

# Construal levels and moral judgment: Some complications

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## Abstract

Eyal, T., Liberman, N., & Trope, Y., (2008). Judging near and distant virtue and vice. *Journal of Experimental Social Psychology*, 44, 1204–1209, explored how psychological distance influences moral judgment and found that more extreme moral appraisals were given to distal behaviors rather than proximal behaviors. Contrary to Eyal et al., the current paper presents converging evidence showing that moral judgments become more extreme at lower-level construals compared to higher-level construals. In four experiments using two different priming techniques, we manipulated construal levels and assessed their effects on moral judgment. High-level construals elicited less moral outrage toward transgressions and less positive ratings of virtuous behaviors than low-level construals. A replication study was also conducted to reconcile the inconsistencies between the current results and those of Eyal et al. Possible explanations for the different results between two studies are discussed.

Keywords: moral judgment, construal-level theory.

## 1 Introduction

Preference and judgment are commonly influenced by the information we attend to, receive, and construct. We can construe the same event in different ways. When attending to an object, we can focus on its entire figure, or we can focus on its details. Recent work on Construal Level Theory (CLT) provides a framework of considerable potential by linking mental representations to moral judgment. CLT proposes that the same event or object can be represented at multiple levels of abstraction (see Trope & Liberman, 2010, for a review). High-level construals are superordinate and decontextualized, and entail constructing abstract conceptualizations of information about objects and events. By contrast, low-level construals consist of subordinate and contextualized information, represented concretely and in detail. Individuals' judgments, decisions, and behaviors differ as a function of construal levels. More weight is given to global, abstract features at high-level construals, whereas local, concrete features are more influential at low-level construals.

CLT has received a great deal of attention in psychology, and its predictions have been applied to many aspects of human cognition and behavior (Trope & Liberman, 2010). For example, the activation of high-level construals leads to categorization in fewer, broader, and abstract units, whereas activation of low levels leads to categorization in multiple, narrow, and concrete units

(Liberman, Sagristano, & Trope, 2002, Study 1). High-level representations are also more coherent and integrative, whereas low-level representations are more specific and disparate (Liberman et al., 2002, Study 4; Nussbaum, Trope, & Liberman, 2006). According to CLT, psychological distance is a major determinant of what level of construal is activated. In general, distancing a target on any dimension of psychological distance (i.e., time, space, social, and hypotheticality) leads to greater activation of high-level construals than low-level construals (Liberman et al., 2002). For instance, Fujita and colleagues (2006) found that subjects were more likely to describe spatially distant events in terms of goals (high-level) than in terms of means (low-level).

Under the framework of CLT, Eyal et al. (2008) investigated how psychological distance affects moral judgment. In that paper, they argued that moral principles are high-level constructs because of their abstract, universal nature and that concrete situational detail should mitigate moral judgment. Since CLT posits that more psychologically distant entities are represented at higher-level of construals, Eyal et al. proposed that people would be more inclined to base their judgments of remote behaviors on moral principles but to underweight the situational details, thereby leading to more extreme moral judgments of distal transgressions relative to proximal transgressions. Consider, for instance, an act of sexual intercourse between siblings. From a distant perspective, one tends to construe it as incest, without considering mitigating details (e.g., using contraceptives) that might tilt moral judgment to be less extreme. Therefore, Eyal et al. predicted and observed that greater psychological distances were associated with more extreme moral judgments.

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The current project tried to build on the Eyal et al. findings and started with a conceptual replication by more directly manipulating construal levels. CLT indicates that the findings of the effect of psychological distance on people's judgment and decision making should not be a unique effect of psychological distance *per se* but rather a more general process by which mental representations influence the nature of evaluative objects and decisions. Considering that the Eyal et al. studies manipulated psychological distances and did not test the proposed effects of construal levels, we first used a more direct manipulation of construal levels, a manipulation employed in other CLT research, to investigate how levels of construal affect moral judgment. We, however, observed that low-level construals led to more negative judgment of moral transgressions, contrary to Eyal et al.'s findings and interpretation. In order to establish the robustness of our findings, we conducted another three experiments using different manipulations of construal levels and varied scenarios. Consistent with the initial findings, the converging results suggest that moral judgments are more extreme at lower-level construals than higher-level construals.

Given that our results are the opposite of those of Eyal et al., we established a partial collaboration with Tal Eyal<sup>1</sup> attempting to understand the basis for our differing pattern of findings. We conducted a replication study (Study 5 in the present paper) and still observed the results contrary to those of Eyal et al. Tal Eyal also tried to replicate two of our experiments with Israeli subjects and the partial results were in the direction of replicating our findings but not statistically reliable. Given that our cooperative efforts with Tal Eyal did not arrive at successful resolution of our opposing patterns of findings, in the General Discussion we consider in detail possibilities for why our results differ from theirs.<sup>2</sup>

## 1.1 The present research

In Studies 1 to 4, we experimentally manipulated levels of construal through two procedural priming techniques, and then assessed subjects' reactions toward several different moral situations by looking for carryover effects from the primed construal levels. Subjects were asked to evaluate both virtuous and immoral behaviors. In Study 5, to reconcile the inconsistencies between our results and those of Eyal et al., we replicated one of the original studies published in their paper (Eyal et al., 2008, Study 2)

<sup>1</sup>We very much appreciate Dr. Eyal's cooperation in this further work.

<sup>2</sup>Interestingly our initial attempts to publish our findings were unsuccessful as Editors insisted that we resolve our discrepant findings before our studies could be published. By this "pioneering effect" rule, had we published our results before Eyal et al. did, they would have been unable to publish their results because the burden of proof would have shifted. In our opinion this asymmetry is unfortunate.

by using the same experimental materials translated from Hebrew to English.

## 2 Study 1

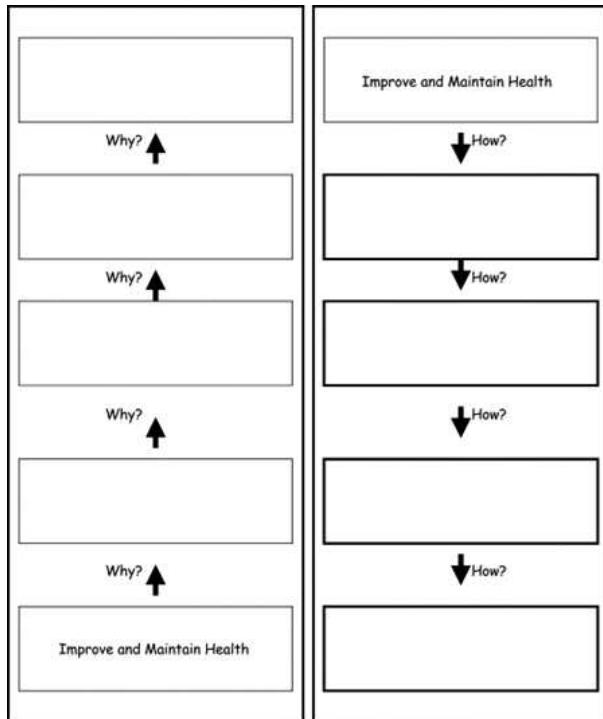
In this study, we started with a conceptual replication of Eyal et al. by using a more direct manipulation of construal levels, instead of indirectly manipulating construal levels by changing psychological distances. Prior research has shown that the tendency to construe situations at high and low levels can be procedurally primed (Smith & Branscombe, 1987) and induced directly through manipulations that activate cognitive procedures or mindsets associated with each respective construal in unrelated prior contexts (Freitas, Gollwitzer, & Trope, 2004). One possible way to procedurally induce high or low level construal is to lead subjects to focus either on superordinate, goal-oriented characteristics of a given activity or on subordinate, concrete means. High- and low-level construals differ in whether end states of actions (the "why" of activities) or the means by which actions are accomplished (the "how" of activities) are emphasized (Liberman & Trope, 1998). Research suggests that expressing *why* one achieves a behavior temporarily induces higher-level construals whereas expressing *how* one achieves a behavior temporarily induces lower-level construals (Wakslak & Trope, 2009).

Consistent with Action Identification Theory (Vallacher & Wegner, 1987), the representation of action in terms of means-ends relationships is viewed as an important dimension of construal levels of instrumental actions (see Liberman & Trope, 1998). By asking subjects to generate more and more superordinate goals, they can be led to adopt a higher-level perspective. Conversely, by asking them to generate more and more subordinate means, they can be led to adopt a lower-level perspective. It is expected that activating a mindset that involves emphasizing the *why* will produce higher-level construals of those actions compared to the *how*, which will consequently influence the subjects' judgment of those transgressions.

### 2.1 Construal-level manipulation

All the subjects worked on a task involving the same activity "improve and maintain health." Half of the subjects were asked to plan *how* they could implement this activity (low-level condition), whereas the other half were asked to consider *why* they would engage in the same activity (high-level condition). They read a passage describing the task as a thought exercise which focused their attention on how/why they might complete a mundane activity. After reading the passage, subjects in high-level con-

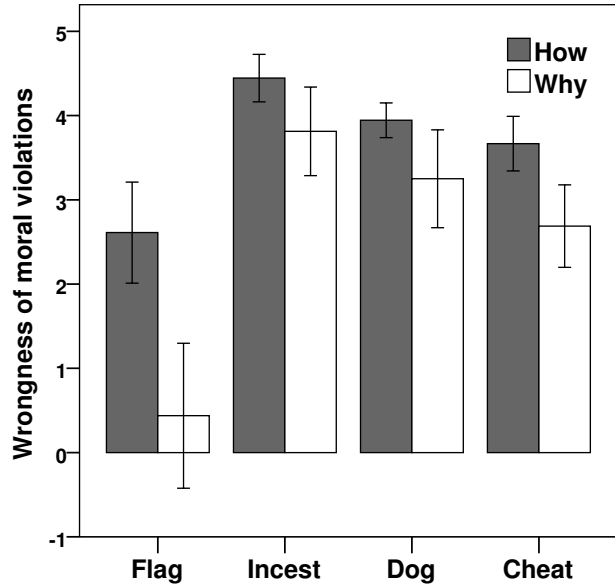
Figure 1: *Left panel:* Diagram directing subjects to think increasingly abstractly (high-level construals) about a given mundane activity. *Right panel:* Diagram directing subjects to think increasingly concretely (low-level construals) about a given mundane activity.



dition completed a diagram of vertically aligned boxes that began at the bottom of the page and were connected by upward arrows labeled “why?” (see Figure 1, left panel) to consider three increasingly abstract reasons why they would improve and maintain their physical health. The box at the bottom of the diagram was filled in with the statement, “Improve and maintain health.” Subjects were instructed to write down a response in the box just above the bottom one, answering the question of why they would improve and maintain health. On completing their first reason, they were to write down a second response in the box just above the box they had just completed, meaning that they were prompted to provide a reason for their first responses. For example, a subject initially answered “Study hard” would next be prompted to ask him/herself, “Why do I study hard?” After providing the reason, subjects were then prompted again by the diagram to ask themselves to insert their reason until they had given four responses in this manner.

Subjects in low-level condition completed a diagram of vertically aligned boxes that began at the top of the page and were connected by downward arrows labeled “how?” (see Figure 1, right panel) to plan three increasingly con-

Figure 2: Rating scores of moral judgments on wrongness of the four moral transgressions by levels of construal from Study 1. Higher numbers indicate more unacceptable ratings and harsher moral judgments.



crete means by which they could improve and maintain their physical health. For example, a subject who wrote “Eat healthy food” would be prompted to answer “How do I eat health food?” and so on until four responses were provided.

## 2.2 Methods

### 2.2.1 Subjects

34 Northwestern students (12 males, 22 females) from various academic programs participated in this experiment on a voluntary basis. All the subjects completed the study independently. We included the gender of subjects as a factor for all of the analyses but no reliable effects were observed, and gender is not discussed further.

### 2.2.2 Materials and procedure

This study used a 2 construal level (high-level versus low-level) between-subjects design. All instructions and tasks were presented on a paper questionnaire. As a cover story, subjects were told that they would be completing materials for two independent studies. They were randomly assigned to an exercise designed to manipulate construal levels. Half of the subjects were procedurally primed to use high-level construals by generating answers as to *why* they accomplished a given action. The other half were primed to use low-level construals by

thinking about questions related to *how* they implemented a given action.

Subjects were then presented with what was ostensibly the second of two independent studies. They were instructed to evaluate four short scenarios, each of which depicted a moral violation: a woman cleaning the house with an old national flag, two siblings committing sexual intercourse, a neighbor eating his dead dog, and a student cheating on an exam (adapted from Haidt [2001] and Haidt, Koller, & Dias [1993] and used by Eyal et al. [2008]; further details about all the scenarios are available in the Appendix A). Subjects' moral judgments for the behavior described in each scenario were measured on an 11-point scales from  $-5$  (extremely unacceptable) to  $5$  (extremely acceptable), indicating how morally acceptable they think that behavior would be.

### 2.3 Results and discussion

All the mean ratings were negative and rating scores were reverse coded into positive scores by multiplying the scores by  $-1$  for clarity of presentation. Higher rating indicates harsher moral judgment. A 2 (between-subjects factor: high-level versus low-level construal) by 4 (within-subjects factor: scenario) mixed design ANOVA was conducted on the moral judgments. The main effect of construal level was statistically significant,  $F(1, 32) = 9.88, p = .004$ ; subjects in the high-level condition made less severe judgments (Mean = 2.547, SD = 1.184) than those in the low-level condition (Mean = 3.667, SD = .887; see Figure 2). That is, subjects exposed to *why* questions showed a reduced tendency to evaluate infractions harshly compared with those exposed to *how* questions. The main effect of scenarios was also significant,  $F(3, 32) = 9.681, p < .001$ , meaning that some behaviors were judged more negatively than others. The interaction between level of construal and scenario was not significant ( $F < 1$ ). Apparently the effect of construal levels on moral judgment did not differ across scenarios.

Study 1 shows that low-level construals lead to harsher condemnation for moral transgressions as compared to high-level construals. This pattern, however, seems contradictory to that observed by Eyal et al, considering that construal levels should have similar effects as psychological distance. Furthermore, the present study used the same scenarios as those employed by Eyal et al. Before addressing this apparent inconsistency, it is important to put the present results on firmer footing. Note, for example, that direct evidence that subjects in high- versus low-level conditions were indeed representing the scenarios at different levels of abstraction is still lacking. In Study 2, we also sought to illustrate the effect of construal levels on judgments to relatively more familiar forms of misconduct that college students might commonly con-

front.

## 3 Study 2

Study 2 was designed to replicate and to provide convergent evidence for our prior finding that low-level construals are associated with more extreme moral judgment than high-level construals. Instead of using unrealistic behaviors, we used two different scenarios involving morally questionable acts that were potentially relevant to everyday college life. We also asked subjects to recall what they memorized from each scenario so that their mental representations could be assessed. We predicted that high-level construals should be associated with the use of more abstract language (Semin & Smith, 1999).

### 3.1 Method

#### 3.1.1 Subjects

46 Northwestern University undergraduates (22 males, 23 females, and 1 unknown), who enrolled in an introductory psychology course, participated in partial fulfillment of a course requirement. Their average age was 19 (SD=2.1) years.

#### 3.1.2 Materials and procedure

Students were tested in groups of 1 to 4 by a female experimenter blind to the experimental condition. Students were randomly assigned to either *how* or *why* conditions. The procedure was similar as in Study 1 except for the following changes. First, only the "*how*" or "*why*" construal level priming was conducted on a paper questionnaire and all other tasks were completed on computers. Second, a recall task was included either before or after the judgment task. All the subjects were asked to recall the content of each scenario, which was designed to give us some information of how subjects mentally represented the scenarios they read. For each scenario, half of the subjects were asked to indicate their moral judgment prior to their recall responses, and the remaining half completed these measures in the reverse order. Finally, subjects evaluated each behavior on a 6-point scale ranging from 1 (extremely unacceptable) to 5 (extremely acceptable).

Subjects read two scenarios depicting questionable acts related to familiar contexts that college students might confront (see Appendix B for details). The order of scenarios was randomly determined for each subject by the computer program, MediaLab (Jarvis, 2000). One scenario was that one girl abandoned her friend in great danger of alcohol poisoning. The other was about a se-

nior having intercourse with a guy with whom her friend wanted to start a relationship.

### 3.2 Results and discussion

There was no effect of item order, or whether or not subjects performed the recall task prior to making moral judgment. All subsequent analyses were performed collapsing across these two variables. We reverse scored subjects' ratings so that higher rating scores indicated harsher judgments. A mixed ANOVA with construal levels (high versus low) as a between-group factor and scenario as a within-group factor showed that the main effect of construal levels was significant,  $F(1, 44) = 5.083$ ,  $p = .029$ . Students in low-level condition (Mean = 4.522, SD = .384) judged the same moral transgression as less acceptable than their counterparts in high-level condition (Mean = 4.174, SD = .633). The main effect of scenario type achieved significance as well,  $F(1, 44) = 4.348$ ,  $p < .05$ , and the priming effect on moral judgment was not moderated by scenario type ( $F < 1$ ).

In addition, we analyzed recall descriptions for abstractness of language, using the coding scheme developed for the Linguistic Categorization Model (Semin & Felder, 1988). Two judges who were blind to the conditions coded each predicate as belonging to one of four linguistic categories: adjective (e.g., responsible), state verb (SV; e.g., love), interpretive action verb (IAV; e.g., betray), or descriptive action verb (DAV; e.g., call). It has been shown that these four linguistic categories are arranged along a dimension of abstractness to concreteness, with adjectives being the most abstract and DAVs being the most concrete (Semin & Fiedler, 1988). We used a 1,2,3,4 weighting scheme to convert these categories to a numeric measure of abstraction (Fujita, Henderson, Eng, Trope, & Liberman, 2006) and calculated a weighted abstractness index score for each subject by dividing each weighted score by the number of coded predicates in the description.

The index scores calculated by the two judges' ratings were highly correlated,  $r = .822$ ,  $p < .001$ . Discrepancies were resolved through discussion to create a single index. Subjects who were primed to take high-level construals used more abstract language (Mean = 2.04, SD = .364) than those who were primed to take low-level construals (Mean = 1.77, SD = .442),  $t(43) = 2.21$ ,  $p = .033$ . This result provides a manipulation check for the priming conditions.

Study 2 replicated and extended the results of Study 1; subjects in high-level condition expressed less negative reactions toward questionable acts than those in low-level condition. We also demonstrated that subjects at low-level construals displayed an increased tendency to describe the act with concrete language.

## 4 Study 3

The main objective of Study 3 was to test the effect of construal levels on moral judgment of virtuous behaviors. Based on the previous two studies, we hypothesized that subjects at high-level construals would show less positive attitudes toward virtuous acts than those at low-level construals.

### 4.1 Methods

#### 4.1.1 Subjects

32 undergraduate students from Northwestern University (12 males, 20 females) took part in the experiment in partial fulfillment of a requirement in an introductory psychology course. Their average age was 19.6 years.

#### 4.1.2 Materials and procedure

This experiment was conducted in sessions involving 1 to 4 subjects. All instructions and tasks were presented on a paper questionnaire. Subjects were randomly assigned to one of the two construal level conditions using the same why versus how priming manipulation as before. All the subjects were then presented with two scenarios involving two morally positive behaviors (see Appendix C for details). After reading each scenario, subjects evaluated how moral the behavior was on a 6-point scale ranging from 1 (not very moral) to 6 (very moral).

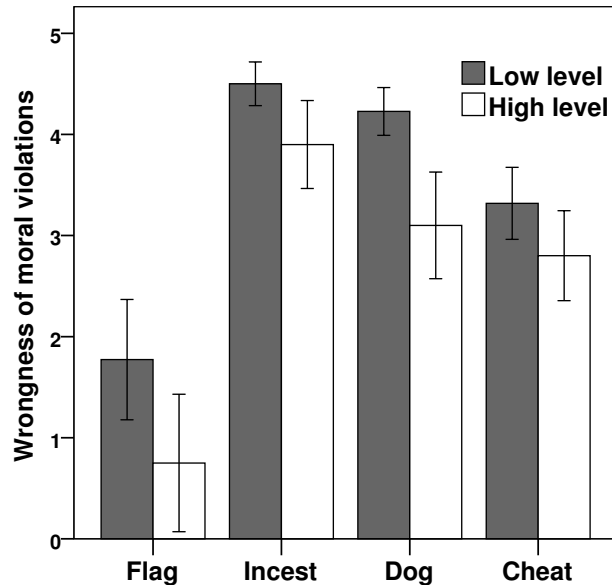
### 4.2 Results and discussion

A construal level (between-subjects factor: high versus low)  $\times$  scenario (within-subjects factor) mixed ANOVA indicated that the main effect of construal levels was significant,  $F(1, 30) = 5.98$ ,  $p = .021$ . Subjects tended to show more favorable attitudes toward virtuous behaviors when primed with low-level construals (Mean = 4.75, SD = .632) than when primed with high-level construals (Mean = 4.03, SD = .991). Neither scenario nor its interaction with construal level was reliable ( $F_s < 1$ ). These results provide further evidence for our notion that low-level construals are more associated with extreme moral judgment even to virtuous behaviors.

## 5 Study 4

In Study 4, a different priming technique—word generation—was used to manipulate construal levels. Prior research indicates that generating superordinate category labels activates abstract, high-level construals, whereas considering subordinate exemplars activates concrete, low-level construals (Liberman, et al., 2002).

Figure 3: Rating scores of moral judgments on wrongness of the four moral transgressions by levels of construal from Study 4. Higher numbers indicate more unacceptable ratings and harsher moral judgments.



The word-generation task has been successfully used to induce high- versus low-level construals in previous studies (e.g., Fujita et al., 2006; Henderson & Trope, 2009).

## 5.1 Methods

### 5.1.1 Subjects

Subjects were 42 Northwestern undergraduate participants in partial fulfillment of a course requirement. All the subjects were tested in small groups of one to four people.

### 5.1.2 Materials and procedure

We adapted the word-generation procedure developed by Henderson and Trope (2009). As a cover story, all subjects were told that the word-generation task examines whether thinking about objects in different manners can influence how people organize knowledge about basic objects. A random half of subjects was assigned to the high-level condition and instructed to generate four increasingly abstract superordinate category labels for the three target words (i.e., dogs, birds, and fish) by answering the question, “\_\_\_\_\_ is an example of what?” In the low-level condition, the other half were instructed to generate four increasingly concrete subordinate exemplars of dogs, birds, and fish by answering the question “An example of \_\_\_\_\_ is what?” Before they started with the

priming manipulation, we presented subjects in each condition with an example of how one might go about generating either superordinate category labels or subordinate exemplars of three unrelated nouns—forks, knives, and spoons.

After the construal level manipulation, subjects were presented with a supposedly unrelated questionnaire that included the same scenarios used in Study 1 (and by Eyal et al.), and asked to judge the behavior on the same 11-point scale ranging from  $-5$  (extremely unacceptable) to  $5$  (extremely acceptable).

## 5.2 Results and discussion

All judgments were reverse coded. A 2 (between-subjects factor: high-level versus low-level construal) by 4 (within-subjects factor: scenario) mixed design ANOVA revealed a main effect of construal level,  $F(1, 40) = 5.381, p = .026$ . Students in the high-level condition made less harsh judgments (Mean = 2.64, SD = 1.231) than those in the low-level condition (Mean = 3.45, SD = .822; Figure 3). In other words subjects generating superordinate category labels gave less extreme moral judgments than those generating subordinate exemplars. The main effect of scenarios was also significant,  $F(1, 40) = 6.503, p = .015$ , but the interaction between level of construal and scenario was not ( $F < 1$ ).

## 6 Study 5

All four studies presented so far found that higher-level construals led to less extreme judgments than lower-level construals. This pattern held for both positive and negative behaviors and across two different priming manipulations. The apparent robustness of the present results flies in the face of the Eyal et al. observations that greater psychological distance led to more, not less extreme judgment. Our findings are surprising given that previous literature has demonstrated a strong link between psychological distance and construal levels (Liberman et al., 2002). However, in light of some research suggesting that psychological distance may have effects independent of construal levels, it seems possible that direct priming of construal levels yields differing results than manipulating psychological distance (Williams, Stein, & Galguera, 2012).

Given that all four studies in Eyal et al. paper were conducted in Israel and our subjects were all Northwestern University undergraduates, we also considered the possibility that we had been observing a cultural difference. Thanks to the support and cooperation of Tal Eyal we began to explore procedural and cultural differences between our studies and those of Eyal et al. Study 5 ad-

dresses methodological and procedural differences. It is possible that the “how (versus why) manipulation” leads to a vivid, evocative representation that triggers strong moral judgments. If so, other ways of manipulating construal level may yield a different pattern of results.<sup>3</sup> Study 5 was an exact replication of Study 2 of Eyal et al.<sup>4</sup> If there is something special about the “how versus why” procedure then we might now observe that greater distance is associated with more extreme moral judgments.

### 6.0.1 Subjects

Thirty-six Northwestern students voluntarily participated in this experiment. They were approached by a female experimenter who was blind to the hypothesis at the university student center. All the subjects were tested individually. After the experiment, they were thanked and debriefed.

### 6.0.2 Materials and procedure

This study was an exact replication of the Study 2 in Eyal et al (2008). Three scenarios were involved (flag, dog, and incest). The temporal distance manipulation consisted of having the subjects envision the scenarios as happening tomorrow (near future condition) or a year from now (distant future condition). After reading each scenario, subjects judged whether or not this action would be okay on an 11-point scale from  $-5$  (not at all okay) to  $5$  (perfectly okay).

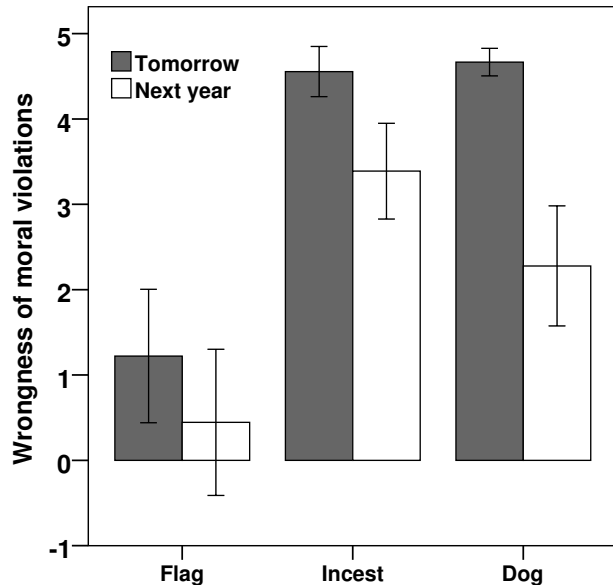
## 6.1 Results and discussion

We submitted the reversely-coded responses to a temporal distance (near versus distant)  $\times$  scenario mixed ANOVA. The main effect of temporal distance was significant,  $F(1, 34) = 5.791$ ,  $p = .022$ . Consistent with Studies 1–4 but inconsistent with Study 2 of Eyal et al, 2008, in the distant future condition (Mean = 3.48, SD = 1.378) led to less harsh moral judgments than the near future condition (Mean = 2.04, SD = 2.142; see Fig. 4). No interaction between temporal distance and scenario emerged ( $F < 1$ ), suggesting that the direction of construal level effect was not moderated by scenarios. These data undermine the idea that construal levels exert a different influence on moral judgments than psychological distance because once again we find that temporal closeness is associated with harsher moral judgments.

<sup>3</sup>We also thank Nira Liberman for suggesting that construal levels might produce different effects on moral judgment not seen in other distance manipulations.

<sup>4</sup>Tal Eyal kindly made the instructions and procedures available to us and translated the procedures into English where appropriate.

Figure 4: Rating scores of moral judgments on wrongness of the four moral transgressions by levels of construal from Study 5. Higher numbers indicate more unacceptable ratings and harsher moral judgments.



## 7 General discussion

Traditionally approaches to moral psychology are silent with regards to the effect of mental representations. Moving beyond research that has focused on what features of behavior shape moral judgment, CLT has provided a new perspective to investigate how moral judgment may be affected by people’s mental construe of certain events. Based on Eyal et al. (2008), we set out to extend the effect of psychological distances on moral judgment to a different but theoretically similar task with a more direct manipulation of construal levels. However, the initial pattern we observed was opposite to what would be expected based on previous literature.

Across four studies with a variety of experimental manipulations of construal levels and different scenarios, we consistently found that low level construals lead to more extreme moral judgments than high level construals. Those answering a series of “how” questions not only judged “taboo behaviors” (Study 1) as well as common misconducts (Study 2) more harshly, but also gave more positive evaluations to virtuous behaviors (Study 3). Similarly, after generating subordinate exemplars of some concepts, the same transgression was seen as worse (Study 4). Since our findings are in apparent contradiction to the pattern of results reported in the Eyal et al. paper, as the first step to uncover the possible explanations for the seemingly contradictory results, with the help of Tal Eyal, we tried an exact replication of their

Study 2. In contrast to the Eyal et al. results we still found that moral transgressions were judged more harshly when happening in the near future than in the distant future (Study 5).

Eyal and colleagues have also tried to replicate two of our experiments (i.e., Studies 1 and 4) by translating our materials from English to Hebrew and then conducting these studies with Israeli subjects. This first study (Study 1) produced findings suggesting that the *how* manipulation led to stronger moral judgments than the *why* manipulation, though the difference was short of statistical reliability and the second study (patterned after our Study 4) showed little if any influence of construal level. In short, the results so far are inconclusive.

There are several alternative (and not mutually exclusive) reasons to believe that lower-level construals may lead to more extreme evaluations of moral situations. First, it has been suggested that concrete and detailed information has more impact on judgment and decision making than merely giving abstract facts (Borgida & Nisbett, 1977). Schmid & Fiedler (1996) coded the transcripts from the Nuremberg trials of Nazi generals using the Linguistic Category Model (Semin & Fielder, 1988). They found that prosecutors strongly emphasized very concrete descriptions of the defendants' actions (e.g., favoring descriptive active verbs over state verbs or adjectives). Also, concreteness of descriptions can influence the perceived credibility of the statements. For example, Hansen and Wanke (2010) have shown that when an event is expressed in a concrete manner, individuals tend to rate the event as more probably true than when it is expressed in an abstract manner.

Another reason why taking a low-level perspective may intensify moral reactions comes from the notion that low-level construals are more "imageable" than high-level construals (Semin & Fiedler, 1988; 1999), and imageability correlates with easier simulation of an event (Carroll, 1978; Gregory, Cialdini, & Carpenter, 1982). In fact, Caruso and Gino (2011) have demonstrated that closing one's eyes can polarize ethical judgment, because doing so induces people to mentally simulate situations more extensively, and Amit and Greene (2012) also reported effects of visual imagery on judgment.

Indeed, several published papers have reported on inconsistent effects of construal levels or temporal distance on moral judgment and decision making since the Eyal et al. came out (e.g., Agerstrom & Bjorklund, 2009; Sanna, Lundberg, Parks, & Chang, 2010; Lammers, 2012). For example, Agerstrom and Bjorklund have found that people made harsher evaluations of other individuals who failed to act altruistically when this was highly desirable in a number of different situations that were temporally distant as compared to temporally close. This is consistent with the original Eyal et al. findings.

The focus of the Lammers (2012) paper was on hypocrisy but embedded in the design were four conceptual replications of Eyal et al.'s design. Lammers has demonstrated that subjects reacted less negatively to others' morally questionable behaviors when they took an abstract (high-level) perspective rather than a concrete (low-level) perspective. That is, in each case the results in the relevant condition were the opposite of Eyal et al. Lammers did not point out the non-replication or more properly speaking, opposite results.

Without any further investigation, our analyses of the basis for our current results necessarily take the form of speculation. First, if we take a closer look at the similarities and differences associated with these published studies, it is not difficult to see that they are not strictly comparable in terms of experimental manipulations. Some studies manipulated temporal distance and social distance whereas others used manipulations of construal levels. CLT contends that psychological distance is a major determinant of what level of mental construal is activated; and psychological distance and construal levels are often treated as identical, interchangeable constructs. It is, however, plausible that psychological distance and construal levels can exert differing effects on thinking and doing. A recent paper by Williams, Stein, and Galguera-Garcia (2012) has suggested that the emotional consequences of psychological distance for judgment and action are distinct from the emotional consequences of abstract thinking.

Moreover, an obvious major difference between the two sets of studies was that Eyal et al. studies were done with Israeli subjects whereas our experiments were conducted at Northwestern University. We are therefore led to consider culture as the potential critical factor in our differences, but invoking culture is, at best, a promissory note for a more specific explanation. One candidate cultural difference concerns responses to mitigating factors. Perhaps for Israeli subjects mitigating factors are just mitigating, but for Northwestern University students mitigating factors may have been perceived as "poor excuses" and discounted. For virtuous behaviors the mitigating factors would constitute obstacles to be overcome and on these grounds a lower level construal should lead to more positive judgments.

Another possible explanation could be a cultural difference in the understanding of how emotion is or should be involved in judgment and decision making between subjects in Israel and in U.S. For example, "learning always to have a good control of your emotions" in particular, is identified as highly crucial by Israeli but not American young adults (Mayseless & Scharf, 2003). It may be that the Israeli subjects in Eyal et al. studies may have tried preventing their affective reactions from influencing their judgment, which could lead to less condemna-



tion at lower construal levels. Some preliminary patterns were observed in a collaborative experiment done by Eyal with Israeli subjects, in which feelings of disgust did not significantly differ between high and low construal level conditions. In the present paper, we did not examine subjects' affective reactions toward each scenario; it may thus be useful to examine effects of mental construals on affective reactions in future studies.

For completeness, we will suggest that it is at least logically possible that higher level features were perceived differently by the two samples. Since CLT posits that abstractions of any given event can vary across different situations and that different goal or personal value would change what is central and what is peripheral and would lead to a different abstraction, it could also explain the differences between our findings and findings in Eyal et al. paper. Although the result of Study 2 shows that priming high-level construals may lead to abstract mental representations, a more complete content analysis of subjects' mental representations is still lacking. Future research may establish, in a more definitive way, whether subjects from US and Israel focus on different features and form different abstractions for the very same scenario.

Despite their apparent conflict, both the Eyal et al results and the present findings provide contributions to the understanding of the complex and multifaceted processes involved in moral judgment. As such, the present research provides further evidence that mental representation as a means of thinking of the social world also affects social reality. How something is mentally construed is sometimes at least as important as what is mentally construed.

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## Appendix A. Scenarios used in Studies 1, 4 and 5

### Flag

A woman is cleaning out her closet, and she finds an old and worn out Israeli flag. She decides to cut it up into small pieces and uses the rags to clean her house.

### Incest

A brother and sister are alone in the house and decide to make love just once. The sister is already taking birth control pills and the brother uses a condom. They both enjoy the act but decide not to do it again. They promise each other to keep it a secret.

### Dog

The neighbors' dog is hit by a car in front of their house and is killed. A member of the neighbors' family has heard that dog meat is delicious, and suggests cooking it and eating it for dinner.

### Cheat

A student who doesn't know the answers to some of the questions in an exam copies them from a student sitting in front of him. He doesn't get caught and he and the other student both get good grades.

## Appendix B. Scenarios used in Study 2

### Alcohol

"There are certain times," thought Lisa, "when you know things have gone from really bad to out of control." The party had started out fine, like they always do. And things got a little crazy, like they always do. But Lisa's friend Sarah, a small framed senior had had way too much alcohol and had been throwing up for an hour while going in and out of consciousness. There were no adults around and they were miles from the nearest town, at somebody's vacation home.

"We need to call 911 or take Sarah to the hospital now!" Lisa said to the group of five friends in the bathroom with Sarah. But another girl said, "We'd be in so much trouble, if we call 911. My parents cannot know I'm even here! If they find out, this will be my last time out of the house before leaving for college!" Lisa felt more scared than ever before in her life. She felt in her gut that Sarah was worse off than any of them could deal with, and if they didn't get help she might even die. The girls continued arguing. Finally, Lisa decided not to call 911 and left for home by herself.

### Betrayal

Stephanie always thought of herself as a good friend but two weeks ago she found herself in a pretty big dilemma. One of her good friends, Rebecca, had confided to her that she liked a guy in the sophomore class. Stephanie had offered to go talk to him for her. When Stephanie told the boy that Rebecca was interested in him, he told Stephanie he might be interested but also asked if Stephanie wanted to hang out that Saturday at a local party. It didn't seem like that big a deal when Stephanie said yes, but on Saturday, she let things get carried away and the two hooked up. She didn't even know

why she did it. It just seemed really cool that he was into her and, quite frankly, she just wasn't thinking.

To make matters worse, Rebecca came to her on Monday and asked if Stephanie knew anything about what was going on with this guy. She had heard that he had gotten together with someone else and Rebecca was upset. Stephanie knew she should just tell Rebecca the truth, but she didn't want to lose her friendship. She wanted to find a way where Rebecca wouldn't find out what happened and Stephanie wouldn't lose any friends. She had to think fast. She panicked, and told Rebecca she had heard a rumor that he had hooked up with a certain other girl in their class.

## Appendix C. Scenarios used in Study 3

### Chris

Chris was in his final year in college. He was a good student but his grades in Physics were quite low. One night he was guarding "the rock" for an organization to which he belongs, and although his shift was over and he had to attend a very important review session for an exam in his Physics class, but his replacement had something urgent and could only show up 40 minutes later. The rock was a well-known rock on campus that university organizations could paint to publicize upcoming events, and dominance of the rock was highly valued by campus organizations. Use of the rock could be reserved ahead of time but could also be "stolen" by other organizations if left unguarded. Chris knew that if he stayed and waited he would keep the rock "safe" but he would probably fail the class and delay his graduation. Finally, Chris decided to stay and guard the rock instead of going to the review.

### Kelsey

Kelsey started out at a good university two years ago, when Brenda, her sister, was already a junior at another university, at a time when their family could no longer afford to support two college students. They both started working to pay for their housing while their parents were still paying the tuition. They took out loans for tuition too.

After one year of college, Kelsey moved home to another city and took classes at a local community college instead and started working full time. She did this by choice and quietly let the whole family think that she wanted to move home anyway, that it was for her as much as for their parents' financial situation. Over the past year, Brenda continued to receive any support that their parents could give. Not until Brenda's graduation, did the family realize that Kelsey was waitressing full time and saving to go back to her old university. Kelsey was actually saving up for her own college education, and making a sacrifice so that Brenda could finish up her last year.