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Accounting for Some of the Flexibility of Moral Value-Driven Judgment

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Abstract
An influential account of moral choice suggests that one class of moral values—protected values (PVs)—rules like “do no harm” motivate a kind of rigidity in moral cognition: PV-driven choices are sensitive to the difference between doing and allowing harm, but are relatively less sensitive to the amount of harm imposed (Baron & Spranca, 1997). Related work on people’s reasoning about moral dilemmas suggests a kind of flexibility—moral judgment is influenced by many factors. Participants in the current studies evaluated governmental administrators’ decisions to knowingly do harm to a resource to mitigate greater harm or to allow the greater harm to happen. When evaluated in isolation, approval for choices to do harm were interactively shaped by PVs and participants’ tendency to rely on intuition (rather than deliberative thinking). When both choices were evaluated simultaneously, total harm—but not the do/allow distinction— influenced rated approval. These results suggest PV-driven judgment is more flexible than previously supposed and are broadly consistent with an “Affect-Backed Normative Theory” (Nichols, 2002) account of moral judgment.

Keywords: Moral judgment, reasoning, decision making

Introduction
Understanding the processes at work in value-driven judgment is an active endeavor in psychology: a number of descriptive frameworks have been developed in recent years with this aim in mind (Baron & Spranca, 1997; Tetlock, 2002; Cushman et al., 2006; Greene et al., 2001; Nichols & Mallon, 2006). The current studies aim for cross-pollination between these frameworks by testing their predictions concerning the use of two distinct moral judgment processes that pervade discussions in moral philosophy and psychology: deontology (adhering to moral rules of right and wrong) and consequentialism (balancing costs and benefits). Although many perspectives in moral psychology implicate these processes, little theoretical synthesis has been achieved, perhaps because few studies seek descriptive generalization across contexts (i.e., different types of judgment and choice situations).

The current studies are a modest step towards a synthesis, incorporating multiple methods and theoretical viewpoints to examine the flexibility of value-driven judgment. Specifically, these studies examine whether people’s judgment in domains governed by a specific type of moral value—a protected value—is always rigidly focused on rules, or whether moral judgment is more flexible. They examine how task constraints can shift participants’ evaluative focus to rules and to consequences and examine one way in which individual differences can inform an investigation of the processes underlying moral judgment.

Deontology and Consequentialism
Normative ethical theories in philosophy offer bases for judging acts as morally forbidden, permissible, or obligatory. The most prominent classes of normative ethical theory in philosophy are deontology (Davis, 1993) and consequentialism (Pettit, 1993); I will present strict versions of each to accentuate the contrast. Both types of theory hold that the goodness of the consequences produced by an act is relevant for determining its moral status, but they differ in key respects. Strict consequentialism acknowledges only one moral currency—the goodness of consequences. Deontology invests significant weight in a second factor—adherence to moral rules—allowing this factor to outweigh the goodness of consequences (Kagan, 1998). Strict deontology attributes intrinsic significance to rules classifying acts as per se impermissible—for example, knowingly doing harm. This rule forbids an agent from performing harmful actions. Consequentialism removes the agent and rules—what matters is that the best consequences be produced. In many contexts, consequentialist judgment is similar to deontological judgment for harmful acts—doing harm leads to worse consequences, other things equal—but strict consequentialism treats proscriptions for harmful acts as rules of thumb that must be broken in cases where doing so produces better consequences.

Importantly, these two normative positions imply different cognitive processes. Absolutist deontological reasoning checks certain qualities of actions (but not their consequences) against a set of norms that must be honored. The output of this process is that some acts are judged wrong in themselves, and thus are morally unacceptable (even as means to morally-obligatory ends (see Davis, 1993). Conversely, strict consequentialist reasoning is focused on ends—whatever values an individual adopts, this perspective mandates that one brings about the best consequences by any means (Pettit, 1993). Because the only inputs to this reasoning process are the consequences (and not their causes), the morally right course of action is the one that produces the best outcome. Of course, moral cognition is remarkably flexible—these two classes of reasoning do not exhaust the processes at work in moral cognition (see Haidt & Joseph, 2004). Accounting for this flexibility within the context of reasonably-constrained models is an important goal for cognitive science.

Dilemmatic Reasoning
Philosophers often discuss morality by constructing ethical dilemmas intended to distill real world problems to their “essential” features. Ethical dilemmas typically pit moral rules vs. consequences: less acceptable actions result in better
consequences; more acceptable actions result in worse consequences. Whereas philosophers have used dilemmas to develop normative arguments, moral psychologists have used them to develop descriptive accounts of moral cognition.

Recent studies have asked participants to judge the permissibility of acts that do harm to one person to prevent harm to others. Such judgments appear to be influenced by whether (a) the action elicits a strong emotional reaction, (b) sufficient consequences favoring the sacrifice (i.e., many lives to be saved) exist, and by (c) individual differences in propensity to allow emotional reactions to drive judgment (to name a few; Cushman et al., 2006; Greene et al., 2001; Nichols & Mallon, 2006). For example, researchers have compared reactions to the “trolley problem”—where a protagonist may flip a switch to divert runaway train car threatening to kill five railway workers onto a track where it will kill only a single railway worker—to reactions to the “footbridge problem”—where the only way to save the five railway workers is to stop the train by pushing a fat man off a footbridge onto the tracks below. People tend to judge flipping the switch permissible, but pushing the fat man impermissible. Greene et al. (2001) argue that people’s aversion to pushing the fat man is attributable to an emotional reaction elicited by the up-close and “personal” nature of the act that differs from the “impersonal” nature of flipping the switch. They argue that (rarely-observed) consequentialist judgments for “personal” dilemmas are produced by actively suppressing the affectively pre- potent, deontology-consistent response to judge “personal” harm impermissible (c.f., Mikhail, 2007).

In contrast to a strictly emotion-based account, Nichols (2002; Nichols & Mallon, 2006) argues that moral cognition depends on an “affect-backed normative theory” that contains a set of proscriptive moral rules that serve to establish preconditions for actions to be viewed as morally wrong. The rules are often accompanied by affect or reliant on affect to bring them on-line. This account suggests three processes interactively shape moral judgment: cost-benefit analysis, checking to see whether the action violates a moral rule, and an emotional reaction. To support the claim that moral judgment is mediated by affective response, Nichols (2002; Nichols & Mallon, 2006) presents two kinds of evidence. First, Nichols (2002) found that conventional norm violations that elicited affective reactions (e.g. spitting at the table) were judged as less permissible than rule violations that did not (e.g. playing with your food), and this was especially true for participants high in disgust sensitivity. Second, Nichols and Mallon (2006) developed trolley-like and footbridge-like dilemmas of minimized emotional force (by substituting teacups for humans) and found a distinction between judgments of whether the protagonist broke a rule—what they call “weak impermissibility”, and judgments of whether the action was morally wrong, all things considered—what they call “all-in impermissibility”. They show that violations of affect-backed rules are more likely to generate judgments of all-in impermissibility than violations of non-affect-backed rules.

However, Nichols and Mallon also found that even affect-backed moral rules can be overwhelmed by good/bad consequences of great magnitude. For example, when presented with a dilemma where billions of people would die from a virus released into the atmosphere unless the fat man is pushed from a footbridge, 68% of participants judged that such an action violates a moral rule, but only 24% judged that the action was morally wrong, all things considered. Judging an act permissible or impermissible thus appears to be influenced by whether violations of moral rules evoke affective reactions and by whether sufficient attention is directed to consequences favoring violating a moral rule. It appears that non-affect backed rules operate as a normative consequentialist theory might treat all commonsense moral rules: if the consequences favor a harmful action, infringing them may be required and thus, morally justified, producing dissociation between weak and all-in impermissibility. The operation of affect-backed rules is more consistent with a rigid deontology: violating these rules is forbidden except in the most extreme circumstances.

Accounts of dilemmatic reasoning intend to explain de facto morally-motivated processes, describing sensitivities to certain features of dilemmas that generalize across people. However, in trying to develop parsimonious theories about the fundamental (i.e., not context-dependent) laws of human thought that generalize across a wide range of content domains, these experimenters may be exhibiting what Tetlock et al. (1996) refer to as the anti-context and anti-content biases. The current studies take a different approach, using as key variables not only issues related to the content of the scenarios under consideration, but also making use of individual differences to inform a process-based account of moral judgment.

Whereas many dilemmatic reasoning studies make use of only one type of problem—threats to human life, studies in the judgment and decision making literature confront participants with threats to different kinds of resources that are not universally treated as having moral, or intrinsic cross individuals or cultures. The literatures on “sacred values” (e.g. Tetlock, 2002) and “protected values” (e.g. Baron & Spranca, 1997) focus on the restrictive tradeoff rules participants appear to have for cherished resources, and suggest that strongly held, situation-specific values engender nonconsequentialist decision strategies.

Protected Values

One distinguishing characteristic of morally-motivated choice is its (often nonconsequentialist) use of moral rules. For example, when people have sacred or protected values (PVs), proposed tradeoffs for these values elicit moral outrage (Tetlock, 2002). People refuse such tradeoffs on moral grounds and exhibit an outright refusal to consider costs and benefits (e.g. “You can’t put a price on a human life.”). The PV framework (Baron & Spranca, 1997) suggests that for scenarios entailing the exchange of a cherished resource (for which people have a PV), people may reason differently (i.e., they make use of moral rules) than when reasoning about resources not tied to one’s moral values. Baron and Spranca (1997) describe PVs as a subset of deontological rules that are tied to affect—rules that concern actions, like “do no harm”, but not the consequences of those actions.
The PV framework offers a way to pick out the domains for which we might expect deontology (i.e., for moral rules to drive judgment, rather than consideration of consequences). To assess whether a participant has a PV for a given resource, participants are presented with statements concerning the acceptability of tradeoffs for some value (e.g., fish species), as below:

>Causing the extinction of fish species.
>1. I do not object to this.
>2. This is acceptable if it leads to some sort of benefits (money or something else) that are great enough.
>3. This is not acceptable no matter how great the benefits.

People who endorse “c” are counted as having a PV for that resource (Ritov & Baron, 1999). Endorsement of PVs has been linked to what Baron et al. call “omission bias”—a preference for indirect harm caused by omissions (i.e., failure to act) over equal or lesser harm caused by acts. Consider, for example, a scenario where the only way to save 20 species above a dam in a river is to open a dam that will kill 2 species downstream. In this situation, some participants say they would not open the dam. Some even say they would not want to cause the loss of a single species (even though not opening the dam leads to the loss of all 20 species). These sorts of nonconsequentialist responses are more likely for people who endorse a PV for the relevant resource.

So, how rigid are people’s apparently nonconsequentialist preferences in domains governed by PVs? Do people who endorse a PV care less about the consequences than people who do not? There are some reasons to think so. First, the measurement itself suggests a lack of concern with consequences—“no matter how great the benefits”. Second, the evidence linking PVs to a large omission bias is consistent with commitment to moral prohibition. That the preference for omission over action in contexts where action produces better consequences is greater for people with PVs suggests PV-driven preference is consistent with a rigid deontology (Baron & Spranca, 1997).

Are people absolutist deontologists for domains governed by PVs? Probably not. PVs tend to be about particularly important issues—those issues where it seems like consequences should matter most. It seems reasonable that the people who care more about not harming the resource (people with PVs) might also care more about the ultimate consequences of an act. Based on this logic, Bartels and Medin (2007) used two different preference elicitation procedures to examine the context-sensitivity of PV-driven (non)consequentialist preference. Using a procedure that focused attention on whether an action that causes harm should be taken to maximize net benefits, people without PVs appear more consequentialist than people with PVs. Using a procedure that highlights the net costs averted by such actions, the trend reverses—people with PVs appear more consequentialist than people without PVs. The context sensitivity apparent in Bartels & Medin (1997) makes sense if we assume that people with PVs for a resource care more than people without PVs about both not doing harm to the resource and about the ultimate consequences of actions in the domain.

Moral value-driven preference appears to be influenced by the presence or absence of a PV and by whether attention is directed towards the permissibility of rule-violating act or to the act’s consequences. The current studies expand on these findings, relating accounts of dilemmatic reasoning to an investigation of PV-driven judgment. The current studies use the models of dilemmatic reasoning as a basis for new predictions about the context-sensitive role of moral rules in moral judgment across content domains and different types of people.

One idea motivating the current research is that PVs share important properties with “affect-backed rules.” Notably, PVs are intimately tied to strong emotions—proposed tradeoffs of sacred goods can elicit extreme anger (Tetlock, 2002). But just as even affect-backed rules can be overwhelmed if sufficient attention is directed to consequences favoring violating PVs, Bartels and Medin (2007) show that people’s willingness to accept tradeoffs of PVs varies depending on where attention is focused, a factor that varies substantially across contexts. In particular, they report that in contexts that direct attention towards net benefits brought about by doing harm, people with PVs were more willing to engage in the harmful action than people without PVs.

### Joint vs. Separate Evaluation Preference Reversals

The current studies examine whether PV-driven focus on moral rules and consequences is subject to a different set of task constraints. Study 1 asks participants to evaluate decisions under separate evaluation conditions. Study 2 presents the same participants with two decisions in joint evaluation, inviting a comparison between options before rendering judgment.

Previous research demonstrates that attributes that appeal to one’s intuitive sensibilities, and attributes that are otherwise easy to evaluate, drive preference in separate evaluation (where a number of otherwise useful comparisons are not made available), whereas attributes with greater normative significance that appeal to “colder”, more logical sensibilities drive preference in joint evaluation. For example, Hsee and Leclerc (1998) asked three groups of participants to assign buying prices to an ice cream product. One group was asked to evaluate a 7 oz. serving of ice cream presented in a 5 oz. cup, a second group was asked to evaluate an 8 oz. serving in a 10 oz. cup, and a third group assigned buying prices to both. Participants in the first condition were willing to pay more for 7 oz. serving than participants in the second condition were willing to pay for the 8 oz. serving. In separate evaluation, participants incorporated feelings about the overfilled/underfilled attribute of the product into their evaluative judgment. Of course, buying prices in the joint evaluation were greater for the 8 oz. serving than the 7 oz. serving. The joint evaluation condition affords participants with a richer evaluative context, where participants are able to pick out the most important attribute for setting a buying price.

Bazerman and Messick (1998) argue that one way to assess the normative status people give to deontology-relevant vs. consequentialism-relevant attributes is to present scenarios in joint evaluation. They suggest consequentialism better captures people’s lay normative theory for a host of problems, so sensitivity to deontological considerations would be diminished in joint evaluation. In the current studies, by collecting judgments in both separate (Study 1) and joint evaluation (Study 2), one can...
better assess whether the deontology-consistent judgments rendered for violations of PVs are the result of emotional reaction vs. whether people invest the doing/allowing harm distinction with enough normative significance to outweigh consequentialist considerations.

**Intuitive and Deliberative Thinking Styles**

A shared theme of the models of dilemmatic reasoning is that intuition and deliberation shape moral judgment. In particular, some suggest that sensitivity to violations of moral rules is often more reflexive than reflective. The current studies use an adapted version of Epstein’s (1996) Rational versus Experiential Inventory (REI) to measure differences in intuitive/deliberative thinking styles. This measure consists of two subscales: the Need for Cognition scale, which measures enjoyment of and reliance on deliberation and the Faith-in-Intuition scale, which measures enjoyment of and reliance on intuition.

Recall (a) that the affect-backed rules account of moral judgment suggests the importance of affect for bringing moral rules on-line, but that even affect-backed rules can be overwhelmed and (b) that Greene et al. (2001) view some consequentialist judgments as the product of deliberatively overriding the affectively pre-potent, deontology-consistent response. If PVs are like affect-backed rules, one might expect intuitive thinkers, those who “trust their feelings”, to be those whose judgment will be influenced by PVs in the standard way (i.e., induce focus on the impermissibility of knowingly doing harm and away from the consequences of the action). In contrast, deliberative thinkers might be more likely to ignore or over-ride intuitions generated by violations of their affect-backed PVs and thus render more consequentialist judgments.

**Hypotheses**

The current studies examine whether PVs operate like affect-backed rules in evaluation of others’ decisions and whether emotional influences of PVs on judgment will be stronger for intuitive thinkers. In these studies, participants rate (dis)approval of decisions made by government administrators, and in Study 1, judge whether the administrators’ decision have broken a moral rule (judgments of “weak impermissibility”).

For each problem described to participants, each of two administrators is described as facing a choice about whether to intervene and knowingly do harm to a resource to mitigate even greater harm or to merely allow the harm to happen. One administrator is described as motivated by a desire to do no harm, and so 100% of the anticipated harm to the resources occurs. I refer to this class of choices as “omission”. The other administrator knowingly does harm, first calculating that by intervening, he or she will kill 80% of the resources under consideration, and based on this analysis, he or she chooses to intervene. I refer to this class of choices as “action”.

Study 1 presents the decisions in separate evaluation—on a given trial participants evaluate just the omission or the action. Study 2 presents the decisions in joint evaluation—both the omission and action are evaluated on a single trial.

**Hypothesis 1** For separate evaluation judgments, I predicted that actions would be evaluated more negatively for domains governed by PVs than for domains not governed by PVs, because the administrator is described as knowingly doing harm, violating a PV. Violations of PVs evoke moral outrage, (Baron & Spranca, 1997), and because attributes that appeal to intuitive faculties drive judgment in separate evaluation, I predicted that moral outrage to would drive disapproval.

**Hypothesis 2** I expected that the effect predicted in Hypothesis 1 would be moderated by individual differences. Specifically, the advantage in approval for acts in domains not governed by PVs over acts in domains governed by PVs should be larger for people who report greater reliance on intuitive (as opposed to deliberative) thinking. Deliberative thinkers may over-ride the pre-potent response to render strong disapproval of PV violations.

**Hypothesis 3** The relationship between rule violation and approval will be stronger for domains governed by PVs than for other domains. When participants perceive that a PV has been violated, they should more strongly disapprove of the decision than when they perceive that some other (non-affect-backed) moral rule has been violated—such violations should be sufficient for strong disapproval. For other domains, participants may be willing to support a decision that violates a moral rule if the benefits brought about are great enough.

**Hypothesis 4** In joint evaluation, I predicted that actions would be met with more approval than omissions. Consistent with the predictions of Bazerman and Messick (1998), I expected the consequentialism-relevant attributes—80% are lost with the action; all 100% are lost with the omission—would be large enough to sway even participants whose judgments might be consistent with a rigid deontology in other contexts.

**Method**

**Participants** Forty-eight undergraduates (25 women; 23 men) participated in Study 1 for partial course credit. Participants completed the study tasks at their own pace. They were tested individually but in a small group setting (typically, 1 to 4 Ps per session). Usually, other participants were completing the study in the same room. Those participants who wrote their contact information on a sign-up sheet for Study 2 were contacted about participating in the second round of data collection, conducted 61 to 71 days later. Thirty-two of the original 48 (18 women, 14 men) Ps participated in Study 2 in exchange for $5 compensation. Sixteen of Study 2’s Ps were run in one session; the others participated individually in a small group setting. No differences were observed on any of the variables between the large- and small-group setting Ps in Study 2.

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1 I did not predict a difference in judgments of approval for omissions in separate evaluation because Haidt and Baron [1996] demonstrated that omission bias—a preference for allowing harm over doing harm—did not generalize to evaluations of third-party decisions made by people occupying especially responsible social roles, like that of a government administrator.
Materials and Procedure In each session, Ps completed one of three packets that differed only in the pseudo-randomized ordering of items within each type (PV items, Rational-Experiential Inventory items [only Study 1], judgment scenarios). First, Ps responded to 30 PV items—seven that corresponded to the judgment scenarios intermixed with 23 unrelated PV items. Then, Ps responded to an adapted, 20-item version of the REI. Finally, Ps evaluated two governmental administrators’ choices for seven problems. The 14 judgment scenarios crossed two types of decisions (omission, action) with seven problems (birds, children, dolphins, fish, jobs, poor, trees). The two versions of the children problem appear below:

(Name) is considering a vaccination program. Epidemiologists estimate that vaccinating 600 children will prevent them from dying from an epidemic of a new infectious disease. The vaccine itself will kill some number of children because it sometimes causes the same disease. Because this disease progresses rapidly, a decision must be made quickly, and the government’s options are severely constrained.

Julie does not want to kill any of the children with the vaccine. So, the vaccine is not administered. The 600 children die.

Rich wants to save the children from the disease. He first calculates that administering the vaccine will kill 480 children. Knowing that doing so will kill many children, he chooses to vaccinate the children.

In Study 1, after reading about the administrator’s decision, Ps were asked to assess whether or not the administrator broke a moral rule. The item read, “By (not) administering the vaccine, (Julie) Rich broke a moral rule.” Ps indicated agreement on a 1-8 = Strongly (Dis)Approve scale.

Results and Discussion

To assess whether moral judgment differs according to whether the domain is governed by protected values, I restrict analyses to within-Ps effects where I first separate the items for which each participant endorsed a PV (referred to as “PV”) from the items for which she did not (referred to as “No PV”).

Rule Violations and Approval (Study 1) For each participant, I computed correlations between judgments of moral rule violation (i.e., “weak impermissibility”) and approval ratings across PV and No PV items. I predicted that violations of moral rules would elicit strong disapproval ratings for domains governed by PVs and found that, in general, when participants perceived rule violations, they disapproved of the administrators’ decisions. This relationship held for No PV items (M = -.66), and as predicted, was stronger for PV items (M = -.84; Wilcoxon signed ranks test for related samples Z = -2.42, p < .05). This finding is consistent with the idea that PVs function like affect-backed rules in driving moral judgment.

Approval Ratings—Separate Evaluation (Study 1) For each participant, I calculated four averages: the average approval rating she assigned to omissions/actions on items for which she endorsed/did not endorse a PV. Recall that in the current design, actions resulted in better consequences (80% loss) than omissions (100% loss). In Study 1, this comparison was unavailable to participants, leaving emotional reactions to drive (dis)approval. I expected that for domains governed by PVs, decisions to knowingly do harm on the basis of explicit cost-benefit reasoning would be considered offensive (violations of PVs—rules like “do no harm”—elicit anger), eliciting greater disapproval from participants than similar choices made for other domains. I also predicted that this tendency would be more pronounced for intuitive thinkers, who might be less likely to over-ride their emotional reaction than deliberative thinkers. The results of a 2 (Decision: Action/Omission) x 2 (Domain: No PV/PV) repeated-measures ANOVA reveal effects of each factor (F(1,43) = 19.98 and 19.87, p’s < .001, ηp2 = .32) and a reliable interaction (F(1,43) = 12.58, p < .001, ηp2 = .23). As predicted, actions were evaluated more favorably for No PV domains than for PV domains (M’s = 5.39 vs. 4.30; See Figure 1). Also, the correlation between this difference score and participants’ REI scores was strongly negative (r(43) = -.54, p <

![Figure 1: Approval Ratings](image-url)
having normative significance. Against doing harm that participants would otherwise treat as the contrast in consequences appears to overwhelm constraints. Given this more enriched evaluative context, attention given to both deontology-relevant and consequentialist considerations. PVs. Study 2's joint evaluation context allows for comparisons of costs and benefits, people endorsing PVs appeared Medin's (2007) finding that in a procedure that highlighted net costs and benefits, people endorsing PVs appeared more sensitive to consequentialist considerations than people without PVs. Study 2's joint evaluation context allows for comparisons of both deontology-relevant and consequentialist considerations. Given this more enriched evaluative context, attention given to the contrast in consequences appears to overwhelm constraints against doing harm that participants would otherwise treat as having normative significance.

Summary and Conclusions
Research that asks participants to judge the permissibility of sacrificing a human life for the benefit of others suggested such judgments are influenced by (a) whether violations of moral rules evoke strong affective reactions (b) by whether sufficient attention is directed to consequences favoring the act, and (c) by individual differences in propensity to allow emotional reactions to drive judgment. The current results suggest a similar set of principles govern PV-driven judgment. The observed results suggest PVs might operate as constituents of an affect-backed normative theory, offering some cross-pollination between theoretical frameworks. The current studies were motivated by the idea that a better understanding of PV-driven judgment and choice can only be achieved through more thorough scrutiny of the processes PVs motivate. Previous theory suggested PVs motivate rigid, nonconsequentialist judgment and choice. By demonstrating the context-sensitivity of PV-driven moral judgment, the present findings qualify previous conclusions, suggesting a more flexible PV-driven judge.

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