

## Background

One of the central questions in the field of moral psychology relates to how individuals make decisions about the rightness or wrongness of actions. That is, how do individuals arrive at moral judgments? This question has received a great deal of attention throughout the history of the study of moral cognition, yet a consensus remains elusive. The dominant view for several decades was Kohlberg's (1969) theory of moral development, which emphasizes the role of conscious reasoning as the source of moral judgments. However, in recent years, there has been growing interest in theories that emphasize non-conscious or intuitive cognitive processes (Cushman et al., 2006; Green & Haidt, 2002, Haidt, 2001).

## Purpose

The present study tested the theory presented by Cushman and colleagues (2006) that our moral judgments are the product of a special moral faculty. This moral faculty is made up of principles that guide our judgments of permissible harm, oftentimes, without our knowledge. The present study tested whether there are age-related differences in: (1) the degree to which individuals produce moral judgments in accordance with certain principles of harm, and (2) the ability to provide sufficient justifications for moral judgments.

## Method

**Participants:** 86 adolescents from grades 9 ( $n = 46$ ,  $M_{age} = 14.8$ ) and 12 ( $n = 40$ ,  $M_{age} = 17.8$ ).

**Procedure:** Participants were presented with diagrams and audio narration of 10 "trolley problems" (Foot, 1967). Dilemma varied according to three dimensions: (1) directness of harm, (2) action or omission, and (3) intentionality (see Cushman et al., 2006).

**Judgments:** Participants were asked to rate the permissibility of the actions described in the scenarios on a Likert-type scale ranging from 1 (*Completely Wrong*) to 8 (*Completely Right*). All scenarios were part of at least one scenario pair. Scenario pairs were used to test the degree to which participants conformed their judgments to the three principles of harm described in Cushman and colleagues (2006).

**Justifications:** In the second portion of the study participants were presented with the scenarios they had previously rated and—using a structured interview format—they were asked to explain their divergent ratings between scenarios that made up a scenario pair.

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## Results

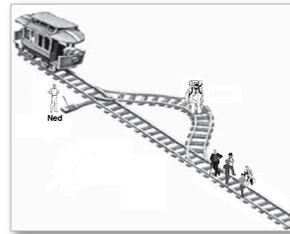


Figure 1. Diagram of "Ned" Scenario.

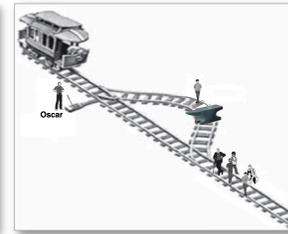


Figure 2. Diagram of "Oscar" Scenario.

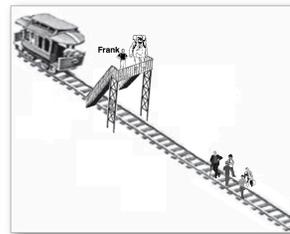


Figure 3. Diagram of "Frank" Scenario.

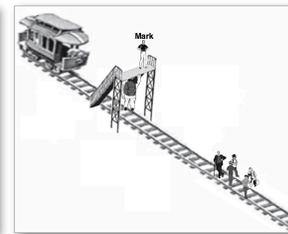


Figure 4. Diagram of "Mark" Scenario.

Table 1.  
Summary of Paired Sample t-tests on Scenario Pairs

	Grade 9				Grade 12					
	Mean Difference	SD	t(45)	p (two-tailed)	Effect Size (d)	Mean Difference	SD	t(39)	p (two-tailed)	Effect Size (d)
<b>Contact Principle</b>										
Frank – Ned	-0.59	1.53	-2.60	.01	.39	-1.50	1.73	-5.50	<.001	.87
Frank – Bob	-0.49	1.66	-1.96	.06	.30	-0.68	2.06	-2.08	.04	.33
Zach – Chris	-0.44	1.96	-1.50	.14	.23	0.23	1.78	0.80	.43	.13
<b>Action Principle</b>										
Ned – Mark	0.26	1.48	1.19	.24	.18	0.43	1.81	1.49	.15	.23
Bob – Mark	0.15	1.75	0.59	.56	.09	-0.40	2.31	-1.10	.28	.17
Chris – Dan	-0.50	1.41	-2.41	.02	.36	-0.45	1.21	-2.33	.03	.37
<b>Principle of Double Effect</b>										
Ned – Oscar	-0.85	2.04	-2.81	.01	.42	-0.50	1.50	-2.11	.04	.33
Bob – Oscar	-0.96	2.09	-3.11	<.01	.46	-1.33	1.62	-5.16	<.001	.81
Casey – Joe	0.15	1.25	0.83	.41	.13	-0.10	1.60	-0.40	.70	.06

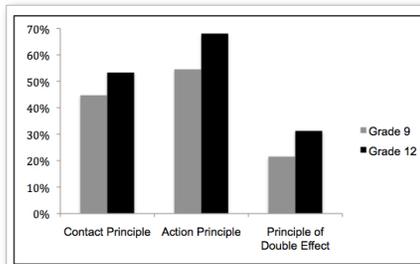


Figure 5. Overall Percentage of Sufficient Justifications by Principle for 9<sup>th</sup> and 12<sup>th</sup> graders.

•Results indicated that participants tended to conform their judgments to the principles of harm under investigation (see Table 1).

•Participants had difficulty providing justifications for their judgments. This suggests some principles of harm may operate outside of conscious control. This was especially the case for scenario pairs

•Results also revealed age differences in the ability to provide justifications for one's judgments—with older participants providing more sufficient justifications,  $F(1,85) = 7.53$ ,  $p < .01$  (see Figure 3).

•Participants whose justifications involved at least one instance of emotional language—call them "emoters"—were less likely to conform to the principles under investigation when the scenario that was theoretically more permissible in the pair involved physical contact or the close proximity of agent and victim.

- This pattern was apparent for two scenario pairs,  $\chi^2(2, N = 86) = 5.11$ ,  $p = .08$ ,  $\chi^2(2, N = 86) = 5.03$ ,  $p = .08$ . Interestingly, the opposite pattern emerged when the scenario involving contact or close proximity was theoretically less permissible. In these instances "non-emoters" were less likely to conform to the principle under investigation,  $\chi^2(2, N = 86) = 13.08$ ,  $p < .01$ ,  $\chi^2(2, N = 86) = 10.14$ ,  $p < .01$ .

## Conclusions and Implications

These findings suggest that adolescents tend to conform their moral judgments to certain principles of harm. Specifically, (1) participants judged harm that was caused through physical contact as morally worse than harm without contact, (2) they judged harm caused through action as worse than harm resulting from omission, and (3) they judged harm that was used as the means to an end as morally worse than harm that was foreseen but unintended. These principles appear to work implicitly in some cases (e.g., principle of double effect). Furthermore, the absence of group differences with respect to judgments of permissibility indicate that the moral faculty, if it is a developmental construct, is fairly well developed by the time adolescents are in grade 9. However, it seems that adolescents' abilities to explain their moral judgments are still developing between grades 9 and 12.