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Desiring to Appear Moral versus Being Moral: Development of Moral Hypocrisy  
and Moral Integrity

by

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B.A. Redeemer University College, 2011

THESIS

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### Abstract

Moral hypocrisy has been defined as “the motivation to appear moral while acting in one’s self interest, and therefore avoiding the cost of actually being moral” (Batson, Kobryniewicz, Dinnerstein, Kampf, & Wilson, 1997). This is in contrast with moral integrity, or the motivation to actually be moral. Experimental research with adults has indicated that people are more highly motivated by moral hypocrisy than by moral integrity (Batson, Thompson, & Chen, 2002). However, this research has yet to be conducted with a variety of age groups. The present study investigated whether there are age differences in individuals’ tendency to engage in moral hypocrisy versus moral integrity. How does the desire to appear moral develop in relation to the desire to be consistent with one’s moral beliefs? Two hundred and sixty children, adolescents, and emerging adults from the Kitchener-Waterloo region were asked to make a decision in which it was possible to appear moral by endorsing fairness while choosing to act in accordance with their own self-interest. Results indicate that as age increases, self-interest decreases, and moral integrity and prosocial behaviour increase. Our experiment yields no age-related trend with regards to moral hypocrisy. This research informs moral identity research and suggests that moral hypocrisy may not be as widespread or as solidified a motive for moral action as previously claimed.

*Keywords:* moral hypocrisy, fairness behaviour, moral identity

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## **Desiring to Appear Moral versus Being Moral:**

### **Development of Moral Hypocrisy and Moral Integrity**

Current psychological research investigates the influence of concerns about fairness on decision-making. Social and developmental psychology have each addressed morality and fairness development; this study aims to bridge these discourses. This paper begins with an overview of foundational research in fairness and fairness behaviour, citing the work of Jean Piaget (1932/1965), Lawrence Kohlberg (1969), and William Damon (1977). It then discusses more recent fairness research, citing studies that borrow from behavioural economics, and utilize the dictator game (Kahneman, Knetsch, & Thaler, 1986). The concept of Moral Hypocrisy is introduced, with an emphasis on the work of social psychologist Batson. Moral hypocrisy is explained within the framework of moral identity, followed by an explanation of the current research hypotheses and procedural measures.

### **Early Fairness Research**

Early research into fairness stems from the work of Piaget and Kohlberg. Through naturalistic observation and interview procedures, Piaget observed that children move from following authority mandates (moral heteronomy) to adhering to independent principles of morality (moral autonomy). Children learn to behave according to social rules through external cues from adults, and learn cooperation through their interactions with peers (Piaget, 1932/1965). As children progress from the pre-operational stage of development to the concrete operational stage, they become cognitively able to comprehend the perspective of others. Piaget's research focused on moral reasoning and judgment, and did not make a clear connection between beliefs about morality and actual behaviour.

Kohlberg's research advanced Piaget's cognitive-developmental model of morality, also focusing on moral cognition rather than on moral motivation or action (Kohlberg, 1969).

Kohlberg's stage theory of moral development proposes that individuals go through six stages of moral development: 1) obedience and punishment orientation 2) self-interest orientation 3) interpersonal conformity 4) authority and social order maintenance 5) social contract orientation and 6) universal ethical principles (Kohlberg, 1969). People shift from personal reasoning to societal reasoning, and finally to principled moral reasoning (Kohlberg, 1984). In this model, it is assumed that a person's behaviour naturally progresses along with their moral reasoning.

Kohlberg and Candee (1984) further linked moral judgment to moral behaviour. Their premise is that the more thorough an individual's understanding of why a moral decision is right in a given situation, the more likely they are to behave morally. In this model, people first determine what is right in a particular situation. They then decide whether they have a personal responsibility to take the moral course of action; if so, they will act morally. Knowing and understanding what is right leads to moral behaviour (Kohlberg & Candee, 1984).

Developmental psychologist Damon also finds that children's reasoning about justice develops in a predictable and age-related manner (Damon, 1977). Based on experimental research with children and adolescents, Damon formulated six 'early positive justice levels'. In the first, fairness is confused with personal desire. Children judge something to be fair if it coincides with their wants. Next, egocentric desires are justified by references to more objective criteria. At this age, children begin to realize that their moral judgments should reference some factor outside of their own desire. In the third level, fairness is equated with strict equality. Children do not consider individuals' merit or need, and distribute resources perfectly equally. Fourth, the concept of fairness begins to reflect merit. Who is most deserving of a given

resource? In the final two levels, fairness involves compromise (weighing many factors at once), and is determined situationally. Overall, children's ability to distinguish between practical and moral concerns steadily increases with age (Damon, 1977). Damon is careful to specify that he can predict an individual's general tendencies or behavioural patterns from which positive justice level they operate at, but that his data is not predictive of behaviour in specific real-life situations (Damon, 1977).

A strength of Damon's research is that he uses both hypothetical scenarios and actual decision-making experiments. Through these experiments, he concluded that children's hypothetical reasoning functions at the same justice level as, or higher than, their real-life reasoning. This "lag" between hypothetical and real-life reasoning is demonstrated, for example, through children's moral decision-making in distributive justice problems. Damon finds that in these situations, children often use lower modes of judgment, as lower modes are more egocentric and self-serving. Children demonstrate higher levels of positive justice reasoning when considering an imaginary moral story than when engaged in a real-life situation (Damon, 1977). As such, Damon is the first to demonstrate that individuals' behaviour lags behind their fairness understanding.

Blasi (1983, 1984) established the moral identity construct. In contrast to Kohlberg's stage theory of moral reasoning, which was built on the premise that moral beliefs necessarily translate into moral action, Blasi believed that moral beliefs do not lead to moral behaviour unless these beliefs are held to be highly important to the individual. Consequently, an individual can know right and wrong, but still fall short in the realm of moral action (Blasi, 1984). This notion is key to the current study.

### **Development of Fairness Behaviour**

Children display understanding of the mechanisms of fairness early on. In fact, children as young as 15 months old have been found to show sensitivity to fairness and are able to engage in fair and altruistic sharing behaviour (Schmidt & Somerville, 2011). Sloane, Barillargeon, and Premack (2012) found that at 19 months, infants already expect a person to divide two items equally between two individuals. Interestingly, this expectation vanishes when the two individuals are replaced with inanimate objects, as well as when the experimenter does not distribute the items, but instead removes covers to reveal items in front of the individuals to show they had been there all along. In a second study, Sloane and colleagues found that 21-month-old toddlers hold a fairness expectation with regard to who should receive a reward for work completed. In this experiment, participants expected the researcher to give a reward to two individuals when both had worked to complete a chore, but not when only one individual had done the work. They only held this expectation when they knew the experimenter could tell who had helped and who had not (Sloane et al., 2012). These results suggest that the basics of fairness understanding exist early in development.

Despite an increase in the understanding of fairness when it comes to third party cases (when required to distribute items to outside parties), young children tend to behave with a high degree of self-interest in first party situations, when they are one of the recipients (Eisenberg & Fabes, 1998; Harbaugh, Krause, & Liday, 2003; Benenson, Pascoe, & Radmore, 2007; Kogut, 2012; Smith, Blake, & Harris, 2013). When faced with a situation in which it is possible to do so, the majority of preschool-aged children will behave selfishly, making decisions that optimize their own gain (Fehr, Bernhard, & Rochenbach, 2008; Rochat, Dias, Liping, Broesch, Passos-Ferreira, Winning, & Berg, 2009). Smith and colleagues (2013) highlight this disparity between

expectation and behaviour, finding that at this age, children say they should divide four stickers equally between themselves and another child, but do not predict that they would actually do so, nor do they when given the chance.

By approximately the age of five, children begin to behave more fairly. In fact, the span between age three to five is a developmental period when self-interest decreases significantly, and when fairness norms begin to trump self-regarding motives (Rochat et al., 2009; Svetlova, 2013). Here, children move from strict use of the equality principle (where everyone receives equal resources) to the distribution of resources on the basis of need. At five years of age, concern for need can override the equality principle, with children choosing fairness even when it conflicts with self-interest (Svetlova, 2013). Research on the identifiable victim effect, which refers to “people’s greater willingness to share resources with identified targets than to share with unidentified or statistical targets” with child samples shows that including identifying information about a needy recipient increases fairness behaviour, but only in older children (Kogut, Slovic, & Vastfjall, 2016, p. 353).

In addition to developmental changes with regards to equality versus need, the manner in which children distribute resources also changes. Children ages 3-5 tend to follow the equal numbers rule, and divide toys numerically equally, but choose to take the largest advantage possible, ignoring the toys’ qualitative value. The decision to divide toys numerically equally *and* qualitatively equally emerges in middle childhood, around the age of 6-8 (Sheskin, 2013).

Fehr and Schmidt’s inequity aversion hypothesis is valuable in explaining children’s fairness behaviour, as it distinguishes between advantageous and disadvantageous inequity (Fehr & Schmidt, 1999). In laboratory experiments, the equitable outcome is most often synonymous with the equal outcome, as participants possess no additional information about each other. It is

assumed that the equal allocation of resources is the equitable allocation. Evidently, children of all ages are concerned with receiving less than another child, but do not become concerned with another child receiving less than themselves until middle childhood (Blake & McAuliffe, 2011; Robbins, 2013; Fehr et al., 2008). Robbins (2013) finds that an aversion to both types of inequity emerges between the ages of 5 and 7; Fehr and colleagues (2008) find it develops between ages 7 and 8. Williams and More (2016) find evidence that motivations for fairness and equality differ depending on context, and that an across-the-board aversion to inequality is not the primary guide of decision-making throughout childhood. A cross-cultural study found that disadvantageous inequity aversion emerged across populations of 7 diverse societies by middle childhood, and advantageous inequity emerged in only 3 of the 7, and then only later in development (Blake et al., 2015).

Inequity aversion can become strong enough that North American children between ages 6-8 choose to throw away a resource rather than be forced to distribute resources unequally between two children (Shaw & Olsen, 2012; Shaw, Montinari, Piovesan, & Olson, 2014). In a cross-cultural comparison, Paulus (2015) finds Ugandan children will distribute unequally rather than throwing a remaining resource away. Alternatively, Sheskin (2013) finds that children age 5-10 would rather another person receive the same amount as themselves rather than more, but they also prefer for them to receive less than themselves rather than the same amount. Though such discrepancies do exist in the literature on fairness behaviour – perhaps due to cultural effects or type of resource used (whether money or tokens, etc., Gummerum et al., 2008) – results consistently demonstrate that children's expectations and actual behaviour become more sophisticated and fairness-oriented as they age.

### **The Dictator Game as a Measure of Fairness Behaviour**

Designed by behavioural economists Kahneman, Knetsch, and Thaler (1986), the dictator game measures individuals' fairness preferences using the simplest definition of fairness: two individuals receiving identical outcomes (equality). The game involves a proposer and an anonymous receiver. The proposer is given a sum of money, tokens, or other goods. He or she is then told that they can, but do not have to, share their resources with the anonymous receiver. The question is simple: what percentage would they like to share? Most dictator game research has been conducted with university students, who allocate an average of 10-25% of their resources to the anonymous other (Camerer & Fehr, 2003; Hoffman, McCabe, & Smith, 1994). By comparing these results with the few studies involving child and adolescent samples, we gain further insight into the development of fairness tendencies.

The majority of dictator game studies conducted with children and adolescents reveal that younger children tend to offer less than older children and adults (Harbaugh & Krause, 2000; Benenson et al., 2007; Sally & Hill, 2006; Gummerum, Hanoch, Keller, Parsons, & Hummel, 2010). Despite this general trend, select studies have yielded competing results. Lucas, Wagner, and Chow (2008) found that four-year-olds were actually more altruistic than their adult counterparts, and Ongley and Malti (2014) found that dictator game offers increased specifically for boys between ages four and eight, and decreased again between the ages of eight and twelve. Gummerum, Keller, and Takezawa (2008) found no significant age differences in the allocations of children versus adults, each allocating on average between 35-40 percent of their resources.

A modification of the dictator game, the ultimatum game (Guth, Schmittberger, and Schwarz, 1982) is similar in style, only the receiver can either choose to accept or reject the proposed allocation of resources. If accepted, both take home the proposed amount of resources;

if rejected, both parties receive nothing. Ultimatum game proposals typically consist of 30-50% of resources (Harbaugh, Krause, & Liday, 2003; Camerer & Fehr, 2003). Both dictator and ultimatum games have been widely used in economic game theory to describe and predict strategic interactions and outcomes (Forsythe, Horowitz, Savin, & Sefton, 1994; Camerer & Fehr, 2003). The current study uses a measure similar to the dictator game, with some adaptations.

Of course, whether offers increase or decrease with age is not the only information we can glean from this research. Participants can also choose to share zero percent of their resources, or to give away 100 percent. Whether pertaining to the dictator game or to the ultimatum game, research shows that sharing nothing decreases with age, as does sharing all (Gummerum et al., 2010; Ongley & Malti, 2014; Kogut, 2012). In one ultimatum game study, the only participants to offer all were in the youngest age group (Murnighan & Saxon, 1998). The tendency to share exactly equal in both games was found to be strongest in children ages 7-10 (Kogut, 2012), and most likely for children age 9 (Murnighan & Saxon, 1998). Girls are found to be more likely to make perfectly fair proposals than boys, and are more altruistic overall (Murnighan & Saxon, 1998; Gummerum et al., 2008, 2010). In the majority of these studies, children and adolescent's beliefs and behaviour regarding fairness continues to develop with age, and, as Damon predicted, their actual behaviour tends to lag behind their beliefs.

### **Moral Hypocrisy**

Blasi claimed that moral behaviour is influenced by three factors: the importance of morality to the self, a sense of personal responsibility for moral action, and a motive for self-consistency (1983). An individual's moral behaviour is motivated in part by the desire for their external actions to match their internal beliefs. In other words, their behaviour is motivated by

moral integrity. Moral hypocrisy, in contrast, is defined as “the desire to present oneself as moral while actually acting in one’s own self-interest” (Batson, Kobrynowicz, Dinnerstein, Kampf, & Wilson, 1997). Batson proposes another motive: the desire to appear fair rather than to be fair. Moral hypocrisy has also been described as “the deceptive pursuit of self-interest in which the individual violates his or her own moral standards” (Naso, 2006, 2007), or “when a person endorses a moral standard yet behaves in violation of it” (Tong & Yang, 2011). Though alternative models and theories of moral hypocrisy exist (Frimer & Oakes, 2014; Lammers, Stapel, & Galinsky, 2010; Larson & Capra, 2009), the current study utilizes Batson’s definition. Though both early and modern studies in developmental psychology support the idea that children develop a more sophisticated understanding of fairness and become more fairness-oriented in their actual behaviour as they age, social psychologist Batson claims that fairness behaviour is actually motivated by the desire to *appear* moral rather than to *be* moral (Batson et al., 1997; 1999; 2002; 2011). The following is a summary of Batson’s methods, findings, and conclusions.

In an initial paper, Batson and colleagues (1997) asked 80 female undergraduate students to assign either themselves or another participant to a task that yielded positive consequences and the other to a dull, boring task. In the positive consequence task, one had the chance to win a raffle ticket, and in the neutral consequences task, there was no such opportunity. In the first study, the concept of morality was not mentioned. Sixteen of twenty participants assigned themselves to the positive consequences task, while in retrospect, only one participant said they had made a moral choice. In a second study, participants were given a choice of moral strategies: either flip a coin, or accept their task assignment by the experimenter. Ten out of twenty chose to flip the coin. Out of these ten, nine assigned themselves to the positive task. In study three,

participants were far more likely to apply the experimenter's task assignment when assigned to the positive consequences task (Batson et al., 1997). Results consistently seemed to reveal a motivation to appear moral while benefiting oneself; far more participants reported having flipped a coin to assign themselves to the positive consequences task than expected by chance.

In a series of follow-up studies (Batson, Thompson, Sueferling, Whitney, & Strongman, 1999; Batson et al., 2002), Batson and colleagues address potential self-deception strategies that could be involved in the 'how' of moral hypocrisy (1999), as well as potential alternative hypotheses. Through the investigation of two self-deception strategies, two alternative hypotheses were eliminated: 1) that participants who engage in moral hypocrisy actually misperceive their own behaviour as being moral and 2) that these participants are able to simply avoid comparing their own behaviour to any moral standard (see Batson et al., 1999). Study one involved labelling the coin, which cancelled out any ambiguity on whether the participants had been assigned heads or tails; study two tested the comparison of behaviour to a moral standard through a self-awareness manipulation (the presence of a mirror). Labelling the coin did nothing to increase the fairness of the task assignment among those who flipped it; conversely, the presence of a mirror made the coin flip fair (exactly 50/50). Evidently, self-awareness decreased moral hypocrisy in this case.

Batson and colleagues' (2002) paper tested the alternative hypothesis that it was salience of social evaluation, and not personal evaluation that accounted for the coin flip becoming fair in front of a mirror. In this case, researchers manipulated privacy. Participants were either told "you'll work independently, and never meet" (private condition), or "after you're done, you'll meet and discuss your thoughts, feelings, and experience" (public condition). Results again leaned heavily toward moral hypocrisy: all ten participants in the private condition assigned

themselves to the positive consequences task (with four choosing to flip the coin), and in the public condition, the awareness that the other participant knew they were making the decision led more people to flip the coin and record that they had done so, but did not lead the outcome of the coin flip to be more fair. In a study conducted with younger participants, most 6-8 year olds were fair towards their counterparts when they knew an experimenter was aware of their choices. Fewer children, however, behaved fairly when their choice was hidden from experimenters (Shaw et al., 2014). In a second experiment, older children were more likely to use a coin flip to decide which of two prizes to give to themselves, but they were just as likely to assign themselves the better prize by reportedly winning the coin flip as younger children were (Shaw et al., 2014). However, among children who chose to flip the coin, 62.2% reported winning the coin flip. Although this percentage is indeed greater than the 50% expected due to chance, it remains much less than the 80-85% reported by Batson.

The standard explanations of why people fail to act morally are that they lack moral judgment, or are under situational pressures that cause them to act in self-interest (Batson, 2011). The above research, however, proposes that what we are actually seeing is a lack of truly moral motivation. The current study uses an adaptation of Batson's well-developed paradigm, but there are others who make similar claims with regards to moral motivation. Frimer and colleagues, for example, also address the paradox that though most people claim to be prosocial, the majority choose to behave selfishly (Frimer & Oakes, 2014). This inconsistency is taken as evidence that individuals have two distinct motives: appearance motives (the desire to appear prosocial to others), and behavioural motives (the desire to behave in a way that benefits the self). Frimer, Schaefer, and Oakes (2014) further develop this concept by concluding that this inconsistency translates into two motivated selves: the actor, or watched self, and the agent, or self as executor.

While the actor is motivated to behave morally, the agent is motivated to act in their own self-interest.

Researchers Dana, Weber, and Kuang (2007) address a similar issue with the concept of “moral wiggle room”. Dana and colleagues asked participants to decide either to remain ignorant of how their actions affected someone else’s earnings, or to click a button to find out how they were affected. When participants were able to choose, half of them chose to remain uninformed, and chose to behave selfishly. When participants were unable to choose, and were simply told how their actions would affect the other, the majority of them behaved more altruistically. A follow up study confirmed Dana and colleagues’ findings: indeed, weakening the connection between actions and outcomes once again caused fair behaviour to decrease significantly (Larson & Capra, 2009). In a study addressing the implications of moral hypocrisy in the business world, Batson and colleagues find that the presence of such wiggle room is associated with higher rates of morally hypocritical behaviour (Batson, Collins, & Powell, 2006).

### **Now What? Addressing the discrepancy**

If Batson’s theory of moral hypocrisy does not completely contradict traditional research into fairness development, it certainly launches a problematic competing explanation of moral behaviour. Though most fairness research finds that fairness understanding and behaviour increase with age, and that self-interest decreases with age, Batson’s research suggests that people do not actually become more concerned with fairness and morality as they age. Instead, he argues, people simply become more concerned with *appearing* moral. How can we address this discrepancy? Psychological research into children’s fairness behaviour has not delved into the motivations behind children’s fairness actions, and despite briefly speculating as to the developmental origins of moral hypocrisy – namely, through modeling and through learning that

one can go unpunished for misbehavior if kept under wraps (see Batson, 2011, 2015) – Batson does not extend his research to include child and adolescent samples. Is moral hypocrisy indeed general to human nature? Or do developmental changes exist in the tendency to engage in moral hypocrisy versus moral integrity? Perhaps the answer is informed in part by the concept of moral identity.

### **Moral Hypocrisy: a form of Moral Identity**

Moral identity is defined as the extent to which a person views moral values as central to his or her identity (Aquino & Reed, 2002; Arnold, 1993; Colby & Damon, 1992; Hardy & Carlo, 2005, 2011; Hart & Fegley, 1995). An individual has a strong moral identity if they feel that being a moral person (for example, being fair, honest, and caring) is central to who they are. Moral identity has been linked to the experience of moral emotions such as guilt, shame, and pride (Blasi, 1983; Nunner-Winkler, 2007; Tangney, Stuewig, & Mashek, 2007), as well as moral action in the form of pro-social or anti-social behaviour (Blasi, 1983; Frimer & Walker, 2009; Krettenauer, Colasante, Buchmann, & Malti, 2014, Sengsavang & Krettenauer, 2015).

Experienced and anticipated moral emotions shift with age. Positive feelings after moral transgressions tend to decrease with age (Arsenio, Gold, & Adams, 2006), while positive feelings after moral decisions increase (Krettenauer et al., 2014). Additionally, Nunner-Winkler (2007) found that moral motivation – the willingness to do what one knows to be right even when it entails personal costs – is also positively correlated with age. Recent research into moral identity formation across the lifespan suggests that this formation continues past adolescence and into middle age, with participants' moral identity gradually becoming stronger from adolescence throughout adulthood (Krettenauer, Murua, & Jia, 2016).

The critical period for moral identity formation is believed to be adolescence and emerging adulthood (Frimer & Walker, 2009, Hardy & Carlo, 2011). During this age period, moral identity research suggests that it becomes increasingly important to act in a manner that is morally consistent with one's beliefs (Batson's research would suggest it only becomes increasingly important to *appear* to act morally). Although empirical research on developmental change during these years is scarce (see Krettenauer & Hertz, 2015), the findings seem to encompass a shift from *external* moral motivation to *internal* moral standards (Krettenauer, 2011; Krettenauer & Victor, in press). In other words, adolescents' reasoning as to why they acted in a certain way shifts from referencing outside forces, such as obedience to the law, to referencing personal values. This discussion corresponds in part to Frimer's claim that human beings have two distinct motives: appearance motives (desire to appear prosocial to others), and behavioural motives (desire to behave in a way that benefits the self) (Frimer & Oakes, 2014; Frimer, Schaefer, & Oakes, 2014).

When informed by moral identity research, it becomes apparent that moral hypocrisy can be understood as an external form of moral identity. From this viewpoint, developmental changes in morality are attributed to the motivation to maintain the *appearance* of being fair. Instead of experiencing a growing motivation to maintain self-consistency and adhere to developing fairness beliefs, children, adolescents, and emerging adults simply become more highly concerned with presenting themselves in a good way.

### **The Current Study**

**Research Methods and Hypotheses.** The current study investigates whether there are age differences in the tendency to engage in moral hypocrisy versus moral integrity. In other words, how does the desire to appear moral develop in relation to the desire to be consistent with

one's moral beliefs? Is the tendency toward moral hypocrisy present in children? If so, at what age does it appear? Does moral hypocrisy increase in adolescence, and moral integrity remain stagnant? Alternatively, do both tendencies increase with age? We use a similar procedure to that of social psychologist Batson (Batson et al., 1997), with two slight variations: the use of a ticket draw instead of a coin flip, and the inclusion of a satisfaction measure.

Our hypotheses were as follows. As age increased, we expected that individuals' tendency to act in pure self-interest would decrease. We also expected that as age increased, the number of participants to act with moral hypocrisy as well as the number of participants to act with moral integrity would increase. Our expectation that moral integrity would increase reflects the body of research showing that age is associated with the increasing sophistication of fairness beliefs and behaviour, while the expectation that moral hypocrisy will also increase is founded in Batson's findings and those of Shaw and colleagues (2014). Shaw and colleagues find moral hypocrisy at a rate of 11% in children ages 6-8, and a rate of 13% in children ages 9-11. Since Batson reports rates of 30-35% in adults, we expected to find an increase in morally hypocritical behaviour across childhood and adolescence.

In addition to these three main hypotheses, we explored the question of satisfaction. How satisfied are participants with the decision they make? Is there a relationship between the level of satisfaction and the decision-making pattern? Are the participants who engage in moral hypocrisy more or less satisfied with their decision than those who engage in moral integrity? To measure level of satisfaction, participants were asked to rate their level of happiness with their decision on a scale of 1-5 before proceeding to the subsequent portion of the interview.

### Method

This MA thesis project is part of a larger study into the development of morality, sense of self, and emotions across childhood and adolescence. In the larger study participants were asked to complete an interview and a questionnaire in addition to the decision-making task that is the focus of the present study. The decision-making task preceded the interview and questionnaire for age groups 1, 2 and 4 (grades 4 & 5, grades 7 & 8, 1<sup>st</sup>/2<sup>nd</sup> year university) and preceded the interview for age group 3 (grades 10 & 11). In the latter case, there was a considerable time lapse of up to four weeks between filling out the questionnaire in a classroom setting and participating in the decision-making task.

### Sample

Participants were 260 individuals from Grades 4-5 ( $n = 65$ ;  $M = 10.11$ ,  $SD = 0.70$ , range = 9-11.92, 39 females), Grades 7-8 ( $n = 68$ ,  $M = 13.26$ ,  $SD = 0.53$ , range = 12-13.92, 30 females), Grades 10-11 ( $n = 57$ ;  $M = 16.00$ ,  $SD = 0.67$ , range = 15-17.83, 32 females), and first- and second-year university students ( $n = 70$ ,  $M = 19.21$ ,  $SD = 1.54$ , range = 18-26.25, 34 females). Overall, the sample was comprised of 51.9% females ( $n = 135$ ). Seventy-eight percent of participants were born in Canada ( $n = 205$ ), and 21.2% were born outside of Canada ( $n = 55$ ). Parents' highest level of education was used as a measure of socioeconomic status. Interviewers asked participants for their father and mother's highest education level, and selected an option from the following list: *some high school studies, completed high school, some college or university studies, completed college diploma, completed undergraduate degree, some postgraduate studies, completed graduate or professional degree*. A Kruskal-Wallis test showed no significant differences in mean rank of father's education level between age groups ( $\chi^2(3, n =$

242) = 5.003,  $p = 0.172$ ) and no significant differences in mean rank of mother's education level between age groups ( $\chi^2(3, n = 247) = 0.275, p = 0.965$ ).

Participants in grades 4 and 5 (middle childhood), grades 7 and 8 (early adolescence), and grades 10 and 11 (middle adolescence) were recruited through the Waterloo District School Board and the Waterloo Catholic District School Board. Participants in the first- or second-year university (emerging adult) group were recruited through Wilfrid Laurier University's Psychology Research Experience Program (PREP), which encourages undergraduate students to participate in psychological research studies in exchange for course credit. Participants in grades 4 and 5 and grades 7 and 8 were compensated an honorarium of \$7; participants in grades 10 and 11 received \$10 for completing the questionnaire, \$20 for completing the interview portion on their school premises, and \$25 for completing the interview at Dr. Tobias Krettenauer's Morality, Self, and Emotions lab (Wilfrid Laurier University, Northdale Campus). Participants in the first- and second-year university sample received one course credit on Wilfrid Laurier University's PREP system. Participants younger than 18 years of age provided informed written consent from a parent or guardian; university students provided written informed consent. All participants provided verbal assent prior to testing.

### **Procedure**

Participants were interviewed by undergraduate or graduate students who were trained in interview techniques. Those in the youngest two age groups were interviewed on their school premises during nutrition breaks. Most participants in the middle adolescent age group were interviewed after school hours at their high schools. Individuals in the late adolescence/emerging adult sample, and a portion of the middle adolescent sample were interviewed at Dr. Krettenauer's research lab. Each participant was tested individually, either in separate rooms, or

at separate tables in a shared workspace such as a library. Classroom teachers were asked to fill out a form pertaining to the child's social development and behaviour, which includes questions from the Child Behaviour Scale (Ladd & Profilet, 1996) and the Strengths & Difficulties Questionnaire (Goodman, 2002); this form was not completed for the late adolescence/emerging adult sample. This teacher-report measure is intended for use in the larger research study, and was not used as part of the current MA thesis project. Each participant session was comprised of a decision-making task, an interview, and a questionnaire. Sessions lasted approximately 45 minutes, and were audio recorded for data collection and accuracy purposes. The grade 10 and 11 sample completed the questionnaire first, on school premises, at which point they were given the option of signing up to complete the decision-making task and interview anywhere from two days to four weeks afterward. Data were entered into Wilfrid Laurier University's online research software system, Qualtrics, and participants were debriefed upon completion (see Appendix C).

### **Moral Hypocrisy Measure**

We used the original experimental procedure developed by Batson and colleagues (Batson et al., 1997), and adapted it for use with children and adolescents. As was the case in Batson's procedure, participants were asked to make a decision where it is possible to appear fair while acting in their own self-interest. See Appendix B for the complete experimental procedure. The following is a summary of the decision-making task.

The interviewer first explained that there were two games to be played: one that participants in previous studies had supposedly deemed to be the 'Fun' game, and one deemed simply 'OK'. In the Fun game, participants had a chance to win a \$25 iTunes gift card; no chance at such a prize was available through the OK game. Participants were told that our study

requires an equal number of participants to play each game, and therefore only some can decide which to play. The interviewer then identified that the participant was, in fact, one of those who got to decide. Participants were told that depending on which game they chose to play, the next student would be designated the opposite game, but would not be aware that the current participant made the choice. This lessened the possibility that participants' decisions would be affected by concern regarding peer reactions. Next, the interviewer introduced a fairness standard: "Most people think it is most fair to give everyone an equal chance of playing each game. For example, by choosing an envelope from this bag, and seeing what the ticket inside says" (interviewer shows participant an opened envelope and ticket). Tickets that assign the participant to the Fun game were included in case a participant decided to open multiple envelopes in efforts to find one with a desirable outcome, or out of suspicion that the raffle was rigged. The ratio of OK tickets to Fun tickets was 20:10 as opposed to 50:50 to ensure that a larger number of participants were presented with the opportunity to act with either moral integrity or moral hypocrisy than were presented with the opportunity to accept the assignment to the Fun condition, or to display prosocial behaviour (the two possible outcomes of opening a Fun ticket).

The participant was then asked for their opinion. "Is this a good way to decide?" and "What would be a fair way to decide?" These questions ensured that the participant understood the demand for being fair, and allowed the researcher to record the participant's beliefs regarding fairness behaviour. The interviewer then explained that the participant would be left to make their own decision, by checking off one option on a sheet of paper – either "I play FUN game; next student plays OK game" or "I play OK game; next student plays FUN game" – and placing it in a designated letter-sized envelope (as opposed to the miniature envelopes used in the raffle

draw). The interviewer once again reminded the participant that the decision is completely up to them, and that they can make their decision by selecting a miniature envelope from the raffle bag, or make their choice without drawing a ticket. The participant was also reminded that the next participant will not know that they made the decision, and will simply be told which game they have been assigned.

The interviewer then got up from the table and exited the room for a few minutes. Upon returning, they asked the participant “I don’t need to know what choice you made right now, but I’m curious – did you use the envelopes to help you decide?” Similar to the question “did you flip the coin to make your decision?” in Batson’s studies, this allowed the researcher to record whether the participant says they have used an envelope (whether or not they actually did). The participant was then asked to rate how happy they were with the decision they made on a scale of 1-5 (1 = *very unhappy*, 2 = *unhappy*, 3 = *OK*, 4 = *happy*, 5 = *very happy*). Participants in the middle childhood and early adolescence samples were asked to select one of five faces on a supplemental visual Likert scale.

When the interview session was completed, and the participant had left the room, the researcher checked whether the participant opened a miniature envelope, and entered ‘yes’ or ‘no’ into the computer system. If the participant did open a ticket envelope, the researcher also recorded whether the ticket inside assigned them to the ‘OK’ or the ‘Fun’ game. The 10 envelopes assigning participants to the ‘Fun’ game had previously been marked with a tiny dot of ink (not noticeable to participants) to ensure accuracy in this step. If the participant had left an opened envelope behind, the researcher could easily identify by this dot whether the ticket had assigned them to the OK or the Fun game; alternatively, if the participant chose to take the envelope with them, the researcher was able to count the envelopes left in the raffle bag to

determine the outcome of the ticket in question. Although we did not track this, a small minority took the ticket envelope with them. Most participants left the opened ticket envelope on the desk. The ticket draw worked as a randomized procedure, and the researcher only became aware of the outcome of the ticket draw once the participant left the room. Once the researcher determined whether a ticket envelope was drawn, they opened the letter-sized envelope to record what option the participant chose to assign themselves.

It is important that participants believed that they would be playing either the ‘Fun’ game or the ‘OK’ game upon completion of the interview portion of the session, while in reality there was no such game. The decision-making task was necessary to collect data on individuals’ fairness behaviour, but actual participation in a game was unnecessary. Participants were debriefed as to the actual purpose of the decision-making task upon completion of the interview session (see Appendix C).

### **Coding Schemes**

#### *Fairness standard*

Responses to this question were coded as follows: a value of 1 was given to participants who said the raffle was a fair way, a value of 2 was given to participants who indicated some other random procedure (e.g. “rock paper scissors”), and a value of 3 was given to any participants whose decision-making strategy involved communication with the other participants (e.g. “I would prefer to ask the next person what their preference is”). Responses that included raffle *and* some other random procedure (e.g. “raffle, or coin flip”) were given a value of 1. Two responses were ambiguous (“I’ll just play the OK game”, and “alternative choices”), and were therefore excluded from data analyses related to the fairness question in the interview.

*Ticket draw*

Next, we coded the categorical variable *ticketdraw*. Values for *ticketdraw* reflected whether a participant chose to participate in the raffle draw, as well as whether the ticket assigned them to the Fun game or to the OK game. A value of 1 was assigned to those who drew a ticket that assigned them to the Fun game, a value of 2 was assigned to those who drew a ticket assigning them to the OK game, and a value of 3 was assigned to those who did not choose to select a ticket during the decision-making task.

*Decision*

Regardless of whether a participant chose to open a ticket, all participants were required to make a decision by selecting either “I play OK game; Next student plays FUN game”, or “I play FUN game; Next student plays OK game.” The variable *decision* refers to which game the participant decided to assign themselves to, regardless of whether they used a ticket to make their choice. A value of 1 was assigned to those who selected ‘I play the FUN game; the next student plays the OK game’, and a value of 2 was given to those who selected ‘I play the OK game; the next student plays the FUN game’.

*Decision-making pattern variable*

To answer our primary research question, we used the variables *ticketdraw* and *decision* to create a new variable called *decision making in experiment*. This variable allowed us to capture the six possible outcomes that exist for this decision-making task (see Table 1).

Of those who chose to participate in the raffle, some drew a ticket that assigned them to the ‘OK’ condition, and assigned themselves to the ‘OK’ condition. For the purposes of this study, we say that these participants have chosen to act with moral integrity (*ticketdraw* = 2; *decision* = 2). Others drew a ticket that assigned them to the ‘OK’ condition, and chose to assign

themselves to the ‘Fun’ condition. These participants demonstrated moral hypocrisy, or the desire to appear moral by using the fairness standard without actually being moral (*ticketdraw* = 2; *decision* = 1). Additionally, there were those who drew a ticket that assigned them to the ‘Fun’ condition, and chose to assign themselves to the ‘OK’ condition. These participants are considered prosocial (*ticketdraw* = 1, *decision* = 2). Those who participated in the raffle, drew a ticket that assigned them to the ‘Fun’ condition, and chose to assign themselves to the ‘Fun’ condition were excluded from any statistical analyses, as they simply had good luck in the ticket draw and their motivation to choose the ‘Fun’ game remains ambiguous ( $n = 35$ , 13.5%) (*ticketdraw* = 1, *decision* = 2).

Those who choose not to draw a raffle ticket either assign themselves to the ‘Fun’ condition (acting in self-interest; *ticketdraw* = 3, *decision* = 1), or to the ‘OK’ condition (acting according to the prosocial pattern; *ticketdraw* = 3, *decision* = 2). All subsequent analyses are based on these four decision making patterns: self-interest, moral hypocrisy, prosocial behaviour, and moral integrity.

## Results

We begin by reporting frequency and descriptive information for questions asked of participants during the experimental portion of the procedure. We then report frequencies and age-related findings for whether participants opened a ticket envelope, and for what game they decided to assign themselves to. Finally, we report age-related findings with regards to participants’ decision-making patterns.

### Fairness Judgment

The initial question that participants were asked as part of the decision-making task was about the fairness of the ticket draw. Interviewers asked participants “is this a good way to make

the decision?”, and recorded participant responses of ‘yes’ or ‘no’. Frequency counts show that 98% of participants agreed that the raffle was a good way to make the decision. See Table 2 for detailed results according to age group. A chi-square test for independence showed no significant effect of age on participant response,  $\chi^2(3, n = 260) = 4.98, p = 0.173$ .

Immediately after being asked whether they think that the raffle would be a good way to decide, interviewers asked the participant “what would be a fair way to decide?”. Eighty-one percent of participants said the raffle would be a fair way, 15.8% cited another random decision-making procedure, and 2.7% indicated preference for interpersonal communication. See Table 3 for a breakdown of answers according to age group. Again, a chi-square test for independence showed no significant effect of age on participant response,  $\chi^2(6, n = 260) = 9.54, p = 0.146$ .

### **Use of Ticket Draw**

Frequencies for use of the fairness standard (independent of the ticket outcome) were as follows: 110 (42.3%) participants chose to open a ticket envelope, and 150 (57.7%) participants chose not to open a ticket envelope. See Table 4 for a breakdown of age differences. A 4 X 2 chi-square analysis of age group and decision to open a ticket yielded a significant effect of age,  $\chi^2(3, n = 260) = 24.06, p < 0.001$ . Of note is that 83.1% of students in grades 4 and 5 did not open a ticket envelope; only 16.9% chose to do so ( $z = -3.1$ ). The only participant who opened multiple tickets opened three, all of which read “I play OK game; Next student plays FUN game”. This participant was coded as one of those who did open a ticket envelope.

### **Reported Use of Ticket Draw**

Participants were asked directly after they made their decision whether they used a ticket to make their choice. One hundred thirteen participants (43.5%) said that yes, they had opened a ticket envelope, while 147 (56.5%) reported that they had not. This *reported* use of the ticket

draw in decision-making differs by five points from the *actual* use of the ticket draw. Evidently, five participants falsely reported the use of the ticket draw. Three of these participants were in grades 7 & 8, one in grades 10 & 11, and one in first- and second-year university. Of these five participants, three of them chose the Fun game for themselves, and two assigned the Fun game to the next student. Also of note is that two participants who opened ticket envelopes lied and said they did not. Both of these participants had opened tickets that assigned them to the OK game, but chose the Fun game, therefore were coded as having acted with moral hypocrisy.

### **Ticket Outcome**

As mentioned in the methods section, the ratio of OK tickets to Fun tickets was 20:10, to ensure that the response pattern of drawing the Fun ticket and choosing the Fun game remains relatively infrequent. Closely reflecting the intended ratio of 20:10, 66.1% of tickets opened read “I play OK game; Next student plays FUN game”, and 33.9% read “I play FUN game; Next student plays OK game”. Note that in this case the 151 participants who chose *not* to open a ticket envelope were removed from this analysis.

### **Decision**

One hundred forty-four (54.2%) participants assigned themselves to the Fun game, and 119 (45.8%) participants assigned themselves to the OK game. See Table 5 for a breakdown of age differences. A 4 X 2 chi-square analysis run on age group versus decision yielded a significant effect of age,  $\chi^2(3, n = 260) = 37.41, p < 0.001$ . Age groups differed significantly in whether they chose to play the Fun game or the OK game. As age increased, participants were less likely to assign themselves to the Fun game, and more likely to assign themselves to the OK game.

### Age-related Differences in Decision-making Pattern

Frequency counts for decision-making patterns were as follows: 41.3% of the 260 participants acted with self-interest, 5.8% acted with moral hypocrisy, 26.2% acted with prosocial behaviour, and 26.7% acted with moral integrity. A chi-square test for independence was carried out to examine whether the distribution of participants across the four possible behavioural outcomes differed across age groups. In other words, is the tendency of participants to act in accordance with moral hypocrisy, moral integrity, prosocial behaviour or self-interest related to age? A 4 X 4 chi-square analysis yielded a significant effect of age,  $\chi^2(9, n = 225) = 56.01, p < 0.001$  (see Table 6). Age was significantly related to participants' decision-making pattern (see also Figure 1).

The following general trends can be identified: self-interest decreased with age, with the large majority of the decrease occurring between middle childhood ( $z = 4.2$ ) and early adolescence ( $z = -0.4$ ). None of the standardized residuals for moral hypocrisy across the four age groups deviated significantly from chance. Percentages for the first three groups ranged between 6.5% and 9.1%, and fell to 0% between age groups 3 and 4. Thus, although rare in occurrence, moral hypocrisy was stable from middle childhood to late adolescence. Prosocial behaviour increased with age, with the majority of the increase occurring between middle childhood ( $z = -2.3$ ) and early adolescence ( $z = 0.2$ ). Moral integrity also increased with age, following a steadier trend between middle childhood and early adolescence as well as between early adolescence and middle adolescence. This behavioural pattern remained steady between middle adolescence and emerging adulthood. See Table 6 for detailed results.

Those in the middle childhood age group (grades 4 and 5) were most likely to act with self-interest (75%,  $z = 4.2$ ). In contrast, only 23% ( $z = -2.2$ ) of those in age group 4 (first- and

second-year university) acted with self-interest. The proportion of participants in grade 4 and 5 who acted prosocially (11.3%,  $z = -2.3$ ) also differed significantly from what we would expect due to chance, as did participants from grade 4 and 5 who acted in accordance with moral integrity (6.5%,  $z = -1.9$ ). Of marginal significance were those participants in age group 4 (first- and second-year university) who acted with moral integrity (39.3%,  $z = 1.9$ ) and those who acted with moral hypocrisy (0%,  $z = -1.9$ ).

### **An Alternate Analysis**

The previous analyses were based on all four decision-making patterns. An alternative approach to analyzing this data that is equivalent to the way Batson et al. (1997) reported findings is to examine the decision-making patterns of only those participants who drew a ticket. These individuals have arrived at a junction where the next step of the decision-making task is either to decide for the Fun game or the OK game. Of those who did draw a raffle ticket, what percentage chose the Fun game versus the OK game?

**Decision of participants who drew a ticket.** Of the 110 participants who took part in the raffle draw, 46 (41.8%) participants assigned themselves to the Fun game, and 64 (58.2%) participants assigned themselves to the OK game. Note that the odds to draw to a ticket for the Fun game versus the OK game were 2:1. Thus, if all participants decided according to the outcome of the ticket draw 33% would have opted for the Fun game. The actual number (41.8%) indicates that 8.8% of participants chose the Fun game even though the ticket draw assigned them to the OK game. In Batson's studies this number was typically 30-35%. A 4 X 2 chi-square analysis run on age group versus decision yielded a significant effect of age,  $\chi^2(3, n = 110) = 8.97, p < 0.05$ . As age increased, participants were significantly less likely to assign themselves

to the Fun game, and significantly more likely to assign themselves to the OK game. See Table 7 for a breakdown of age differences.

**Age differences in decision-making pattern for those who drew an OK game ticket.**

Percentages within age group for the decision-making patterns of the 73 participants who drew an OK game ticket were as follows: 17.8% decided to play the FUN game (thus, acted with moral hypocrisy) and 82.2% decided to play the OK game (thus, acted with moral integrity).

A 4 X 2 chi-square test for independence was carried out to examine whether the distribution of participants across the four possible behavioural outcomes differed across age groups. The test yielded a significant effect of age,  $\chi^2(3, n = 73) = 11.806, p < 0.01$  (see Table 8). Age was significantly related to participants' decision-making pattern, such that moral integrity increased with age (from 50% of the youngest age group to 100% of the eldest age group), and moral hypocrisy decreased with age (from 50% of the youngest age group to 0% of the eldest age group).

**Self-reported satisfaction with decision**

An Analysis of Variance (ANOVA) was performed to examine the relationship between participant's decision-making pattern and their reported level of satisfaction with the decision they made. We ran the analysis with decision-making pattern (1 = *self-interest*, 2 = *moral hypocrisy*, 3 = *prosocial behaviour*, 4 = *moral integrity*) as the independent factor and reported level of satisfaction (on a scale of 1-5) as the dependent variable. The mean difference level was significant,  $F(3, 221) = 6.979, p < 0.001$ . A Scheffe post-hoc test ( $p < .05$ ) showed that means for reported satisfaction levels differed significantly between the self-interest and moral integrity groups, as well as between prosocial and moral integrity groups. Decision-making pattern was significantly related to participants' reported satisfaction level, such that those in the self-interest

and prosocial behaviour groups were significantly happier than those in the moral integrity group. The moral hypocrisy group did not significantly differ from any other decision-making pattern. See Table 9 for the means and standard deviations for each decision-making pattern.

### **Gender differences in decision-making pattern**

A 4 X 2 chi-square test for independence was performed to examine the relationship between decision-making pattern and gender. The relationship between these variables was not significant,  $\chi^2(3, N=225) = 0.51, p = 0.92$ . Gender did not appear to have a significant impact on participants' decision-making pattern.

### **Discussion**

The current study was designed to examine the development of moral hypocrisy versus moral integrity across childhood, adolescence, and emerging adulthood. Research into the development of fairness has shown that children's beliefs and behaviour become increasingly fairness-oriented as they age. Behavioural economics literature confirms this trend. However, social psychologist Batson provided evidence that fair behaviour in adulthood is not primarily due to the desire to *be* fair, but rather to *appear* fair to others. Shaw and colleagues (2014) found evidence of moral hypocrisy in children ages 6-11, although at substantially lower rates than Batson. Our experimental procedure aimed to investigate changes in this tendency towards moral hypocrisy or moral integrity across a wider range of ages. By doing so, we hoped to answer questions of moral development that have thus remained at least partially unanswered. Does the desire to be fair increase with age? What about the motivation to appear fair? How does the desire to appear moral develop in relation to the desire to be consistent with one's moral beliefs? When given an opportunity to do so, will children, adolescents, and emerging adults act in their own self-interest while maintaining the appearance of fairness?

We hypothesized that purely self-interested behaviour would decrease with age, and that the motivations both to *be* fair (moral integrity) as well as to *appear* fair (moral hypocrisy) would increase with age. Such results would support previous fairness research and provide a more detailed picture of the development of moral hypocrisy as conceptualized by Batson.

To measure these expected developmental changes in behaviour, we adapted Batson and colleagues' (1997) decision-making task for use with children and adolescents. The revisions made to the decision-making task allowed us to record the result of the ticket draw for each participant. We also included a satisfaction measure, which served to determine whether participants' reported level of satisfaction with their decision was related to the decision-making pattern they used. As such, our experimental measure collected participant beliefs regarding fairness, actual decision-making behaviour, as well as reported level of satisfaction with the decision made. Current research is crucial to understanding the development of moral motivation and behaviour across childhood, adolescence, and emerging adulthood. This discussion begins with an examination of participants' judgment about fairness, followed by a discussion of empirical findings as per the research questions outlined in the introduction.

### **Fairness Judgment**

When presented with the fairness standard of the raffle draw, almost all participants agreed that it was a good way to make the decision. Age-groups did not significantly differ with regard to this fairness judgment. Regardless of how they would end up making their decision, or what their decision would be, only a few participants questioned the fairness of the raffle ticket system. This somewhat resembles Damon's research involving hypothetical and actual decision-making scenarios, specifically those where he identifies a lag between children's beliefs and behaviour (Damon, 1977). Fairness research shows that people's judgments about what would be

fair in a given scenario develop sooner than their actual behaviour. The question “is this a good way to make the decision?” cannot be directly compared to Damon’s hypothetical scenarios, as it is asked *after* participants are aware that they will soon be asked to make an actual decision.

Despite this difference, perhaps similar principles apply. Our results show that more participants agree with the fairness of the raffle system than actually use the raffle system and abide by it.

The clear majority of participants who agreed that the raffle was a good way to make the decision went on to cite the raffle as a fair way when asked ‘what would be a fair way to make the decision?’. A small proportion of participants brought up an alternative random strategy, such as a coin flip or a game of rock paper scissors. Lastly, a few participants associated fairness with being aware of the next participant’s preferences and desires. These individuals presumably believed that a truly fair decision-making strategy would acknowledge the cause and effect nature of the decision they were facing, as well as individual differences in each participant’s desire to play the Fun game. It is important to note, though, that of the individuals whose answers we were able to code, the vast majority did indicate that the raffle was a fair way to make the decision.

### **Ticket Draw and Outcome**

Independent of their fairness judgment or what they chose to do with the result of their ticket draw, a little less than half of the participants chose to open a ticket envelope even though the concept of fairness was made salient via the introduction of the raffle. While the eldest three age groups did not vary significantly in whether they chose to use the fairness standard, the only group that differed significantly from the other groups was middle childhood, where only a very small portion selected a ticket. These results align with our hypothesis that unmitigated self-interest influences decision-making more strongly in younger age groups, and that as age

increases, people are more likely to behave fairly, whether due to a true desire to be fair, or to a desire to appear fair.

### **Decision**

Without taking into consideration whether they chose to select a ticket, or whether their decision was a result of following the result of the ticket draw, about half of our sample ended up assigning themselves to the Fun game, and half to the OK game. As age increased, participants were less likely to choose the Fun game and more likely to choose the OK game. A ratio of 50:50 would have signalled a fair outcome in Batson's studies, but the same is not true in our case, with the ratio of 20 'OK' tickets to 10 'Fun' tickets. These results only reveal so much about participant behaviour, as they simply reflect the final decisions, and not how the participants made their decisions. For this information, we turn to a discussion of participant behaviour as captured by the decision-making pattern variable.

### **Age-related Differences in Decision-making Pattern**

**Self-interest.** In this experimental paradigm, self-interest was equated with choosing not to use the fairness standard (raffle), and assigning the Fun game to self, and the OK game to the next participant. We predicted that self-interest would decrease as age increased; our results support both this hypothesis, as well as literature cited in the introduction. The current study extends previous research in that includes child, adolescent, and adult samples.

It has been well documented that young children tend to behave with greater self-interest than older children and adults. With age, children's understanding, beliefs, and behaviour about fairness become more sophisticated. Despite this decrease in self-interest being an expected trend, a couple of alternative explanations exist. First, the attractiveness of the Fun game and associated prize of a \$25 iTunes gift card could have decreased as age increased. This would

justify a decrease in the tendency to assign oneself to the Fun game. However, roughly 25% of the emerging adult sample did act in accordance with self-interest. Evidently, the Fun game was still attractive enough to a quarter of the eldest age group for them to forego the fairness standard, and take the Fun game for themselves.

A second explanation for the decrease in self-interested behaviour is that the youngest group was the least able to understand the raffle system, and subsequently, what was being asked of them. Perhaps confusion led these participants to take what they perceived to be the easiest way through the decision-making task. This explanation is less plausible, though, when held next to the data from the fairness beliefs question. When asked the question “what do you think – is this a good way to decide?”, 97% of the youngest age group said that the raffle was a good way to make the decision. If the raffle was indeed this confusing to the youngest participants, we would expect far fewer of them to agree with the validity of the fairness standard.

**Moral integrity.** Moral integrity was defined as drawing a raffle ticket and following through with the ticket assignment. As mentioned, those who drew a ticket that assigned themselves to the Fun game and the next student to the OK game were not considered part of this group, because they simply received the luck of the draw. It was not possible to ascertain what motivated them to follow through with the ticket assignment. Based on previous literature, we predicted that the moral integrity pattern would increase with age, and our results supported this hypothesis. As age increases, so does the desire for behaviour to match belief. This is consistent with moral identity research, which pinpoints adolescence as the critical period for moral identity formation. As mentioned, the current study adds the dimension of a wider age-range to a literature base where research is often conducted with either adults or children, but not both groups.

Although this result was also expected, there are alternative possibilities to address. The most problematic is that perhaps participants did not realize that they had the option to cheat the system (i.e. act with moral hypocrisy), and therefore believed that their only option was to follow the ticket assignment. To borrow language cited in the introduction (Dana, Weber, & Kuang, 2007), perhaps they did not perceive the ‘wiggle room’, or assumed that the interviewer would eventually check on them by reading what was inside their raffle ticket envelope. Each participant did have the option to take their raffle ticket with them (interviewers provided no instruction about what to do with the opened envelope), but the majority did leave it on the table. If this lack of perception were the case, what we consider moral integrity would arguably be another variant of moral hypocrisy, in which participants care more about appearing fair than about being fair. To minimize this possibility, interviewers left the room while participants were making their decisions, and stated twice that they did not need to know which game the participant chose – once before leaving the room, and once upon returning. Additionally, when Batson and colleagues revised their procedure to include a coin with a different colour on each side, allowing the observing experimenter to see the result of the coin flip, the hypocrisy pattern still emerged (Batson et al., 2002). The same was true when experimenters used a raffle system similar to the dictator game (Batson et al., 2006). This takes away credibility from the argument that it was lack of seeing the opportunity to cheat, and not moral integrity, that accounted for the prevalence of the moral integrity pattern.

**Prosocial behaviour.** There is one decision-making pattern that Batson does not differentiate from the others, and that is the prosocial pattern. We did not have a hypothesis regarding prosocial behaviour, in part because Batson does not address it. Batson’s procedure places all those who assign themselves the neutral consequences task into one group, regardless

of whether their decision was made according to the results of a coin flip. Because of this, we do not know if any of Batson's participants receive the positive task for themselves, but choose to give it away.

Having revised Batson's original procedure, we unexpectedly found that prosocial behaviour increases at roughly the same rate as moral integrity. This pattern is much more prevalent than expected, and, we suppose, also much more prevalent than Batson would presume, based on his exclusion of the group. Prosocial behaviour, characterized by using the fairness standard, receiving a ticket assignment to the Fun game, and proceeding to give it away to the next participant, *or* of choosing not to take a ticket, and choosing to give the Fun game to the next participant is most certainly not in line with moral hypocrisy. Even if what we deem moral integrity was indeed a variant of moral hypocrisy, the same cannot hold true of the prosocial pattern. These participants give the better option away even when the fairness standard was made clear, and when provided with the opportunity to assign themselves the better option. The increase of the prosocial pattern points to a strengthening moral motivation, albeit not in the way that we expected. In this case we see an increase in prosocial motivation rather than an increase in the motivation to be fair.

A counter-argument could again be made that perhaps participants care less about the Fun game and associated prize as they get older. But as stated, the fact that about a quarter of first- and second-year university students still act with self-interest suggests that this is not what is occurring. An even stronger case can be made by looking at the self-reported satisfaction levels for all four decision-making groups. Evidently, those in the prosocial group report the highest level of satisfaction with their decision. If the value of the Fun game decreased with age,

why would those who give the Fun game away rate themselves happier than those who act with moral integrity?

Another possible explanation for the prevalence of prosocial behaviour in this case is that many of our participants, although they are not aware of the identity of the next student, do know that it will be one of their classmates. In this way, the next participant is not a completely anonymous other, as is presumably true of other studies. These participants might be more strongly motivated to be prosocial with their peers than they would be with an anonymous next participant (recall the identifiable victim effect, Kogut, Slovic, & Vastfjall, 2016). However, the group that engages in the highest percentage of prosocial behaviour is the emerging adult sample, and peer relationships within university classes are typically more distant than those in a grade school or high school classroom. At the very least, relationships between university classmates likely would not differ from those in Batson's studies. Overall, the existence and strength of the prosocial pattern lends credibility to the idea that what our measure labels as moral integrity is moral integrity, and not just a variant of moral hypocrisy.

**Moral hypocrisy.** Moral hypocrisy, defined as the desire to appear moral rather than to actually be moral, was associated with endorsing fairness by taking a raffle ticket, being assigned the OK game, and going against the ticket assignment to assign oneself to the Fun game. As mentioned, as age increased, so did the desire to be or at least to appear fair by participating in the raffle. Predictably, this led to an age-related increase in moral integrity. Surprisingly, it did not lead to the predicted increasing trend in moral hypocrisy. We hypothesized, based on previous research (Batson et al., 1997 & Shaw et al., 2014), that as age increased, so would the moral hypocrisy decision-making pattern. In practice, though two thirds of those who selected a ticket selected one that read "I play OK game; Next student plays FUN game", only 13

participants went against this ticket assignment when provided the opportunity to do so. These 13 participants represent only 5.8% of the total number of participants. This result differs greatly from Batson's experiments, where about 80-85% of people who flip the coin assign themselves to the positive consequences task, leading to an estimate that about 35% are motivated by moral hypocrisy (50% would be expected due to chance).

As mentioned in the results section, roughly 40% of participants who used the fairness standard selected the Fun game versus the OK game even though the odds to draw a ticket for the OK game versus the Fun game were 2:1. From this, we can estimate the percentage of participants who drew a ticket and acted with moral hypocrisy. Batson's analysis would end here. However, due to the use of the raffle draw rather than a coin flip, we were able to determine the exact percentages of moral hypocrisy and moral integrity that occurred in the group who participated in the ticket draw. Analyzed in this way, we see that moral hypocrisy occurred at a rate of 17.8%. This percentage remains relatively low compared to Batson's rates of 30-35%, but is more comparable to both his results and Shaw and colleagues' (2014) results of 11-13% moral hypocrisy in children. When we consider all 260 participants and all six potential behavioural outcomes, an analysis that we propose provides a broader picture of decision-making behaviour, moral hypocrisy occurs at a very low rate. When considered only in terms of those who did participate in the ticket draw, we find a total percentage slightly more comparable to that of Batson and that of Shaw and colleagues (2014), with a decreasing age-related trend overall.

Possible reasons for this discrepancy are crucial to discuss. First, we address potential discrepancies in our methodology. Perhaps our Fun game was less attractive than Batson's positive consequences task. But the positive consequences task was simply referred to as such.

Again, perhaps participants simply did not see the opportunity to cheat the system by acting with moral hypocrisy. The wiggle room afforded them may not have been obvious enough, despite the interviewer leaving the room and communicating that they did not need to know the outcome of the participant's decision.

A third explanation, as yet unaddressed, concerns the possible existence of self-deception (Batson et al., 1999). A coin flip is arguably more malleable than a raffle, in that it is easier to trick yourself into believing that the result of a coin flip is in your favour than it is to do so with a ticket containing one clearly stated outcome. Batson and colleagues refer to the former behaviour as *fiddling* the coin flip. This reduced ability to engage in self-deception could impact our rates of moral hypocrisy. However, when Batson and colleagues developed a test to determine whether self-deception had an influence on their results, labelling the coin "SELF to POS" on one side, and "OTHER to POS" on the other side, they found similar frequencies of moral hypocritical behaviour (Batson et al., 1999, 2002). This indicates that the potential of self-deception was not likely an influencing factor in the discrepancy between our results.

**An additional hypocrisy measure.** Although not explicitly stated as such, an alternative way to appear moral without actually behaving morally in this experiment was to lie about the use of the ticket draw. If moral hypocrisy is such a central moral motivation, we should see a greater percentage of participants foregoing the ticket draw and proceeding to lie about it and say that they did select a ticket. This would easily serve to maintain the appearance of being fair while still acting in accordance with one's own self-interest. As it stands, only five participants said they used a ticket to make their decision, but actually did not.

Naturally, another explanation for these drastically different findings is that moral hypocrisy is simply not as prevalent as Batson conceives it to be. Perhaps the trend towards

moral hypocrisy does not similarly apply to all populations. The results of the current study contrast with the idea that moral hypocrisy is common and becomes an increasingly solidified motivational structure with age. Even when manipulations to the procedure included labelled coins, coloured coins, or the inclusion of a raffle system, Batson consistently finds that people end up behaving according to the moral hypocrisy pattern, but we find this behavioural pattern occurs rarely. In fact, if there were to be a trend, it would represent a decrease in morally hypocritical behaviour, not an increase.

Might the real endpoint of moral motivation be prosocial in nature rather than hypocritical? As previously stated, the prosocial decision-making pattern had the highest levels of reported happiness, and research on prosocial behaviour suggests the presence of a self-sustaining feedback loop. Although these predictions remain speculative, we are at the very least left wondering if moral hypocrisy is as pervasive as Batson's research finds.

### **Levels of Reported Satisfaction**

In addition to testing for age differences in decision-making behaviour, our study also looked at participants' level of satisfaction with their decision. As mentioned in the results section, this was addressed by asking participants how happy they were with their decision on a scale of one to five, ranging from very unhappy to very happy. We did not have a specific hypothesis regarding these differences; however, we find evidence to suggest that there are indeed significant differences between the emotional consequences of each decision-making pattern.

Participants in the self-interest and prosocial groups are significantly more happy than moral hypocrisy and moral integrity groups. In other words, participants were happiest when they chose not to use the fairness standard and thus chose for themselves whether they would

play the Fun or OK game, or when they did use the fairness standard, but chose to give the Fun game away.

These findings warrant closer examination. Research cited in the introduction suggests that as moral identity matures, people become increasingly motivated by the desire for their behaviour to match their beliefs, and more likely to experience positive emotions after making moral decisions (Krettenauer et al., 2014). In this case, however, despite having acted in accordance with their internal beliefs, those in the moral integrity group were less satisfied with their choice than those who acted with self-interest or prosocial behaviour. Perhaps it is not moral hypocrisy that is the main competitor with fair behaviour, but rather a very real conflict between self-interest and fairness motives. Perhaps those in the moral integrity group did desire to play the Fun game, but chose the constraint of the fairness standard, a decision that resulted in lower levels of satisfaction.

Alternatively, if we look at the other ‘moral’ choice, that of giving the Fun game away, we found higher reported levels of satisfaction, suggesting that prosocial behaviour might be more self-sustaining in nature. This is purely speculative at this point, but perhaps prosocial behaviour is better integrated into moral identity and the sense of self than moral integrity? There is literature that suggests the existence of an affective self-reward mechanism that assists people in maintaining prosocial behaviour (Dunn, Aknin, & Norton, 2014). In research specifically utilizing economic games, it was found that giving to others increased children’s happiness levels (Kogut, 2012). Paulus and Moore (2016) find that 3-6-year-old children expected people to be happier after sharing than after not sharing.

Wu, Zhang, Guo and Gros-Louis (in press) find that when giving is based on a social norm, such as merit, it does not lead to the increase in happiness brought on through autonomous

sharing. Similarly, Aknin, Hamlin, and Dunn (2012) find that giving rewards children with positive emotions, but only when it costs something to do so. Perhaps this provides a partial explanation as to why those who use the fairness standard and give the game away are not as satisfied with their decision. They have given based on the social norm of fairness, an action which Wu and colleagues would classify as obligated versus autonomous. Gebauer and colleagues (2008) suggest that prosocial behaviour can be motivated either by the anticipation of positive affect (pleasure) or by fulfilling a duty or conforming to a social norm (pressure). Further research is necessary, but our results suggest that in this case, it is motivated more by the former than by the latter.

### **Limitations of Current Research**

Some of the limitations of this study, several which have already been mentioned, are methodological in nature. The first is that we do not include a measure of the attractiveness of the Fun game and OK game. Therefore, we do not know for certain that the attractiveness level of the Fun game and associated prize do not decrease with age. A second limitation previously discussed is the possibility that participants did not see the chance to appear moral while acting in their own self-interest (i.e. did not perceive the wiggle room). As a consequence, we cannot fully rule out the possibility that the moral integrity group is therefore actually a variant of moral hypocrisy. A third limitation relates to our satisfaction rating. We did find significant differences in reported happiness levels dependent on decision-making pattern, but we do not employ a pre-measure for satisfaction, and thus cannot control for the initial satisfaction level of each participant. Additionally, the fact that our high school sample participated in the decision-making task and interview after completing the questionnaire could be a potential confound. Though the decision-making task was completed anywhere from 1 week to 4 weeks after the questionnaire,

and though it took place in a different setting (one-on-one versus in a classroom with other students), the content of the questionnaire could have influenced participants' decision-making behaviour.

As is the case with much research in developmental psychology, it is essential to highlight that this study was cross-sectional, and not longitudinal. We therefore do not know if the age differences observed are due to age or to cohort effects. The analysis of parent education levels indicated that our age groups do not differ in socio-economic status, but this also remains a possibility.

### **Future Directions**

In addition to addressing these limitations, further research should investigate the relationship between the decision-making patterns defined in this study and key aspects of the moral self, namely moral centrality and moral motivation. Moral centrality refers to the degree to which issues of morality are central to an individual's sense of self, whereas moral motivation refers to whether an individual is motivated by internal or external factors. Moral *motivation* is distinct from moral *centrality*, in that both aspects play interrelated yet distinct roles in the moral self, and arguably differ in their developmental trajectories (Krettenauer, 2011). It is well documented that as age increases, people generally experience a shift from external to internal motivation. Batson speaks of this shift as a move from an *ought* to a *want*, and claims that while it occurs early in life in matters of propriety morality (principles of purity, loyalty, honor, and respect) it is quite rare in matters of interpersonal morality, which he associates with principles of fairness, doing no harm, care, and honesty (Batson, 2015). This rarity was not captured with the current experimental paradigm.

At the outset of this thesis project, we expected to find a decreasing trend in self-interest, compensated by increasing trends in behaviour signifying an *ought* (moral hypocrisy or externally motivated moral integrity) or a *want* (internally motivated moral integrity). What we found, however, seems to indicate that as age increases, individuals shift from self-serving motives to a desire to be moral (*ought* or *want*), and to the desire to behave prosocially. What do these results mean for the connection between moral decision-making and moral identity?

When placed in the greater context of moral identity development, the current findings precipitate further research questions. Are individuals who score high in internal moral motivation more likely to behave with moral integrity? Conversely, are those who score high in external moral motivation more likely to behave with moral hypocrisy? Do those who score high in moral centrality tend to act with moral integrity or with prosocial behaviour? These questions need to be addressed in future research.

### **Concluding Remarks**

Developmental and social psychologists have mixed opinions on whether there is sufficient evidence for the existence of moral identity. Some suggest that the concept of morality is outdated or broken (Batson et al., 2011), or that having a moral identity is the privilege of a select few highly moral people classed as “moral exemplars” (Colby & Damon, 1992). However, we find that moral hypocrisy is a far less likely outcome of moral development than moral integrity and prosocial behaviour. Current research informs the study of moral development and provides a basis for further research into the relationship between the moral self and moral behaviour. Results indicate that self-interest, moral hypocrisy, prosocial behaviour, and moral integrity are not basic and fixed human tendencies, and are instead constructs that change according to socialization and developmental processes.

## Appendix A: Introduction and Demographics

*Introduce yourself to child and explain general purpose of the meeting with child.*

Hi, my name is \_\_\_\_\_ and I am a student at university. The reason I am meeting with you today is that I am very interested in what children/teenagers like you think and feel about your own and other children's behaviours and values.

*Give brief overview of interview procedure and explain equipment.*

Before we start with the interview, let me briefly explain what we are going to do today. This study has three parts: an interview, questionnaire, and game. We will first do the interview together and then the questionnaire.

The interview is about the importance of values in different situations of your life. I understand that this topic can be quite personal, at least for some people. To make it easier to talk about these things, I brought some picture boards with me. I will record the interview and put a personal identification code to the recording. Only you will know this code. Let me assure you that whatever you say is completely confidential.

You should also know that no one is going to judge your answers as good or bad, right or wrong. So just say what you think and feel because this is what today is all about. If you don't know an answer to one of my questions, you should just say "I don't know". Also, if you don't understand something, please say so and I can explain it better. At any point, if you need a break or would like to stop, you may do so. When we are done with everything, you will get \$7 for your participation.

We first need to create your personal identification code. This code has letters and numbers that only you know. Tell me: What are the first two letters in your mother's first name? What day of the month is your birthday? And what are the first two letters in your father's name?

So, this is your personal code [XX99YY].

Do you have any questions right now?

*Ask child for oral assent:* Great. Before starting, I need to ask you one more time: Are you okay with talking to me and filling out some questionnaires today?

IF YES: So let's start.

IF NO: That's okay. I will take you back to your classmates.

First, we just need to know a little about your background before. *Do the demographic questions with them on Qualtrics.*

## Appendix B: Experimental Procedure

At the end of this interview you will play a computer game. The game is about how you react to other people's decisions. There are two versions of the game that take the same amount of time. We've played these two versions of the game before in other studies.

- In one version, many students your age feel it is really fun so let's call it the "FUN" game. In the fun game, you have to react fast and you can collect points and if you collect enough points then you will get a chance to win a \$25 iTunes gift card.
- The other version of the game is slower and most students think it's less fun so let's call it the "OK" game. In the OK game, you have all the time you need for making your decisions. There are no points to collect and there is also no gift card to win at the end. But, you have the chance to learn about your decision-making in different situations.

We need to make sure that we have the same number of people play both games. We can't let everyone decide, but we do let some people decide which game they get to play. You are one of these students. You can choose one of the two games you want to play and whichever game you pick, the next student after you will play the other game. So if you choose the Fun Game, the next person will play the OK Game. If you choose the OK Game, the next student will play the Fun Game.

Most people think that the fairest way to decide is to give everyone an equal chance of playing the fun game. For example, by drawing a raffle ticket, where we have an equal number of tickets for the fun game and the ok game. [*Take out one envelope with one ticket, take out one ticket from the envelope, show to student what is in the envelope*].

What do you think – is this a good way to decide? What would be a fair way to make a decision?

Now it's up to you to decide. You are free to make your own decision. You can draw a ticket, but you don't have to. You just need to make your decision by checking one of the two boxes here [*point at form*]. Either check the box that says "I play FUN game – Next student plays OK game" or "I play OK game – Next student plays FUN game". After making your decision, put the form in this envelope. There is no rush; you can take all the time you need and no one will know you decided. We will tell the next student what game they are playing, but they won't know that you made the decision. I will leave you alone for a moment to make your decision.

*Leave the room while the participant checks off the option they choose. Return to the student and ask "Are you ready?" Knock on the door to make sure the participant is finished circling their option.*

Ok great! I don't want to know what you decided, but I am curious, "Did you draw a ticket?"

On a scale of 1-5, how happy are you with your decision?

Thank you for doing this. Now let's begin the interview.

## Appendix C: Closing and Debrief

Thank you very much for participating in this study! Now that you're finished, I want to tell you a little bit more about the study. You're probably wondering when we're going to play that game I mentioned we would do after the questionnaire. We won't be playing the game, but every participant who participates in this study is entered into the raffle to win a \$25 iTunes gift card. It does not matter what your answer was – everyone who does this study, including you, has a chance to win. We will let your school know if you won!

Let me explain why you did the task of assigning the different games to you or another participant. The goal of the research study is to collect information on how children and adolescents of different ages think and feel about moral issues in their everyday life and why they matter to them. One of the things we are looking at is how children and teenagers decide what to do when they want something and want to be fair. That was the goal of having you assign one of the games to yourself and the other to another participant. We actually ask all participants to do this, but there is no game that is played.

I apologize for not telling you the full purpose of the study at the beginning. To protect the integrity (**be prepared to define this term to children**) of the research, I could not fully reveal the complete goal at the start of our session today. I hope you can see that if participants knew exactly what we were interested in, they might change their answers a little bit and we wanted the true behaviour in order to make sure the research conclusions are authentic.

Remember that there were no wrong or right, or good or bad answers. No one will judge what you said or did today. Again, all the information you gave me today will be kept anonymous, which means it will be impossible for people to know what you said or what you wrote.

You were very helpful today, thank you. Do you have any questions you would like to ask?

Ok great, here is your compensation (for PREP sample, "I will assign your PREP credit"), and hope you have a great day!

*Provide the participant with a copy of this to give to their parent/guardian.*

## Tables

Table 1

*Possible Decision-making Patterns*

Decision	Did participant draw a ticket?		
	Yes		No
	Outcome of the ticket draw		
	Fun game	OK game	
Fun game	*Lucky <i>n</i> = 35	Moral hypocrisy <i>n</i> = 13	Self-interest <i>n</i> = 93
OK game	Prosocial <i>n</i> = 4	Moral integrity <i>n</i> = 60	Prosocial <i>n</i> = 55

*Note.* \* = data excluded from main analyses (age group by decision-making pattern)

Table 2

*Fairness Judgment*

Response	Age Group				Total
	Grade 4/5	Grade 7/8	Grade 10/11	1 <sup>st</sup> /2 <sup>nd</sup> Year	
Yes	63 (96.9%) -0.1	68 (100%) 0.2	57 (100%) 0.1	67 (95.7%) -0.2	255 (98.1%)
No	2 (3.1%) 0.7	0 (0%) -1.1	0 (0%) -1.0	3 (4.3%) 1.4	5 (1.9%)
Total	65 (100%)	68 (100%)	57(100%)	70 (100%)	260 (100%)

*Note:* Column % in parentheses. Standardized residuals ( $z$ ) below column percent.

Table 3

*Fairness Strategy*

Response	Age Group				Total
	Grade 4/5	Grade 7/8	Grade 10/11	1 <sup>st</sup> /2 <sup>nd</sup> Year	
Raffle	47 (72.3%) -0.9	59 (86.8%) 0.4	44 (78.6%) -0.3	62 (89.9%) 0.7	212 (82.2)
Other random	16 (24.6%) 1.9	7 (10.3%) -1.1	11 (19.6%) 0.8	6 (8.7%) -1.4	40 (15.5%)
Communication	2 (3.1%) 0.4	2 (2.9%) 0.3	1 (1.8%) -0.3	1 (1.4%) -0.5	6 (2.3%)
Total	65 (100%)	68 (100%)	56 (100%)	69 (100%)	258 (100%)

*Note.* Column % in parentheses. Standardized residuals ( $z$ ) below column percent.

Table 4

*Use of Raffle in Decision-making*

Did the participant open a ticket envelope?	Age Group				Total
	Grades 4/5	Grades 7/8	Grades 10/11	1 <sup>st</sup> /2 <sup>nd</sup> Year	
Yes	11 (16.9%) -3.1	31 (45.6%) 0.4	31 (54.4%) 1.4	37 (52.9%) 1.4	110 (42.3%)
No	54 (83.1%) 2.7	37 (54.4%) -0.4	26 (45.6%) -1.2	33 (47.1%) -1.2	150 (57.7%)
Total	65 (100%)	68 (100%)	57 (100%)	70 (100%)	260 (100%)

*Note:* Column % in parentheses. Standardized residuals (z) below column percent.

Table 5

*Decision*

Decision	Age Group				Total
	Grade 4/5	Grade 7/8	Grade 10/11	1 <sup>st</sup> /2 <sup>nd</sup> Year	
FUN game	54 (83.1%) 3.2	39 (57.4%) 0.3	25 (43.9%) -1.1	23 (32.9%) -2.4	141 (54.2%)
OK game	11 (16.9%) -3.4	29 (42.6%) -0.4	32 (56.1%) 1.2	47 (67.1%) 2.6	119 (45.8%)
Total	65 (100%)	68 (100%)	57 (100%)	70 (100%)	260 (100%)

*Note.* Column % shown in parentheses. Standardized residuals ( $z$ ) below column percent.

Table 6

*Crosstabulation of Decision-making Pattern and Age Group*

Decision-making Pattern	Age Group				Total
	Grade 4/5	Grade 7/8	Grade 10/11	1 <sup>st</sup> /2 <sup>nd</sup> year	
Self-Interest	47 (75.8%) 4.2	21 (38.2%) -0.4	11 (23.4%) -1.9	14 (23.0%) -2.2	93 (41.3%)
Moral Hypocrisy	4 (6.5%) 0.2	5 (9.1%) 1.0	4 (8.5%) 0.8	0 (0%) -1.9	13 (5.8%)
Prosocial Behaviour	7 (11.3%) -2.3	15 (27.3%) 0.2	14 (29.8%) 0.5	23 (37.7%) 1.8	59 (26.2%)
Moral Integrity	4 (6.5%) -3.1	14 (25.5%) -0.2	18 (38.3%) 1.5	24 (39.3%) 1.9	60 (26.7)
Total	62 (100%)	55 (100%)	47 (100%)	61 (100%)	225 (100%)

*Note.* Column % in parentheses. Standardized residuals ( $z$ ) below column percent.

Table 7

*Decision of Participants Who Drew a Ticket*

Decision	Age Group				Total
	Grade 4/5	Grade 7/8	Grade 10/11	1 <sup>st</sup> /2 <sup>nd</sup> Year	
FUN game	7 (63.6%) 1.1	17 (54.8%) 1.1	13 (41.9%) 0.0	9 (24.3%) -1.6	46 (41.8%)
OK game	4 (36.4%) -0.9	14 (45.2%) -1.0	18 (58.1%) 0.0	28 (75.7%) 1.4	64 (58.2%)
Total	11 (100%)	31 (100%)	31 (100%)	37 (100%)	110 (100%)

*Note.* Column % shown in parentheses. Standardized residuals ( $z$ ) below column percent.

Table 8

*Crosstabulation of Decision-making Pattern and Age Group for Participants Who Drew an OK game ticket*

Decision-making Pattern	Age Group				Total
	Grade 4/5	Grade 7/8	Grade 10/11	1 <sup>st</sup> /2 <sup>nd</sup> year	
Moral Hypocrisy	4 (50%) 2.3	5 (26.3%) 0.9	4 (18.2%) 0.0	0 (0%) -2.1	13 (17.8%)
Moral Integrity	4 (50%) -1.0	14 (73.7%) -0.4	18 (81.8%) 0.0	24 (100%) 0.3	60 (82.2%)
Total	8 (100%)	19 (100%)	22 (100%)	24 (100%)	73 (100%)

*Note.* Column % in parentheses. Standardized residuals (z) below column percent.

Table 9

*Means and Standard Deviations for Level of Satisfaction by Decision-making Pattern*

Decision-making pattern	Mean (SD)	95% Confidence Interval	
		Lower Bound	Upper Bound
Self-interest	4.20 <sup>a</sup> (0.745)	4.05	4.36
Moral hypocrisy	4.00 <sup>a, b</sup> (0.816)	3.51	4.49
Prosocial	4.41 <sup>a</sup> (0.646)	4.24	4.58
Moral integrity	3.78 <sup>b</sup> (0.802)	3.55	4.02

*Note.* Means with different superscripts indicate significant group differences (post hoc Scheffe,  $p < .05$ )

Figures

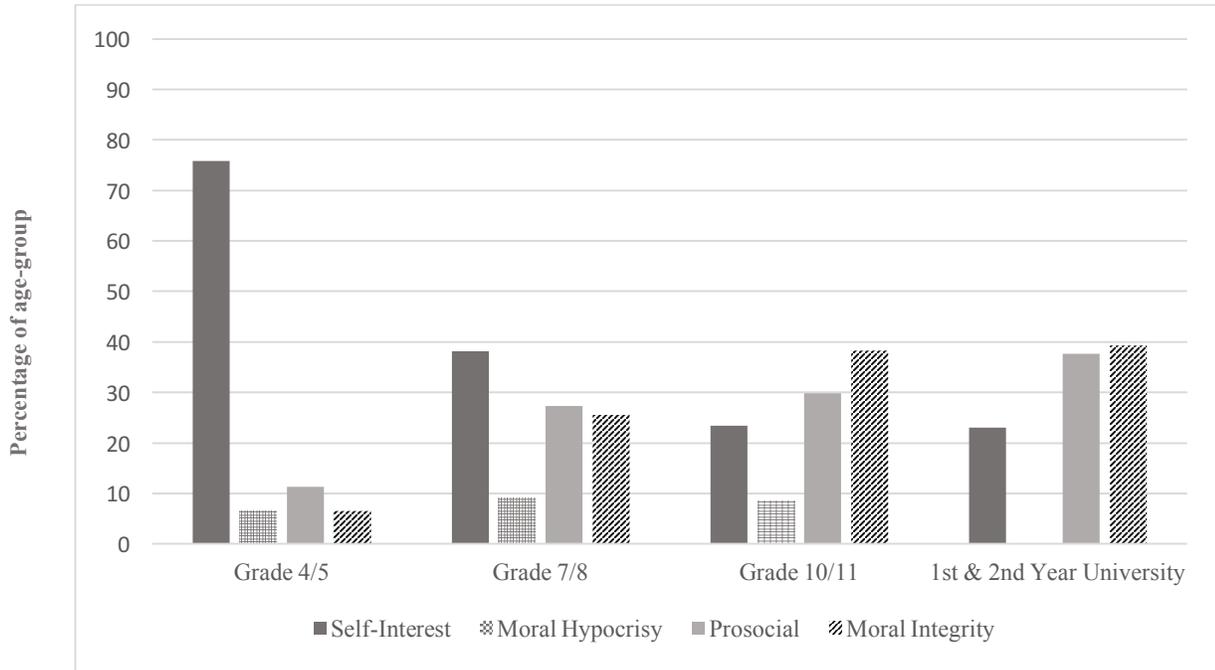


Figure 1: *Percentage of Age-group that Participated in each Decision-making Pattern*

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