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Korean Adolescents' Understandings of Social Equalities and Inequalities

By

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Committee in charge:

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## Abstract

### Korean Adolescents' Understandings of Social Equalities and Inequalities

By

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Doctor of Philosophy in Education

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Equality is a central issue in morality, and a desire for equality has resulted in major historical changes in human societies. The issues regarding social inequalities among different social groups are complex because they often involve multiple players bringing in varying claims, demands, and perspectives. Thus, individuals need to coordinate multiple considerations in coming to judgments about fairness. However, research on equality has not been sufficiently extensive to fully understand the development and application of concepts of equality to social inequalities that exist among different social groups and processes of coordination involved in making judgments about equality.

This study examined Korean adolescents' judgments and reasoning about social inequalities. Eighty-four adolescents from three age groups (12-13, 14-15, and 16-17 years) were administered individual interviews. Participants were presented with hypothetical situations depicting unequal allocations of resources among different groups based on social class, race, and gender. Participants were first asked to evaluate the inequalities. Then, they were presented with a set of questions that measured whether their evaluations would change in the face of personal and conventional contingencies (i.e. personal assertions, dictates from authorities or a rule, cultural generalizability). Participants' reasoning was assessed through elicitation of justifications for each question. As a follow-up of a study that was conducted with American adolescents, Korean adolescents' judgments and reasoning about social inequalities were compared with those of American adolescents.

The findings showed that Korean adolescents have developed understandings about equality, and they apply concepts of equality in making judgments about fairness. Although the majority of adolescents evaluated the inequalities in all situations as unacceptable, fewer made negative evaluations in the social class situations than in the race and gender situations. The negative evaluations about the inequalities in the race and gender situations were not contingent on personal assertions, the directives from authorities, the dictates of a rule, or culturally accepted practices. Those negative evaluations were justified with reasons of welfare and equality. In the two social-class situations, more positive evaluations were made and based on moral justifications of merit, as well as on conventional justifications. Justifications based on personal choices were common in the situation that pertained to differences in the amount of lunch money. Korean adolescents' judgments and reasoning about the social inequalities were largely in line with those of American adolescents. A few differences were observed. One was

that American adolescents primarily used moral reasons of welfare and equality whereas Korean adolescents also took into consideration moral concerns of merit and property rights. Another was that racial inequality invoked concerns about welfare of immigrants as well as maintaining equality for Korean adolescents, whereas the latter was a single main concern for American adolescents.

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## Korean Adolescents' Understandings of Social Equalities and Inequalities

Equality has been one of central principles of morality and a foundational element in structures of human society. As expressed by philosopher Vlastos (1962, p.31), “The great historical struggles for social justice have centered about some demand for equal rights,” and such struggles include movements that led emancipation of slaves, recognition of voting rights for women, and legalization of same-sex marriage, to name a few. As coming together of individuals from different backgrounds has now become commonplace, the differences among individuals that make the social makeup more diverse heightens such demands for equality.

Even though it is not too difficult to come to an agreement about the importance of understanding the development of concepts equality, the way concept of equality is accepted and applied is complex. For example, it is expected that traffic laws are abided by all drivers without exception. However, people would not oppose giving advantages to people with disadvantages in cases of disabled parking. There are also instances when we readily accept existence of inequality as in hierarchies between employer and employee or teachers and students. Furthermore, the application of the concept of equality in societies often excludes certain groups – when Aristotle endorsed the idea of equality as central concept of justice or when the U.S. Declaration of Independence declared all men are created equal, women or slaves were not included in their considerations (Sen, 1997; Turiel, Chung & Carr, 2016).

Research on the development of concepts of equality has not been extensive. Most of the existing research focuses on one aspect of equality, distributive justice. The idea of distributive justice is associated with allocating limited resources among involved individuals with varying merits and needs. Some researchers (Damon, 1977; Piaget, 1932) have attempted to delineate levels of development in judgments about distributive justice. According to their findings, the concept of equality only emerges in late childhood, which develops from strict application of equality to coordination of various considerations in coming to judgments about distribution.

A number of other researchers more specifically looked at how children think about fairness regarding distribution of goods. The body of research on distributive justice provides evidence that at a fairly young age, much earlier than proposed by Piaget and Damon, children comprehend the concept of equality and take into account various factors of a given situation when making judgments about the distribution of resources (e.g. Kanngiesser & Warneken, 2012; Olson & Spelke, 2008; Paulus, 2014; Shaw & Olson, 2012)

Although the body of research on distributive justice provides useful findings in understanding the development of concept of equality, it is heavily focused on allocation tasks in controlled experiment settings with simple resources like candies or stickers. However, many issues about social equalities concern inequalities that stem from hierarchies based on different economic, racial and gender backgrounds. Issues about social inequalities in societies are often more complicated than determining fair allocation among groups as individuals pay attention to various aspects of social situations. Individuals perceive these complex issues through processes of coordination of moral considerations like justice, welfare, and rights, and one's knowledge about the social world, which have been evident in decisions about rights (Helwig, 1995), fairness in social inclusion and exclusion (Killen, Piscane, Lee-Kim, & Ardilla-Rey, 2001), and honesty (Gingo, 2017; Gingo, Roded, & Turiel, 2017; Perkins & Turiel, 2007).

The purpose of this study was to examine adolescents' judgments and reasoning regarding issues that have substantial connection to socially rooted problems of inequality. The study attempted to provide a more comprehensive understanding about adolescents' of concepts

of equality and the processes of coordination in coming judgments about fairness. In addition, the present study was a follow up of a study that was conducted with adolescents in the U.S. Thus, another aim of the study was to determine how Korean adolescents' judgments and reasoning about social inequalities compares with those of American adolescents.

### **Theories of the Development of Concepts of Distributive Justice**

Some researchers, especially Piaget and Damon, approached questions about equality by attempting to formulate levels of the development of concepts of equality. Piaget (1932) studied children's conceptions of equality, specifically distributive justice, in connection with his stages of moral development from a heteronomous to an autonomous orientation, or from morality based on unilateral respect for authority to moral understandings constructed through cooperation with peers. Piaget interchangeably used the term *distributive justice* with *egalitarian justice* as its development is manifested through changes in children's judgments about matters that involve understanding of equality.

Piaget examined children's judgments about fairness in distribution of resources through their responses to hypothetical stories that depicted conflicts between equality and retributive justice or respect for authority. According to Piaget, children's development of concepts of distributive justice follows three stages. The first stage is observed among children up to ages 7 and 8 who possess unilateral respect for adults believing in their absolute authority. Therefore, children in this stage do not differentiate what is just from conformity to adult authority; any behavior that does not follow the dictates of the adult authority is judged unfair. The next stage includes children from ages 8 to 11 who make judgments about distribution based on strict equality. Equality is given priority over any other consideration, even over adult authority.

As children get older, around ages 11-12 and beyond, they engage more in cooperative interactions with peers, which engenders a departure from adherence to authority and the emergence of concepts of equity. Equity is "a more subtle conception of justice" that "consists in never defining equality without taking account of the way each individual is situated" (Piaget, 1932, p. 285). Resource distributions based on equity involve taking various situational factors and individual circumstances into consideration. In sum, the notion of distributive justice is developed as experiences in cooperation with other children progressively increase, and submission to authority gradually decreases.

Piaget, however, studied children's understandings of distributive justice only in relation to retributive justice and obedience to authority. As a part of his studies on the social development of young children, Damon (1977) attempted to extend Piaget's research through more direct investigations of children's conceptions of distributive justice with children as young as four year olds, and formulated six developmental levels associated with fair distribution. Children were presented with hypothetical stories involving the need to distribute resources among a group of children (e.g. rewards for making bracelets). Each character in the stories varied in a number of features including productivity, need, age and physical appearance. A strong correlation between age and one's distributive justice reasoning level was observed; level 0-A appears around age 4, level 0-1 between ages 4-5, level 1-A around age 5, level 1-B between ages 6-7, and level 2-A and 2-B around age 8.

At level 0-A, children do not differentiate fairness from their own desires, and they experience conflict whenever satisfaction of their desires is hindered. Their judgments are self-centered, and justified with subjective reasoning. At the next level (0-B), children are still mainly driven by egocentric desires. However, a distinguishing characteristic of judgments made at this



level is that children attempt to justify their self-gratifying judgments with objective considerations (e.g., I get the most because I am the *biggest*), usually in a posteriori manner. Although still far from being perfect, the use of objective justifications in support of their judgments is evidence that children begin to distinguish concepts of justice and individual desires.

The next two levels (levels 1-A and 1-B) are characterized by adherence to strict equality. These levels correspond to Piaget's second stage but involve a younger group of children (5-7 year olds vs. 8-11 year olds in Piaget's stage). At level 1-A, children recognize that other persons are also driven by self-interest that are as valuable as one's own, and assign equal weights to wishes of others. In turn, children judge by equality with regard to making distributions, considering all *actions* as equal (in contrast to equality of all *persons* at level 2-A). Thus, children apply equality in an inflexible and absolute way, treating self-interest of each person equally regardless of any differences in circumstances.

At level 1-B, children's judgments about distributive justice are based on reciprocity of acts in that good acts should be rewarded and work must be compensated. For children at this level, being fair is choosing the most deserving claim among conflicting ones based on merit. Accordingly, children generate different treatments for people depending on their contributions. Children still apply equality in an inflexible way, strictly basing their judgments about fairness on the degree of one's contribution regardless of different situational circumstances.

In his third stage of justice development, Piaget explained how children develop from inflexibly applying equality to flexibly coordinating multiple situational factors when making judgments. Damon divided this stage into two levels. Instead of adhering strictly to a specific type of justice claims, children at level 2-A begin to realize that there might be multiple claims to justice that are equally acceptable. As a result, children's reasoning at this stage reflects a relativistic idea that everyone has a legitimate claim. In order to resolve conflicts among competing claims, all available claims are first given equal attention then weighed differently. In parallel, children also develop a sense of equality of all *persons* as opposed to equality of all *actions* as in level 1-A. Therefore, children at this level predominantly employ the notion of individual need in coming to fairness judgments with a goal to accomplish equality for all *persons* even though the particular judgments may require an unfair *act* (i.e. distributing more resources to the poor).

Similarly at the final level 2-B, children consider the relative value of all conflicting claims. They further take into consideration special demands of a particular situation. Some claims, therefore, can be disregarded as irrelevant to the current situation. Although specific judgment on what is relevant to the given situation may vary from child to child, each child coordinates multiple claims to justice, and determines one claim that he or she thinks best satisfies the demands of the situation.

Piaget and Damon proposed that the concept of equality emerges in late childhood, and only older children or adolescents take into account individual circumstances. As presented in the next section, however, findings from studies on distribution of resources suggest that Piaget and Damon underestimated young children's thinking and that children do comprehend the concept of equality from an early age.

### **Emergence of the Concept of Equality and Processes of Coordination**

A good deal of additional research has been conducted on the topic of distributive justice in an attempt to understand how children allocate limited resources among competing

individuals. Unlike what is suggested by the stage theories of Piaget and Damon, findings of these studies on distributive justice show that understandings of the concept of equality emerge as early as three years of age. In addition, young children also take into account various situational features, such as merit, effort, and need, in coming to judgments about fairness.

**Aversion to inequality.** Children at various ages from 3 to 8 have been found to show a strong preference for equality to the extent that researchers named the phenomenon, *inequality aversion*. Fehr, Bernhard and Rockenbach (2008) asked children between ages of 3 and 8 to distribute sweets between themselves and their anonymous partner. Each child participated in three conditions varying in cost to oneself and benefits to the partner, and then was required to choose between an option that led to equality (i.e., distributing one for each) and another option to inequality (i.e., distributing more for self or the partner). The results showed that most of 3- to 4-year-olds favored themselves in the allocation tasks. It was only among 7 to 8 year olds that a strong preference for egalitarian choice was observed. The majority of older children (about 80%) chose to distribute the resources equally with their partner, and roughly half of them preferred egalitarian allocation even in cases when choosing equal distribution meant less resources for themselves.

Blake and McAuliffe (2011) further investigated the influence of cost to oneself on resource distribution, particularly when required to pay a cost to avoid inequality. In an attempt to better represent real life social interactions, the study was done in a public park with a real partner. Two children were randomly paired to play a game, and one of them was assigned a decider role and the other a recipient role. The decider of each pair was asked to either reject or accept offers from the researcher on the distribution of sweets. The results showed that children rarely rejected equitable offers that allocated equal numbers of sweets to each participant. On the contrary, children were more likely to reject inequitable offers that allocated more sweets to one of the participants, and the pattern of rejection varied significantly with age; younger children rejected inequitable offers only when the other child received more, whereas 8-year-olds frequently rejected inequitable allocations regardless of who received more, displaying an aversion towards inequality even when the allocations were advantageous for themselves.

From these findings, it seems that an aversion to inequality increases with age and becomes prominent around ages 7 and 8 years. However, it has been found that children as young as three years of age also display an aversion to inequality when they are not recipients of resources. A study by Shaw and Olson (2012) investigated children's (ages 3-8) aversion to inequality and their reasons for avoiding inequality when distributing resources between two other unknown children. The number of resources was designed so that there always was a resource leftover that the participants could distribute to one of the participants or throw away in order to avoid inequality. All children, including those in the younger group (3- to 5-year-olds), favored equal distribution of resources between the recipients even if it meant the extra resource had to be thrown away. Other investigations showed that children engaged in discarding resources not to avoid conflicts or to simply maintain visual symmetry between the recipients, but because they really cared about things being equal (give references). Moreover, the majority of 6- to 8-year-olds (85%) still preferred to throw away the resource than see it distributed unequally even when they were a part of the resource distribution, echoing the results of previous studies on older children's preferences for equal distribution.

**Development of concept of equality in distribution of Resources.** It is interesting that although young children between ages 3 to 8 possess a strong tendency to avoid inequality, their decisions are also influenced by situational factors. In the Fehr et al., (2008) study, it was observed that children's preference for equality diminished when the partner in the distribution was an out-group member rather than an in-group member; children were more likely to make an egalitarian choice when the recipient was an in-group member. In addition, Shaw and Olson (2012) found that when the distributor was provided with additional information on the recipients' effort, the leftover resource was more likely to be given to a hard worker rather than be thrown away. Furthermore, in another study, Shaw and Olson (2013) showed that children (ages 6-8) preferred allocating more resources to a disadvantaged child of a pair (i.e. one who had less to begin with) over distributing equally when the pair's initial resources were unequal. Children attempted to achieve equality as an outcome of the distribution (i.e. both recipients end up with equal number of resources) even if the distribution itself might be unequal (i.e. giving more to the disadvantaged child). And this decision was further influenced by value of the resources being distributed; that is, the likelihood of choosing distribution favoring the child with less resources over equal distribution was significantly higher in an equal or a lower value conditions than in a high value condition.

These findings suggest that children do not always adhere to strict equality when making judgments about fair distribution. These results are especially noteworthy because the age range falls into Damon's levels 1-A and 1-B or Piaget's heteronomous stage at which children are expected to show a strong adherence to strict equality. The following sections discuss in detail how various situational factors (e.g., relationship with recipient, effort, need and value of resources) influence children's decisions about fair allocation.

***Differences in judgments about fairness by age.*** Numerous studies have investigated how children's decisions about fair distribution vary across different age groups and a variety of situational contexts. Two studies specifically looked at variations in judgments about fairness related to age. First, Sigelman and Waitzman (1991) examined children's sensitivity to contextual information in making judgments about fairness. A total of 90 children in three different age groups – kindergartners (age 5), fourth graders (age 9), and eighth graders (age 13) – participated. They were presented with allocation tasks in three different situations. For each situation, the participating child distributed resources to three members at a camp; one of the members was the oldest, one had done the most work, and one was from the poorest family. The first situation involved distributing money that the three campers earned from work they recently completed. The second situation asked the participant to distribute voting ballots for a poll to decide upon an upcoming purchase of communal goods. The last situation entailed distributing donated dollars from an unknown benefactor among the campers. The results showed that the youngest children (age 5) tended to allocate resources equally in all three situations. On the contrary, older children's (ages 9-13) judgments varied as a function of contextual information; they favored the character who worked the most in the work context, preferred equal distributions in the voting scenario, and showed a greater concern for need of the poor camper in the charity situation. The most important implication of this study was that the shift from “indiscriminate reliance on an equality rule to selection of the justice norm most appropriate to the demands of the situation at hand” (p. 1377) marks the development of children's understandings of equality.

Second, Almas, Cappelen, Sorensen, and Tungodden (2010) examined the developmental pattern of reasoning about distributive justice among children in grades 5 to 13 (Norwegian grade levels). Unlike the above study by Sigelman and Waitzman (1991), participants in this study were included in the resource distribution as one of potential recipients. The children participated in games during which they earned points that later were converted to an income for each player. Each participant was randomly paired with a partner, and then was asked to distribute the total income (i.e. sum of incomes from two players) between him/herself and the partner. The experimental situations varied individual ability (i.e. a better player earned more points), choice of effort (i.e. each player had an option to not participate in games and spend time reading magazine articles), and luck (i.e. actual income given per point was random). With age, adolescents were better at distinguishing these factors and taking them into consideration when making judgments about distribution. Specifically, they favored individuals who spent more time and achieved more income but not those who were simply lucky.

The above findings add evidence that young children do understand the concept of equality. In addition, children and adolescents increasingly attend to various situational factors and coordinate information about them in coming to judgments. The next section presents studies that have been conducted to investigate effects of specific situational factors (e.g. merit, need, context, recipient, value, and group norm) on children's judgments about fairness. Findings from the studies show that in some situations, very young children also take situational factors into consideration when making judgments about fair distribution.

**Merit.** Merit has often been considered a factor understood only by older children (Damon, 1977; Piaget, 1932; Seligman & Waitzman, 1991). Recent studies show, however, that children as young as three years of age possess a rudimentary understanding of merit-based distribution, which reflects the differences in individual contributions. Kanngiesser and Warneken (2012) placed 3- and 5-year-olds in a pair with a puppet to play a fishing game. Each child was exposed to both a more-work condition, in which the child caught more toy fish than the puppet, and a less-work condition, in which the puppet caught more than the child. After completing the game, the child was asked to distribute stickers as rewards between oneself and the puppet. The results showed that children as young as three years of age paid attention to the difference in work contributions when distributing the rewards; that is, children kept more stickers for themselves in the more-work condition than in the less-work condition. Moreover, in Baumard, Mascaro, and Chevallier's (2012) study, children between ages of 3 and 4 judged that a greater contributor in baking cookies deserved more to receive a bigger cookie as a reward than a lesser contributor. Furthermore, children were more likely to give the third cookie to the greater contributor after distributing two cookies equally when asked to distribute three equal-sized cookies between the two contributors.

The studies discussed above provide evidence for the early emergence of taking merit into consideration when making distributive justice decisions. However, merit is not always taken into account at this age; about half of the children in Kanngiesser and Warneken's (2012) study, 56% of 3-year-olds and 50% of 5-year-olds, made judgments irrelevant to considerations of merit (i.e. taking less for oneself in the more-work condition, more in the less-work condition, or equally distributing in both conditions). In Baumard et al.'s (2012) study, only 24% of the children were able to provide justifications based on merit, which is far below the proportion of children who decided to give the bigger cookie to the greater contributor (75%). In addition, when asked to distribute three equal-sized cookies, a significant portion of children (56%)

stopped their distribution after giving one cookie to each recipient until further prompted to distribute the final cookie, which shows preferences to distribute equally.

The findings show that children as young as 3 years old also make merit-based distributions in simple situations involving familiar objects like toys and cookies. However, they experience difficulty in associating their distribution decision with justifications based on merit and still prefer equal distribution over merit-based distribution when given an option to choose between the two.

***Need.*** Need is another factor that has been considered to emerge later in the development of concepts of distributive justice. However, recent studies provide evidence for the onset of need-based distribution among preschool-aged children. In Paulus's (2014) study, 3- and 5-year-old children were placed in experimental situations in which they had to share resources (stickers) with either a wealthy (i.e. a partner with a book full of stickers) or a poor (i.e. a partner with a book containing only few stickers) teddy bear. Most of the participants favored themselves in the distribution, but 5-year-old children were more likely to choose an allocation option that was beneficial to the other in cases when the partner was poor. The participants were also asked to distribute resources between the wealthy and poor agents from a third person perspective (i.e. distributing resources between two other recipients). As in the previous setting, 3-year-old children showed a preference for equal distribution between the two agents. By contrast, 5-year-old children favored allocation options that benefitted the poor agent. In Li, Spitzer, and Olson's (2014) study, 4- to 5-year-old children also displayed a desire to minimize existing inequality between two recipients by allocating more resources (e.g. jars of play-dough and stuffed animals) to a more disadvantaged recipient. Hence, judgments based on need favoring a disadvantaged recipient in distribution through equalization of outcomes develops around age four, much earlier than previously claimed.

The above mentioned studies examined children's distribution decisions in response to existing inequalities where the difference in need between recipients was more salient. In such situations that depict two recipients who already have unequal resources, children as young as 4 years old take information about the varying needs of recipients in coming to judgments about fair distribution.

***Social relationships and cost in sharing.*** The influence of types of relationships with potential recipients on judgment about distribution was briefly introduced above with regard to the Fehr et al. (2008) study (preferring an in-group member over an outgroup member). Additional studies document the significant influence of the nature of social relationships on allocation judgments. McGillicuddy-De Lisi, Watkins and Vinchur (1994) investigated the influence of social relationships on children's judgments and reasoning about fairness. They found that younger children's (kindergarteners and 3<sup>rd</sup> graders) judgments were not affected by different relationship types. The oldest group in the study (average age 11.8), however, treated recipients differentially based on different types of social relationships (i.e. strangers vs. friends) and further integrated information about character (i.e. age, productivity and need) in their judgments; they favored productive strangers over needy strangers, and needy friends over needy strangers in allocation of resources. The authors argued that the process of integrating information about social relationship with characteristics of recipients requires a process of coordinating different concepts of justice, which do not develop until late childhood or early adolescence.

Other studies, however, show that younger children are also capable of making recipient-dependent judgments. One study (Olson & Spelke, 2008) looked at how the different nature of social relationships influences children's judgments about distribution. Specifically, three types of relationships were investigated; those in close relationships (siblings or friends), those whose past actions have benefitted oneself (direct giver), those who have been generous to others (indirect giver), and strangers. The results showed that preschool-aged children (3.5 years) favored the individuals in close relations more than strangers, the direct givers than the indirect givers, and both direct and indirect givers than the strangers. It is interesting to note that children's application of different concepts of justice also depended on the number of available resources. The above preferences depending on the type of social relationship were only observed when there were insufficient resources to be equally distributed (i.e. more recipients than available resources). With enough resources for everyone, equal distribution was the option predominantly chosen (e.g., four resources and four recipients).

With a slightly older group of children between 4.5 and 6 years of age, Moore (2009) examined the influence of the nature of social relationships and costs involved for the distributor on children's resource allocation decisions. The study employed three different types of recipients – a friend, a non-friend classmate, and a stranger – and two conditions varying in the degree of costs involved with sharing. The results showed that children as young as 4 to 5 years old preferred equal distribution (i.e. one for each) with both strangers and friends when there was no cost involved, or no difference in their own gain. However, children were willing to share only with their friends when their cost was higher (i.e. sharing required receiving less for themselves). The result can be interpreted that children hold a general preference for equality but the adherence to equality does not extend beyond the in-group members especially when a given situation involves cost to themselves.

Similar findings on the influence of social relationships and involved cost were reported in Paulus and Moore's (2014) study with a younger group of children. The participants were asked to distribute resources by choosing between an equitable (i.e. equal distributions) and an inequitable (i.e. distributing more for oneself) option in situations that varied in the costs for the distributor. All children were more likely to choose an option beneficial for their partner when the involved cost for themselves was low, or there was no difference in gain for the distributor between two allocation options. With regard to recipient-dependent judgments, 4 and 5-year-old children were more likely to choose an allocation option that benefitted their partner when the partner was a friend than when it was a disliked peer, whereas 3-year-olds did not show a significant difference in judgments depending on the types of relationships.

A study by Blake and Rand (2010) investigated the influence of cost for the distributor on children's sharing behaviors by varying the value of resources. Participating children between ages 3 and 6 were asked to share their least favorite stickers in a low-value condition and their most favorite stickers in a high-value condition. In each value condition, they were asked to either keep ten stickers all to oneself or share some with an anonymous child who would come later for play. The proportion of children who were willing to give any sticker to another child increased with age regardless of the resource value. However, among those who decided to share, the value of stickers had a significant influence; children at all ages were more likely to share a higher fraction of stickers, and to opt for equal distribution (5 for each) in the low-value condition. In addition, the tendency to make equal distribution increased with age in the low-value condition whereas this was not as clearly observed in the high-value condition in which self-benefitting distribution (i.e. keeping more to self) was dominant across age.

Young children generally favor themselves in distribution and show a strong preference for equal distribution when there are enough resources for everyone. However, even pre-school aged children decide to distribute resources differently especially in situations that involve different types of social relationships and varying costs to the distributor.

**Processes of coordination.** As Sigelman and Waitzman (1991) concluded from the results of their aforementioned study, children increasingly recognize different demands of a particular situation, and select the most appropriate justice norm accordingly. Children tend to prefer equal distributions as opposed to unequal distributions among recipients (e.g., Blake & McAuliffe, 2011; Fehr et al., 2008, Shaw & Olson, 2012); however, their judgments are subject to change when provided with specific information about the recipients (e.g. merit, need, type of relationship) or the situation (e.g. value of resources). Except for two studies (Moore, 2009; Paulus & Moore, 2014), the studies discussed above varied one piece of information at a time, which raises the question of whether children can coordinate more than one piece of information, and the pattern of coordination changes with age. Although there has not been extensive research that focused on investigating how children coordinate multiple demands of a situation in coming to allocation decisions, a few studies do provide relevant findings.

First of these studies, conducted by McGillicuddy-De Lisi, De Lisi and Van Gulik (2008), examined how children considered multiple dimensions of fairness in the distribution of resources. Participants in grades 9 and 12 were presented with stories that depicted four brothers acquiring a large sum of money (\$37,500) either as a bonus from their work or a scholarship for their education. The four brothers were described as either biologically related or one of them adopted. Each of the brothers was illustrated as popular, productive, with special needs or the last one only by physical appearance (e.g. tallest) providing irrelevant information to the distribution of the money. When the participants were asked to allocate the money, the younger adolescents used equality (i.e. everyone gets equal amount of money) more often than the older adolescents, whereas the older adolescents focused more on equity (i.e. favoring the most productive brother), benevolence (i.e. favoring the most needy brother), or combination of equity and benevolence (i.e. both the productive and needy brothers receiving more than others). With regard to coordinating multiple dimensions of a situation, the older adolescents showed a difference in justice orientation depending on the context; they favored the productive brother in the work context, and the needy brother in the education context. In addition, all adolescents distributed a larger share to a stepbrother when he was depicted as productive or needy, but not popular, than in cases when the productive or needy character was biologically related. The results showed that adolescents, especially older ones, attend to multiple aspects of a given situation, and apply appropriate concepts of justice in making judgments.

Kienbaum and Wilkening (2009) investigated whether children, between the ages of 6 and 15 years, can integrate various aspects of situations. The children were presented with scenarios in which two characters varied in the degree of luck, individual need, and effort. The results showed that children's judgments about distributive justice varied by age and by situational context. At each age level, children employed qualitatively different concepts of distributive justice. Need was the dominating concept for the youngest children (age 6-7), and effort for the adolescents (age 15). Emphasis on need and effort coexisted among children in-between (age 9). In addition, children increasingly integrated more information in judgment making with age; the youngest children attended to only one piece of information, usually need, whereas the older children (age 9) coordinated information about need and luck. However, even

these older children experienced difficulty in integrating information about need and effort as effort only became meaningful in decision making among the adolescents. Only the adolescents integrated all available information (luck, need, and effort) though still not perfectly (only 50%) at 15 years of age. The findings suggest that children's judgments about distribution seems to undergo qualitative changes in the dominating values at different age levels, and their understandings of distributive justice develop in a way that children increasingly integrate more information of a given situation in coming to judgments.

A recent study (Rizzo, Elenbass, Cooley, & Killen, 2016) showed that younger children also coordinate multiple moral concerns including equality, merit, and welfare when making distribution judgments. In this study, children were asked to distribute two types of resources between a hardworking and a lazy character. The two types of resources presented to the children were 'luxury' or 'necessary' resources. The luxury resources are resources that are enjoyable but not harmful if absent, and the necessary resource are those that are needed to stay healthy and not get sick. When allocating luxury resources, children (6 – 8 year olds) made distribution judgments based on merit, distributing more to the hardworking character. However, when the children had to allocate necessary resources, equal distribution was preferred based on concerns for others' welfare. The results showed that children's judgments are not made in a fixed way, but may vary depending on the type of goods being distributed.

The body of research on distributive justice provides interesting and meaningful findings proposing that children develop the concept of equality at a fairly young age. Also, the findings identified features like need, merit, effort, and social relationship types that influence children's decisions about the distribution of resources. Furthermore, a few studies showed that children and adolescents attend to multiple considerations and goals of a given situation and coordinate them in coming to allocation decisions.

### **Processes of Coordination in Understanding Complex Social Issues**

Children's conceptions regarding inequalities that exist among different individuals and social groups have received little attention in the literature on distributive justice. A large majority of the previous research measured judgments about fairness using allocation tasks in controlled experiment settings with simple resources like candies or stickers. Although the findings may transfer to understanding the concept of equality in broader societal contexts, issues that concern social equality and inequality are much more complex; they often involve multiple players bringing in varying claims, demands, and perspectives, and therefore require coordinating multiple considerations in making judgment. Thus, there is a need for research to address issues that have substantial connection to socially rooted problems of inequality, such as inequalities among individuals and social groups, and to examine how children coordinate different dimensions of judgments.

Studying such issues on social inequality is complicated and requires a research framework to fully capture the complexity in judgment and reasoning. Social-cognitive domain theory demonstrates that children are sensitive to various contextual factors, and that they engage in a process of coordinating multiple considerations from different domains when making judgments about social issues. From a young age, children develop understandings about morality, and make moral judgments that are distinct from judgments about social conventions (the conventional domain) and personal choices (the personal domain). Previous studies examined the identification of domains using a set of questions assessing "criterion judgments," and ascertained that moral judgments are considered as universally applicable and not contingent



on personal assertions or the directives of authority or rules. Justifications for moral evaluations and judgments entail reasons of welfare, justice and rights, whereas judgments in the conventional domain are based on customs and conventions of social systems (Turiel, 1983; 2015a). Acts in the personal domain are those that do not fall within the jurisdiction of moral obligation or social regulation, and are justified with references to the legitimacy of personal choice (Nucci, 2001). A large body of research using the domain approach has shown that coming to decisions about complex social issues involves weighing and balancing various goals, and often coordinating among conflicting considerations between different moral concerns or between moral and non-moral concerns (see Killen & Smetana, 2006; Turiel, 2008).

Helwig (1995) investigated adolescents' and college students' decisions about supporting civil liberties (specifically, freedoms of speech and religion) in abstract and in conflicting situations. His findings show that most of the participants endorsed the civil liberties in response to straightforward questions (e.g. Do you think the law should allow people to express their view?), and justified their evaluations with moral reasoning. However, when these rights came in conflict with other social and moral issues – such as psychological harm, physical harm, and equal opportunities – the rights were sometimes subordinated to the conflicting considerations.

Research on social inclusion and exclusion also provides evidence that children's judgments involve weighing and balancing various situational factors (Killen, Pisacane, Lee-Kim & Ardila-Rey, 2001; Killen & Stangor, 2001). The studies examined children's judgments about social exclusion based on gender and racial group membership. The results showed that a majority of children judged it wrong to exclude a child based on the child's gender or race (e.g. excluding a boy from ballet club or a black child from math club) in straightforward situations, and justified their evaluations with moral reasons, such as fairness and equality. However, in situations that involved considerations of other factors, such as qualifications of the candidate or limitations in available space for a new members, concerns for equal treatment were subordinated to goals to enhance group functioning.

Two studies on adolescents' decisions about honesty show that adolescents weigh and balance different considerations in coming to decisions about honesty. The first study (Perkins & Turiel, 2007) examined adolescents' evaluations about deception of parents in various situations. Adolescents' judgments varied systematically by type of activities and type of relationship. For prudential matters, deception of parents was evaluated as wrong and parental control was judged legitimate. However, adolescents evaluated deception of parents as acceptable in other situations, such as when parents gave directives for morally wrong acts or directives about personal choices. Deception of parents about moral and personal issues was judged as more acceptable than deception of peers. These results indicate that information about domain of activities and power differences in social relationships are coordinated when adolescents make judgments about deception.

The second study (Gingo, Roded & Turiel, 2017) further examined adolescents' judgments about honesty varying by domains of activities and types of relationships. As in the previous study, adolescents judged parental control legitimate and deception of parents wrong for prudential activities, and parental control as not acceptable and deception of parents as acceptable for personal activities. New findings include adolescents' evaluations about activities in the conventional domain; Parental control over conventional activities was judged legitimate and deception of parents wrong but to a lesser extent than prudential activities. Adolescents' judgments also varied by types of relationship with parents. For activities in the personal and conventional domains, parental control was judged more legitimate for parents who have mutual

relationship than those who have unilateral relationships with their child. Parental authority was judged legitimate for prudential matters regardless of the type of parent relationship.

As observed from those studies (Gingo, Roded & Turiel, 2017; Helwig, 1995; Killen, Pisacane, Lee-Kim & Ardila-Rey, 2001; Killen & Stangor, 2001; Perkins & Turiel, 2007; Turiel & Wainryb, 1998), individuals' understandings of social issues are not unitary, but are applied in a flexible way because they distinguish different dimensions of judgment; they recognize moral implications of endorsing individual freedoms, ensuring equal chances for everyone, and building trust in relationships with parents; these considerations are, however, weighed along with other considerations embedded in a given situation when making social judgments.

A few studies have investigated judgments about equality involving distribution of resources among different social groups. In one study (Elenbass, Rizzo, Cooley, & Killen, 2016), children were presented with inequalities in allocation of education resources between two schools differing in racial composition. It was found that with age (from 5 to 11 years) children negatively judged the unequal allocation, and distributed more resources to the group with less regardless of the racial background of the disadvantaged school. The children made references to the importance of equal access to school resources.

In another study (Rizzo & Killen, 2016), it has been found that different moral concerns are prioritized in coming to judgments about inequalities with age. When allocating resources between two recipients from a wealthy and a poor town, the youngest group (ages 3-4) preferred equal allocations whereas the oldest group (ages 7-8) preferred to allocate more to the recipient with less resources. Therefore, with age, children weigh and balance the concerns for equality and equity, judging equitable allocations more positively in situations where inequalities in distribution already exist between groups in different positions in the social hierarchy.

The processes of coordination were also evident in a study (Elenbass & Killen, 2016) that examined judgments about distribution of resources to groups of different racial backgrounds. Children (between ages 5 and 11) negatively evaluated unequal allocation of medical supplies between two hospitals based on racial compositions. However, it was only when African-American hospitals were disadvantaged (not when European-American hospitals were disadvantaged) that with increasing age children allocated more medical supplies to the disadvantaged hospital. Children also referenced children's rights to decent medical care only when African-American hospitals were disadvantaged. In coming to judgments about unequal allocation of medical resources, children increasingly took into consideration their awareness of historically racial minority group.

Social issues we encountered in daily lives are complex and that they often involve multiple players bringing in varying claims, demands, and perspectives. A large body of studies on moral judgments including rights, fairness in social exclusion and honesty have shown that children's understanding of social issues is not unitary, rather applied in a flexible way because children distinguish different dimensions of judgment. However, with exceptions of only a few studies, little attention was given to the study of the development of concepts of equality, especially regarding judgments about equalities and inequalities pertaining to different groups in different positions.

### **Some Conclusions about Judgments of Equality**

Numerous studies on distributive justice show that children starting at a young age understand and make judgments about equality. In coming to judgments about fairness, children not only make judgments based on strict equality, but also on considerations of merit and need.

A few studies further showed that children's judgments about fair distribution varies by situation because they coordinate among various considerations of equality taking situational factors into consideration.

Most of the studies on equality employed simple tasks involving stickers or candies, which were efficient to examine young children's understandings of fair distribution. However, central issues about social inequalities are complex involving conflicts among individuals from different groups, such as social class, race and gender. Only a few studies investigated children's moral reasoning about unequal distribution of resources between different social groups, and the findings showed that children coordinate multiple moral concerns about equality prioritizing different considerations depending on the social context.

Since the up-to-date literature on equality primarily focuses on assessing judgments and reasoning about what is fair distribution and how to make fair allocations, a study was conducted in the United States in attempt to understand concepts about equality beyond the judgments about fair allocation (Chung & Turiel, under review). The study examined American adolescents' judgments and reasoning about social inequalities pertaining to group differences based on social-class, race, and gender, which tap into central issues of existing social inequalities. In addition to evaluations about the social inequalities, adolescents' judgments were further assessed along a set of judgments that ascertain how adolescents classify the issues about inequalities within domains.

The findings show that almost all adolescents judged inequalities between different race or gender groups as unacceptable based on references to equality. Their judgements about inequalities did not vary even when facing conventional and personal contingencies. Adolescents also negatively judged the social inequality in a situation that depicted unequal distribution of school resources between a wealthy and a poor schools. In addition to concerns for equitable distribution, adolescents displayed concerns about welfare of the students attending the poor school with insufficient educational supplies.

The American adolescents' judgments and reasoning showed differences in a situation about inequality in personal lunch money that students have to spend in a school cafeteria to buy lunches and other things with leftover. Although the majority of adolescents judged the inequality in lunch money as unacceptable based on concerns about welfare of those students who are not able to buy adequate lunches, adolescents were more accepting of the inequality than in other situations. And those who evaluated the inequality as acceptable used justifications in the conventional domain making references to structures of the existing economic system. In addition, the judgments about the inequality of lunch money were more contingent on personal assertions or cultural practices than the judgments about other social inequalities.

The findings with adolescents in the U.S. show that understandings of equality are multifaceted involving moral considerations of welfare and equality as well as concerns in the conventional and personal domains. Adolescents weigh and balance these considerations when making judgments about social inequalities. Before considering the specific aims and expectations of the present study, which was conducted with adolescents from Korea, it is necessary to discuss different formulations it is necessary to consider different formulations of comparisons between a Western culture like the United States and a non-Western culture like Korea.

## **Formulations of Cultural Differences and Similarities**

A good deal of debate exists regarding the role of culture as a factor that determines individual's understandings about social and moral issues (as examples, see Abu-Lughod, 1993; Gjerde, 2004; Markus & Kitayama, 1991; Shweder, Mahapatra, & Miller, 1987; Turiel, 2002). One group of scholars maintains a position that each culture represents a coherent pattern of thought and rationalities shared among the members of the culture without much disagreement. The shared elements within a culture are transmitted to later generations, thereby maintaining homogeneity within each culture (Shweder, 1990). However, in these views heterogeneity across cultures exists as these shared elements differ from one culture to another. It is proposed that cultures can be distinguished along the dichotomy of individualism and collectivism (Markus, Mullally, & Kitayama, 1997; Shweder, Much, Mahapatra, & Park, 1997). Many Western cultures, such as the United States, Australia, Canada, England, and New Zealand, are characterized as individualistic cultures, with a primary focus on the autonomy of individuals and achievement of personal goals. Collectivistic cultures are said to be in non-Western nations, including countries in Asia, Africa and Latin America. In the collectivistic framework, members are said to show interdependent orientations to keep social harmony and thereby attribute higher values to traditions, duties and shared goals (Kitayama, 2000; Markus & Kitayama, 1991). According to the scholars who maintain that membership to a specific culture determines individuals' social orientations, South Korea is a traditional society with a hierarchical social structure where interpersonal relationships and preservation of harmony take precedence over individual goals or desires (Shaw, 1991).

Such variations in the patterns of thought result in different understandings of morality in different cultures. Morality in individualistic cultures is based on *ethics of autonomy*, which centers on concepts of harm, justice and rights. People in collectivistic cultures are oriented to hold *ethics of community* in which social order and duties assigned by the society are primary organizing features of morality. Cultures differ in the degree to which morality predominates, and different understandings of morality bring about different judgments about social issues (Shweder et al., 1997). For example, Indians judged a son claiming much more of his deceased father's inheritance than his sister as acceptable whereas Americans judged it unfair. It is argued that the differences in judgments stem from different orientations towards morality; Indians are bound to prioritize social harmony and role obligations over individual rights and personal entitlements, and Americans vice versa (Shweder et al., 1987).

In contrast, others scholars including psychologists taking the domain approach in understanding moral development (e.g. Abu-Lughod, 1993, Gjerde, 2004; Nussbaum, 2000; Turiel, 2002) maintain that a culture is not a homogeneous entity and that there are multiple perspectives in any given culture, and therefore membership to a specific culture does not predict or shape individuals' judgments about social or moral issues. Findings from the body of research using the social domain approach show that people in non-Western cultures also develop understandings of concepts of harm, justice and rights, and make moral judgments based on these concepts (Turiel, 2002). A study of Druze people living in a non-Western culture (Wainryb & Turiel, 1994) examined judgments in situations that depicted disagreements between a dominant family member (husband or father) and a subordinate member (wife, daughter or son) over personal choices to engage in various activities. The findings showed that independence, personal entitlement, and freedom of choice were a part of the thinking and actions of Druze people. Specifically, Druze males judged that men should be able to engage in activities they want in spite of objections of their wives, and that it was alright for sons to not comply with

father's wishes regarding issues about friendship and leisure time. These evaluations were justified with references to autonomy of individuals and right to make personal choices.

Another study with Druze Arabs by Turiel and Wainryb (1998) assessed judgments about freedoms of speech, religion and reproduction in situations containing weak and strong conflicts with issues regarding harm, community interests and parental authority. The results showed that the majority of Druze adults and adolescents, just like the American sample, endorsed these rights in situations where there were no conflicts, and negatively judged legal restrictions on the freedoms.

If the understandings of concepts such as independence and rights (often defined as characteristics of individualistic cultures) are also present in the judgments of people in non-Western cultures, where do the supposed differences across cultures characterized either as individualistic or collectivistic stem from? As discussed in the above section (*Processes of Coordination in Understanding Complex Social Issues*), people appraise various features of social situations which are weighed and balanced in coming to decisions. Similarly, people in non-Western cultures go through the processes of coordination when making social judgments based on their interpretations about the social contexts, and that they apply moral judgments in different situations can give rise to differences in decisions (see Turiel, 2002).

In the study on Druze people on personal choices (Wainryb & Turiel, 1994), personal entitlement and freedom of choice were not always endorsed. From the perspective of Druze females, they judged that men should be able to engage in activities of their choice in spite of objections from wives based on the legitimacy of personal entitlements and autonomy. However, they judged that wives should acquiesce to their husbands' objections because of serious negative consequences on welfare of women (i.e., beating or killing) if wives or daughters did not obey their husbands or fathers.

Other studies further provide examples of variations in judgments by situations and a mixture of individualistic and collectivistic ways of thinking in people in non-Western cultures. In the abovementioned study by Turiel and Wainryb (1998), Druze adolescents and adults endorsed concepts of freedoms as rights in general, but the freedoms were subordinated to other considerations when the conflict with other issues was salient (e.g. right to practice a religion that advocates a physically harmful ritual) just as the American adolescents and adults in Helwig (1995) study.

A few studies have been conducted with Korean children and adolescents to examine their understandings of morality. Along with the findings from a number of studies conducted in non-Western cultures (e.g. Ardilia-Rey & Killen, 2001; Hollos, Leis, & Turiel, 1986; Yau & Smetana, 2003), it was found that Korean children and adolescents make distinctions between morality and social convention (Song, Smetana, & Kim, 1987). They make moral judgments based on concerns about welfare, justice and equality whereas judgments about social conventions involve references to social coordination, traditions and conformity to authority.

Although Korea has been generally considered to be a traditional society with emphasis on respect for and conformity to authorities (Kwon, 2004; Rohner & Pettengill, 1985), studies (Kim, 1998; Kim & Turiel, 1996) show that Korean children and adolescents do not take a unilateral orientation to authorities. When authorities (e.g. principals or teachers) give directives contrary to moral evaluations (i.e. to continue fighting, keep other's money, or not share with peers), Korean children and adolescents attributed greater legitimacy to individuals giving commands consistent with moral evaluations even if these individuals were lower in positions within the social hierarchy (e.g. class president or peer without authority). Their responses were

justified with references about potential physical harm, property rights or other's welfare. These results show that moral judgments of Korean children and adolescents are not solely based on conformity to authority, and that they take several factors into consideration, including concerns about harm, justice, and rights in making judgments about social issues.

### **Statement of the Research Problem**

On the basis of findings of heterogeneity of thinking in both Western and non-Western cultures and that concepts of fairness exist in both cultures, the present study was designed to ascertain if Koreans as a supposedly "collectivistic" culture maintain concepts of equality. Therefore, the study examined Korean adolescents' concepts of equality in their application to situations involving inequalities pertaining to group differences based on social-class, racial, and gender, and to ascertain how the judgments and reasoning of Korean adolescents compares with that of American adolescents. As mentioned above, the social domain approach take a theoretical standpoint that moral judgments do not vary by culture and people in different cultures make similar judgments about matters in the moral domain. However, there may be differences in judgments of adolescents in their coordination of various concerns about equality, and if different considerations are given precedence over other issues, it may result in different judgments.

The research on the development of the concept of equality is heavily focused on distributive justice, and social inequalities that exist among individuals and social groups have not received much attention. Issues of social equalities and inequalities are complex in that individuals attend to multiple aspects of a situation and coordinate them in making judgments about fairness. Thus, the present study was designed to examine the development of concepts of equality with regard to social inequalities that exist among groups from different socio-economic class, race, and gender, with special attention to investigating processes involved in coming to judgments about fairness.

Furthermore, the majority of previous studies have been conducted with young children in attempt to describe the emergence of concepts of equality and have not often included adolescents (Kienbaum & Wilkening, 2009; Rizzo et al., 2016). Although young children begin to distinguish various factors of a situation that influence fair treatment among individuals, studies report that it is not until in adolescence that judgments about fairness involve complex coordination process (Almas, Cappelen, Sorensen & Tungodden, 2010; Kienbuam & Wilkening, 2009; McGillicuddy-De Lisi, De Lisi a& Van Gulik, 2008; Sigelman & Waitzman, 1991). In addition, the aims of the current study were to examine concepts of equality in their application to situations involving disparities among groups based on social class, race, and gender. Given the complexities of these social groups and situations, the study was conducted with adolescents ranging in age from 12 to 17 years.

The current study was based on social domain theory, which provides a framework explaining the complexity in judgment and reasoning. The domain approach to social problems demonstrates that children make distinct judgments about issues in moral, social conventional, and personal domains, and that they engage in processes of coordinating multiple considerations from different domains when making judgments about social issues. The moral domain pertains to issues of welfare, fairness, and rights. The social conventional domain is based on customs and norms according to which a particular society operates. Additionally, the personal domain involves concerns that fall under personal jurisdiction. Often real life social issues are complex in that they are inherent with conflicts between moral and non-moral considerations. Individuals

attend to various components of social situations and coordinate them in coming to judgments about social issues (Smetana, 2006; Turiel 1983; 2015a). Therefore, domain theory provides a useful framework for the current study to examine adolescents' judgments about social inequalities and reasoning associated with their evaluations.

Specific research questions guiding the current study are as follows.

- 1) How do adolescents evaluate social inequalities among individuals and groups?
- 2) How do their evaluations of inequalities vary when additional situational factors come into consideration (i.e. along criterion judgments)?
- 3) What domains of justifications do adolescents use when evaluating inequalities?
- 4) Does adolescents' use of justifications vary depending on evaluations?
- 5) Do adolescents' evaluations and forms of reasoning undergo age-related changes?

There are many kinds of social inequalities, but one that is salient in contemporary societies arises from differences in socio-economic class. Many of the economies in the world, including that of Korea, operate on capitalism, which gives rise to differences in socio-economic classes. As a result, people near the lower end of the income hierarchy experience inequalities in various aspects; some that immediately impact their lives include the amount of food, the quality of housing, and the access to healthcare. There are others that bear long-term effects, such as inequalities in educational and occupational opportunities.

Other prevalent inequalities include those that stem from differences in group membership, particularly race and gender. Gender inequality has always been an important social issue in Korean, for example, Korea has the highest gender wage gap among 29 developed nations (OECD, 2018). The issue of gender inequality in Korea has received much more attention with the Me Too Movement in early 2018 (Bicker, 2018). The influx of foreign residents to Korea has continually increased in the past 20 years with its number increasing from 0.2 million in 1997 to 1.1 million in 2017 (Ministry of Justice, 2017). In 2016, interracial marriage accounted for 7.7% of total marriage in Korea with 4.8% of newborn babies being born in interracial families (Statistics Korea, 2016). Social issues regarding discrimination of people of different racial groups, especially immigrant workers and children born into interracial families, have become more pertinent in Korea.

Given the current social issues related to Korean society, the present study aimed to assess several aspects of judgments about inequalities among social groups based on social class, race, and gender. Participants were presented with four hypothetical situations depicting different kinds of social inequalities in school contexts. Two situations depicted inequalities due to differences in wealth (i.e., social class). One of these situations was related to students' family level of wealth affecting how much they could spend on lunches in a school cafeteria. The second social-class situation pertained to differences in educational resources that town's government distributed to a wealthy and a poor schools in their town. The other two situations pertained to differences in educational resources provided to schools divided by race (Korean and non-Koreans) or gender (male and female).

The first research question aimed at examining adolescents' evaluations about social inequalities. After presenting the stories, adolescents were first asked to evaluate the presented inequalities. The second research question complemented the first question in that it was devised to further investigate the complexity in adolescents' understandings of social equalities. They were asked to make judgments about the issues when additional situational factors are introduced

for consideration, including issues of personal choice, authority and rule contingency, and cultural generalizability (referred as criterion judgments). Criterion judgments “pertain to the categories used by individuals in the identification and classification of the parameters of a domain of knowledge” (Turiel, 1983, p.52). Derived from philosophical propositions (Dworkin, 1977; Gewirth, 1978) and supported by empirical findings (Nucci & Turiel, 1978; Davidson, Turiel & Black, 1983; Turiel, 1983, for examples), issues in moral domain are considered as obligatory, universally applicable, impersonal and not contingent on the directives of authority or rules. The studies on social issues drawing on social domain theory (Helwig, 1995; Killen & Stangor, 2001; Nucci, Turiel, & Roded, 2107; Perkins & Turiel, 2007; Turiel & Wainryb, 1998) show that children’s and adolescents’ understandings of social issues are not unitary, and they apply moral judgments in a flexible way taking into consideration various social contexts. Prominent moral concepts are often prioritized in straightforward situations whereas they are coordinated with other moral or non-moral considerations in multifaceted and complex situations. Further, a few studies about distribution of resources also reported that children weigh and coordinate multiple moral concerns when making fair allocation decisions (Rizzo et al., 2016, Rizzo, & Killen, 2016). Therefore, it was expected that adolescents would attend to and coordinate relevant considerations in making judgments about complex issues about social inequalities. It was further expected that the contextualized application of moral judgments would be evident through variations in participants’ judgments depending on different contextual differences across and within the situations.

Justifications were elicited for evaluations and criterion judgments. Justifications have been found to be distinctive across domains; moral acts are justified using concepts of justice, harm, and rights whereas conventional acts are evaluated upon social-organizational reasons (Turiel, 1983). And, acts in the personal domain are justified with references to the legitimacy of personal choice (Nucci, 2001). Analyzing the uses of justifications in addition to evaluations and criterion judgments would capture the cognitive processes involved in how adolescents make distinctions among various social inequalities. The third and fourth research questions were designed to investigate variations in the uses of justifications associated with the adolescents’ judgments about inequalities. It was hypothesized that variations in the judgments across and within the situations would be accompanied with variations in the uses of justifications. Thus, the analysis of justifications associated with different evaluations of social inequalities would show the processes of coordination involved in decision making (specifically, what kinds of considerations are prioritized or subordinated in which contexts).

Furthermore, it has been reported that although there are no age differences in distinction of domains, how the domains are coordinated and the use of forms of reasoning may undergo age-related transformations (Turiel, 1983). Adolescence is an interesting time in development as some studies report U-shaped pattern in moral development of adolescents especially in overly believing that considerations of personal rights should be given priority in making judgments about moral issues (Flanagan, Stout & Gallay, 2008; Nucci & Turiel, 2009). In addition, though evaluations and criterion judgments about moral issues are not age-related, age-related differences are evident in uses of moral reasoning (Nucci, Turiel, & Roded, 2107). Therefore, it was expected to find age-related differences in applying and justifying moral judgments in situations that raise conflicts between moral and non-moral (i.e. personal and conventional) considerations.



## Method

### Participants

The study included 84 participants, 14 males and 14 females in each of three ages: 12-13 years ( $M = 12.9, SD = 0.28$ ), 14-15 years ( $M = 14.50, SD = 0.33$ ), and 16-17 years ( $M = 17.4, SD = 0.42$ ). Participants were recruited from one public high school, one private high school, two public middle schools and one private middle school in the suburban areas near Seoul. In Korea, students in both public and private middle and high schools follow the same curriculum, and the same portion of fees for both kinds of schools are covered by the government. The participants were 100% Korean in nationality.

### Procedure

All participants was interviewed by a female interviewer individually in a quiet room in their schools after the participants and their parents or legal guardians gave consent. The interviewer reviewed the contents in the consent form with each participant before the interviews. Four hypothetical situations were presented to the participants during the interview. First situation was read to the participants, and the interviewer made sure they needed any further clarification before proceeding to questions. Five questions were asked for each situation. Once all of the five questions were answered for the first situation, the interviewer moved on to the next situation and repeated the process until all four situations were covered. Participants were able to decline to answer any question or choose to end the interview at any time. All interviews were audio-recorded and transcribed for coding purposes. Interview protocols used for the study can be found in Appendix A. The protocols are translated versions of the protocols used in the interviews conducted in Korean.

### Design

A semi-structured interview was administered consisting of four hypothetical situations that depicted social inequalities resulting from differences in socio-economic class, race, and gender. A within-subjects design, in which every participant gave responses to all four hypothetical situations, was used. The order of presenting the situations was counterbalanced in order to control for any order effect, with half of the group receiving the situations in the order of 1-2-3-4, and the other half in the order of 4-3-2-1.

The situations were designed to assess judgments and reasoning about social issues of inequalities among individuals and groups in different contexts. Two of the four situations depicted differences in socio-economic class; one pertained to differences in the amount of lunch money that students could spend at a school cafeteria (*Social-Class: Lunch Money*), and the other was about differences in the amount of money for educational resources between schools in a wealthy and a poor neighborhood (*Social-Class: Education*). In the third situation, a town's government distributed more money for educational resources to a school composed of Korean students than to one composed of non-Korean students (*Race: Education*). The fourth situation depicted schools divided by gender in which the town's government distributed more money to the male school than to the female school (*Gender: Education*). The distribution of resources in all situations were disadvantageous to groups commonly perceived to be discriminated against (i.e. the poor, the non-Koreans, and the females) in contemporary Korean society.

For each situation, five questions were asked to assess their evaluation, criterion judgments and justifications about social inequalities. After a situation was presented,

participants were asked whether the presented inequality was acceptable or not (Evaluation). Then, participants were asked questions assessing criterion judgments: Assertion of Personal Choice, Authority Directive, Rule Contingency, and Generalizability. Bearing on the participants' evaluation about the social inequality, questions assessing criterion judgments were posed; these questions depicted actors making assertions opposite to the evaluation provided by the participant. If the participant judged the social inequality as unacceptable, the following questions asked the participant to make judgements about an individual, authority and rule that assert persistence of social inequality. Lastly, the participant was asked whether the social inequality would be acceptable if it is considered acceptable in another country.

As the four situations follow the same format, only one situation depicting inequalities based on social class differences (*Social-Class: Education*) is described as follows:

The interviewer reads the situation:

*Suppose there is a town in which the students go to schools in their neighborhoods. In this town, there is one school that has mostly wealthy students and another school that has mostly poor students. Because the wealthy people in the town have more money and pay more in taxes than poor people, the students from the school in the wealthy neighborhood have more and better equipment, supplies, and books than the other school.*

Once it is confirmed that the participant understood the situation, the first question assessing their judgment about the social inequality:

(Evaluation) *Do you think it is OK or not OK that one school has better equipment, supplies, and books than the other school?*

Assuming that the participant judged the unequal distribution of educational resources between a poor and wealthy school as not acceptable, the following questions were posed (see Appendix A for a presentation of questions in each situation):

(Personal Choice) *Suppose the parents from the wealthy neighborhood say that they give more to the town and their school should get more money for equipment, supplies, and books. Do you think that's OK or not OK?*

(Authority Directive) *Suppose the people who run the town's government say that the schools cannot have the same amount of money for equipment, supplies, and books. Do you think it is OK or not OK for the people who run the town's government to say that?*

(Rule Contingency) *Suppose there is a law that the amount of money for schools has to be based on the amount of taxes they pay. Do you think it is OK or not OK to have that law?*

(Generalizability) *Suppose that there is another country where it is generally accepted for one school to have better equipment, supplies, and books than the other school. Do you think that is OK or not OK?*

For all the above assessments (evaluation of inequality and criterion judgments), participants were asked for their justifications with the questions of, *why or why not?*

### **Data Coding and Reliability**

Participants from three age groups were asked to provide responses to five questions assessing the evaluation of inequality and criterion judgments for four different types of social inequalities. Each response consisted of a judgment and justification. The judgment portion of the evaluations and criterion judgments were coded with three categories of responses: OK, Depends, and Not OK.

Reasons provided for judgments were coded into the justification categories listed in Table 1. The coding system for the justifications were formulated using 25% of the interviews, but were also based on a large body of previous research (Davidson, Turiel, & Black, 1983; Helwig, 1995; see Turiel, 2002 for summaries). Justification categories are also grouped into the general domains of Moral, Conventional, and Personal. The Moral justifications were further categorized into four specific categories which were: 1) *Welfare* (references to concerns for welfare of others, especially needs of others, including economic and basic human needs, such as, “You need to be full to concentrate during classes”), 2) *Equality* (references to equal treatment of individuals, such as “Everyone has a right to live, a right to be educated, a right to go to a school, so everyone should be treated equally”), 3) *Property Rights* (references to one’s entitlement over one’s possessions, such as, “forcing someone to share his money...is like stealing.”), and 4) *Merit* (deservedness of individuals or a group based on monetary contribution recognizing the work required to earn the money, such as, “they should rightfully receive more because they paid more because money doesn’t just come from nowhere- you must have earned it”). Reasons categorized as Conventional justifications referred to existing social structure or system, such as, “you can’t say it’s unfair because that is how the social system is set up”. Participants also provided reasons that fall into the personal domain. Personal justifications made references to legitimacy of individual choice, will, preferences about one’s actions, such as, “we want to use our money however we want. Teacher should be concerned with our education, not with how we spend our money,” and “If you want to share, you can, if you don’t want to, you don’t have to”.

Reliability was assessed by a second judge on a randomly selected 25% of the interviews. Using Cohen’s kappa, inter-rater agreement for evaluations and criterion judgments was .92. For justifications, inter-rater agreement was .89.

Table 1  
*Justification Categories*

<b>Category</b>	<b>Descriptions</b>
Moral	
Welfare	References to concerns for welfare of others, especially need of others, including economic and basic human needs
Equality	References to maintaining equal chances for everyone, and appeal to equal treatment of individuals regardless of individual qualities or group membership
Property Rights	References to personal entitlements over one's possessions
Merit	Appeal to deservedness of individuals or a group based on monetary contribution recognizing the work required to earn the money
Conventional	References to how the existing social structure or system operates or to obligations of individuals to follow dictates of authorities
Personal	Appeal to legitimacy of individual choice, will, preferences about one's actions

## Results

### Data Analysis

Participants from three different age groups responded to five questions regarding four different situations each depicting a different kind of social inequality. The five questions assessed participants' evaluations and criterion judgments about the social inequalities, as well as justifications. Results are presented in two main sections. The first and second research questions (evaluations of social inequalities and criterion judgments, respectively) are addressed in the first section discussing analyses of judgments about social inequalities for evaluations and criterion judgments. The third (justifications for the evaluations) and fourth (relations of justifications and evaluations) research questions are addressed in the second section on analyses of justifications for evaluations and criterion judgments, and on relations between judgments and justifications. The last research question regarding age-related differences is discussed throughout the two sections.

Univariate ANOVAs were conducted to examine whether judgments and justifications varied significantly due to order of presentation of the situations and gender. The effects of age, situation type and judgment dimension (i.e. the evaluations and criterion judgments) were examined using mixed effects ANOVAs to assess both between- and within-subjects effects. First, participants' judgments for the evaluations and criterion judgments were analyzed using 3 (Age) x 4 (Situation Type) ANOVAs with repeated measures on the last factor. In order to analyze the uses of justifications for the evaluations, 3 (Age) x 4 (Situation Type) ANOVAs with repeated measures on the last factor were conducted for the three primary justification categories (Moral, Conventional, and Personal), and on four specific categories of Moral justifications (Welfare, Equality, Property Rights, and Merit). The uses of justifications for criterion judgments were analyzed using a 3 (Age) x 4 (Situation Type) x 5 (Judgment Dimension) ANOVA with repeated measures on the last two factors for each of the above justification categories. Further investigations were conducted to analyze participants' use of justification in relation to judgments they made. 3 (Age) x 2 (Type of Judgment) x 3 (Type of Justification) ANOVAs with repeated measures on the last factor were conducted to investigate relations between participants' judgments and six justification categories – the four specific categories in the Moral domain, Conventional, and Personal justifications. For all ANOVA analyses, post-hoc comparisons were performed using Bonferroni adjustment on significant differences.

ANOVA models have been considered more appropriate for analyses of categorical data such as justifications in this study that are coded 0, 1 (no use, use of a code) than loglinear-based models; these approaches may confound '0' as "missing" data, and result in an estimation issue as log of zero is undefined (see Posada & Wainryb, 2008 and Wainryb, Shaw, Laupa, & Smith, 2001). Moreover, ANOVA-base procedures were found to be robust with dichotomous data demonstrated by an empirical investigation using the Monte Carlo technique (see Lunney, 1970 and D'Agostino, 1971).

### Evaluations and Criterion Judgments of Social Inequalities in Different Contexts

In order to examine the effects of order of presentation of the situations and gender on the evaluations and criterion judgments, univariate ANOVAs were conducted. Since the tests showed no significant difference in the evaluations due to the order of the presentation of the situations,  $F(1,332) = 1.27, p = .26$ , or between genders,  $F(1,332) = .23, p = .63$ , the two variables in the following analyses are not discussed further.

Table 2

*Percentage of Participants' Negative Responses to Evaluations and Criterion Judgments by Situation and Age*

	Social Class- Lunch					Social Class- Education					Race-Education					Gender-Education				
	12-13	14-15	16-17	Total		12-13	14-15	16-17	Total		12-13	14-15	16-17	Total		12-13	14-15	16-17	Total	
Evaluation	68	50	40	52		61	61	64	62		96	100	100	99		100	100	100	100	
Assertion of personal choice	18	14	14	15		54	46	64	55		79	71	61	70		75	68	61	68	
Authority directive	93	96	96	95		61	68	71	67		96	100	100	99		100	100	100	100	
Rule contingency	86	93	96	92		57	68	75	67		96	100	100	99		100	96	100	99	
Generalizability	43	32	21	32		71	68	68	70		96	96	96	96		93	100	100	98	

Table 2 presents the percentages of negative evaluations and criterion judgments for each of the age groups within each of the four situations. The totals show percentages combined for each situation. Participants' judgments about questions assessing evaluations and criterion judgments were analyzed.

Participants were first asked to evaluate the acceptability of social inequalities in four different situations. To test effects of age and situation type on evaluations of the inequalities, a 3 (Age) x 4 (Situation Type) ANOVA with repeated measures on the last factor was performed. The results showed a main effect for Situation Type on the evaluation responses,  $F(3, 243) = 44.87, p < .001, \eta_p^2 = .36$ , yielded no significant age differences,  $F(6, 81) = .64, p = .53$ , and no significant interaction between Age and Situation Type,  $F(2, 243) = 1.57, p = .16$ .

As shown in the Table 2, almost all participants evaluated the inequalities in the *Race: Education* and *Gender: Education* situations as not acceptable (99% and 100%, respectively) whereas slightly more than half of the participants negatively evaluated the inequalities in the *Social Class: Lunch* (52%) and *Social Class: Education* (62%) situations. Post-hoc analyses also showed that significantly more participants judged the inequalities in the *Race: Education* and *Gender: Education* situations as unacceptable than in the *Social Class: Lunch* and *Social Class: Education* situations,  $ps < .001$ .

Participants' responses to the criterion judgment questions show how their moral judgments intersect with personal and conventional contingencies. For each criterion judgment, a 3 (Age) x 4 (Situation Type) ANOVA with repeated measures on the last factor was performed to test effects of age and situation type.

The first criterion judgment question investigated participants' judgments when faced with assertions of individual(s) opposite to their evaluations about social inequalities (e.g., the actor claims he should be able to keep his lunch money and not share). A main effect for Situation Type,  $F(3, 243) = 33.79, p < .001, \eta_p^2 = .29$ , was observed. Compared to their initial evaluations, participants made more positive judgments under these circumstances. Especially in the *Social Class: Lunch* situation, eighty-five percent of participants judged personal assertions about how to spend own money as acceptable. In other words, only 15% made negative evaluations about personal choices to not share, which was significantly less than negative evaluations in the three situations involving school resources (55% to 70%),  $ps < .001$ .

Corresponding findings were obtained for judgments about generalizability to another country. A main effect for Situation Type was found,  $F(3, 243) = 68.17, p < .001, \eta_p^2 = .45$ . Thirty-two percent of participants judged the inequality of lunch money based on social-class in another country as unacceptable, with 68% judging the inequality as acceptable in another country, which was significantly less than negative evaluations about the inequalities for school resources in another country based on social-class (70%), race (96%), and gender (98%),  $ps < .001$ . Furthermore, although the majority of participants made negative evaluations for the Generalizability criterion judgment in the three situations involving school resources, fewer judged the inequalities in another country as unacceptable in the *Social Class: Education* situation (70%) than in the *Race: Education* (96%) and *Gender: Education* (98%) situations,  $ps < .001$ .

The other two questions assessed judgments when there are dictates by authorities or when there is a rule opposite to participants' evaluations about social inequalities. A main effect for Situation Type was found for Authority Directive,  $F(3, 243) = 24.48, p < .001, \eta_p^2 = .23$ , and for Rule Contingency,  $F(3, 243) = 20.52, p < .001, \eta_p^2 = .20$ . The majority of participants negatively evaluated the dictates of authorities or the existence of a rule in these circumstance for

all situations. However, post-hoc comparisons showed that significantly fewer participants judged the acts directed by authority as unacceptable in the *Social Class: Education* situation (67%) than in the *Social Class: Lunch* (95%), *Race: Education* (99%), and *Gender: Education* (100%) situations,  $ps < .001$ . Similarly when a rule commands an act against the evaluation initially provided by the participant, it was also judged more acceptable in the *Social Class: Education* situation (67%) than in the *Social Class: Lunch* (92%),  $p = .005$ , *Race: Education* (99%),  $p < .001$ , and *Gender: Education* (99%) situations,  $ps < .001$ .

As in the evaluations of the inequalities, no significant main effect for age or interaction between situation and age were observed for the criterion judgments.

In sum, participants judged social inequalities related to race and gender as wrong, and their judgments were not different for the criterion judgments of personal assertions, directives from authorities, existence of a rule, and generalizability to another country. Participants evaluated social inequalities due to social class differences as more acceptable. Participants were more accepting of personal and conventional contingencies for the two situations about social-class differences than for the situations about race and gender inequalities.

### **Justifications for Judgments about Social Inequalities in Different Contexts**

Justifications were elicited for evaluations and criterion judgments. First, analyses of justifications for the evaluations and criterion judgments are presented. Then, analyses of the results on the relations between judgment and justifications are presented.

**Justifications for Evaluation.** Participants were asked to provide reasons (justifications) for their judgments about the inequalities. The justification categories (see Table 1) are grouped by the general domains of Moral, Conventional, and Personal. The Moral domain was further divided into four specific categories: Welfare, Equality, Property Rights, and Merit.

In order to analyze the uses of justifications for the evaluations of inequalities, a 3 (Age) x 4 (Situation) ANOVA was conducted for each justification category. Table 3 presents the percentages of the uses of justification categories in the evaluations and criterion judgments within each situation. As shown in Table 3, justifications in the Personal domain were not used for evaluations, and Moral justifications were used more than Conventional justifications in every situation.

A main effect of type was observed for Moral justifications,  $F(3,243) = 35.53, p < .001, \eta_p^2 = .29$ . Although the majority of participants used Moral justifications for the evaluations in all situations, Moral justifications were used less in the *Social Class: Lunch* situation (69%) than in the *Social Class: Education*, *Race: Education* and *Gender: Education* situations (99% to 100%),  $ps < .001$ . The results showed no significant differences for Age,  $F(2,81) = .76, p = .69$ , and no significant interaction between Situation and Age,  $F(6,243) = 1.58, p = .47$ .

Within the Moral domain, a main effect of Situation was observed for Welfare,  $F(3,243) = 14.62, p < .001, \eta_p^2 = .15$ , and Equality,  $F(3,243) = 92.97, p < .001, \eta_p^2 = .53$ , justifications. Welfare justifications were used less in the *Gender: Education* situation (1%) than in the *Social Class: Lunch* (36%),  $p < .001$ , *Social Class: Education* (24%),  $p < .001$ , and *Race: Education* (13%),  $p < .01$ , situations. In addition, participants used Welfare justifications less in the *Race: Education* situation than in the *Social Class: Lunch* situation,  $p < .001$ . Equality justifications were used more in the *Gender: Education* situation (99%) than in the *Social Class: Lunch* (20%),  $p < .001$ , *Social Class: Education* (39%),  $p < .001$ , and *Race: Education* (87%),  $p < .01$ , situations. In addition, Equality justifications were used more in the *Race: Education* situation



Table 3

*Percentage of Justifications for Evaluation and Criterion Judgments by Situation*

Justifications	Social Class- Lunch	Social Class- Education	Race- Education	Gender- Education
<b>Evaluations</b>				
Moral	69	99	99	100
Welfare	34	24	13	1
Equality	19	39	86	99
Property Rights	1	0	0	0
Merit	15	36	0	0
Conventional	31	1	1	0
Personal	0	0	0	0
<b>Assertion of Personal Choice</b>				
Moral	43	85	91	95
Welfare	28	36	20	5
Equality	1	39	52	64
Property Rights	14	0	19	27
Merit	0	10	0	0
Conventional	0	0	1	0
Personal	57	15	9	5
<b>Authority Directive</b>				
Moral	35	98	99	100
Welfare	24	20	11	0
Equality	1	61	88	100
Property Rights	9	0	0	0
Merit	1	16	0	0
Conventional	1	0	1	0
Personal	64	2	0	0
<b>Rule Contingency</b>				
Moral	32	96	100	99
Welfare	23	26	6	0
Equality	2	52	94	99
Property Rights	7	0	0	0
Merit	0	18	0	0
Conventional	6	2	0	1
Personal	62	2	0	0
<b>Generalizability</b>				
Moral	42	92	98	98
Welfare	35	16	11	0
Equality	0	55	87	98
Property Rights	6	0	0	0
Merit	1	21	0	0
Conventional	14	8	2	2
Personal	44	0	0	0

than in the two situations about the inequalities base on social-class differences,  $ps < .001$ , and more in the *Social Class: Education* situation than in the *Social Class: Lunch* situation,  $p = .03$ .

A main effect for Situation was also observed for Merit justifications,  $F(3,243) = 31.48$ ,  $p < .001$ ,  $\eta_p^2 = .28$ . Merit justifications were not used in the *Race: Education* and *Gender: Education* situations, but only for the *Social Class: Lunch* and *Social Class: Education* situations in support of positive or uncertain evaluations about the inequalities based on social-class differences. Between the two *Social Class* situations, participants used Merit justifications more in the *Social Class: Education* situation (37%) than in the *Social Class: Lunch* situation (15%),  $p < .001$ . The results did not show any significant interactions between Situation and Age or any significant effects due to Age for Welfare, Equality, and Merit justifications. Property Rights justifications were not used for the evaluations.

A main effect of Situation was observed for Conventional justifications,  $F(3,243) = 34.02$ ,  $p < .001$ ,  $\eta_p^2 = .29$ . In the *Social Class: Education*, *Race: Education*, and *Gender: Education* situations, participants rarely used justifications in the Conventional domain in support of the evaluations (0% to 1%), and analyses also showed that Conventional justifications were used significantly more in the *Social Class: Lunch* situation (32%) than in the three situations involving school resources,  $ps < .001$ . Along with Merit justifications, Conventional justifications were used primarily by those who evaluated the inequality in the *Social Class: Lunch* situation as alright or were uncertain. No significant effects due to Age or due to interaction between Situation and Age were found for Conventional justifications.

In sum, participants reasoned their evaluations about social inequalities using justifications in the Moral domain for the *Social Class: Education*, *Race: Education*, and *Gender: Education* situations. Specifically, Equality justifications were primarily used in the *Race: Education* and *Gender: Education* situations whereas Welfare, Merit, and Equality justifications were evenly used in the *Social Class: Education* situation. The majority of responses were justified with Moral justifications in the *Social Class: Lunch* situation as well; however, participants also referred to reasons in the Conventional domain in support of positive evaluation about the inequality in the amount of money for school lunches. Personal justifications were not used for the evaluations.

**Justifications for Criterion Judgments.** Justifications for the four criterion judgments were also assessed. Table 3 shows the percentages of uses of the justification categories for each of criterion judgment within each situation. In order to test the effects of age, situation, and judgment dimension on the uses of justifications, 3 (Age) x 4 (Situation Type) x 5 (Judgment Dimension) ANOVAs with repeated measures on the last two factors were conducted on the three primary justification domains and on the four specific categories of Moral justifications. The evaluations of inequality were included as a judgment dimension to compare with the uses of justifications in criterion judgments.

Main effects of Situation Type,  $F(3,243) = 173.76$ ,  $p < .001$ ,  $\eta_p^2 = .68$ , and of Judgment Dimension,  $F(4, 324) = 9.60$ ,  $p < .001$ ,  $\eta_p^2 = .12$ , were observed for Moral justifications combined. No significant differences due to Age was found. The main effects of Situation Type and Judgment Dimension were further explained by interaction effects between Situation Type and Judgment Dimension,  $F(12,972) = 6.77$ ,  $p < .001$ ,  $\eta_p^2 = .08$ , and between Situation Type and Age,  $F(6,243) = 3.43$ ,  $p < .01$ ,  $\eta_p^2 = .08$ .

As in the evaluations, for criterion judgments Moral justifications were used less in the *Social Class: Lunch* situation than in the three situations about the inequalities in educational

resources,  $ps < .001$  (see Table 3). However, variations from the uses of Moral justifications for the evaluations were observed within situations. Specifically, In the *Social Class: Lunch* situation, Moral justifications were used less in the criterion judgments (33% to 46%) than in the evaluations (69%),  $ps < .01$ . Although the majority of participants used Moral justifications in the *Social Class: Education* situation (85% to 98%), Moral justifications were used significantly less in the criterion judgment of Assertion of Personal Choice (85%) than in the evaluations (99%),  $p = .02$ , and the Authority Directive (98%),  $p = .01$  and Rule Contingency (96%),  $p = .02$ , criterion judgments. Participants primarily used Moral justifications for the criterion judgments in the *Race: Education* (92% to 100%) and *Gender: Education* (95% to 100%) situations as in the evaluations, and no significant differences were observed.

Age-related differences in the use of Moral justifications for the criterion judgments were found. For all three age groups, participants used Moral justifications less in the *Social Class: Lunch* situation (36% to 59%) than in the *Social Class: Education* (92% to 95%), *Race: Education* (97% to 98%), and *Gender: Education* (97% to 99%) situations,  $ps < .001$ . In the *Social Class: Lunch* situation, Moral justifications were used less by those in 16-17 years age group (36%) than those in the 12-13 years age group (59%),  $p = .02$ . No significant differences in the uses of Moral justifications among age groups were observed for the *Social Class: Education*, *Race: Education*, and *Gender: Education* situations.

The four specific categories – Welfare, Equality, Property Rights, and Merit – were further analyzed. Equality justifications showed similar patterns as Moral justifications combined. Main effects for Situation Type,  $F(3,243) = 273.44$ ,  $p < .001$ ,  $\eta_p^2 = .77$ , and Judgment Dimension,  $F(4,243) = 33.91$ ,  $p < .001$ ,  $\eta_p^2 = .30$ , were found. Explaining these effects, an interaction was found between Situation Type and Judgment Dimension,  $F(12,972) = 11.97$ ,  $p < .001$ ,  $\eta_p^2 = .13$ .

As in the evaluations, the percentages of uses of Equality justifications were lower in the *Social Class: Lunch* situation than in the *Social Class: Education*, *Race: Education*, and *Gender: Education* situations for the criterion judgments. Equality justifications were rarely used for the criterion judgments for the *Social Class: Lunch* situation (0% to 2%), which was significantly less than the uses in the *Social Class: Education* (40% to 58%), *Race: Education* (55% to 96%), and *Gender: Education* (65% to 100%) situations,  $ps < .001$ . Among the three situations about distribution of educational resources, participants used Equality justifications less in the *Social Class: Education* situation than in the *Race: Education* and *Gender: Education* situations for the criterion judgments,  $ps < .01$ . Between the *Race: Education* and *Gender: Education* situations, participants used Equality justifications more in the *Gender: Education* situation (100%) than in the *Race: Education* situation (89%),  $ps = .01$ , for the criterion judgment of Authority Directive.

Furthermore, differences in the uses of Equality justifications for the criterion judgments from the uses in the evaluations were observed within situations. In the *Race: Education* and *Gender: Education* situations, Equality justifications were used less in the criterion judgment of Assertion of Personal Choice (55% and 65%, respectively) than in the evaluations (87% and 99%, respectively) and other criterion judgments (88% to 100%),  $ps < .001$ . In the *Social Class: Lunch* situation, participants used Equality justifications less for the criterion judgments (0% to 2%) than for the evaluations (20%),  $ps < .01$ . Within the *Social Class: Education* situation, Equality justifications were used more in the Authority Directive (68%),  $p < .001$ , and Generalizability (58%) criterion judgments than in the evaluations (39%),  $ps = .04$ . Participants also used Equality justifications more in the Authority Directive criterion judgment (68%) than in the Assertion of Personal Choice criterion judgment (40%),  $p < .001$ .

Main effects for Situation Type,  $F(3,243) = 26.24, p < .001, \eta_p^2 = .25$ , and Judgment Dimension,  $F(4,243) = 5.73, p < .001, \eta_p^2 = .07$ , were found in the uses of Welfare justifications. These effects were further explained by an interaction between Situation Type and Judgment Dimension,  $F(12,972) = 3.219, p < .001, \eta_p^2 = .04$ . Similar to the evaluations, the uses of Welfare justifications showed a different pattern from the uses of Equality justifications; references about welfare were made more in the two *Social Class* situations than in other two situations about racial and gender inequalities. Participants used Welfare justifications less in the *Gender: Education* situation (0% to 5%) than in the *Social Class: Lunch* (24% to 39%) and *Social Class: Education* (17% to 38%) situations for all criterion judgments,  $ps < .001$ . In addition, Welfare justifications were used less in the *Race: Education* situation than in the *Social Class: Lunch* and *Social Class: Education* (72%) situations for the criterion judgments of Rule Contingency, and less in the *Race: Education* situation than in the *Social Class: Lunch* situation for the Generalizability criterion judgment,  $ps < .01$ . Between the *Race: Education* and *Gender: Education* situations in which Welfare justifications were used less than in the two *Social Class* situations, Welfare justifications were used more in the *Race: Education* situation than in the *Gender: Education* situation for the Assertion of Personal Choice,  $p < .001$ , Authority Directive,  $p = .02$ , and Generalizability,  $p = .01$ , criterion judgments.

Significant differences in the uses of Welfare justifications among judgment dimensions within situations were observed. In the three situations involving school resources, participants expressed concerns about others' welfare when personal assertions resulted in unequal distribution of school supplies. Specifically, in the *Gender: Education* situation, Welfare justifications were not used in the evaluations or other criterion judgments but only for the Assertion of Personal Choice criterion judgment (5%). In the *Race: Education* situation, participants used Welfare justifications more for the Assertion of Personal Choice criterion judgment (21%) than for the Rule Contingency criterion judgment (6%),  $p < .01$ . Also in the *Social Class: Education* situation, Welfare justifications were used more in the Assertion of Personal Choice criterion judgment (38%) than in the Authority Directive (23%),  $p = .03$ , and Generalizability (17%),  $p < .01$ , criterion judgments. Participants made references about others' welfare evenly across the evaluations and criterion judgments in the *Social Class: Lunch* situation (24% to 39%) so that no significant differences among judgment dimensions were found.

Although the uses of Property Rights and Merit justifications were much lower than those of Welfare and Equality justifications, a few significant findings were observed. Main effects for Situation Type,  $F(3,243) = 12.12, p < .001, \eta_p^2 = .13$ , and for Judgment Dimension,  $F(4,243) = 28.48, p < .001, \eta_p^2 = .26$ , were observed for Property Rights justifications. Explaining these effects was an interaction between Situation Type and Judgment Dimension,  $F(12, 972) = 8.97, p < .001, \eta_p^2 = .10$ . Property Rights justifications were not used for the evaluations, however, participants made references about property rights for the criterion judgments primarily in support of personal assertions about own properties. Specifically, for *Race: Education* and *Gender: Education* situations, participants used Property Rights justifications only in the Assertion of Personal Choice criterion judgment (20% and 27%, respectively). In the *Social Class: Lunch* situation, Property Rights justifications were also used more for the Assertion of Personal Choice criterion judgment (15%) than in other criterion judgments (7% to 10%), but significant differences were not observed. Property Rights justifications were not used in the *Social Class: Education* situation in any criterion judgment.

The analyses on the uses of Merit justification showed main effects for Situation Type,  $F(3,243) = 52.08, p < .001, \eta_p^2 = .39$ , and Judgment Dimension,  $F(4,243) = 12.88, p < .001, \eta_p^2 = .14$ . These effects were further explained by an interaction between Situation Type and Judgment Dimension,  $F(12, 972) = 5.62, p < .001, \eta_p^2 = .07$ . As in the evaluations, Merit justifications were not used for the criterion judgments in the *Race: Education* and *Gender: Education* situations. Participants used Merit justifications more in the *Social Class: Education* situation (10% to 37%) than in the *Social Class: Lunch* situation (0% to 15%),  $ps < .01$ , for all criterion judgments. In the *Social Class: Education* situation, participants used Merit justifications more for the evaluations (37%) than for the criterion judgments (10% to 23%),  $ps < .05$ . Similarly, in the *Social Class: Lunch* situation, Merit justifications were rarely used in the criterion judgments (0% to 1%), which was significantly less than the use in the evaluations (15%),  $p < .01$ .

Main effects for Situation Type,  $F(3,243) = 31.36, p < .001, \eta_p^2 = .28$ , and Judgment Dimension,  $F(4,243) = 15.69, p < .001, \eta_p^2 = .16$ , were found for Conventional justifications. Explaining these effects was an interaction between Situation Type and Judgment Dimension,  $F(12, 972) = 12.41, p < .001, \eta_p^2 = .13$ . As in the evaluations, Conventional justifications were used more in the *Social Class: Lunch* situation than in the *Social Class: Education*, *Race: Education*, and *Gender: Education* situations in which participants rarely made references in the Conventional domain. The most frequently used Conventional justifications for these three situations were in the criterion judgment of Generalizability though the uses were still less than in the *Social Class: Lunch* situation. Specifically, participants used justifications in the Conventional domain more in the *Social Class: Lunch* situation (15%) than in the *Race: Education* (2%),  $p = .01$ , and *Gender: Education* (2%),  $ps < .01$ , situations. In the *Social Class: Lunch* situation, Conventional justifications were used more for the evaluations (32%) than for the criterion judgments of Assertion of Personal Choice (0%), Authority Directive (1%), and Rule Contingency (6%),  $ps < .001$ . Participants also used Conventional justifications more for the Generalizability criterion judgment (15%) than for the Assertion of Personal Choice and Authority Directive criterion judgments,  $ps < .01$ .

An interaction between Age and Judgment Dimension was also observed for Conventional justifications,  $F(8, 324) = 2.00, p = .04, \eta_p^2 = .05$ . There was little use of Conventional justifications for the Assertion of Personal Choice (0%), Authority Directive (0% to 2%), and Rule Contingency (0% to 5%) criterion judgments in all three age group. For the evaluations, participants in the 16–17 years age group (10%) used Conventional justifications more than those in the 12–13 years (7%) and 14–15 years (9%) age groups, but pairwise comparison showed no significant differences. Further, participants in the 16–17 years age group (12%) also used Conventional justifications more than those in the 12–13 years (5%) and 14–15 years (4%) age groups for the Generalizability criterion judgment, but no significant differences were found in the post-hoc analyses.

Analyses of Personal justification showed main effects for Age,  $F(2,81) = 3.45, p = .04, \eta_p^2 = .08$ , Situation Type,  $F(3,243) = 247.61, p < .001, \eta_p^2 = .75$ , and Judgment Dimension,  $F(4,243) = 41.49, p < .001, \eta_p^2 = .34$ . These effects were further explained by an interaction between Age and Situation Type,  $F(6,243) = 3.77, p < .001, \eta_p^2 = .09$ , and an interaction between Situation Type and Judgment Dimension,  $F(12,972) = 30.15, p < .001, \eta_p^2 = .27$ . Personal justifications were not used for the evaluations in all situations. However, participant used justifications in the Personal domain when making judgments about personal assertions. In the *Race: Education* and *Gender: Education* situations, Personal justifications were not used in other

criterion judgments, but only for the Assertion of Personal Choice criterion judgment (10% and 5%, respectively). Correspondingly, Personal justifications were used more for the Assertion of Personal Choice criterion judgment (15%) than for other criterion judgments (0% to 2%) in the *Social Class: Education* situation,  $ps < .01$ . In the *Social Class: Lunch* situation, not only were Personal justifications frequently used for the Assertion of Personal Choice criterion judgment (61%), but also for all criterion judgments (50% to 67%), and no significant differences were observed among criterion judgments. Overall, Personal justifications were used more in the *Social Class: Lunch* situation than in the *Social Class: Education*, *Race: Education*, and *Gender: Education* situations for all four criterion judgments,  $ps < .001$ .

The interaction between Age and Situation Type also showed that Personal justifications were used more in the *Social Class: Lunch* situation than in the other three situations about the distribution of educational resources,  $ps < .001$ , for all three age groups. Within each situation, no significant differences due to age were found for the *Social Class: Education*, *Race: Education*, and *Gender: Education* situations. However, participants in 16-17 years age group (55%) used Personal justifications more than those in 12-13 years age group (37%) in the *Social Class: Lunch* situation  $ps < .01$ .

In sum, when making criterion judgments the majority of participants used Moral justifications more in the *Social Class: Education*, *Race: Education* and *Gender: Education* situations. However, the uses of specific categories of justifications in the Moral domain showed differences among the three situations. Equality justifications were used more in the *Race: Education* and *Gender: Education* situations whereas Welfare justifications were used more in the *Social Class: Education* situation. Participants did not use Merit and Property Rights justifications as frequently as Welfare and Equality justifications, and the uses of these justifications were focused in specific cases. Property Rights justifications were used for the Assertion of Personal Choice criterion judgment to support personal assertions to not share personal properties. Merit justifications were used mostly in the *Social Class: Education* situation across criterion judgments accepting the inequality in school resources distributed more to the group with higher monetary contribution.

In the *Social Class: Lunch* situation, Moral justifications were used less and Conventional and Personal justifications used more than in the three situations involving school resources. Participants often used Conventional justifications in support of the evaluation about inequality of lunch money or judgments about generalizability across cultures. Personal justifications were frequently used to support positive evaluations about personal choices individuals make. Age related differences were observed in the *Social Class: Lunch* situation in that Personal justifications were used more by the oldest participants (16-17 year olds) than the youngest ones (12-13 year olds) whereas Moral justifications were used more by the youngest (12-13 year olds) than the oldest (16-17 year olds).

Table 4

*Percentages of Justifications for Evaluation and Criterion Judgments divided by Judgment Type*

Justifications	Social Class- Lunch		Social Class- Education		Race- Education		Gender- Education	
	Alright	Not Alright	Alright	Not Alright	Alright	Not Alright	Alright	Not Alright
<b>Evaluations</b>								
Moral	19	50	38	61	0	99	0	100
Welfare	2	32	0	24	0	13	0	1
Equality	1	18	1	38	0	86	0	99
Property Rights	0	0	0	0	0	0	0	0
Merit	15	0	36	0	0	0	0	0
Conventional	30	1	1	0	1	0	0	0
Personal	0	0	0	0	0	0	0	0
<b>Assertion of Personal Choice</b>								
Moral	31	12	33	52	24	67	29	66
Welfare	17	11	11	25	1	19	0	5
Equality	0	1	11	27	3	48	2	62
Property Rights	14	0	0	0	19	0	27	0
Merit	0	0	10	0	0	0	0	0
Conventional	0	0	0	0	0	0	0	0
Personal	54	2	15	0	9	0	5	0
<b>Authority Directive</b>								
Moral	1	34	39	59	0	99	0	100
Welfare	0	24	6	14	0	11	0	0
Equality	0	1	23	39	0	88	0	100
Property Rights	1	8	0	0	0	0	0	0
Merit	0	1	10	6	0	0	0	0
Conventional	1	0	0	0	1	0	0	0
Personal	2	61	0	2	0	0	0	0
<b>Rule Contingency</b>								
Moral	2	30	33	63	1	99	0	99
Welfare	0	22	10	16	0	6	0	0
Equality	1	1	16	36	1	93	0	99
Property Rights	0	7	0	0	0	0	0	0
Merit	0	0	7	11	0	0	0	0
Conventional	5	1	2	0	0	0	1	0
Personal	1	61	2	0	0	0	0	0
<b>Generalizability</b>								
Moral	16	26	25	67	2	95	1	96
Welfare	9	25	1	15	0	11	0	0
Equality	0	0	2	53	2	85	1	96
Property Rights	5	1	0	0	0	0	0	0
Merit	1	0	21	0	0	0	0	0
Conventional	14	0	8	0	2	0	2	0
Personal	42	2	0	0	0	0	0	0

**Justifications as divided by positive or negative evaluations or judgments.** In order to determine whether the uses of justification varied by one's judgments about inequalities, 3 (Age) x 2 (Judgment Type) x 3 (Justification Category) mixed effects ANOVAs were conducted with repeated measures on the last measure. Judgment refers to positive or negative judgments participants made for the evaluations and criterion judgments. Justification includes the four specific categories of Moral justifications, Conventional, and Personal justifications. Table 4 shows percentages of each justification category for the evaluations and criterion Judgments within each situation divided by judgment type (i.e. positive or negative). Age did not have any significant effects in all the analyses below and is not be discussed.

In the *Social Class: Lunch* situation, an interaction effect between Judgment Type and Justification Category was observed for the evaluations,  $F(5, 390) = 38.77, p < .001, \eta_p^2 = .31$ . Welfare and Equality justifications were used more with negative judgments,  $ps < .001$ , whereas Merit and Conventional justifications were used more with positive judgments,  $ps < .001$ . Similar patterns were observed in the uses of justifications for criterion judgments. An interaction effect between Judgment Type and Justification Category was also observed for the Assertion of Personal Choice criterion judgment,  $F(5, 390) = 13.79, p < .001, \eta_p^2 = .14$ . Participants used Welfare and Equality justifications more with negative judgments,  $ps < .01$ . For positive judgments for the Assertion of Personal Choice criterion judgment, however, participants used Personal and Property Rights justifications. Personal justifications were significantly used more with positive judgments,  $p < .001$ , and Property Rights justifications were used only with positive judgment. An interaction between Judgment Type and Justification Category was also found for the Generalizability criterion judgment,  $F(5, 390) = 37.55, p < .001, \eta_p^2 = .31$ . Welfare justifications were used more with negative judgments,  $p < .001$ , whereas Conventional and Personal justifications were used more with positive judgments,  $ps < .001$ .

Most of the judgments were negative for the Authority Directive (95%) and Rule Contingency (92%) criterion judgements in the *Social Class: Lunch* situation. A main effect of Justification was found,  $F(5, 390) = 6.58, p < .001, \eta_p^2 = .08$ . Most of the participants made negative evaluations about dictates by authorities on distribution of personal lunch money, and justifications in the Personal domain were used more than Equality,  $p < .001$ , Merit,  $p < .001$ , and Conventional,  $p < .01$ , justifications. An interaction between Judgment Type and Justification Category was observed for the Rule Contingency criterion judgment,  $F(5, 390) = 8.03, p < .01, \eta_p^2 = .09$ . When participants made negative judgments about a rule that dictates how personal lunch money should be distributed, they made references to Welfare, Property Rights, and Personal justifications. Welfare and Property Rights justifications were used only for negative judgments, and Personal justifications were used significantly more with negative judgments,  $p < .01$ . Few participants who made positive judgments about the rule based on justifications in the Conventional domain, which were used significantly more with positive than negative judgments,  $p < .001$ .

In the *Social Class: Education* situation, an interaction effect between Judgment Type and Justification Category was found for the evaluations,  $F(5, 390) = 84.81, p < .001, \eta_p^2 = .51$ . As in the *Social Class: Lunch* situation, Welfare and Equality justifications were used more with negative judgments,  $ps < .001$ . However, Conventional justifications were not used and only Merit justifications were used more with positive judgments,  $ps < .001$ . Corresponding uses of Welfare, Equality, and Merit justifications were found for the Assertion of Personal Choice and the Generalizability criterion judgments; significant interactions between Judgment Type and Justification Category were observed for the Assertion of Personal Choice,  $F(5, 390) = 9.24, p$



$< .001$ ,  $\eta_p^2 = .10$ , and the Generalizability,  $F(5, 390) = 55.44$ ,  $p < .001$ ,  $\eta_p^2 = .40$ , criterion judgments. Additional findings for the two criterion judgments include that Personal justifications were used only with positive evaluations in the Assertion of Personal Choice criterion judgment, and Conventional justifications were used only with positive judgments in the Generalizability criterion judgment.

A main effect of Justification Type was found for the criterion judgments of Authority Directive,  $F(5, 390) = 48.19$ ,  $p < .001$ ,  $\eta_p^2 = .38$ , and Rule Contingency,  $F(5, 390) = 24.52$ ,  $p < .001$ ,  $\eta_p^2 = .24$ . Regardless of the side of the judgment (i.e. for both positive and negative judgments), Equality justifications were used more than Welfare, Merit, and Personal justifications,  $ps < .001$ . Welfare and Merit justifications were used more than Personal justifications,  $ps < .01$ . For the criterion judgment of Rule Contingency, Welfare, Equality, and Merit justifications were used more than Conventional and Personal justifications,  $ps < .05$ , regardless of the side of judgments. Participants used Equality justifications more than Merit justifications,  $p < .01$ .

For the *Race: Education* and *Gender: Education* situations, analyses were conducted only for the Assertion of Personal Choice criterion judgment as positive judgments were rarely made in the evaluations or other criterion judgments. These negative responses for the evaluations or other criterion judgments in the *Race: Education* (96% to 100%) and *Gender: Education* (98% to 100%) situations were based on Moral justifications, specifically Equality and Welfare justifications (see Table 4).

A significant interaction effect between Judgment Type and Justification Category,  $F(5, 390) = 36.20$ ,  $p < .001$ ,  $\eta_p^2 = .32$ , was found for the Assertion of Personal Choice criterion judgment in the *Race: Education* situation. Participants used Welfare,  $p = .01$ , and Equality,  $p < .001$ , justifications more with negative judgments, whereas Property Rights and Personal justifications were used only with positive judgments. Corresponding findings were found for the Assertion of Personal Choice criterion judgment in the *Gender: Education* situation. An interaction between judgment and Justification was also observed,  $F(5, 390) = 133.83$ ,  $p < .001$ ,  $\eta_p^2 = .63$ . Participants used Equality justifications more with negative judgments,  $p < .001$ , and Property Rights and Personal justifications only with positive judgments.

In sum, Welfare and Equality justifications were more frequently used with negative judgments, except for the Authority Directive and Rule Contingency criterion judgments in the *Social Class: Education* situation, in which Welfare and Equality justifications were also used for positive judgments. Positive judgments include those who initially judged the inequality as acceptable but changing their judgments upon encountering directives from an authority or a rule to share equally. Other two categories in Moral justifications, Property Rights and Merit, were used more with positive judgments. Merit justifications were used primarily in the *Social Class: Education* situation acknowledging deservedness of the wealthy school to receive more resources based on monetary contribution. The majority of Property Rights justifications were used in the Assertion of Personal Choice criterion judgment along with Personal justifications, which were also used more in support of positive judgments. Personal justifications were also used with negative judgments for the Authority Directive and Rule Contingency criterion judgments in the *Social Class: Lunch* situation. These responses include assertions that students should be allowed to decide how to use personal lunch money. Lastly, participants used justifications in the Conventional domain more with positive judgments for the evaluations in the *Social Class: Lunch* situation accepting the inequality in personal lunch money.

## Discussion

As much as equality is a central moral issue in human society, understanding concepts of equality in the contexts of social equality and inequality is complex. A large body of research on the development of morality has shown that moral judgments involve considerations about fairness along with concerns for other's welfare and protection of rights. And further, judgments regarding those matters are not contingent on personal choices, authority dictates or the existence of rules, and are considered generalizable across different cultures (see Turiel, 2015a for a summary). Although individuals make similar judgments about morality, application of those judgments in situations are not unitary because they weigh and balance various features of the situational contexts. Findings from the studies on judgments about rights, and fairness of social inclusion and exclusion, and honesty (Helwig, 1995; Killen, Piscane, Lee-Kim, & Ardilla-Rey, 2001; Gingo, 2017; Gingo, Roded, & Turiel, 2017; Perkins & Turiel, 2007) show that social situations are complex and that they often involve multiple players bringing in multiple claims that are coordinated when making social decisions. Issues regarding social equality and inequality may also involve processes of coordination in coming to decisions; individuals recognize moral implications of endorsing equal distribution and ensuring equal chances for everyone. In coming to decisions about fairness, however, those concerns are taken into consideration along with other concerns salient in a given situation, therefore sometimes prioritized or subordinated to other considerations.

Existing research on concepts of equality has not been sufficiently extensive to fully understand individuals' concepts of equality and inequality in their application to various situations involving inequalities among different social groups. Most of the research has focused on one aspect of equality, distributive justice, and particularly examined how individuals allocate limited resources taking situational information such as merit and need into account (e.g. Baumard, Mascaro & Chevallier, 2012; Bernhard & Rockenbach, 2008; Fehr, Shaw & Olson, 2012; Kanngiesser & Warneken, 2012; Li, Spitzer & Olson, 2014; Olson & Spelke, 2008; Paulus, 2014). The majorities of those allocation tasks was designed to be suitable for young children and thus were conducted in controlled experiment settings with simple resources like candies or stickers. The findings from the body of research on distributive justice are useful in understanding the development of concepts of equality from a young age. However, judgments about complex social inequalities among different groups remain largely unexplored. Thus, there is a need for studies to investigate people's judgments and reasoning about social issues of inequalities.

The aims of the present study were to examine adolescents' concepts of equality and inequality, and their application to judgments about fairness in various situations depicting social inequalities among different groups based on social-class, race, and gender. Furthermore, the current study was designed and conducted as a follow-up research to a similar study conducted with adolescents in the U.S (Chung & Turiel, under review). The aims of the current study include a cultural focus to ascertain how Korean adolescents' concepts about equality and inequality are different or similar to those of American adolescents.

The results of this study demonstrated that Korean adolescents have developed concepts of equality, and that they apply the concepts in a flexible manner when coming to judgments about social inequalities. The majority of adolescents initially judged the inequalities as unacceptable and justified their judgments with reasons in the moral domain. However, variations in their judgments and reasoning across situations and across different questions

within each situation (i.e. personal choice, dictates from authorities or by a rule and cultural generalizability) showed complexities in their understandings of equality, and that adolescents attend to various concerns related to the social inequalities. Some issues such as racial and gender inequalities were straightforward in that adolescents' judgments about these issues primarily involved considerations of equality, including equal treatment of people and equal chances for every student. By contrast, the situations depicting social-class differences were more complex and judgments about those inequalities involved coordinating concerns for equality with other moral considerations including others' welfare, property rights, and merit, as well as non-moral considerations including personal choices and conventional concerns.

All of the participants evaluated the government's decision to unequally distribute educational resources between schools based on race and gender as unacceptable. Participants justified their negative evaluations with considerations of equality expressing concerns for equal treatment of students regardless of their gender or race and emphasizing that every child should have a right to be educated in a decent environment. Those reasons are illustrated in the following responses from participants of different ages:

It's not alright. Those non-Korean students also have a right to be educated because they are also a part of our society. They have the same right as Korean students (12-year-old female)

It is discrimination against non-Korean students. They would feel that is it unfair when you live in the same country but you don't get as good supplies as other students (14-year-old male)

It's definitely not alright. It is sexual discrimination. I don't like it. (Why do you not like it?) Males and females are different but still the same humans and you should not be discriminated on gender. All students should begin the race at the same starting point (15-year-old female)

It's not alright. Whether you are a male student or a female student, you both are students. And you go to school to be educated. Education, especially school supplies and those educations rights should be guaranteed to all students regardless of your gender (17-year-old male)

Although the majority of participants (86%) made negative judgments about the inequality between schools divided by race based on considerations of equality, some participants also expressed concerns about the welfare of non-Korean students. Most of the non-Korean students attending public schools in Korea are children from interracial families. (Foreigners temporarily living in Korea often send their children to international schools.) Interracial marriages are not common in Korea and the majority of those marriages are between Korean husbands and wives from other countries. The wives most of the time had not lived in Korea before getting married, and thus they experience difficulties in adjusting to Korean society due to lack of experiences in Korean culture, knowledge about the language and support communities. In recognizing their difficulties, there have been more attempts from the government and local communities to seek ways to ameliorate the lives of foreign wives and their children. Adolescents were also aware of the difficulties experienced by the interracial

individuals and families. The following responses illustrate that non-Korean student should be given more, not less, because it is tougher for them to live in Korea as foreigners:

Those students from multicultural families do not speak Korean fluently and still need to learn a lot more about living in Korea. So I think more supplies should be distributed to the non-Korean school so they can adjust and study better (13-year-old female)

I don't think it's alright. In fact, those students from interracial families should get more resources because in general, those students live in more underprivileged environments than Korean students. Their lives are tougher in terms of economics as well. (16-year-old male)

Similar patterns of judgments and justifications were observed in the criterion judgments for the race and gender situations. Almost all of the participants judged that the inequalities based on race or gender were wrong even in the face of dictates from authorities and the existence of a rule. A large majority of participants also judged that the inequalities would be wrong even if they were considered as acceptable cultural practices in another country. Thirty percent of participants made positive evaluations for the Assertion of Personal Choice criterion judgment, and judged personal assertions to not share school supplies already given to their school as acceptable. However, still the majority of participants negatively judged the assertions to not share when the government made unequal allocations between schools based on race (70%) and gender (68%).

Justifications used in the criterion judgments were mostly in the moral domain, and adolescents primarily used reasons of equality in both situations. As in the evaluations, however, participants used reasons of welfare more when making judgments about the inequality between schools based on race. The positive judgments about the students wanting to keep the supplies already given to their school (Assertion of Personal Choice) mainly involved reasons of property rights; adolescents maintained that what had been given "should not be forcefully taken away by another person, even if it was the government".

The two stories about the inequalities based on social-class differences showed somewhat different findings and indicate those adolescents' judgments about inequalities involving coordinating various features of the situational contexts. Sixty-two percent of participants negatively evaluated the inequality in the *Social Class: Education* situation. Nonetheless, the justifications used for both negative and positive evaluations about the inequality in school supplies between a wealthy and a poor school were in the moral domain. As in the race and gender situations, most of the negative evaluations were based on reasons of equality and welfare expressing that every child should be able to have an equal opportunity to study in a good school environment. In contrast, positive evaluations were justified with considerations of merit, maintaining that individuals who made more monetary contribution deserve to receive more because they have earned it. The following responses from participants from various ages show how adolescents apply concept of merit in their judgments:

Wealthy students, wealthy parents worked hard to earn that much money and pay more taxes. They are receiving what they paid in return, so I don't think

it's alright to say that (the wealthy school receiving more) is not good (12-year-old male)

I think it's okay because yes, they are wealthy and earn more money but they still paid more taxes, right? Their children are just getting what their parents paid in return. It is unfair for wealthy people to get less, less benefits just because they have a lot of money and are the leaders of the society (16-year-old female)

This time I think it is alright because of the differences in taxes paid by each neighborhood. And especially, your economic power, you have to work hard to achieve the economic power or properties, and receiving deserved benefits is natural in a capitalistic society (17-year-old male)

A similar proportion of participants made negative judgments (55% - 70%) in the criterion judgments in the *Social Class: Education* situation and corresponding patterns were observed in the uses of justifications. Although the participants mostly used justifications in the moral domain in the criterion judgments, the uses of specific categories within the moral domain varied from the other education situations. As in the race and gender situation, negative judgments were justified with reasons of welfare and equality. Welfare and equality justifications were, however, also used for positive judgments along with considerations of merit. The uses of reasons in the moral domain (i.e. welfare, equality and merit) for positive judgments can be explained in two ways. One is that a group of participants initially evaluated the inequality between a wealthy and a poor school as acceptable but later changed their judgments in the context of personal choices and directives from authorities or by a rule to distribute equally. Even though the participants evaluated the unequal allocation as acceptable, they judged the attempts to correct the inequality should also be endorsed based on reasons of welfare and equality. Another group of participants, who initially evaluated the inequality in the distribution of school supplies between the two schools based on wealth as unacceptable, later judged the unequal distribution as acceptable in the face of personal assertions, directives from Authorities or the existence of laws that direct distributing more to the wealthy school. As in the evaluations, those participants justified their judgments on the basis of considerations of merit, recognizing work and effort of the wealthy people in earning the money. Merit justifications were also used with positive judgments for judgments about generalizability to another country; based on reasons of merit, twenty-one percent of participants judged the inequality as acceptable if the unequal allocation was generally accepted in another country.

Considerations of merit were used only in the *Social Class: Education* situation except for the evaluations in the *Social Class: Lunch* situation. As the social inequality in this situation revolved around the differences in family level of wealth and in the amount of taxes paid by parents, adolescents took into consideration that the parents had to work hard in order to earn money and that it is alright for the hard work to be compensated. Although they were aware that some poor families are poor due to misfortunes and that not all the poor parents were lazy, adolescents still considered hard work as the primary source of accumulating wealth in the society, which should be rightfully rewarded.

Just more than half of the participants (52%) negatively evaluated the inequality bearing on how much money students can spend on lunch based on their families' income. As in the

three education situations, negative evaluations were justified with considerations for welfare and equality, but welfare justifications were used more than equality justifications in the *Social Class: Lunch* situation. Those participants expressed concerns that students who do not have sufficient food cannot concentrate and do well in school. The other half of the participants who made positive evaluations about the inequality primarily used conventional reasons. Those responses included references to the structures of existing economic system and that the differences in income are inevitable.

The judgments and justifications in the criterion judgments showed the most discrepancies from the evaluations in the *Social Class: Lunch* situation. One was in adolescents' judgments in the Assertion of Personal Choice and Generalizability criterion judgments. The majority of participants made positive judgments about personal choices over whether to share their personal lunch money (85%) and about acceptance of the inequality in another country (68%). Negative judgments for the two criterion judgments were based primarily on reasons in the moral domain, especially concerns with others' welfare due to the lack of money to buy lunches. However, positive judgments were justified mostly using personal justifications. Adolescents endorsed the legitimacy of personal prerogatives in deciding the uses of their own money. Almost all of the participants made negative judgments in the Authority Directive (95%) and Rule Contingency (92%) criterion judgments, and the majority of the negative responses were also based on reasons in the personal domain (61% in both situations). Both for the cases of initially judging the inequality as acceptable or unacceptable, adolescents negatively evaluated authorities or a rule dictating students on their uses of personal lunch money because it should be up to the students to make decisions about how to spend own money. The rest of the negative judgments in the Authority Directive and Rule Contingency criterion judgments were justified using moral justifications, primarily reasons of welfare, by adolescents who initially evaluated the inequality as unacceptable and kept their negative judgments about the unequal distribution even in the face of authorities and a rule directing students to not share.

It was in the *Social Class: Lunch* situation that age related differences were observed in the uses of justifications. Moral justifications were used less in the *Social Class: Lunch* situation than in the three education situations. Adolescents made more references about personal prerogatives over own lunch money in place of the lesser use of moral justifications, and the uses of reasons in the personal domain increased with age. Younger adolescents used moral justifications more frequently than older adolescents whereas older adolescents made references about the legitimacy of personal choices more often than younger adolescents.

The adolescents' orientations to equality were different in the situation about the inequality in lunch money from other situations as revealed in their responses to the criterion judgment questions and the use of justifications. Why was this particular situation judged differently? Kahn (1992) has made a distinction between obligatory and discretionary moral judgments. Obligatory judgments are moral requirements that are generalizable and not contingent on societal rules or laws whereas discretionary moral judgments involve actions that are not required but still considered morally worthy based on moral considerations (e.g. helping a poor family with one's lunch money). As pointed out by Turiel (2015b), situations that are judged discretionary as opposed to obligatory involve the elements of personal resources and freedom of choice. In the current study, the two elements were salient in the *Social Class: Lunch* situation, but not so much in the three other situations that involved public resources (i.e. educational resources for schools and taxes collected by a town) distributed by the government among schools. Therefore, it is likely that adolescents coordinated information regarding the

nature of a given resource (i.e. personal or public) and the salience of freedom of choice when making judgments about fairness, which eventually led them to make judgments about equality in the *Social Class: Lunch* situation differently from those in the three other situations.

As mentioned, the present study was a follow-up to a similar study conducted with American adolescents. The current study attempted to ascertain whether the findings with adolescents in Korea were different or similar with the findings with adolescents in the U.S. A body of research on the development of moral judgments in various cultures showed that cultures cannot be divided and understood by general orientations to moral judgments, such as individualism and collectivism (e.g. Ardilia-Rey & Killen, 2001; Hollos, Leis, & Turiel, 1986; Perkins & Turiel, 2007; Turiel & Wainryb, 1998). In all cultures, people make similar judgments about morality regarding issues about rights, welfare and justice. Individuals do not apply those moral judgments following a unilateral orientation predetermined by culture. Flexibilities of thought are observed in the application moral judgments as various types of contextual information are weighed and balanced.

The findings of the studies conducted in the U.S. and Korea share general patterns in judgments. Specifically, the inequalities based on race and gender were evaluated as unacceptable and those evaluations were justified with concerns about equality. The inequalities involving the differences in social-class were evaluated as more acceptable. In coordinating concepts of equality, adolescents took into account concerns about others' welfare more in the two social-class situations than in the race and gender situations. Furthermore, reasons in the personal domain including personal choices and autonomy in decision-making were given most frequently when making judgments about the inequality in personal lunch money.

Some differences were observed in the application of moral judgments. One was that welfare justifications were used more in the race situation by Korean adolescents than by American adolescents. The percentages of students from interracial families are much lower than that of black population in the U.S. In addition, racial discrimination has been a topic of discussion only recently in Korea since the history of coexistence with foreign residents is very short compared to that of America. The variations in the uses of justifications showed that the relationships between Koreans and non-Koreans were understood differently from the relationship between whites and blacks. American adolescents viewed the racial inequality as primarily an issue of equality as both whites and blacks are considered equal citizens of the society. The majority of Korean adolescents also viewed the racial inequality as a moral issue; however, some Korean adolescents also saw it as an issue about welfare given the underprivileged living conditions of the immigrants. Another difference was that the proportion of negative evaluations about the inequality in school resources based on social-class was less for Korean adolescents (62%) than for American adolescents (92%). The discrepancies are reflected in the uses of merit justifications for positive evaluations in the *Social Class: Education* situation for the Korean study. Even though only sixty-two percent of the Korean adolescents evaluated the inequality as unacceptable, almost all of the justifications used for the evaluations were in the moral domain (99%). This means that positive evaluations about the inequality were also justified with reasons in the moral domain, which specifically were concerns for merit. It was evident that although both Korean and American adolescents viewed the inequality in school supplies due to differences in wealth as a moral issue, considerations of merit were more salient to Korean adolescents so that their final decisions came down to accepting the inequality. Lastly, another moral consideration used only by Korean adolescents was property rights. Korean adolescents expressed concerns of property rights mostly in justifying their acceptance of

personal assertions to not share. Although adolescents viewed the inequalities as unacceptable, they also judged sharing involuntarily by external pressures as wrong.

In sum, the findings show that Korean adolescents develop understandings about concepts of equality and apply the concepts in various situations involving unequal allocations among groups divided by social-class, race, and gender. Adolescents make moral judgments about social inequalities taking into various considerations including the unfairness of unequal allocations and the consequences on the welfare of fellow students, as well as personal entitlements over one's own properties and the deservedness of compensation for hard work. Decisions about what is the fairest are not simple given the complexities of issues about social inequalities involving various social groups. Adolescents apply understandings of equality in a flexible manner distinguishing different features within and across situational contexts. A comparison between the findings of the present research and the study conducted in the U.S. indicates that adolescents in both countries view the social inequalities primarily as moral issues. However, various concepts of equality are weighted and balanced differently; American adolescents coordinated considerations of equality and welfare with personal and conventional reasons, whereas Korean adolescents also took into consideration merit and prosperity rights. Taken together, the findings suggest that future research should aim to expand our knowledge about children's and adolescents' concepts of equality in their application to other numerous social issues related to social inequalities, and how those social judgments compare across cultures.



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## Appendix A

### Interview Protocols

#### **Social Class: Lunch Money**

Suppose in one town, there is a school where the students have to buy their own lunches at school cafeteria. The parents give children an allowance to buy lunch and to spend on other things if they want. The students from families with a lot of money usually have enough allowance to buy enough food and still have some left over. But the ones from families with little money only get enough to buy a little food.

<b>Judgment Dimension</b>	<b>Questions</b>	
Evaluation of Inequality	Do you think it is OK or not OK that some students have a lot of money for food and others don't?	
	If OK	If not OK
Personal Choice	Suppose someone wants to share, that it is his/her money and he should be able to share if that is what he/she wants to. <ul style="list-style-type: none"> <li>• Is that OK or not OK?</li> </ul>	Suppose someone does not want to share, that it is his/her money and he/she should be able to keep it all.
School Authority	Suppose the principal and teachers told them they have to share their money for food while at school. <ul style="list-style-type: none"> <li>• Do you think it is OK or not OK for the principal and teachers to tell them that?</li> </ul> Should the children share in that case?	Suppose the principal and teachers told them they cannot share their money for food while at school.  Should the children not share in that case?
School Rule	Suppose there was a school rule that they have to share money for food while at school. <ul style="list-style-type: none"> <li>• Do you think it is OK or not OK to have that rule?</li> </ul> Should the children share in that case?	Suppose there was a school rule that they cannot share money for food.  Should the children not share in that case?

Parental Authority	Suppose all the parents told them that students have to share money for food.	Suppose all the parents told them that students cannot share money for food.
	<ul style="list-style-type: none"> <li>• Do you think it is OK or not OK for the parents to tell them that?</li> </ul>	
	Should the children share in that case?	Should the children not share in that case?
Generalizability	Suppose that there is another country where it is generally accepted that richer students who bring more money for food to school do not have to share. Do you think that is OK or not OK?	

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### Social Class: Education

Suppose there is a town in which the students go to schools in their neighborhoods. In this town, there is one school that has mostly wealthy students and another school that has mostly poor students. Because the wealthy people in the town have more money and pay more in taxes than poor people, the students from the school in the wealthy neighborhood have more and better equipment, supplies, and books than the other school.

Judgment Dimension	Questions	
Evaluation of Inequality	Do you think it is OK or not OK that the one school has better equipment, supplies, and books than the other school?	
	If OK	If not OK
Personal Choice	Suppose the parents from the wealthy neighborhood say that although they give more to the town, all schools have to have the same amount of money for equipment, supplies, and books.	Suppose the parents from the wealthy neighborhood say that they give more to the town and their school should get more money for equipment, supplies, and books.
	<ul style="list-style-type: none"> <li>• Is that OK or not OK?</li> </ul>	
Authority	Suppose the people who run the town's government say that the schools have to have the same amount of money (for equipment, supplies, and books).	Suppose the people who run the town's government say that the schools cannot have the same amount of money (for equipment, supplies, and books).

- Do you think it is OK or not OK for the people who run the town's government say that?

Law	Suppose there is a law that the amount of money for schools cannot be based on the amount of taxes they pay.	Suppose there is a law that the amount of money for schools have to be based on the amount of taxes they pay.
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- Do you think it is OK or not OK to have that law?

Generalizability	Suppose that there is another country where it is generally accepted for one school has better equipment, supplies, and books than the other school. Do you think that is OK or not OK?
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**Race: Education**

Suppose there is a town in which all white students in the town go to one school and all black students in the town go to a different school. Both schools are funded by the town's government for equipment, supplies and books. And it turns out that the school with only white students has more and better equipment, supplies and books than the school with only black students.

Judgment Dimension	Questions	
Evaluation of Inequality	Do you think it is OK or not OK that the one school has better equipment, supplies, and books than the other school?	
	If OK	If not OK
Personal Choice	Suppose white students want to share some of their equipment, supplies, and books with the other school even though those were given to their school.	Suppose white students do not want to share some of their equipment, supplies, and books with the other school because those were given to their school and they should be able to keep them all.
	<ul style="list-style-type: none"> <li>• Is that OK or not OK?</li> </ul>	
Authority	Suppose the people who run the town's government were to say that the schools have to have the same amount of money (for equipment, supplies, and books).	Suppose the people who run the town's government say that the schools cannot have the same amount of money (for equipment, supplies, and books).

- Do you think it is OK or not OK for the people who run the town’s government say that?

Law                      Suppose there is a law that the amount of money for schools cannot be based on race of the school.                      Suppose there is a law that the amount of money for schools has to be based on race of the school.

- Do you think it is OK or not OK to have that law?

Generalizability                      Suppose that there is another country where it is generally accepted for a school with only white students to have better equipment, supplies, and books than the other school with only black students. Do you think that is OK or not OK?

**Gender: Education**

Suppose there is a town in which all male students in the town go to one school and all female students in the town go to a different school. Both schools are funded by the town’s government for equipment, supplies and books. And it turns out that the school with only male students has more and better equipment, supplies and books than the school with only female students.

<b>Judgment Dimension</b>	<b>Questions</b>	
Evaluation of Inequality	Do you think it is OK or not OK that the one school has better equipment, supplies, and books than the other school?	
	If OK	If not OK
Personal Choice	Suppose male students want to share some of their equipment, supplies, and books with the other school even though those were given to their school.	Suppose male students do not want to share some of their equipment, supplies, and books with the other school because those were given to their school and they should be able to keep them all.
	<ul style="list-style-type: none"> <li>• Is that OK or not OK?</li> </ul>	
Authority	Suppose the people who run the town’s government were to say that the schools have to have the same amount of money (for equipment, supplies, and books).	Suppose the people who run the town’s government say that the schools cannot have the same amount of money (for equipment, supplies, and books).



- Do you think it is OK or not OK for the people who run the town's government say that?

Law

Suppose there is a law that the amount of money for schools cannot be based on gender of the school.

Suppose there is a law that the amount of money for schools has to be based on gender of the school.

- Do you think it is OK or not OK to have that law?

Generalizability

Suppose that there is another country where it is generally accepted for a school with only male students to have better equipment, supplies, and books than the other school with only female students. Do you think that is OK or not OK?

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