



## Children's and adolescents' tolerance for divergent beliefs: Exploring the cognitive and affective dimensions of moral conviction in our youth

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Moral conviction predicts interpersonal tolerance in adults, but its role in children and adolescents is not as well understood. This study measured moral conviction for a variety of issues along two separate dimensions – cognitive and affective – in children and adolescents (4th–12th grade). Results showed that, like adults, when children and adolescents view an issue as moral, this is strongly predictive of both age groups' discomfort with divergent beliefs. But only for adolescents, and not children, did moral conviction play a role in that discomfort, as had previously been found with adults. The context in which the divergent beliefs were encountered also mattered, but more for adolescents than for children – both groups were most comfortable with divergent beliefs when they were encountered in distal relations.

Recent scholarship has highlighted the role that people's moral convictions (i.e., their strongly held moral beliefs) play in generating negative interpersonal responses towards divergent beliefs and practices. Indeed, moral conviction has been found to be predictive across a wide range of attitudinal and behavioural outcomes – including tolerance for different opinions, willingness to interact with, help, and share resources with dissimilar others, willingness to seek resolution of disagreement, and suspicion for legal and political processes that are perceived as supporting divergent beliefs/practices (Mullen & Skitka, 2006a, b; Skitka, 2010; Skitka, Bauman, & Sargis, 2005; Skitka & Mullen, 2002; Wright, Cullum, & Schwab, 2008).

Moral conviction involves (and, thus, can be measured along) two distinct dimensions (Wright *et al.*, 2008). The first dimension (hereafter referred to as 'belief structure') is the cognitive structure of people's moral beliefs, which has been shown to differ from the structure of other (non-moral) normative beliefs – for example, people view moral issues as more objectively grounded, universally applicable, and autonomous from external influences than non-moral issues (Goodwin & Darley, 2008, 2010; Kohlberg, 1986; Skitka, 2010; Turiel, 1983, 1998; Wright, Grandjean, & McWhite, 2011). The second

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dimension (hereafter referred to as 'belief intensity') is affective in nature – moral conviction is about more than just having moral beliefs, it is about those beliefs being 'strongly held' (Skitka, 2010; Wright *et al.*, 2008).

While affective strength has been found to influence our attitudes and behaviours across a range of domains (for reviews, see Krosnick & Petty, 1995; Petty & Krosnick, 1995; Visser, Bizer, & Krosnick, 2004), it plays an especially important role in the moral domain. Not only do people report holding many of their moral beliefs more strongly than their non-moral beliefs, but also this affective intensity *interacts* with their moral beliefs to generate a variety of attitudinal and behavioural outcomes specific to the moral domain (Skitka, 2010; Wright *et al.*, 2008). Though simply believing an issue to be moral is enough to generate increased intolerance for dissimilar beliefs/practices, people with strongly held moral beliefs (i.e., people with moral conviction) express even less attitudinal and behavioural tolerance towards divergent beliefs/practices than people with weakly held moral beliefs – whereas with non-moral beliefs, the strength with which those beliefs are held does not predict changes in people's tolerance for divergence (Skitka *et al.*, 2005; Wright *et al.*, 2008).

### **Moral conviction in children and adolescents**

Though the extant research on moral conviction has provided valuable insight into the mechanisms of tolerance in adults, there has, to date, been no research systematically exploring the two dimensions of moral conviction in children and adolescents. Both groups have been found to be less tolerant of divergent beliefs involving moral issues than other sorts of issues (Wainryb, 1993; Wainryb, Shaw, Langley, Cottam, & Lewis, 2004; also Wainryb & Ford, 1998). Similarly, both have been found to be more tolerant of beliefs that differ from their own when the source of the difference was non-moral 'informational' assumptions than when it was a difference in moral beliefs (Wainryb, Shaw, & Maianu, 1998; also Wainryb, Shaw, Laupa, & Smith, 2001). But to what degree is this intolerance for divergent moral beliefs and practices related to moral conviction? As of yet, it is unknown whether children and adolescents display moral conviction about certain issues and, if so, if the cognitive and affective dimensions of that moral conviction function together, as they do in adults, to generate their negative interpersonal responses to divergent moral beliefs.

There is some reason to think that children's and adolescents' moral beliefs share a similar cognitive structure with those of adults. Like adults, children and adolescents clearly distinguish between moral and non-moral issues (Killen & Nucci, 1995; Nucci, 1996, 1981; Nucci & Turiel, 2000; Smetana, 1981, 1983; Turiel, 1983, 1998; Wainryb *et al.*, 2001, 2004). Like adults, they treat moral transgressions as more serious, more severely punishable, more objective, and more universal than social transgressions – and unlike social transgressions, moral transgressions are generally viewed as wrong even in the absence of rules and/or in the presence of social sanction (Turiel, 1983, 1998; also Davidson, Turiel, & Black, 1983; Goodwin & Darley, 2008; Killen, Lee-Kim, McGlothlin, & Strangor, 2002; Killen, Margie, & Sinno, 2006; Nichols & Folds-Bennett, 2003; Nucci, 1981; Smetana, 1981, 1983; Smetana & Braeges, 1990; Stoddart & Turiel, 1985). These findings have been found to hold across a range of social and cultural contexts (Ardila-Rey, Killen, & Brenick, 2009; Killen, Ardila-Rey, Barakkatz, & Wang, 2000; Nucci, Saxe, & Turiel, 2000; Nucci, Turiel, & Encarnacion-Gawrych, 1983; Song, Smetana, & Kim, 1987; Turiel, Nucci, & Smetana, 1988).

Much less is known, however, about the affective dimension in children and adolescents. To date, only minimal research on attitude strength in pre-adult (child/adolescent) populations has been conducted (see, for example, Cvencek, Greenwald, & Meltzoff, 2011; Gallagher & Cairns, 2011; Sears & Weber, 1988). As such, the 'downstream' effects of strongly (vs. weakly) held beliefs in children and adolescents - especially strongly held moral beliefs - are unclear.

This study is the first to explicitly investigate the relationship between moral conviction, measured in terms of its cognitive and affective dimensions (Wright *et al.*, 2008), and tolerance in child and adolescent populations. Both children and adolescents were targeted because of the important cognitive and moral development that occurs during adolescence - development that leads to a clash in predictions about their moral conviction. Adolescence is an important period for epistemic development, one during which the developmental trend is typically from 'absolutism' (Perry, 1970) or 'naïve realism' (Chandler, 1987) towards 'relativism' (Chandler, Boyles, & Ball, 1990), an epistemic stance that begins to appreciate the fundamentally constructive (and interpretive) nature of our beliefs. Given this, we should expect adolescents to generally be more open to (and, thus, comfortable with) divergent beliefs than children (Enright & Lapsley, 1981; Enright, Lapsley, Franklin, & Steuck, 1984; Wainryb *et al.*, 1998, 2001, 2004) and to express weaker affective intensity (moral conviction) for their moral beliefs than children.

Yet, at the same time, adolescence is a time of moral development - in particular, the development of the 'moral self' (Blasi, 1994, 2004; Damon, 1997, 2000), which serves to integrate moral judgements and motivation and lead more consistently to moral action. Adolescents begin to identify with moral attributes (e.g., honesty, bravery) and develop moral commitments that carry motivational weight (Maclean, Walker, & Matsuba, 2004; Matsuba & Walker, 2004, 2005). This suggests a contrary prediction, namely, that adolescents will express greater affective intensity (moral conviction) for at least *some* of their moral beliefs than children, insofar as they have come to identify more strongly with them. And this increased intensity would be related to decreased levels of comfort with divergent beliefs. Thus, the goal of this study was to conduct a preliminary investigation into the relationship between moral conviction and children's and adolescents' interpersonal reactions to divergent beliefs in an effort to adjudicate between these two competing predictions.

Measuring the cognitive and affective dimensions of moral conviction in children and adolescents required allowing them to self-identify which of their beliefs involved moral issues and which did not, along with the intensity with which they held those beliefs. This methodology therefore diverged from much of the extant literature on children's and adolescents' (and adults') moral judgements, which has generally assumed the moral/non-moral classification of the issues being considered *a priori*. This is an important change because Wright *et al.* (2008) found that adults disagreed strongly about which of their beliefs involved moral issues: of the 50 plus issues they were asked to consider, none were unanimously classified as moral. Beyond this being in itself an interesting finding, allowing self-identification of moral issues also therefore removes significant 'noise' from the variance, helping to reveal the true predictive power of the cognitive dimension of moral conviction. Though children and adolescents may be more unified in their identification of moral issues than adults (perhaps not yet having had the life experiences that often result in divergence), allowing them to self-identify moral versus non-moral issues nonetheless helps to further clarify the parameters of their

moral beliefs, as well as to better isolate the power those beliefs have on interpersonal tolerance.

The effects of moral conviction have also been found to vary across contexts in the adult population, having a more powerful negative influence on people's responses to divergent beliefs when they are encountered in close proximity than in more distal contexts. For example, having strongly held moral beliefs predicted significantly more intolerant responses towards divergent moral beliefs held by people's dates/roommates than towards those held by someone that they worked or took classes with. In addition, people's moral conviction negatively predicted willingness to date, work with, or help people (when that help required direct contact) who held divergent moral beliefs more strongly than it did their willingness to live in the same town or engage in forms of interaction that did not require direct contact (Skitka *et al.*, 2005; Wright *et al.*, 2008).

There is some research suggesting an effect of context on children's and adolescents' moral judgements. For example, children and adolescents have been found to be more accepting of divergent moral practices when those practices occurred in cultures other than their own (Shaw & Wainryb, 1999; Wainryb, 1993; Wainryb *et al.*, 1998; see also Bersoff & Miller, 1993). However, the contextual parameter of 'same' versus 'different' cultures is fairly broad and little is known about the significance of encountering divergent beliefs in different contexts within one's own culture, especially contexts commonly encountered in daily life. Therefore, this study also examined the effect of context in children's and adolescents' interpersonal responses to divergent moral beliefs. Given children's more global tendency towards intolerance (Enright & Lapsley, 1981; Enright *et al.*, 1984; Wainryb, 1993; Wainryb *et al.*, 1998, 2001), it was anticipated that context would matter *more* for adolescents than children.

## Methods

### Participants

Participants were 92 predominantly Caucasian children and adolescents from the public elementary, middle, high schools in southeastern Wyoming. The youngest age group chosen for this study was 4th grade (a pilot of the survey procedure revealed them to be the youngest group capable of completing the survey). In addition, 6th, 8th, and 12th grade were chosen because they represent transitional educational points - 6th being the final year of elementary school (pre-adolescent), 8th the final year of middle school (early adolescence), and 12th the final year of high school (late adolescence). There were 25 (13 male) 4th graders ( $M = 9.6$  years,  $SD = .35$ ), 20 (7 male) 6th graders ( $M = 11.3$ ,  $SD = .32$ ), 21 (13 male) 8th graders ( $M = 13.7$ ,  $SD = .32$ ), and 26 (14 male) 12th graders ( $M = 17.6$ ,  $SD = .37$ ). Data from eight of these participants (two 4th, four 6th, and two 12th graders) were discarded due to incomplete participation.

### Materials and procedure

The goal was to create surveys that would allow us to employ the two-dimensional approach to measuring moral conviction (Wright *et al.*, 2008). This approach was chosen over the unidimensional approach (Skitka *et al.*, 2005; Skitka, 2010) because it not only allowed us to investigate the cognitive and affective dimensions of moral conviction separately, but it was also deemed the most appropriate technique to use with children, who might have difficulty comprehending the questions typically employed in the unidimensional approach (e.g., 'To what extent is your attitude about X a reflection

**Table 1.** Percent of child and adolescent personal, social, and moral issue classification

Shared issues	Adolescent			Child			Adolescent Only	Adolescent		
	Pers	Soc	Mor	Pers	Soc	Mor		Pers	Soc	Mor
Beat up kids	33.3	16.7	50.0	4.7	18.6	76.7	Exercise	83.3	10.4	6.3
Vegetarianism	77.1	10.4	12.5	88.6	4.5	6.9	Use rec. drugs	31.3	16.7	52.0
Recycle	45.8	31.3	22.9	45.5	18.2	36.3	Cheat on exams	27.1	14.6	58.3
Hurt animals for fun	14.6	10.4	75.0	0.0	4.5	95.5	Heavy metal music	91.7	6.3	2.0
Eat with hands	77.1	14.6	8.3	47.7	27.3	25.0	Protect animals	25.0	31.3	42.7
Call teachers by first names	53.2	36.2	10.6	38.6	36.4	25.0	Go to school	27.1	33.3	39.6
Keep clean bedrooms	81.3	6.2	12.5	60.5	25.5	14.0	Love your children	12.5	12.5	75.0
Play sports	81.2	4.2	14.6	72.1	11.6	16.3	Believe in god	91.7	0.0	8.3
Wear shoes to school	41.7	25.0	33.3	23.3	37.2	39.5	Make money	89.6	2.1	8.3
Celebrate birthdays	87.4	6.3	6.3	90.9	4.5	4.6	Eat pets	20.8	16.7	62.5
Nice to unpopular kids	31.9	10.6	57.5	15.9	18.2	65.9				
Eat candy	83.3	10.4	6.3	79.5	18.2	2.3				
Stealing	2.0	18.8	79.2	0.0	22.7	77.3				
Doing homework	70.8	12.5	16.7	31.8	34.1	34.1				
Play violent video games	67.4	15.2	17.4	52.3	29.5	18.2				
Boys treated better than girls	16.7	4.1	79.2	20.5	6.8	72.7				
Reduce pollution	14.6	18.8	66.6	2.3	18.2	79.5				
Shows with fighting	70.8	16.7	12.5	56.8	29.5	13.7				
Punishment by parents	29.2	8.3	62.5	52.3	13.6	34.1				
Smoking cigs	43.8	16.7	39.5	29.5	13.6	56.9				
Sharing with others	58.3	6.3	35.4	40.9	13.6	45.5				
Use animals in experiments	14.6	39.6	45.8	6.8	36.4	56.8				
Be kind to strangers	56.3	2.1	41.6	31.8	11.4	56.8				
Use swear words	75.0	16.7	8.3	22.7	20.5	56.8				
Wash bodies	51.1	10.6	38.3	52.3	20.5	27.2				
Go to war	27.1	27.1	45.8	22.7	13.6	63.7				
Lying	39.6	8.3	52.1	22.7	6.8	70.5				
Have tattoos	83.3	12.5	4.2	85.4	9.8	4.8				
Own guns/weapons	50.0	37.5	12.5	39.0	34.1	26.9				
Passing gas in public	66.7	8.3	25.0	48.8	24.4	26.8				

of your core moral beliefs and convictions?'; Skitka, 2010). Though the latter may have worked with adolescents, it was important to keep measurement techniques as consistent as possible across both age groups.

#### 4th–6th grade surveys

The survey created for the child participants included questions about 30 different issues that were chosen as a means to explore their self-identification of moral and non-moral issues. Most of the issues came from previous research in moral development. Others were chosen to maintain continuity with previous adult research (see Table 1; Wright, *et al.*, 2008).

For each question (one per issue), participants read an issue statement (e.g., 'Kids should not hit other kids' or 'People should recycle bottles and cans') and then were asked to report the direction and strength of their attitude about it on a seven-point

scale ('strongly agree' to 'strongly disagree'). Previous research has confirmed that this measure converts reliably into a measure of *belief intensity*, both generally (Krosnick, Boninger, Chuang, Berent, & Carnot, 1993) and in moral conviction specifically (Wright *et al.*, 2008). Belief intensity has been commonly employed by attitudinal researchers to measure the affective strength of people's attitudes (see Visser *et al.*, 2004).

Participants were then asked to consider the opposite of the issue statement (e.g., 'What if kids did hit other kids - which do you think would be true?' or 'What if people did not recycle bottles and cans - which do you think would be true?'). In response, they were asked to choose from three response options, which were designed to be consistent with social-cognitive domain theory (Turiel, 1983; see Killen & Smetana, 2006 for in-depth review). Specifically, the participants could choose Option 1: It would be okay, because it is each person's choice to do it or not (categorizing the issue as a non-moral *personal* issue); Option 2: It would be something they should or should not do only if there was a rule about it (categorizing it as a non-moral *social/conventional* issue); Option 3: It would be something they should or should not do even if there was not a rule about it (categorizing it as a *moral* issue). Participants' responses represented the cognitive dimension of moral conviction (*belief structure*) for each issue, identifying their self-identified moral issues from their non-moral issues.

Finally, participants were asked to consider someone who believed the opposite of the issue statement (e.g., 'Someone could believe that it is okay for kids to hit other kids' or 'Someone could believe that it is okay for people to not recycle bottles and cans'). They were then asked how acceptable it would be for their *teachers*, their *parents*, their *best friends*, and *other children* to believe this (contexts chosen for their relative prominence in participants' daily social interactions). Responses for each context were reported on a seven-point scale ('not acceptable' to 'very acceptable'). These responses indexed both children's interpersonal acceptance of divergent beliefs and the context sensitivity of that acceptance. The 30 questions were presented to participants in a randomized order.

It is important to note that in previous research (Wright *et al.*, 2008) - and with the adolescents in this study - participants were asked to consider someone who believed differently than they did about each issue in order to ensure that their interpersonal responses were aimed at divergent beliefs. As discussed above, the child survey was structured somewhat differently: instead of asking participants to consider someone that believed differently than they did, they were asked to consider someone who believed the opposite of the issue statement they had been given. This was because the former involved an abstract exercise that could have been too cognitively demanding for participants of this age. The more concrete approach was therefore deemed most appropriate, especially since the participants agreed with most of the issue statements presented. Nonetheless, in order to ensure that children's interpersonal responses were aimed at divergent beliefs, the results for the child surveys were analysed across only those issue statements for which participants had expressed agreement.

### *8th-12th grade surveys*

The survey created for the adolescent participants was similar to the 4th-6th grade survey, though it was adapted to be more age-appropriate (e.g., 'teenagers should keep their rooms clean'). All 30 issues from the 4th-6th grade survey were included plus an additional 10 issues chosen to increase continuity with previous adult research (see Table 1; Wright *et al.*, 2008). Like the children, the adolescents rated the direction

and strength of their attitudes for each issue statement on a seven-point scale ('strongly agree' to 'strongly disagree'). They were then asked about the opposite of the issue statement and given the same three response options to indicate their categorization of the issues. Finally, adolescents were asked how acceptable it would be for their *teachers*, their *parents*, their *best friends*, and *other teenagers* to believe differently than they did about each issue on a seven-point scale ('not acceptable' to 'very acceptable').

### *Procedure*

Advertisements for the study were sent to elementary, middle, and high schools in two different counties. Responses from around 150 interested families were received (92 of which resulted in successful interviews). Parental permission was required for all interviews, to be received before interview scheduling could occur. Interview times for completion of the surveys were arranged either after school at the university lab or at the researcher's or participants' homes. Parents, if present during the time of the interview, were invited to wait outside of the immediate interview area (in an adjacent room, if at the lab, or a separate room in the house if at the researcher's or the participants' home). The surveys took 30–45 minutes to complete. Participants were guided through the first one or two questions and then were instructed to complete the rest on their own, unless they needed help. Only a few 4th graders requested help while filling out the survey.

## **Results**

### ***Preliminary comments***

#### *Age group*

The main concern of this study was investigating the cognitive and affective dimensions of moral conviction in two groups: children versus adolescents. Because both the child and the adolescent surveys sampled from two different grade levels (4th/6th and 8th/12th), mixed-factor ANOVAS were conducted for both age groups to determine whether there were main or interactive effects of grade (i.e., either 4th vs. 6th or 8th vs. 12th grade) on acceptance for divergent beliefs. None were found.

#### *Belief structure*

Participants utilized all three categories (personal, social, moral) for classification, yet none of the issues considered were unanimously classified into one domain. Thus, like adults, neither children nor adolescents were unified with respect to their views on what fits into the moral domain (see Table 1 for an issue categorization breakdown). Nonetheless, there were several issues that were frequently classified as moral – and they were the sorts of issues one would expect (e.g., beating up other children/teenagers, stealing, lying, etc.). A number of issues were also frequently classified as personal (e.g., having clean bedrooms, deciding to play sports, celebrating birthdays, etc.) and, though fewer, social (e.g., calling teachers by their first names, using animals in medical experiments, etc.). Overall, children identified more issues as moral ( $M_s =$  children: 12.1; adolescents: 10.0,  $SE_s = .68-.82$ ) and social ( $M_s =$  children: 6.6; adolescents: 4.8,  $SE_s = .53$ ); than did adolescents adolescents identified more issues as personal than

did children ( $M_s$  = children: 11.3; adolescents: 15.6,  $SE_s$  = .73-.86),  $t_s(82) = 1.9-3.3$ ,  $p < .05$ .

Because participants self-categorized the issues, mean levels of acceptance of divergent beliefs categorized as involving personal, social, and moral issues were calculated separately for each participant: that is, each participant had a mean level of acceptance expressed for divergent personal, social, and moral beliefs based on their own individual issue categorization. All analyses were conducted on these means.

### *Belief intensity*

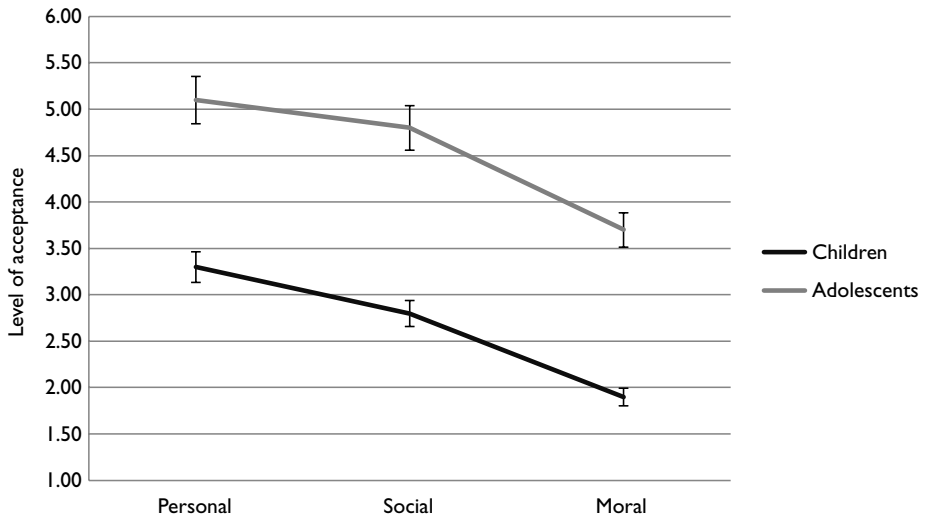
Extremity scores were computed for each of the reported attitudes by folding attitude scores at their midpoint (Krosnick *et al.*, 1993; Wright *et al.*, 2008) and then these scores were averaged for both age groups across the issues participants had categorized as moral, creating a moral belief intensity index. Both children and adolescents showed a comparable range of belief intensity for their self-identified moral beliefs (between 2.0 and 4.0,  $M_s$  for both = 3.5,  $SD_s$  = .46 children, .51 adolescents). In order to enter this variable into mixed-factor ANOVAs, the mean value of the intensity index was used to split participants into two groups - those with *weakly-held* ( $n = 22$  children, 21 adolescents) and those with *strongly-held* ( $n = 20$  children, 24 adolescents) moral beliefs. For comparison, belief intensity indices for the personal and social domains were also created.

### **Tolerance for divergent beliefs in children and adolescents**

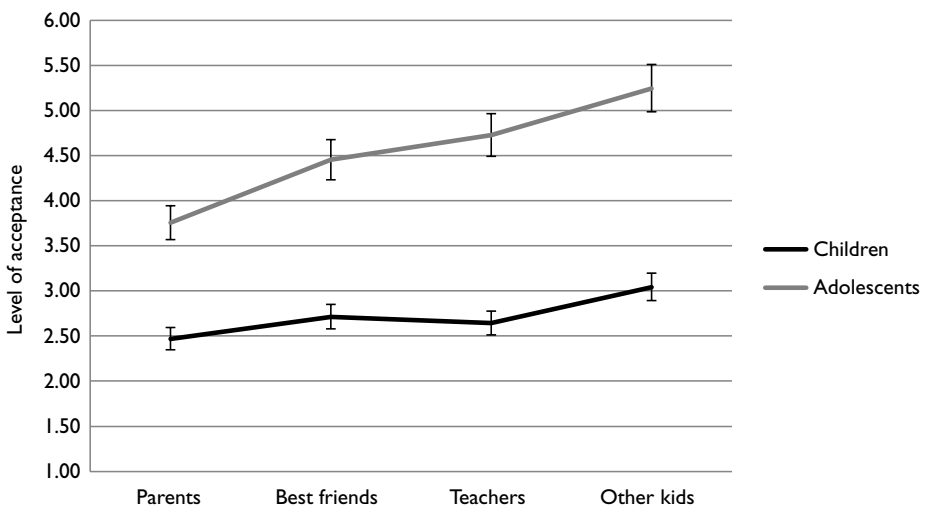
The first step was to investigate the relationship between participants' belief structure and their interpersonal tolerance for divergent beliefs encountered across several contexts. As has been found in previous research, did children and adolescents express lower levels of acceptance of divergent moral beliefs than for other sorts of divergent beliefs? To answer this, a mixed-factor ANOVA was conducted with *belief structure* (personal/social/moral) and *context* (parents/best friends/teachers/other peers) serving as within-participants factors and *age group* (child/adolescent) serving as the between-participants factor. Significant main effects for acceptance of divergent beliefs were found for *belief structure*,  $F(2,162) = 77.1$ ,  $p < .001$ ,  $\eta^2 = .49$ , and *age group*,  $F(1,81) = 69.4$ ,  $p < .001$ ,  $\eta^2 = .46$ . Paired sample *t*-tests (adjusted to  $\alpha = .01$  for multiple tests) revealed that the participating youths were more accepting of divergent personal beliefs ( $M = 4.2$ ,  $SE = .15$ ) than divergent social beliefs ( $M = 3.9$ ,  $SE = .18$ ),  $t(82) = 3.2$ ,  $p = .002$ , which were in turn more acceptable than divergent moral beliefs ( $M = 2.9$ ,  $SE = .16$ ),  $t(82) = 8.4$ ,  $p < .001$ . Children were also significantly less accepting of divergent beliefs ( $M = 2.6$ ,  $SE = .16$ ) than adolescents ( $M = 4.6$ ,  $SE = .15$ ) across all three domains (Figure 1).

There was also a main effect for *context*,  $F(3,243) = 44.2$ ,  $p < .001$ ,  $\eta^2 = .35$ , which was qualified by a significant two-way interaction between *age group* and *context*,  $F(3,243) = 9.1$ ,  $p < .001$ ,  $\eta^2 = .10$ . Children's acceptance of divergent beliefs was significantly less sensitive to the context in which they were encountered than their adolescent counterparts. Indeed, children only made a distinction between those close to them (parents, best friends, teachers) and those more distant (other children),  $t_s(40) = 3.5-3.9$ ,  $ps = .001$ , the difference between parents, best friends, and teachers being non-significant,  $t_s(40) = .8-1.9$ , *ns*. Adolescents, on the other hand, made a distinction between all four contexts,  $t_s(45) = 4.4-7.9$ ,  $ps < .001$ , though the difference





**Figure 1.** Level of acceptance for divergent beliefs across domains: Children versus adolescents.

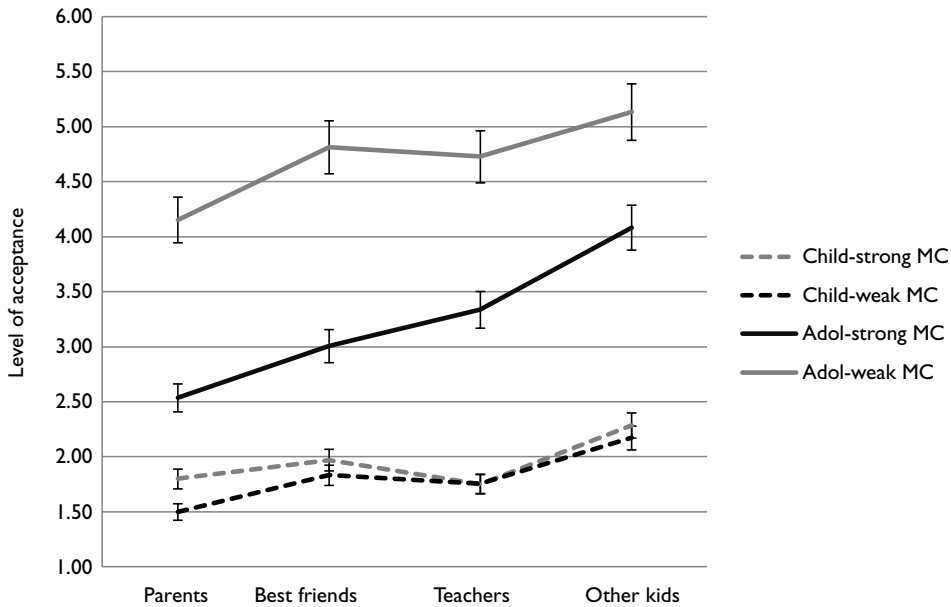


**Figure 2.** Level of acceptance for divergent beliefs across contexts: Children versus adolescents.

in acceptance of divergent beliefs between their teachers and their best friends was marginal,  $t(45) = 2.1, p = .04$  (Figure 2).

### ***The role of moral conviction***

In order to explore the specific relationship between moral conviction and acceptance of divergent beliefs across contexts in both children and adolescents, a mixed-factor ANOVA was conducted for participants' moral beliefs only. *Context* (parents/best friends/teachers/other peers) served as the within-participants factor, with *belief intensity* (low/high) and *age group* (child/adolescent) served as between-participants factors. Significant main effects were found for *context*,  $F(3,240) = 27.5, p < .001$ ,



**Figure 3.** Level of acceptance for divergent beliefs across contexts: Moral conviction (belief intensity)  $\times$  age group interaction.

$\eta^2 = .26$ , *age group*,  $F(1,80) = 69.6$ ,  $p < .001$ ,  $\eta^2 = .47$ , and *belief intensity*,  $F(1,80) = 7.0$ ,  $p = .01$ ,  $\eta^2 = .09$ .

The participants with strongly held beliefs were less accepting of divergence ( $M = 2.6$ ,  $SE = .15$ ) than those with weakly held beliefs ( $M = 3.3$ ,  $SE = .19$ ). This main effect was qualified by a two-way interaction between the *intensity* and *age group*,  $F(1,80) = 10.2$ ,  $p = .002$ ,  $\eta^2 = .11$ . Adolescents with strongly held beliefs expressed lower levels of acceptance for divergent moral beliefs than participants with weakly held beliefs (low intensity:  $M = 5.2$ ,  $SE = .25$ , high intensity:  $M = 4.2$ ,  $SE = .19$ ;  $t(43) = 2.7$ ,  $p = .009$ ). Children's acceptance of divergent beliefs, however, did not differ significantly on the basis of belief intensity,  $t(37) = .01$ , *ns* (Figure 3).

Of course, it may be that the full effect of belief intensity was masked when it was converted into a dichotomous variable. To investigate this possibility, moral belief intensity was examined as a continuous variable through correlational analyses. These revealed the same relationships with tolerance: for children, moral belief intensity was not correlated with their acceptance of divergent moral beliefs,  $r(39) = -.03$ , *ns*, but for adolescents it was,  $r(45) = -.41$ ,  $p = .005$  - as their belief intensity increased, their acceptance of divergent beliefs decreased.

#### *Non-moral conviction?*

In order to investigate whether moral belief intensity had a unique relationship with interpersonal responses to divergent beliefs, mixed-factor ANOVAs were conducted for acceptance of divergent personal and social beliefs with *context* (parent/best friend/teacher/other peer) serving as the within-participants factor and *belief intensity* (low/high) and *age group* (child/adolescent) serving as between-participants factors. Neither children's nor adolescents' comfort for divergent personal and social beliefs was

predicted by the intensity with which they held those beliefs, either as a main effect or in interaction with age group: personal belief intensity,  $F(1,79) = 2.3$ , *ns*, interaction with age group  $F(1,79) = 2.7$ , *ns*; social belief intensity,  $F(1,80) = .79$ , *ns*, interaction with age group,  $F(1,80) = .17$ , *ns*. The same pattern emerged when personal and social belief intensity were examined as continuous variables: personal belief intensity was not correlated with acceptance of divergent personal beliefs,  $r(89) = .17$ , *ns*, nor was social belief intensity correlated with acceptance of divergent social beliefs,  $r(89) = -.11$ , *ns*.

## Discussion

The purpose of this study was to provide a first step in investigating the relationship between moral conviction and children's and adolescents' interpersonal responses to divergent beliefs when encountered in different contexts. Moral conviction was measured along two separate dimensions – *belief structure* and *belief intensity*. The results suggest that, while both children and adolescents have moral beliefs and hold some of them more strongly than others, moral conviction only becomes linked to interpersonal tolerance for divergent beliefs in adolescence.

### Classification of beliefs

Measuring *belief structure* required asking participants to self-identify moral versus non-moral beliefs, providing a useful glimpse into the sorts of issues children and adolescent self-identify as personal, social, and moral, as well as the degree to which they disagree, both within and between age groups. Though none of the issues were unanimously classified into a particular domain, certain important themes emerged. For example, the issues frequently classified as moral (e.g., beating up other children/teenagers, hurting animals for fun, stealing, lying, etc.) were completely in line with the sorts of paradigmatic moral issues discussed in the literature. At the heart of these issues are considerations indicative of the moral domain: considerations of *harm to self and other*, of *compassion*, *desert*, and *fairness* (Damon, 1977; Kohlberg, 1969, 1986; Piaget, 1932; Smetana, 1981; Turiel, 1983). The same was true for the personal and social domains. Most of the issues that were frequently classified as personal (e.g., keeping clean bedrooms, deciding to play sports, celebrating birthdays, etc.) were the sorts of issues viewed as characteristic of the personal domain (Nucci, 1981, 1996; Turiel, 1983). The relatively few issues that were frequently classified as social (e.g., calling teachers by their first names, using animals in medical experiments, etc.) likewise accorded with the sorts of issues typically discussed in the literature.

Overall, children classified more issues as moral than did adolescents, whereas adolescents classified more issues as personal than did children, a finding consistent with previous research documenting the tendency for children to 'moralize' issues (e.g., Gabennesch, 1990; Komatsu & Galotti, 1986; Maccoby, 1983; Piaget, 1932), while adolescents 'personalize' them (e.g., Smetana, 1989; Smetana & Asquith, 1994). Of more surprise was children's more frequent classification of issues into the social domain. A closer look at the specific issues for which they did so (e.g., eating mashed potatoes with your hands, cleaning one's room, doing one's homework, and burping or 'passing gas' in public), suggests that this could be a reflection of adolescents' push for personal autonomy, especially over certain areas of their lives (Piaget, 1932; Smetana, 1989; Smetana & Asquith, 1994) – while they are the sorts of issues children are likely to view

as being under parent/teacher control, adolescents will have begun to view them as issues they should be allowed to make decisions about for themselves.

Of course, equally interesting was the fact that none of the issues were unanimously classified into only one category – indeed many were classified into all three. Such disagreement runs contrary to those views (e.g., Haidt, 2001; Hauser, 2006) that posit our moral beliefs as being largely innate, automatically triggered, and intuitively/emotively driven. If such were the case, then arguably we would expect to find a stronger consensus, especially with respect to any prototypical harm/fairness/reciprocity issues. Yet, this is not what was found here or elsewhere (Wright *et al.*, 2008). This highlights a need for further research.

Indeed, there are many questions with regard to category classification that require exploration: What is it that children, adolescents, and adults are paying attention to when they classify an issue into one category or another? And why is it that there is such strong disagreement about category classification, even for issues commonly thought to fall into a particular category (e.g., beating up another person) – is it that certain features, such as harm, are more salient for some than others? As disagreement about category classification of an issue can lead to conflict, both within families (Smetana, 1989; Smetana & Asquith, 1994) and within and between cultures (Nucci & Turiel, 2000; Wainryb, 1993), it is important to continue to explore the factors that lead to this disagreement.

### **Acceptance of divergent beliefs: The role of context**

Whatever the reasons participants had for classifying something as moral, doing so was enough to generate less acceptance for divergent beliefs in both age groups, though (consistent with the epistemic development occurring at this age – Chandler, 1987; Chandler *et al.*, 1990) adolescents proved to be *more* accepting of divergent moral beliefs than were children. And while both children and adolescents displayed sensitivity to the context in which divergent beliefs were encountered, adolescents did significantly more so.

Specifically, children distinguished between only two contexts – those in close proximity to the child (parents, best friends, teachers) versus those more distal (other children). And even here, the difference in tolerance between the two contexts was fairly minimal. Perhaps this is because children are not particularly sensitive to the source of divergence – they are globally intolerant towards divergence, regardless of where it comes from (Enright & Lapsley, 1981; Enright *et al.*, 1984; Wainryb *et al.*, 1998, 2001, 2004). Or perhaps because parents, best friends, and teachers are all viewed by children as legitimate sources of epistemic authority (Raviv, Bar-Tal, Raviv, & Houminer, 1990; Raviv, Bar-Tal, Raviv, & Peleg, 1990), this makes divergent beliefs from any of these sources problematic and undesirable.

Adolescents, on the other hand, made clear distinctions between every context, with the difference in tolerance between divergent beliefs in their parents (on the one end) and other teenagers (on the other) being much more pronounced. The fact that adolescents were less comfortable with divergent beliefs in their parents than in their best friends was somewhat surprising, especially in light of research suggesting that when it comes to influence on behaviour, parents too often find themselves taking a back seat to their teenager's friends (Way & Hamm, 2005), alongside research suggesting that adolescents choose their friends on the basis of similar attitudes (Hirschi, 1969; Wills & Cleary, 1999). This could simply be a reflection of the fact that disagreement

with one's parents has more serious implications for potential restrictions in freedom than disagreement with friends (something that becomes increasingly important as adolescents begin to negotiate with their parents for areas of personal control – Smetana, 1989; Smetana & Asquith, 1994). Or perhaps it is because adolescents continue to see their parents as important sources of epistemic authority, particularly when it comes to the issue of values (while friends are not viewed as sources of epistemic authority in this area; Bar-Tal, Raviv, Raviv, & Brosh, 1991).

More generally, it is interesting to note that while our concept of intolerance is most strongly associated with strangers and dissimilar others, both the children and adolescents in this study found divergent beliefs in those closest to them the hardest to accept. Especially for the adolescents, divergent beliefs were *more*, not less, acceptable in 'unknown others'. This could have been because the context of other children/teenagers was more impersonal and abstract than the contexts of parents, friends, and teachers. But, nonetheless, these findings are consistent with previous research suggesting that children and adolescents will exclude close peers who challenge relevant in-group norms (Abrams, Rutland, & Cameron, 2003; Abrams, Rutland, Cameron, & Ferrell, 2007). They also nicely mirror adults' increased attitudinal and behavioural intolerance for divergent beliefs when they are encountered in intimate (vs. non-intimate) contexts (Skitka *et al.*, 2005; Wright *et al.*, 2008).

### **Acceptance of divergent beliefs: The role of belief intensity**

With respect to the role of moral conviction – children's and adolescents' strongly held moral beliefs – the results were mixed. Even though both children and adolescents showed a comparable range of belief intensity for their self-identified moral beliefs and both groups also showed a similar distribution of weakly versus strongly held moral beliefs, moral conviction was only predictive of adolescents', and not of children's, acceptance of divergent moral beliefs. Children displayed equal discomfort for divergent moral beliefs, regardless of the strength with which they were held. Adolescents, on the other hand, mirrored the previous research with adults (Skitka *et al.*, 2005; Wright *et al.*, 2008) – those with strongly held moral beliefs expressed higher levels of discomfort for divergent moral beliefs than those with weakly held moral beliefs.

Though only speculative at this point, one potential explanation for these results could actually unite the divergent hypotheses discussed at the outset. While neither of these hypotheses – that adolescents would display weaker or stronger belief intensity than children – found support in the data, both point to a developmental story that would explain why even though both age groups possessed strongly held moral beliefs, only those possessed by the adolescents predicted increased intolerance.

Specifically, one could argue that both developmental trajectories – adolescents' epistemic movement towards relativism, on the one hand, and their development of a moral self which serves to integrate their judgements and actions, resulting in increased capacity for moral commitment, on the other – explain how adolescents responded in this study. Overall, the adolescents expressed much more comfort for divergent beliefs than the children, evidence that even their moral beliefs were becoming 'dislodged' from the absolutism of childhood. However, at the same time as the adolescent moral self develops so does the tendency to place greater importance on *certain* moral issues – namely, those most closely linked to adolescents' developing moral identities. This creates an important role for moral conviction, impacting tolerance for divergence only for those moral beliefs with which adolescents' strongly identify.

In other words, belief intensity may serve as a reliable introspective indicator of a given moral issue's 'weight' within the adolescents' developing identity. As issues take on more moral weight, divergence becomes more potentially undermining and threatening – and, therefore, less acceptable. Thus, divergence with respect to their strongly held moral beliefs becomes unacceptable, not only because it involves moral issues (issues whose wrongness is objectively grounded and non-negotiable), but because it involves moral issues that matter to them.

This would also explain why the relationship was not found in the children. While the analyses of the children's data certainly could have been constrained by a floor effect – consistent with previous research (e.g., Wainryb *et al.* 2001, 2004), children's acceptance levels were dramatically lower than adolescents, especially for divergent moral beliefs – it would make sense that moral belief intensity failed to play the same attitudinal role in children because their moral beliefs have yet to become incorporated into a 'moral self' (Blasi, 1994, 2004). Unfortunately, since research on the development of moral conviction is non-existent and research on the development of attitudinal intensity more generally has been largely restricted to the study of young to old adult populations (Visser & Krosnick, 1998), little is known about its presence and function in younger populations. Additional research will be needed to further clarify the issue.

It is significant that belief intensity only played this role for adolescents' moral beliefs – not their personal and social beliefs. Alongside the same finding with adults (Wright *et al.*, 2008) this supports the view that belief intensity interacts differently with moral beliefs than non-moral beliefs – and that, as has been argued (Skitka, 2010), moral conviction is a construct not reducible to other attitudinal constructs.

### **Concluding remarks**

The results of this study mirror those found with adults in many important respects. For one, they suggest that children and adolescents share with adults a common understanding of the different domains (Wright *et al.*, 2011). At the same time, they also reveal noticeable within and between group differences in self-identification of personal, social, and moral issues – something that warrants further exploration.

Further, they suggest that the cognitive structure of our beliefs is a powerful predictor of interpersonal responses to divergence relatively early in life. Children and adolescents, along with adults, all view *some* issues (though they may disagree on which ones) as having a source of 'wrongness' that is non-negotiable, independent of authority, and the existence of rules. And once an issue has been categorized as *moral*, the acceptability of divergent beliefs about it drops significantly – even (and especially) when the person holding the divergent belief is someone close to us and/or someone we recognize as a legitimate source of epistemic authority.

Of course, there were important differences as well. For one, adolescents expressed a much higher level of comfort with divergent non-moral and moral beliefs than either the children from this study or adults from previous studies (Wright *et al.*, 2008) – a fact that seems entirely consistent with the decrease in absolutism/realism, and increase in skeptical relativism, that emerges in adolescence, later settling back into a more objectively oriented ('rationalist') stance in adulthood (Chandler, Boyes, & Ball, 1990; Piaget, 1932).

Finally, this study also revealed that while for adolescents moral conviction functions as it does with adults, being related to an increased level of discomfort for divergent

moral (but not non-moral) beliefs, this relationship is not present in children. It is thus seems possible that while children, such as adolescents and adults, can identify certain issues (and not others) as *moral* – a capacity which, by itself, is sufficient to predict higher levels of intolerance for divergence – and they can feel more or less strongly about those issues, they do not yet appear to have consequential *moral convictions* that influence their judgements about divergent beliefs. Rather, the attitudinal construct of moral conviction is something that develops later, perhaps (as suggested earlier) through the interplay between the epistemic and moral identity development experienced in adolescence.

## Acknowledgements

Special thanks to Dr. Karen Bartsch, University of Wyoming, for her kind mentorship on this project and to Christin Covello, for her help in data collection and entry.

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Received 6 July 2010; revised version received 24 July 2011