issue and thus contingent on an authority’s approval. To examine this hypothesis, spearman correlation coefficients were used to determine whether there were significant correlations between the four primary justification domains and the direction of change in evaluations following the “authority contingency” question. Table 11 shows that this hypothesis was supported. The “change” variable was significantly negatively correlated with moral justifications. Participants’ evaluations were not as likely to change when they used moral reasoning in their consideration of differential treatment. Learning justifications were weakly, though significantly, correlated with changes in evaluations following an authority’s sanction. Social conventional justifications were strongly and significantly correlated with changes in evaluations following an authority’s approval or disapproval of differential treatment. Social-conventional justifications were frequently cited when participants changed their initial evaluations; out of all the responses that changed following the principal question, 56% of the responses used social-conventional reasoning to justify the change of evaluation.

Table 11

Correlations between Justification Types and Change of Evaluation following “Authority Contingency” question

	Justification domain			
	Moral	Learning	Social	Other
Change	-0.46*	0.12*	0.64*	0.01

Notes: * denotes significance at the .01 level

Stability of judgments by age groups. Chi-square tests yielded no significant age differences in whether participants’ judgments changed. Among 6-7 year olds, 33% of their evaluations changed. Among 8-9 year olds, 31% of their evaluations changed. Among 10-11 year olds, 29% of their evaluations changed. Table 12 shows the proportion of responses that changed by age group and rationale. For the different age groups, 37-49% of evaluations changed following an authority endorsement/objection of differentiated instruction for high achieving and struggling students. For the different age groups, 12-22% of evaluations changed following an authority endorsement/objection of preferential treatment for favorite students or boys. Table 13 depicts the proportion of evaluations that changed by age group and initial evaluation. Across age groups, 51-62% of initial positive evaluations changed following the principal objection. Across age groups, 11-21% of initial negative evaluations changed following the principal’s endorsement.

Table 12

Proportions of Evaluations that changed following “Authority Contingency” question by Rationale and Age Group

Age group	Rationale			Boys
	High achieving	Struggling	Favorites	
6-7 year olds	0.48	0.49	0.16	0.15
8-9 year olds	0.42	0.37	0.22	0.22
10-11 year olds	0.49	0.39	0.14	0.12

Table 13

Proportions of answers that changed following “Authority Contingency” question by Age Group and Initial Evaluation

Initial Evaluation	Age Group		
	6-7 years	8-9 years	10-11 years
Initial positive evaluation			
Proportion change, principal objection	0.62	0.51	0.60
Initial negative evaluation			
Proportion change, principal endorsed	0.15	0.21	0.11

Discussion

This study demonstrated several key findings related to children's judgments about differential treatment by teachers. First, children did not defer to the teacher's authority and unquestioningly accept differential treatment in the classroom. In line with research by Laupa, Turiel, and Cowan (1995) and Kim and Turiel (2000), who have shown that children reject authority rules or commands that involve moral violations, the present study has also demonstrated that children reject differential teacher treatment if they believe it results in inequality of opportunities, feelings of exclusion or harm, or other detrimental consequences on a student learning. Second, children's judgments of differential treatment depended on the particular educational good being distributed and the teacher's rationale for the differential treatment. Children as young as 6 years old considered and discriminated among varying teacher rationales for differential treatment and made their judgments in accordance with moral, learning-related, or, more infrequently, social-conventional reasoning. Children consistently viewed preferential treatment for boys and favored students as moral violations while varying in how they considered differentiated instruction. Some participants viewed differentiation as a moral issue that was independent of authority, while others saw differentiation as a learning issue that was subject to a principal's or a teacher's discretion. Third, age differences in judgments depended on the specific context of the differential treatment: the educational good at stake and the presence and type of teacher rationale underlying the differential treatment.

Overall, this study found evidence to substantiate the proposition that children do not merely equate fairness with strict equality, but rather consider the educational needs and interests of others when evaluating the acceptability of differential treatment by teachers.

In this study, children were asked to evaluate three hypothetical stories in which differential treatment took place. In each story, a different educational good was unequally distributed. In the "Assigned Work" story, workload was unequally apportioned, with some students required to complete two math worksheets, and others required to complete four worksheets. In the "Turns to Participate" story, turns at reading aloud were unequally distributed in a class. In the third story, "Teacher Attention," the teacher's time was unequally divided because she was described as spending more time individually helping certain students while others did independent work.

Significant differences in evaluations between all goods were found. Children were significantly more likely to reject differential treatment in the context of differing opportunities to read aloud than differential treatment in the form of extra individual time with the teacher or modified work assignments, collapsed across all rationales. Children were also significantly more likely to reject differential assigned work than differential individual teacher attention. Thus, differential treatment in the form of individual teacher attention was most acceptable to students, followed by differential assigned work, and lastly differential turns to read aloud.

These discrepancies in children's evaluations may occur because turn-taking occurs in a whole-class context where children often expect an equal opportunity to participate and where giving an extra turn to one child results in taking away a turn from another child. In contrast, during independent work activities, not all children necessarily require the same amount of the teacher's individual attention. Many children acknowledged that fairness was not always violated when a teacher spent more time helping certain children, often arguing that the teacher could be attending to a legitimate student need. Likely, many children accepted differentiating work assignments depending on students' achievement level because adjusting one student's workload

does not necessarily have a visible and direct impact on other students' learning opportunities. This finding illustrates that the particular form of differential treatment, including the type of good being differentially allocated, factors into children's evaluation of the appropriateness of the practice.

Children drew a distinction between the condition in which no rationale for the differential treatment was provided and the conditions in which they were. When a rationale was not presented to explain the teacher's behavior, the majority of participants rejected the differential treatment, across all educational goods. When the teacher's rationale for the act of differential treatment was introduced, children's evaluations varied in expected ways. When evaluations were collapsed across stories, participants were significantly more likely to endorse differential treatment for high achieving (54%) and struggling students (74%) than for favorites (4%) or boys (4%). Participants were also significantly more likely to endorse differential treatment for struggling students than for high-achieving students. There were variations, however, in how students evaluated differentiation practices across educational goods.

In regards to differentiation for high achieving students, the story in which high achievers were described to receive a modified work assignment where they got two math worksheets with harder problems when the rest of the class received four pages of regular work was found acceptable by the majority of students. Seventy-seven percent of participants thought this was a valid form of differentiation, arguing, like one 8-year-old girl did, that "it's still kind of fair (because) it adds up to be four easy work pages." The participants who did not consider the practice to be fair, such as one 6-year-old girl, reasoned, "It's still not OK for her to just give them two (pages) because then the whole class wouldn't be able to do the two hard pages together so then they could learn together. Just because these are easy for them, they still should just do it." While the 8-year-old thought that the practice resulted in equality of work assignments, the 6-year-old girl's statement pointed to the idea that equality was violated because all students did not have an equal opportunity to learn from more difficult material. These justifications demonstrate the diversity of ways children reasoned about differential treatment, while still considering moral issues such as equality, as well as consequences on student learning.

In contrast to the majority of positive evaluations for modifying assignments for high achievers, the evaluations for differentiation for high achievers within the other stories were more mixed. Only 40% of students endorsed the story of a teacher who spends extra individual time with high achievers to give them more challenging math problems. The children who endorsed the practice used justifications related to meeting the learning goals of advanced students. An 11-year-old boy, for instance, stated, "I think it's OK if they do challenges because, well...sometimes (the teacher) just gives them challenges just 'cause they're smart and they can finish the regular work fast." The students who did not accept this practice, however, often cited moral reasons of unfairness or inequality (37% of their justifications were moral), sometimes stating that the teacher should spend time with students who need help as opposed to those who are advanced, or that the teacher should spend equal time with each student.

The story in which more turns to read aloud were allotted to students who were the best readers was endorsed by even fewer participants (23%). Most children thought that this practice was unfair or that it hampered the learning opportunities of students who were not given turns to read aloud. The same 11 year old participant who endorsed giving challenges to high achievers in the previous example, rejected giving extra turns to high achievers by saying that "the best readers learn more about reading and then when the teacher sees that they read better each time,

she's going to keep calling on them, and that leaves these people, like, invisible.... These kids aren't getting as much attention as these (kids) and they're not getting as much practice to read aloud." This child rejects the practice because he sees that it might lead to a situation where only certain children receive the opportunity to improve on their reading. He highlights the negative educational consequences for the students who are left out, in addition to the inequality of attention that students receive. This particular remark is an example of a justification that encompasses both learning and moral rationales. In total, about 3% of the justifications given for the scenarios related to differentiation for high students were a combination of learning and moral reasons.

Participants' evaluations of differentiation practices geared towards struggling students were mostly positive, but also varied by the particular educational good. Students were significantly more likely to favor differentiation practices for low-achieving students in the form of extra instructional time with the teacher (85%) and extra opportunities to read aloud (78%) than a reduction of their workload (57%). Many students who rejected modification of work for struggling students thought that the practice was unfair to the other students who had more work, but other participants also disagreed with the pedagogical effectiveness of reducing workload, with some even suggesting that struggling students should receive more work so they could learn more. In general, however, participants mostly affirmed differential teacher treatment for struggling students. Most of the justifications they used were moral (59% – 76%) or learning-related (24% – 41%) across educational goods, with about 11% of the justifications being a combination of moral and learning justifications. Across all three goods, the majority of students across ages endorsed differentiation for struggling students. Even 6 year old students gave explanations such as, "I think it's OK because (the teacher) can help them catch up to the other students" or "I think it's OK because they just can't read too well. Maybe they just need to practice, just like I was practicing reading."

Across all educational goods, the vast majority of children rejected differential treatment that was explained by the teacher liking some students more than others or treating students differently because of gender. Most participants thought that differentially treating boys was unfair, with 68% - 80% of the justifications appealing to inequality, across educational goods. When social conventional justifications were given by students, however, it was significantly more likely to occur within the boys' condition, with some students explaining, for instance, that "boys' brains are smarter than girls' brains" or that "boys might need more help than girls." However, social conventional reasons were infrequently given. The majority of students rejected differential treatment for boys for moral reasons, and there were no differences between boys and girls in their rejection of this practice. Children were also critical of differential treatment for students whom the teacher liked best. Participants rejected this practice for moral reasons; over 80% of the justifications given were moral in nature, with some students citing that others in the class might "feel left out" or that the teacher "should like everyone the same." Justifications related to learning goals were less likely to be used in these conditions than in the differentiated instruction for high achieving and struggling students conditions.

In the analysis of justifications provided for children's evaluations of differential treatment, the study found that both moral and non-moral reasoning were present in children's judgments, depending on the rationale presented. Moral justifications were significantly more likely to be used in the "no rationale," favorites, and boys conditions than the high achieving and struggling students conditions. Moral justifications were also significantly more likely to be used in the struggling students condition than in the high achieving condition. Learning justifications

were significantly more likely to be used in the differentiation for high achieving and struggling students conditions than in the “no rationale,” favorites, and boys conditions. Social conventional reasoning, when present, was significantly more likely to be used when the differential treatment was presented as favoring boys.

The study also assessed the stability of children’s differential treatment judgments when considering an opposing viewpoint by the principal. Responses to the “Authority Contingency” question gave further evidence that children viewed differentiation practices differently from preferential treatment for boys and favored students. Higher proportions of children’s evaluations changed for differentiation rationales than for preferential treatment rationales. Specifically, they saw differentiation practices as sometimes subject to the authority’s commands, but they saw preferential treatment as wrong, no matter what a higher authority might endorse. Children resisted changing their evaluation when a principal allowed a teacher to differentially treat students based on gender or personal preference. But in re-evaluating differentiation practices, many participants argued that the teacher might lose her job if she did not listen to the principal, or that the principal might know more than the teacher on matters of instruction and that the teacher should therefore defer to his expertise.

These justifications also highlight the fact that many children considered differentiation practices to involve learning and schooling issues too, rather than representing moral issues alone. The study found that learning justifications were significantly correlated with instability in judgment when encountering principal opposition, and that moral justifications were significantly correlated with stability in judgment. It should be noted that not all children changed their evaluations of differentiation practices in the face of authority opposition. Some children did consider differentiation for struggling students to be a moral obligation for the teacher and a way of ensuring equality, with one participant even saying that the teacher should give “secret tutoring” to needy students if the principal objected to her giving extra turns in class.

Further analysis showed that participants’ initial evaluations were related to whether they subsequently changed their evaluations. Across the rationales, when children initially endorsed differential treatment, a greater proportion of them changed their responses as a result of the principal’s objection (45%-100% changed). When children initially rejected the differential treatment, a smaller proportion changed their responses as a result of the principal’s endorsement (7% – 38% changed). This finding was not surprising, given that many participants rejected differential treatment for moral reasons and, hence, believed it was a moral violation regardless of the authority dictate. In contrast, many children who initially accepted differential treatment did so for non-moral reasons and thus weighed the principal’s viewpoint more heavily. This corroborates earlier results that differentiation practices are viewed as distinct from preferential treatment.

This study did identify some age differences in judgments of differential treatment, but these age differences were not simple and clear-cut. The particular educational good and the type of rationale contributed to age differences in children’s judgments.

When educational goods were collapsed, significant age differences were found in evaluations of the “no rationale” cases. Six to 7 year olds were significantly less likely to endorse differential treatment (20%) than either 8-9 year olds (40%) or 10-11 year olds (42%) when no rationale for differential treatment was provided. It appears that younger children are more critical than older children of differential teacher treatment presented without the teacher’s rationale. While older children might consider such cases as ambiguous, allowing for possible

legitimate explanations by the teacher, younger children may be more likely to see the differential treatment as an issue of unfairness.

When rationales for differential treatment were presented, there were only two conditions (out of twelve) in which age differences emerged in children's evaluations. In the "Assigned Work" story when high achievers were said to receive differentiated assignments, there were significant age differences in children's evaluations. Although the majority of participants favored modified work for high-achievers, 6 to 7 year old participants were significantly less likely to be in favor of the modified work than 10-11 year old participants.

This age difference could be explained in two ways. First, in the process of making their judgments, 6-7 year olds may be less likely to recognize the difference between form and content of assignments. Four pages differ from two pages in form, but if the math problems are easier on the four pages, then the work differ in content, and four pages of easy work may take as much effort and time as two pages of hard work, making the two assignments in some sense equivalent. Many older children recognized this equivalence and justified their endorsement of the modified work by referencing equality. Second, 10-11 year old participants may be more sensitive to the idea that more difficult assignments would benefit the learning goals of higher-achieving students. The justification data corroborates this: 6-7 year old and 10-11 year old participants both gave roughly the same proportion of moral justifications for their evaluations, but the proportion of 10-11 year old participants' justifications that related to learning goals was higher (48% versus 26%). A greater number of older children talked about the learning benefits of differentiating work for high-achieving students. Although this significant age difference was found, overall, across age groups, the majority of students still favored giving high achieving students this type of differentiated assignment.

The second condition in which an age difference in evaluations emerged was when differential turns were said to be given to struggling readers. Eight to 9 year old participants were significantly more likely to say that extra turns for struggling readers were acceptable compared to 10 to 11 year old participants. No age differences were found between 6-7 year olds and 8-9 year olds, or 6-7 year olds and 10-11 year olds. It is important to note that the majority of students across ages did endorse extra turns for struggling readers. For the smaller proportion of students who did not endorse it, there could be several explanations for the significant age difference.

Analysis of the justification data found that 38% of justifications of 8-9 year olds were related to need, compared to 24% of justifications of 10-11 year olds. Moreover, 19% of justifications of 8-9 year olds were related to equality, whereas 38% of justifications of 10-11 year olds were related to equality. Interestingly, for the "Extra Turns" story, a greater proportion of 10-11 year olds than 8-9 year olds referenced equality in their judgments of the differential treatment for struggling readers. Consideration of differences in the classroom environment for older and younger children may be relevant here. More independent and self-initiated work is expected for older children and there may be fewer opportunities for public displays, such as in read aloud situations. As such, the equality of turns may be more salient to older children when the good itself is scarcer. As an example, a 10 year old female child explained why she thought the teacher should call on everyone rather than give extra turns to struggling readers: "You're the teacher and you should give everyone a chance to speak...It's the whole class and everyone has to have the same amount and if they're having trouble reading, maybe when the whole class is doing something else, she (the teacher) should pull those kids and talk to them." This child

recognized that a public forum may not be as suitable a venue for differentiation, and struggling needs can be served in other ways that do not take away opportunities from the rest of the class.

In addition to the evaluation data, an analysis of the justifications children gave for their evaluations revealed interesting findings on age differences that are relevant to current theories and research on developmental trends in children's justice reasoning. Children across all ages referenced need in their justifications. The proportion of this reference relative to other justification categories, however, varied depending on the educational good and teacher rationale.

In the "Teacher Attention" story, 10-11 year old participant justifications were more likely to reference need than 8-9 year old or 6-7 year old participant justifications. Specifically, it was found that (1) when no rationale was provided, 10-11 year olds' justifications were more likely to reference need than either 8-9 year olds' justifications or 6-7 year olds' justifications; (2) when extra teacher attention was provided for high achievers, 8-9 year old justifications were more likely to reference need than 6-7 year olds; (3) when the extra teacher attention was provided for struggling students, 10-11 year olds' justifications were more likely to reference need than either 6-7 or 8-9 year olds' justifications; and (4) when the extra teacher attention was provided for favorite students or boys, there were no age differences in reference to need. Overall, within this story, there was a clear age progression with older students more likely to reference the concept of need in their responses than younger children, but with subtle differences depending on the presence and type of teacher rationale provided.

In contrast, for the "Turns to Participate" story, a significant age difference was found in which younger students (6-7 year olds) provided significantly more justifications related to need than 10-11 year olds when the extra turns were given for struggling readers. This age difference is interesting because it highlights that older age was not necessarily associated with greater use of need as a justification category. As previously mentioned, for a variety of reasons, equality of turns in a public forum may be more important for older children than for younger children who are more willing to accept extra turns for struggling students. The fact that younger children referenced need more than older children in this story provides contrary evidence to the notion that the concept of need is absent or less preferred in younger children's reasoning; it points more to the view that situational factors may weigh heavily into age differences in need reasoning.

In general, this study's findings related to age differences reveal some consistencies and inconsistencies with previous research. In terms of reasoning about claims of merit, this study's findings are consistent with Damon's (1977) findings demonstrating that even six and seven-year-olds could account for claims of merit and reciprocity in making distribution decisions. It is in contrast, however, to Thorkildsen's (1989a) findings that older students (above 18) were more likely to favor practices that allowed high-ability students to learn more than low ability students, whereas younger children favored equality of work or learning. In the present study, the majority of younger children (ages 6-7) as well as older children accepted differential treatment for high-achievers, in both the "Assigned Work" and "Teacher Attention" stories. Younger children did not show a preference for favoring equality of individual teacher attention. Although the 6-7 year old children were significantly less likely to endorse modified work for high achievers than were the 10-11 year olds, the majority of the younger children still favored the practice. As an illustration, one of the youngest participants in the study, a 6-year-old girl, stated, "It's OK...since they know a lot and they work hard, and they passed a lot of levels up, so they get hard stuff to do." The difference in findings between this study and Thorkildsen's is likely due

to the fact that Thorkildsen did not ask students to evaluate differential teacher treatment directly.

In terms of children's reasoning about claims of need, this study's findings contrast with previous work by Damon (1977) in which his levels of positive justice reasoning suggested that claims of persons with special needs were not seriously considered by children until around age 8. It was these older children who could account for special needs (specifically, the needs of the poor) in making claims to justice within the stories that Damon presented to his participants. The present study found evidence that children as young as 6 years endorsed differential treatment for struggling students in the class, and that children across all age groups referenced the concept of need in their responses. Only the "Teacher Attention" story produced age differences that paralleled Damon's findings. The other stories did not produce similar age differences in children's use of the need justification or in their support of differentiation for struggling students.

There might be several explanations for these divergent findings. First of all, differential teacher treatment may be more grounded in the child's daily experience of schooling than the decisions related to distributing money that Damon asked his participants to make. Previous research had not yet examined justice reasoning as applied to the distribution of educational opportunities in the form of differential treatment. It could be that children form an early understanding that some students require more time and attention from the teacher than others because they experience and observe these situations from the very first days of schooling. In contrast, children may not understand broader inequities in the socioeconomic system and the need to distribute more money to poorer individuals. Secondly, the unequal distribution of educational opportunities like the teacher's time and attention may be more familiar and concrete to children than abstract concepts of monetary worth, wealth and poverty. Children understand what it means to struggle in school better than they understand "needs" in other contexts less familiar to their own experiences. Thirdly, the fact that the "Teacher Attention" story produced age findings similar to Damon's, but the other two stories did not might point to the important role that the particular context of a distribution scenario has on age differences in children's justice reasoning.

In terms of children's reasoning about the value of learning, this study's findings stand in some contrast to certain conclusions made by Thorkildsen (1989a). Thorkildsen concluded from her study that students under 10 years old chose as fair the practices producing equality in observable matters, such as piles of finished work, without mentioning the value of learning, while students from 10 to 18 years old discussed learning as a good to be equally distributed. This study, in contrast, found that the importance or value of learning was referenced by children across ages 6 to 11.

In fact, within this study, there were variations across conditions in the use of learning justifications in the different age groups. On the use of learning as a justification category, a significant interaction effect between rationale, age group, and educational good was found. Older children referenced learning goals more than younger children in only three out of the fifteen total conditions (including the "no rationale" cases). Otherwise, the effects of differential treatment on learning outcomes and goals were considered by students from all age groups, with variation in use determined by educational good and rationale. Age differences in children's reference to learning goals were likely determined by the specific educational good and rationale under consideration, and how children balanced and coordinated moral and learning goals in their judgments, rather than by inherent age differences in how children value learning.

In summary, the significant age difference found in this study does not appear wholly consistent with the idea that the justice concept of equality emerges earlier in ontogeny than the justice concept of merit or need because participants across ages referenced claims to equality, merit, and need (i.e., the acceptability of differential treatment for high-achievers and struggling students). The significant age differences identified in this study may reflect varying capabilities to coordinate the moral issues and learning issues elicited by the scenarios used. In other words, in line with age progressions of moral development postulated by Nucci and Turiel (2009), the age differences found in this study may represent a developmental progression in which older children are more capable of coordinating moral, learning and other social concerns than younger children.

Furthermore, the present study used a design that differed from previous studies. Rather than giving research participants cookies, money, or votes to split among varying justice claims, this study presented children with varying claims and asked them to evaluate each claim individually. This design revealed that even 6 year old children account for need claims by generally supporting differential treatment for struggling students. Moreover, domain distinctions were considered in the design of the interview protocol to create scenarios that evoked prototypical justice decisions in the school setting, and children's reasoning was analyzed with particular attention to distinctions between moral and non-moral types of reasoning.

This study extended previous research by Kowal and Cramer (1997), which showed that children ages 11 – 13 years perceived preferential treatment to be justified under certain conditions in the parent-child relationship. In the present study, children as young as 6 years also did not equate fairness with simple equality of treatment, but recognized that special needs may warrant an unequal distribution of the teacher's individual attention, extra opportunities to read aloud, or a modification of assignments. This research also supports the view that from an early age, children develop moral concepts regarding classroom issues. In line with Thorkildsen's (1989a) finding that children voted the altruistic practice of peer tutoring as fairest among several options for organizing individual work, this study found that the majority of students supported differentiated instruction for students who struggled in school.

Children's conceptions of the morality of differential treatment have not been given sufficient attention in research to date. In the wider context of research on children's school experience, studies have shown that differential treatment can have negative consequences on motivation and other student outcomes (Weinstein, 1993). Additionally, recent work by Crystal, Killen, & Ruck (2010) has shown that children's accumulated experiences of teacher unfairness can result in distorted views of justice in intergroup relations by the time an adolescent reaches 10th grade. Thus, differential teacher treatment can be a relevant and important issue in children's daily lives. This research plays a part in helping us understand how children reason about differential treatment and is an important step along the path to developing a fuller understanding of how unfair teaching practices and experiences might impact children.

One limitation of the current study relates to the fact that, in some cases, student responses that invoked the importance of differing needs of other students were ambiguous. It was difficult to make a clear distinction between instances where children thought that tending to differing needs was a moral issue or a learning issue. Furthermore, sometimes children reasoned about education as an obligatory moral good ("kids need to learn"), whereas other times education was a prudential matter of advancing to the next grade or acquiring skills for a future job. In addition to the domains of social thinking, there are other considerations that go into

decisions about schooling that have to do with educational goals. Educational goals are separate from the social domains, but they can be related to prudential goals, which are part of the psychological domain. Future studies using the domain framework should explore the distinctions and overlaps between educational goals and social domains in order to better explain how children coordinate these components when reasoning about school issues.

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Appendix A

Interview Protocol for Study on Children's Judgments of Differential Treatment by Teachers

Questions are read aloud to subjects. Show pictures for each question.

1. In this class all the students like working with the teacher because she helps them learn more things. But every day, during math time, the teacher spends an extra 10 minutes working only with Erin and Pat, while the other kids are doing worksheets. Is this OK or not OK? Why is this OK/Not OK?
 - e. What if Erin and Pat have the highest math grades, and the teacher wants to give them "challenge" problems to work on? Is this OK or not OK? Why?
Ok
 - i. Would it still be OK if the principal didn't want teachers spending more time with the kids who get highest grades?
Not ok
 - ii. Would it make it OK if the principal said the teacher can spend extra time helping the kids with the highest grades?
 - f. What if Erin and Pat are having a hard time in math, and the teacher wants to give them extra help? Is this OK or not OK? Why?
Ok
 - i. Would it still be OK if the principal didn't want teachers spending more time with the struggling kids?
Not ok
 - ii. Would it make it OK if the principal said the teacher can spend extra time helping the struggling kids?
 - g. What if the teacher liked Erin and Pat more than the other kids and that's why she wanted to spend more time working with them in math? Is this OK or not OK? Why?
Ok
 - i. Would it still be OK if the principal didn't want teachers spending more time with the kids she liked most?
Not ok
 - ii. Would it make it OK if the principal said the teacher can spend extra time helping the kids she liked most?
 - h. What if the teacher gave extra help to Erin and Pat because they were boys? Is this OK or not OK? Why? What if they were the only boys in the class?
Ok
 - i. Would it still be OK if the principal didn't want teachers spending more time with the boys?
Not ok
 - ii. Would it make it OK if the principal said the teacher can spend extra time helping the boys?
2. In this class, *all* the students **love** reading out loud. They all raise their hands to get called on. But, day after day, the same 3 students get more turns at reading out loud than the rest of the class. Is this OK or not OK? Why is this OK/NOT?

- a. What if the three students the teacher calls on are the best readers and the teacher gives these students extra turns because they read nicely? Is this OK or not OK? Why?
Ok
- i. Would it still be OK if the principal didn't want teachers calling on the same best readers?
Not ok
- ii. Would it make it OK if the principal said the teacher can call on the same best students?
- b. What if the three students the teacher calls on are the ones who struggle most with reading and the teacher thinks they should get more practice? Is this OK or not OK? Why?
Ok
- i. Would it still be OK if the principal didn't want teachers calling on the same struggling readers?
Not ok
- ii. Would it make it OK if the principal said the teacher can call on the same struggling students?
- c. What if the teacher likes these three students the most and that's why she gives them extra turns? Is this OK or not OK? Why?
Ok
- i. Would it still be OK if the principal didn't want teachers calling on the students she liked?
Not ok
- ii. Would it make it OK if the principal said the teacher can call on the students she liked?
- d. What if the teacher gave an extra turn to these three students because they were boys? Is this OK or not OK? Why? What if they were the only boys in the class?
Ok
- i. Would it still be OK if the principal didn't want teachers calling more on boys?
Not ok
- ii. Would it make it OK if the principal said the teacher can call more on boys?
3. In this class, all the kids get math worksheets every week. They have to complete 4 addition (multiplication, for 10-11 year olds) pages. A few students, however, only have to complete 2 pages. This means that **not** all the students have to do the same assignment. Is this OK or not OK? Why is this OK/NOT?
- a. What if the students who have to complete 2 pages have the highest math grades? The teacher gives them fewer pages, but the problems are harder. Is this OK or not OK? Why?
Ok
- i. Would it still be OK if the principal didn't want teachers giving less homework to the kids with highest grades?
Not ok

- ii. Would it make it OK if the principal said the teacher can give less homework to the kids with the highest grades?
- b. What if the students who have to complete fewer pages are having a hard time, and the teacher thinks that 4 pages would be too difficult for them? Is this OK or not OK? Why?
 - Ok
 - i. Would it still be OK if the principal didn't want teachers giving less homework to the kids having a hard time?
 - Not ok
 - ii. Would it make it OK if the principal said the teacher can give less homework to the kids who were having a hard time?
- c. What if the teacher likes some students more than others and that's why she assigns them less work? Is this OK or not OK? Why?
 - Ok
 - i. Would it still be OK if the principal didn't want teachers giving less homework to the kids she liked most?
 - Not ok
 - ii. Would it make it OK if the principal said the teacher can give less homework to the kids she liked most?
- d. What if the teacher gave these students less homework because they are boys? Is this OK or not OK? Why? What if they were the only boys in the class?
 - Ok
 - i. Would it still be OK if the principal didn't want teachers giving less homework to the boys?
 - Not ok
 - ii. Would it make it OK if the principal said the teacher can give less homework to the boys?

Appendix B

Coding Guidelines for Study on Children's Judgments of Differential Treatment by Teachers

Evaluations

1. OK
2. Not OK
3. Maybe/It depends
4. I don't know

Negative Evaluations– Justification Categories

1.0 Moral

1.01. Unfairness/Inequality

- Simple unfairness: "It's not fair."
- Any appeal for equality: the equality of all people regardless of personal characteristics; equality of work, outcomes, job prospects, learning opportunities, and rewards. "All people are the same." "It doesn't matter who you are." "All people should get the same work." "No one should be at an advantage or disadvantage."
- Any disapproval of inequality. "These guys are getting better and these guys are staying where they are." "The other kids don't get to read." "That's sexism or favoritism." "If these people are being called on, these kids won't get a turn." "Different gender doesn't matter." "It doesn't matter who you are."

1.02 Need. The subject justifies his/her response by appealing to the needs of struggling or low-achieving students. In particular, the differential treatment is unacceptable because the teacher should help struggling kids to make things fair. There is some semblance of a disequilibrium that needs to be rectified. "These guys need help too." "The teacher should go around helping the kids who need help the most."

1.03 Welfare/Harm. The subject justifies their evaluation of differential treatment through appealing to the emotional or physical welfare of other students. Feelings may get hurt. People may feel excluded. Kids will be angry or disappointed. Appeal to consequences that lead to harm. "People may feel excluded." "This will hurt their feelings." "Students will be stressed."

1.04 Rights/Unspecified moral evaluation. This category represents other catch-all moral justifications, including references to the principle of abstract rights that apply to all people ("women's rights," "human rights"). This category also includes unspecified moral evaluations, including statements such as "because it's right" without further articulation, but with some sense of necessity. "You just have to get a turn."

1.1. Promotion of Educational/Learning Goals

1.10 Simple statement that "kids need to learn."

1.11 Any appeal to the consequences on learning or reference to the lost opportunity for learning or the development of skills. "The other kids won't be as good. They won't acquire skills." "The kids will struggle if the teacher doesn't pay attention to them." "Kids might have questions that won't get answered."

1.12 Appeal to the lost opportunity for educational progress, the attainment of preparation for the

next grade level, better grades, or future job prospects.

1.13 Appeal to the lost opportunity for the teacher to identify struggling students or assess high achieving students.

1.2. Social Conventional/Classroom Organization

1.20 Appeal to the need for classroom organization/management. “Kids will have free time and cause problems for teachers.” “A fight can happen between the kids if boys continuously get called on.” “All the students will try to make her like them.”

1.21 Appeal to the teacher’s job or role function. “A teacher is supposed to teach.” “A teacher should separate her personal life from her professional.”

1.22 Appeal to authority. “The principal is like the king of the school.” The teacher needs to listen to her boss.” Recognition that the principal may have knowledge or expertise that the teacher lacks because of his role.

1.23 Appeal to the potential for the teacher to lose her job if she disobeys the principal.

1.3 Other

1.31. Personal choice/preferences. “Boys may not like that they’re called on more than others.”

Positive Evaluations – Justification Categories

2.0 Moral

2.01 Equality/Fairness Includes simple statements of fairness: “That’s fair.” Includes appeals to an equilibrium or to equality. “That equalizes out.” “It’s fair for them to get 2 pages of work if it’s harder.”

2.02 Need. Appeal to the needs of struggling or low-achieving students. The participant may imply that different needs of struggling students create a disequilibrium that can be rectified through differential teacher treatment. “Kids who struggle need to catch up with the rest of the class.” “If they’re lower, they might need different worksheets. They can only do what they can do.” “These kids don’t need practice, but these (struggling) ones do.”

2.03 Welfare/Harm. “The kids may get stressed out if they have too much work.”

2.04. Rights/Unspecified moral evaluation.

2.1 Promotion of Educational/Learning Goals

2.10 Any appeal to the consequences on learning for individuals as well as the group. “They will struggle in learning if they don’t get help.” “You get two more teachers in the room if the smart kids finish and can help others.” “Their minds will build up.” “The teacher just wants to help them learn.”

2.11 Appeal to the consequences on educational progress, the attainment of preparation for the next grade level, or future job prospects. “The teacher can encourage them to get higher grades.”

2.12 Appeal to high ability or hard work. The subject may appeal to the need for differential treatment for high achieving students because they are smart, have greater motivation, need challenges, or need to learn more. The subject may assume that high-achievement is

associated with hard work and good grades. “They’re ahead of others, so they need challenges.” “They know a lot already,” “If they have higher grades, they’re going to need harder problems.”

2.13 Learning opportunities – unspecified, including task processes “Because people will never finish their work if they’re slow.”

2.2 Social Conventional/Classroom Organization

2.21 Appeal to the need for classroom organization/management.

2.22 Appeal to the teacher’s inability to do her job or perform her role.

2.23 Appeal to social traditions or labels attributed to an individual based on group membership or stereotypes. “Boys’ brains are smarter than girls.” “Some boys play more at recess and don’t think about classwork.” “Boys are usually the ones who have a harder time, so it’s OK.”

2.24 Appeal to authority. “The principal is like the king of the school.” The teacher needs to listen to her boss.” “The teacher might lose her job.” Recognition that the principal may have knowledge or expertise that the teacher lacks because of his role.

2.4 Other

2.41 Personal choice. Appeal to the teacher’s will or individual agency to do as she pleases. “I won’t be pretty happy about that, but I guess she can do it if she wants.” “Some people like some people more.”

3.0 Don’t know. The subject states “I don’t know” without further elaboration.

4.0 Uncodeable. The subject does not provide a justification and a justification cannot be inferred from patterns in responses or other contextual clues. The subject may offer a response, commentary, or assertion that is tangential to the question, and not a true reason or explanation for their evaluation.

Notes on double-coding

Try to code the predominant justification only. If it is clear that two justification categories are given, then code both justifications. Examples of double codes:

Equality/fairness and learning double codes:

“It’s not fair for the other students to be left out. They won’t learn as much as these kids who get the extra attention.”

“All the kids should get the same amount of time (equality) with the teacher so they could all learn new things.”

“It’s not fair because these girls won’t get a chance to learn as much.”

“The other kids still need to learn and they still really need to be able to read aloud as much as the other kids (equality).”

Need and learning double codes:

“The low kids need help or else they will struggle with homework.”

“They need extra help to catch up. They won’t pass tests.”

Harm/Welfare and Learning:

“That’s OK because it both lowers their stress and boosts their capacity.”

Ability and learning double codes

“If they need extra work or they’re good so she needs to give them more things to push them, then differential treatment is OK.”

“That’s OK if the teacher does it to get us ready for middle school, and we need the extra challenge otherwise we’re doing stuff we already accomplished.”

Need and ability double codes:

“Higher or lower kids might need different worksheets. If they’re advanced, they need harder worksheets. If they’re low, we need to pull back on so much overload. They can only do what they can do.”

Learning and social conventions:

“I think the teacher should listen to the principal and not give differential treatment to high kids because the principal probably wants her to pay attention to low kids so they can learn too, and the teacher needs to listen to the principal because he’s the boss.”

Other Notes

Ensure that the justification and the evaluation are consistent with each other. If the subject evaluates the differential treatment as “maybe OK”, but then gives a justification related to the differential treatment being unfair, then code the evaluation as “not OK.”