

# Is It More Wrong to Care Less? The Effects of “More” and “Less” on the Quantity (In)Sensitivity of Protected Values

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## Abstract

Morally-motivated decision making has recently emerged as an especially relevant domain of study for understanding cultural conflict. Baron and Spranca (1997) have proposed that people hold *protected values* that are protected against being traded off for other goods. One of the most characteristic properties of protected values is quantity insensitivity, meaning that holders of these values are relatively insensitive to the consequences of their actions. However, recent research suggests that quantity insensitivity may be a highly context-dependent property of protected values (Bartels & Medin, 2007). To examine the context-dependency of quantity sensitivity, we asked participants if one harmful act was less wrong than five harmful acts and if five harmful acts were more wrong than one harmful act. Participants were relatively insensitive to the magnitude of the consequences in response to the first question, but highly quantity sensitive in response to the second question. This effect was amplified for people who held protected values – they were both more and less quantity sensitive than people without protected values in the respective conditions. We propose that this effect is due to the different frames of reference elicited by each question.

**Keywords:** decision making; judgment; morality; attention

Neoclassical economists describe rationality as the maximization of expected utility. In the ethical domain, rational moral agents, according to proponents of consequentialism, are obligated to engage only in the actions that result in better outcomes than any other alternative (see Hausman & McPherson, 1996). In contrast, deontology, the other predominant view of normative ethics, is mainly concerned with the goodness of an act in itself (see Davis, 1993). Following deontological principles often seems irrational, such as when people are unwilling to sacrifice even one life to save many more (Thomson, 1985). Yet, there are circumstances in which it appears to be descriptively superior to other ethical theories. For instance, it might not be a good idea for doctors to decide that harvesting organs from a visitor in the waiting room without her consent was acceptable to save the lives of three patients.

Although deontology and consequentialism have been viewed as two competing means of promoting moral

behavior, we suggest that people have both consequentialist and deontological reasoning strategies available to employ as necessitated by the context. The goal of this paper is to show that the response towards what is considered to be a moral action might be flexible and affected by whether attention is directed towards the act or outcome in a particular.

Baron and Spranca (1997) have proposed that people hold *protected values* (PVs) that are protected against being traded off for other goods such as economic incentives. PVs are expressed as deontological rules, meaning that breaking these rules is forbidden even if violating them will result in a better outcome. For example, if a particular rule is “Do not engage in practices that result in the destruction of natural resources”, then it prohibits the holder of this particular PV from knowingly purchasing goods made out of unsustainably forested lumber, even if this action would provide some instrumental benefits or result in the protection of many other natural resources. PVs are typically phrased as moral prohibitions which take the form of “do not do X” where X is an act like lying.

One property arising from the deontological constraint of PVs has been termed *quantity insensitivity*. Baron and Spranca (1997) suggested that people with PVs should be indifferent to the number of violations of PVs occurring with a single act. They say, “Quantity of consequences is irrelevant for protected values. Destroying one species through a single act is as bad as destroying a hundred through a single act (p. 5).” In other words, to an avid environmentalist, a single act causing five acres of destruction or one acre of destruction should be equally wrong morally. Similarly, Baron and Spranca (1997) argued that abortion opponents might oppose government spending on family planning programs that carry out abortions in developing countries, even if this spending ultimately reduces the number of abortions performed. Quantity insensitivity occurs because the number of abortions is inconsequential; it is rather the notion that the act is occurring at all which is most distressing to people with PVs.

In order to test for PVs, participants are first asked to the extent to which they agree with a statement like, “This [prohibited action] is unacceptable no matter what the

benefits”, and then probed for specific properties such as quantity sensitivity. Baron and Spranca (1997) measured quantity (in)sensitivity with the following questions:

*Is it equally wrong for X to happen as 2X to happen?*  
*Is it worse for 2X to happen than for X to happen?*

Strict quantity insensitivity would be indicated by answering “yes” to the first question and “no” to the second. They found that a majority of participants who reported having PVs were significantly more quantity insensitive than those who did not, as measured by the first question. They did not provide a similar analysis of the responses to the more wrong (second) question. Surprisingly, however, the authors reported that they did not find a negative correlation between the quantity insensitive probes. In fact, computing the correlation between the probes across scenarios revealed that responses to the first and second question were positively correlated, so if participants said “yes” to one, they were also more likely to respond “yes” to the second<sup>1</sup>.

The relation between the form of a question and quantity (in)sensitivity is the focus of the present study. Specifically, we propose that sensitivity to quantity may depend on how attention is directed when using two forms of the same question. In related work, Bartels and Medin (2007) showed that participants’ willingness to sacrifice a protected good could be drastically changed just by subtly shifting the paradigm. When participants were first asked about the permissibility of a harmful action and then to fill in their own responses to this question, participants with protected values provided overall lower amounts of how much of the good they would be willing to give up. Yet, in an alternate paradigm, when participants were asked to endorse whether they would be willing to sacrifice 5, 10, or 15 species to save 30 species, participants with protected values actually had a higher threshold (were more willing to make tradeoffs) than those without. Participants’ attention was directed to the net gains of the action when they were asked to choose between a harm and a greater harm whereas choosing a number to harm on their own made the “some harm” versus “no harm distinction” more salient.

McKenzie and Nelson (1993) have shown that people take frames of reference into account when interpreting the meaning of a statement. They asked their participants to describe a cup of water that was at half capacity. When participants were told that the cup was originally empty, participants were more likely to describe it as half-full. But, when they were told that that the cup was originally full, participants were more likely to describe it as half-empty. This effect occurred because the two situations entailed different reference points.

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<sup>1</sup> We did not have access to the complete data but Baron and Spranca (1997) present the percentages of endorsement of the equally wrong and more wrong question broken down by scenarios. The equally wrong question was significantly positively correlated with the more wrong question in the two experiments in which it was asked ( $r(12) = .62$  and  $.59$  in experiments 1 and 2, respectively,  $p < .05$ ).

## Present Study

We propose that when participants are asked if many harmful acts are *more wrong* than one (as in Baron & Spranca, 1997), their attention is directed to the consequences that makes quantity more salient. But, when asked if one harmful act is any *less wrong* than many, we predict participants will appear to be relatively quantity insensitive. It is important to note, however, that although the “less” question is conceptually the complement of the “more” question, we believe that participants’ sensitivity to quantity will be responsive to the different frames of reference that each question constructs. Making the “less” judgment may direct attention towards the distinction between an act occurring and it not occurring. This would make the number of that act occurring irrelevant because the reference point is no acts occurring. But, the “more” judgment may presuppose the occurrence of the act and therefore direct attention towards the consequences. This predicts that more wrong acts should be judged worse than fewer wrong acts. As Davis (1993) says, “... faced with the prospect of doing wrong by X or doing wrong by Y, the unfortunate agent would have to consider which action would be more wrong. And from here it is but a short step to a view that looks much more like some form of consequentialism than deontology.”

The predicted effect for both the “more” and “less” questions should be stronger for people with PVs than those without because people who care more deeply about a particular issue should be more engaged in the task and therefore pay more attention to the information presupposed by a question.

We are also interested in examining what effects actions worded either as prohibition or duties have on quantity sensitivity. Positive duties are not simply the conceptual antithesis of prohibitions so we cannot directly compare the two. However, it is certainly possible that because of their close association with deontology, actions worded as prohibitions will elicit significantly more quantity insensitive responses than those worded as duties.

In addition, we expect some carryover or order effects. If participants are first asked if more of a particular act is more wrong than less of that act, they may respond affirmatively, showing quantity sensitivity. This response could influence the second question of whether less of that act is less wrong than more of that act because of a general response bias.

## Method

**Participants** Eighty one Northwestern undergraduates participated in this study for partial course credit. Each participant completed the questionnaire individually but each session included 1 – 4 participants.

**Materials & Design** We employed a 2 (Wording: “Less” question or “More” question) x 2 (Protected Values or No Protected Values) x 2 (Prohibition or Duty) x 2 (Order: Less first or More first) design. The first two factors varied within subjects. Participants were randomly assigned to either the *prohibition or duty* condition (described below)

and to one of two order conditions, which varied the order of presentation of the *less* and *more* questions. They were asked to respond to eight moral actions from various domains. Most of these were adapted from Baron and Spranca (1997) and others were selected on the basis of prior studies of Northwestern undergraduate endorsements. We selected those acts for which about half of a representative sample had reported protected values in an earlier study. Each of the actions had two versions, one that was worded as a prohibition and the other as a duty. Participants were asked to respond to the following questions for each act:<sup>2</sup>

Circle one of A, B or C that best reflects your opinion and then go on to answer D & E

A. I do not oppose this

B. This should be prohibited unless the benefits are great enough.

C. This should be prohibited no matter how great the benefits.

D. Is it worse for this to happen five times than to happen once?<sup>3</sup>            Y            N            ?

E. Is it less wrong for this to happen once than to happen five times?    Y            N            ?

In a following study we multiplied the occurrences of an act by five so that the questions then read, “Is it worse for this to happen 25 times than to happen five times” or “Is it less wrong for this to happen 5 times than to happen 25 times”. We tested 49 of the 81 participants on this paradigm to see if larger numbers would lead participants to focus on the quantity of the act. No effect was found so the data were collapsed over this variable.

Participants who endorsed option “C” from above were counted as holding a PV and only those choosing “B” were included as participants without a PV. Participants endorsing A were not included in the analysis because there could be several different motivations in choosing that option which are not relevant to the comparison between having a PV versus not. However, including these participants would not modify the overall findings. Statements A through C established whether participants held a protected value for a particular act and questions D and E assessed quantity (in)sensitivity. A quantity sensitive response was marked by answering “yes” on these questions. The order of presentation of questions D & E was varied by first presenting question D to half the participants and by presenting question E first to the remaining half. Data with the question mark responses were coded as missing.

<sup>2</sup> Analogous wording on the dependent variables for duty-based protected values i.e. instead of “less wrong”, we asked “is it less right”.

<sup>3</sup>After consulting with several linguists, we decided to substitute “more wrong” with its semantic equivalent, worse, and for duties, “more right” with better to aid understanding. Our subsequent studies have shown, however, that the same pattern of results as described below is obtained when using “more just” and “less just”.

## Results

The dependent measure for all of these analyses is the proportion of “yes” responses (indicating quantity sensitivity) on either the “more” or “less” question for each participant for the scenarios in which they had a PV versus not. So, in essence, each of the dependent variables measures how the participants acted when they had a PV and when they did not. The overall proportion of protected values endorsed is presented in Table 1. The issue of Native American sovereignty evoked the most protected value endorsements whereas the issue of giving medication to increase IQ evoked the least. There were no significant differences in endorsement rates whether the acts were phrased as prohibitions or duties. We analyzed the data using a four way repeated measures ANOVA with Question Type (more or less) and Protected Values as the within subject factors and Wording and Order as the between subject factors.

Table 1: Endorsement of Protected Values by Act

Act	Percent
Act 1 – Destroying (Protecting) Forests	59
Act 2 – Preventing (Promoting) use of IQ drugs	52
Act 3 – Denying (Granting) Kidney Transplant	76
Act 4 – Restricting (Preserving) Freedom of Speech	80
Act 5 – Killing (Saving) Baby Seals	64
Act 6 - Allowing (Forbidding) Bride Auctions	81
Act 7 – Permitting (Banning) Water Pollution	57
Act 8 – Abolishing (Establishing) Indian Sovereignty	83

### More or Less

A significant main effect of question type showed that participants provided quantity sensitive responses almost twice as often when they were asked the more question than the less question (.78 vs. .43,  $F(1,77) = 85.20, p < .001$ ). Although, the questions are conceptually similar and therefore should elicit the same behavior, participants reacted more quantity sensitively to the “more” question and insensitively on the “less” question. This finding supports the hypothesis that asking participants to compare more of a harm than less of a harm leads them to focus on the consequences of the harm. As predicted, having PVs interacted with the effect of question type ( $F(1,77) = 13.07, p < .01$ ). On the “more” question, when people had PVs, they were actually more quantity sensitive than when they did not (.84 vs. .74, respectively,  $t(80) = 1.95, p < .05$ ). However, having PVs also led to more extreme responses with the “less” question by making it more to be quantity insensitive than people without PVs (.38 vs. .48,  $t(80) = 1.95, p < .05$ , see figure 1)

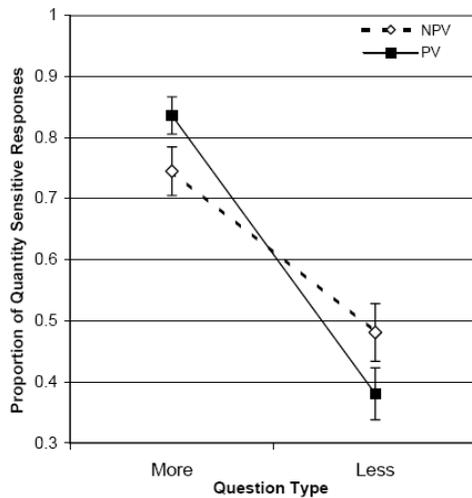


Figure 1: Mean proportion of quantity sensitive responses as a function of the type of “more” or “less” question and protected values.

The effect of question type (more or less) on quantity (in)sensitivity was also examined in a between-subjects fashion by looking just at the initial responses to the “less” and “more” questions. Since participants received both of these questions in reverse order, half of our participants saw the “less” question first and the other half saw the “more” question first. We again found that the “more” question nearly doubled the proportion of quantity sensitive responses relative to the “less” question (.86 vs. .48,  $F(1,82) = 48.84, p < .001$ ). An interaction between protected values and question type as a between-subjects factor was also observed ( $F(1,82) = 6.60, p < .05$ ). Thus, the effect of question type on protected values was confirmed in both types of analyses.

### Prohibitions versus Duties

We expected that, because deontological rules are typically phrased as prohibitions, the participants who were assigned to the prohibition condition would be relatively less quantity sensitive. We also predicted that participants in the duty condition would be more sensitive to quantity. These predictions were partially supported. Increased quantity sensitivity on duty-framed actions (as measured by the “less” question) was found only when people had PVs (.50 versus .29,  $t(78) = 2.53, p < .05$ ). Without PVs, participants were actually more insensitive to quantity with duties than with prohibitions ( $F(1, 77) = 25.62, p < .01$ ). These effects are broken down by question type and wording condition below (see Figure 2).

For prohibitions, quantity sensitivity on the “more” question did not vary as a result of having protected values or not. Both showed somewhat of a ceiling effect of quantity sensitivity with the probability of being quantity sensitive at .84 and .86, respectively (*ns*). But, the “less” question revealed a different picture. When participants did not have PVs, they still showed quantity sensitivity by

responding affirmatively to this question a majority of the time but when they did have PVs, they showed quantity sensitivity only 29% of the time (.58 versus .29, respectively,  $t(87) = 3.42, p < .01$ ).

In the duties condition, having PVs led to more quantity sensitivity on the “more” question (.83 versus .63,  $t(69) = 2.49, p < .05$ ). On the “less” question, having PVs did not seem to affect quantity sensitivity (.50 versus .37, *ns*). This three-way interaction between PVs, wording and question type was marginally significant ( $F(1,77) = 2.81, p = .098$ ).

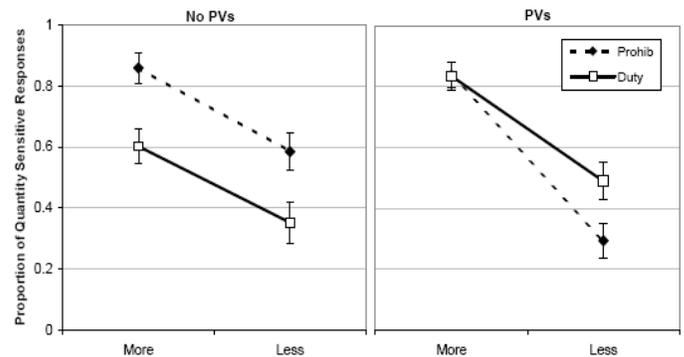


Figure 2: Mean proportion of quantity sensitive responses as a function of the type of “more” or “less” question and wording condition, either duties or prohibitions. When participants did not have protected values (left panel), they showed no difference in quantity sensitive responses between the two wording conditions in answering the “more” and “less” questions. However, having protected values (right panel) led to more quantity sensitive when responding to the “less” question in the duty condition than in the prohibition condition.

### Order Effects

A significant interaction between Order and Question Type revealed some carryover ( $F(1, 77) = 9.04, p < .01$ ). Participants showed more quantity sensitivity (answered affirmatively) on the “more question” when it was asked first than when it was asked second (.86 versus .70, respectively,  $t(60) = 2.43, p < .05$ ). No order or carryover effects were observed with the “less question” (.48 versus .40, *ns*).

### Discussion

Quantity insensitivity appears to be a context-dependent characteristic of protected values. When people are asked, “is it worse for 5 acres of forests to be destroyed than 1,” they are overwhelmingly quantity sensitive but when asked a seemingly parallel question, “is it less wrong for 1 acre of forests to be destroyed than 5,” they appear to be largely quantity insensitive. This effect is more severe for people with PVs for these resources than without. In a broader sense, this may be interpretable as people acting consequentially in one context but acting deontologically in a subsequent context.

In related follow-up work, we (along with Scott Atran and Jeremy Ginges) tested for the generality of this phenomenon. Specifically, we included similar “more” and “less” questions in a survey that was administered to hundreds of Palestinian individuals concerning the Middle East conflict. We asked them, “Who would God love more (less): A martyr who killed one enemy, a martyr who killed ten enemies or there is no difference. Although a vast majority of respondents chose the “no difference” option when such an option existed, we still replicated the results of question type with participants who did not endorse that option. All of the respondents who indicated a difference said that God would love a martyr who killed 10 enemies more than a martyr who killed one enemy but fewer said that God would love a martyr who killed 1 enemy less than one who killed 10 (38 out of 38 for the former versus 13 out of 25 for the latter).

We suggest that a change in the reference frame of the question could account for this result. The “more” and “less” questions could be directing attention to different reference points. When people are asked if a harmful act occurring multiple times is more wrong than occurring once, attention may be directed to the consequences of the act. The presupposition in this case is the destruction of one forest or the poaching of one endangered animal and anything more than that is obviously worse. However, when they are asked if one instance of the harmful act is any less wrong than multiple instances, then attention is drawn to the distinction between a harmful act versus no harmful act. This attentional shift might be an automatic, implicit response that is more readily accessible to people with PVs, thus accounting for the greater discrepancy between the “more” and “less” question.

When asked whether a particular good or beneficial act occurring once is less right than it occurring multiple times, as was the case with duties, people with PVs are more likely to show quantity sensitivity than people without PVs. Previous studies have shown that people who endorse positive protected values such as “saving forests” are more consequentially oriented than those opposing statements such as “destroying forests” (Tanner, Medin & Iliev, submitted). It may be the case that prohibitions such as “do not lie” are more limited in scope and therefore more applicable generally. So, even participants who do not claim to have a PV against lying provide similar quantity sensitive responses because lying is morally unacceptable for everyone. However, duties such as “always tell the truth” may have an added component that induces only those people who are motivated by a strong act-focused PV to be quantity sensitive.

Thus, it appears that quantity sensitivity is not an abstract, context-independent behavior but rather highly dependent on where attention is directed. The malleability of quantity sensitivity indicates the need for a more marked delineation of the specific contexts in which people should appear to be quantity insensitive and those in which they should not. Understanding that people can elicit both quantity sensitive and insensitive behaviors based on context-specific cues is necessary to reveal the cognitive antecedents of deontological and consequentialist reasoning in moral behavior.

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