

How do we assign punishment? The impact of minimal and maximal standards on the  
evaluation of deviants

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## Abstract

To explain the determinants of negative behavior towards deviants (e.g., punishment), we examine how people evaluate others on the basis of two types of standards (minimal, maximal). Minimal standards focus on an absolute cut off point for appropriate behavior, and accordingly the evaluation of others varies dichotomously between acceptable or unacceptable. Maximal standards focus on the degree of deviation from that standard, and accordingly the evaluation of others varies gradually from positive to less positive. This framework leads to the prediction that violation of minimal standards should elicit punishment regardless of the degree of deviation, whereas punishment in response to violations of maximal standards should depend on the degree of deviation. Four studies assessed or manipulated the type of standard and degree of deviation displayed by a target. Results consistently showed the expected interaction between type of standard (minimal, maximal) and degree of deviation on punishment behavior.

(147 words)

In Western societies, torture is generally considered unacceptable. Despite this, there may be specific instances in which debates arise over whether torture has to be absolutely banned or whether this could be exerted as last resort and harm should be used only as much as necessary. In 2002 this very debate erupted in Germany after the vice president of the Frankfurt police ordered the torture of a suspected child abductor. Although there was a general consensus that torture cannot be condoned, there was disagreement about whether torture should be considered completely unacceptable or whether it was acceptable given certain circumstances. This debate extended to the issue of whether police officers involved in torture should be punished absolutely or whether punishment should depend on the level of pain inflicted. This example illustrates that one standard (no torture) can be conceived of as something absolute (what we term a “minimal standard”) or as something to be avoided or approached incrementally (a “maximal standard”). Moreover, how one conceives of a given standard (i.e., as minimal or maximal) may reflect rather stable individual tendencies or stability that arises from social consensus (e.g., Fritsche, Kessler, Mummendey, & Neumann, 2009). Alternatively, conceptions of standards may vary in response to the specifics of a situation.

In this article, we differentiate between these two points of reference and consider how these might guide judgments of people and events in fundamentally different ways. Specifically, we argue that the first reference point, a *minimal standard*, focuses on a cut-off point leading to an either-or evaluation (e.g., acceptable/not acceptable). The second type of reference point, a *maximal standard*, focuses on the degree of deviation from a reference point, leading to a graded evaluation ranging from positive to negative. The present research reports the results of four studies that support the distinction between these two kinds of standards in relation to the punishment of deviants.

### Minimal and Maximal Standards

Higgins (1990) defines standards as “a criterion or rule established by experience, desires, or authority for the measure of quantity and extent, or quality and value” (p.302; see also Biernat & Eidelman, 2007 for a comprehensive review on standards). This definition foreshadows the distinction between minimal standards (leading to judgments about “quality and value”) and maximal standards (leading to judgments of “quantity and extent”). In an influential review, Brendl and Higgins (1996) proposed that some standards define a point above which events are seen as positive or non-negative and below this point, events are seen as non-positive or negative. Other standards define a point that can be approached or avoided gradually which leads to a graded assignment of valence to events depending on the closeness to the standard. The ideas of Brendl and Higgins (1996) were further developed into the conception of regulatory focus (see Higgins, 1997, 1999). Regulatory focus differentiates between two motivational orientations focusing either on the presence or absence of positive events (promotion) or negative events (prevention) when people pursue their goals.

In contrast to regulatory focus, we like to pursue the distinction between “quality and value” and “quantity and extend” with the focus on a minimal standard as an cut-off point leading to an either-or evaluation (acceptable/not acceptable) and to a maximal standard as a reference point that can be approximated leading to a graded evaluation. This distinction is also consistent with the conception of Gould (1939), who introduced the idea of “minimal goals” as goals that people are trying to exceed and “maximal goals” as goals that people try to approximate. Along these lines, in the goal-setting literature minimal goals are often set as the lowest level of performance that would be satisfactory, whereas maximal are set as the high level of performance one should aspire to approximate (Battle, 1965; Rotter, 1954). Although this is clearly compatible with the distinction between minimal and maximal

standards, when discussed in this way the level of attempted performance (low versus high) is conflated with the way these goals can be approached (minimal versus maximal).

Similarly, Boldero and Francis (2002, see also Tenbrunsel, Wade-Benzoni, Messick, & Bazerman, 2000) distinguish between goals and standards. According to their perspective, evaluations with reference to standards lead to the assignment of valence according to the perceived discrepancy between actual state of affairs and the perceived standard. Evaluations made with reference to goals, are instead said to lead to the assignment of valence according to the movement towards or away from the goal. However, our distinction between minimal and maximal standards is independent of the differentiation between standards and goals because either could be conceived of as minimal or maximal.

Biernat and colleagues (Biernat, 2003; Biernat & Manis, 1994; Biernat, Manis, & Nelson, 1991; Biernat & Kobrynowicz, 1997) developed the idea that standards are sometimes adjusted to initial categorizations leading to disparity between judgments made on subjective versus objective measures. For instance, a woman's sport competency may be judged higher than the competency of a man. However, in a selection for a sport team, the man may still be preferred. Here, the subjective judgment of sport competency is adjusted to reflect category-based standards (i.e., based on gender) whereas a common judgmental standard is applied when men and women are compared for selection in a sports team. In our approach, we share the assumption that standards are not always fixed but often adapted to the social context (e.g., social categories). However, we would like to suggest that both subjective as well as objective standards can be conceived of as either minimal or maximal standards.

Distinctions between categorical versus relative thinking are also evident in the categorization literature. Events and individuals are often evaluated with reference to a category to which they seem to belong. Category membership can be determined by reference to a prototype of the category (e.g., Rosch, Mervis, Gray, Johnson, & Boyes-Braem, 1976).

When prototypes are applied, the degree of category membership is determined by their closeness to the category prototype (Mummendey & Wenzel, 1999; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), leading to a graded structure of categories (Barsalou, 1992). In contrast to prototype-based thinking, group membership might instead be determined by the presence or absence of necessary and sufficient features (e.g., Geeraerts, 1986; Rips, 2001). The lack of a necessary feature leads to the clear exclusion of an individual from the category.

Finally, this type of distinction can also be found in the psychology of moral decisions. Generally, research distinguishes between utilitarian or consequential approaches and deontological or absolute approaches (e.g., Greene, 2007). In utilitarian approaches, values are conceived of as subject to trade-offs with other conflicting values (e.g., how much do we have to invest for environmental issues vs. how much do we have to invest to reduce unemployment) in order to maximize an overall good. In contrast, deontological approaches conceptualize some values as absolute where trade-offs are inconceivable (e.g., you can not put a price on human life) which sometimes leads to less optimal decisions (as perceived from a utilitarian perspective). This deontological approach to values is most developed in the conception of protected values (Baron & Spranca, 1997), sacred values (Tetlock, Kristel, Elson, Green, & Lerner, 2000; Tetlock, 2003), or taboo values (Lichtenstein, Gregory, & Irwin, 2007). According to Baron and Spranca (1997), protected values are characterized by quantity insensitivity, agent relativity, moral obligation, and moral emotions. Protected values reduce framing effects (e.g., Tanner, Medin, & Iliev, 2008), foster the reaffirmation of values after thinking about their violation (e.g., “moral cleansing”; Tetlock et al, 2000), and affect decisions on omissions and actions (e.g., Baron, & Ritov, 2004).

### *The present research*

Along the lines of the above literature, we propose distinction between two ways of thinking about standards that should have different consequences for how standard-violating

behavior is judged and responded to. Cutting across the literatures on goals, standards, categorization, and moral reasoning, there seems to be a distinction between thinking that is categorical and either-or in nature and thinking that is incremental and relative in nature. Although it emerges from several literatures, given our interest in how these different modes of thinking might guide evaluations of others, we refer to this as the difference between minimal and maximal standards (rather than, for example, goals; e.g., Brendl & Higgins, 1996)<sup>1</sup>. Synthesizing the above ideas, we suggest that when people conceive of some reference point for behavior as a minimal standard, they should differentiate between behaviors that meet the standard versus behavior that violates the standard. Accordingly, evaluations of others according to minimal standards should lead to judgments of behavior as acceptable versus unacceptable, respectively. When people instead conceive of the reference point for behavior as a maximal standard, they should focus on an ideal or approachable point and judge behavior according to its relative closeness or distance from the reference point. This leads to a graded structure of evaluations. In short, minimal standards lead to either or evaluations whereas maximal standards lead to a graded range of evaluations.

Based on this distinction, we expect that when people evaluate deviations from standards and assign punishment to the individuals who display such deviant behavior, there should be an interaction between people's conception of the standards (minimal, maximal) and the degree of deviation exhibited by the target. People who conceive of a maximal standard should assign punishment according to the degree of deviation, whereas people who are guided by a minimal standard should punish uniformly regardless of the degree of deviation. The four studies presented below were designed to test this basic hypothesis. Study 1 examines this interaction by measuring participants' conception of a standard (i.e., as minimal versus maximal) and manipulating the degree of deviation from that standard displayed by a target. Study 2 replicates this using a design that manipulates, rather than

measures, the type of standard as well as the degree of deviance. Studies 3 and 4 then examine more closely people focused on a minimal standards really do not attend to the degree of deviation-- both in response to violations and non-violations of the minimal standard (i.e., they show an either or judgment). Study 4 also attempts to disentangle empirically the distinction between minimal and maximal standards and other related distinctions in the literature, namely prevention versus promotion focus.

### *Study 1*

Returning to the example with which we began this paper, the first two studies focused on the topic of whether torture should be considered legitimate during police interrogations in Germany. As mentioned earlier, there was recent and significant debate within Germany about whether torture should be considered as completely unacceptable (“no torture at all”, minimal standard) or should be taken as a last resort only (“ideally no torture”, maximal standard). Because of this debate we expected to find some variance in opinions on torture in police interrogations, reflecting different conceptions of this standard as minimal versus maximal. Against this backdrop, we presented participants with a fictional police officer who either threatened a suspect with a mild or severe torture. Participants were asked to judge how they evaluate the deviant (e.g., how much they would punish the police officer).

### *Method*

#### *Participants and Design*

One hundred and forty-seven volunteers (37% men, 61% women, 2% did not indicate their gender; mean age = 26 years, SD = 11.08) completed the experiment online. The majority of our participants (60%) were students (school, university, and apprenticeships), 27% were employees, and the others were unemployed, retired, or self-employed persons. Their perception of the prohibition of torture as minimal or maximal standards was assessed before



they read about a police interrogation portraying varying degrees of torture. Participants were randomly assigned conditions varying in the severity of the behavior portrayed (low, medium, high). Thus, we had a 2 (standard: minimal, maximal)  $\times$  3 (deviation: low, medium, high) between-subjects design.

### *Procedure and Materials*

Participants rated their attitudes toward torture during police interrogations in Germany on one item assessing minimal standard perception (i.e., “Inflicting pain during interrogations in Germany has to be abandoned as a matter of principle and in every case”) and on two items assessing maximal standards (i.e., “Inflicting pain during interrogations in Germany should only be allowed in exceptional cases and when the suspected person will not be seriously injured” and “Inflicting pain during interrogations in Germany should only be allowed in exceptional cases, when thereby imminent dangers for others can be averted”). Possible responses ranged from 1 (wrong) to 7 (right). Participants were categorized as holding a minimal standard when they had a high score on the minimal standard item (7) and low scores on the maximal standard items (scores 1 and 2), all others were categorized as holding maximal standard. This selection of cut-off points should ensure that participants actually perceive “no torture” as a minimal standard. Thirty-seven participants were categorized as holding a minimal standard on the issue of torture and 104 participants as holding a maximal standard. A k-means cluster analysis with two requested clusters (4 iterations) categorized the participants in a similar way confirming our categorization. Next, a fictional situation was described in which a suspect was tortured during a police interrogation in Germany. Torture (i.e., level of deviance) was manipulated at three levels (low: hit slightly with the hand; medium: hit hard with a fist; high: punched with the fist and kicked).

Evaluation of this deviant behavior (i.e., torture) was measured by attribute ratings (e.g., adequate, inhuman, acceptable, brutal, awful, excusable, incomprehensible, disgusting; 7-point answer scale;  $\alpha=.86$ ), as were judgments of how much the police officer should be punished (ranging from 1 = *not at all* to 7 = *very much*), and whether the officer should be excluded from his position (ranging from 1 = *not at all* to 7 = *absolutely*). Two additional dichotomous items (*yes* or *no*) asked “Should the police officer be suspended from the police?” The dependent measures correlated highly (.70 and above). Moreover, a factor analysis including all single items showed that the dependent measure is best represented by one factor as indicated by the Scree Plot. Accordingly, the dependent variables were z-transformed and averaged in a composite score with higher values indicating a more negative evaluation ( $\alpha=.81$ ).

### *Results and Discussion*

A two way analysis of variance (ANOVA) testing the effects of type of standard (minimal, maximal) and degree of deviance (low, medium, high) on evaluation of behavior showed a significant main effect of type of standard,  $F(1,135)=76.42, p < .001, \eta^2=.32$ , a main effect of degree of deviance,  $F(2,135)=6.46, p=.002, \eta^2=.05$ , and the expected interaction,  $F(2,135)=5.88, p=.004, \eta^2=.05$ . Bonferroni corrected comparisons of the means (Table 1) show that for participants who conceive of torture as minimal standard, there was no difference in the evaluation of behavior for the degree of deviation,  $p>.22$ . However, for participants who conceive of torture as maximal standard, the evaluation of behavior was significantly less negative in the low deviance condition compared to the medium and high deviance conditions,  $p=.001$  and  $p=.020$ , which did not differ significantly,  $p=.82$ . Confirming our hypotheses, participants with minimal standards evaluated behavior equally, whereas

participants with maximal standards evaluated the behavior less negative in the low deviance conditions than in the other conditions.

### *Study 2*

Although the Study 1 demonstrates that judgments are absolute (and undifferentiated) when minimal standards are applied versus varied when maximal standards are applied, there were a number of limitations. First, the absence of differences between the medium and high deviance condition among participants who applied the maximal standard, may indicate that the participants did not perceive the intended difference between the behaviors portrayed. To explore this, our second study assessed participants' perceptions of the degree of deviation displayed by the target. More important, in Study 1 the standard representation was measured. Accordingly, the causal effect of different standard representations on evaluation of the behavior has not been tested. To assess causality more directly, we manipulated type of standard in Study 2. Degree of deviance was again manipulated, with two levels. The effectiveness of this manipulation was assessed with a manipulation check.

### *Method*

#### *Participants and Design*

Seventy-four passengers on a German train participated voluntarily (42 female, 30 male, 2 did not indicate their gender; mean age=34.8 years, SD = 16.07). Participants were assigned randomly to one of the four conditions in a 2 (standard: minimal, maximal)  $\times$  2 (deviance: low, high) between-subjects design.

#### *Procedure and Materials*

To manipulate type of standard, we varied in the cover story two different alleged statements about torture by high-level judges in Germany. Both of these statements were

credible and were, in fact, based in real statements made by German judges. We assumed that framing torture in each of these ways would lead participants to think of torture in terms of minimal versus maximal standards. In the minimal standard condition, the quotation read “*On any global, European, and German level and without any exception, torture is ostracized, and all possibilities of justification are explicitly eliminated.*” In the maximal standard condition, the quotation read “*We can imagine situations, in which infliction or threat of torture may be permitted, namely if torture violates a good in order to save a higher order good*”.

As in the previous study, participants were informed of a police officer who had used torture against a suspect. The degree of severity of their behavior was manipulated with two levels (slapping with a hand, punching with a fist). As a manipulation check, severity of the officer’s behavior was rated on one item (“How severe is the behavior the police officer has shown?” on a 7-point scale). Again, participants were asked to evaluate the police officer’s behavior (e.g., how much the police office should be punished). Measures of the evaluation of behavior were identical to Study 1 with the exception that the deviant behavior was evaluated on three attributes only (i.e., adequate, incomprehensible, negative). As in Study 1, the dependent variables correlated highly. Moreover, a factor analysis including all single items showed that the dependent measure is best represented by one factor as indicated by the Scree Plot. Thus, the dependent variables were therefore  $z$ -transformed and averaged into one composite score indicating negative evaluation of the behavior (internal consistency,  $\alpha=.76$ ).

### *Results and Discussion*

Exploratory analysis showed that education (coded as university degree vs. not) and gender had significant effects on the negative evaluation of the behavior. Therefore these variables were included as covariates in further analyses. To check the manipulation of degree of deviation, we conducted a 2 (standard: minimal, maximal) x 2 (degree of deviance: low,

high) analysis of variance (ANCOVA) on perceived severity. The results show a significant main effect of degree of deviation,  $F(1, 56)=23.90, p=.001, \eta^2=.30$ , no significant main effect of type of standard,  $F(1, 56)=1.40, p=.64, \eta^2=.02$ , and no significant interaction effect,  $F<1$ . Thus the manipulation of degree of deviance was successful.

A 2 (standard: minimal, maximal) x 2 (degree of deviance: low, high) analysis of variance (ANCOVA) on negative evaluation of the behavior showed no significant main effect of standard type,  $F(1, 56)=2.69, p=.14, \eta^2=.04$ , a significant main effect of degree of deviance,  $F(1, 56)=6.18, p=.02, \eta^2=.08$ , and the expected significant interaction effect,  $F(1, 56)=4.04, p=.04, \eta^2=.05$ . In line with our hypotheses, simple main effect analyses of the means in Table 2 showed that degree of deviance had no effect in the minimal standard condition,  $F<1$ , but it did have an effect in the maximal standard condition,  $F(1,56)=10.97, p=.001, \eta^2=.16$ , where severe torture was evaluated more negatively than less severe torture.

These results replicate the pattern in Study 1 by revealing an interaction between type of standard (minimal, maximal) and degree of deviance (low, high) on the negative evaluation of the behavior of the deviant. Participants operating under a minimal standard evaluated the behavior negatively irrespective of degree of deviance, whereas participants operating under a maximal standard evaluated the behavior according to the perceived degree of deviance. Although the absolute degree of negative evaluation cannot be determined by the composite measure we used, evaluation of severe behavior was equivalent across the minimal and maximal standard conditions. Exploration of the single dependent variables also suggested that this was not due to ceiling effects preventing further variation in responses to severe behavior.

Although this study establishes a causal role of framing standards as minimal versus maximal in guiding responses to punishment, the framing manipulation we used was rather

blunt and we did not check the assumed success of this manipulation. To rule out demand effects as an alternative explanation of these findings, it would be necessary to employ a more subtle and unobtrusive manipulation of standard framing. This was the aim of the next study.

### *Study 3*

In Study 3 we tried to replicate the previous findings with a more subtle manipulation of type of standard. The previous two studies demonstrated that the type of standard (minimal versus maximal) has consequences for punishment assigned to negatively deviant behavior (i.e., absolute versus relative). However, it is not clear whether the effects of standard type would also guide responses to behavior that does not actually violate the standard. To extend the findings of our previous experiments, this study included deviant behaviors that do not violate the given standard. If minimal standards lead to either-or thinking, then behavior should be judged as either acceptable or unacceptable regardless of the degree of deviation. Behavior that is negative, but not actually violating the standard, should be judged as acceptable. If maximal standards are associated with graded, incremental thinking, then the degree of deviation is the criterion for assigning punishment. Thus negative behavior should be punished (mildly) even if it does not violate the standard.

To explore this idea we conducted a study in the context of smoking ban in train stations in Germany. A general law was introduced that only allows smoking near an ashtray or in pre-specified areas around an ashtray (these areas are arranged slightly differently in various German train stations). Within this scenario we wanted to examine how different degrees of deviance would be evaluated given different types of standard (minimal, maximal). We manipulated the degree of deviation by presenting four pictures of a smoker who was placed in varying distances from an ashtray (very close, close, distant, very distant; see Figure 1). To manipulate standard type, in the minimal standard condition a square was depicted around the

ashtray (see Figure 1) indicating the area in which smoking would be acceptable and where smoking would be unacceptable. In the maximal standard condition such a square was not included and deviations from the general smoking ban could only be assessed by estimating the distance of the smoker from the ashtray. Again, we expect an interaction between type of standard (minimal, maximal) and degree of deviation (e.g., distance from the ashtray) on punishment assigned to the smoker depicted. In more technical terms, we expect that in the minimal standard condition, smokers would be punished less in the no-violation condition (e.g., when they are within the square) than in the violation condition (e.g., when they are outside of the square) but that punishment will be equal within each of these conditions which would be represented statistically as a cubic contrast. In the maximal standard condition, we expect that the smokers will be punished according to their distance from the ashtray which would be represented as linear contrast, only.

### *Method*

#### *Participants*

Seventy-eight students of the University of Jena, Germany, (30 men, 48 women; mean age=24 years ranging between 18 and 38) participated voluntarily and were compensated with a chocolate bar.

#### *Design and Procedure*

We manipulated type of standard (minimal, maximal) between subjects and the degree of deviation (very close, close, distant, very distant from the ashtray) within subjects. These manipulations were delivered pictorially (see Figure 1). Specifically the presence of a minimal standard was manipulated by the presence of a marked space around the ashtray within which smoking was permitted (and outside of which smoking was not permitted). In the maximal standard condition, pictures did not include this marked space around the

ashtray. Degree of deviation was depicted by the distance the smoker stood from the ashtray as they smoked.

Participants were asked to evaluate the smoker portrayed at each level of severity on four items (e.g., “This person should be punished”, responses given on a 7 point scale ranging from 1=*does not apply* to 7=*applies very much*). The internal consistencies for the evaluation of the four deviant behaviors vary between  $\alpha=.79$  and  $\alpha=.91$ .

### *Results*

A two-way mixed factor analysis of variance (MANOVA) tested the effects of type of standard (minimal, maximal) as between subject factors, and the four deviant behaviors as within subject factor on the punishment recommendation (see Table 3 for means and standard deviations). The results showed a significant interaction effect between type of standard (minimal, maximal) and deviant behavior,  $F(3,73)=11.92$ ,  $p=.001$ ,  $\eta^2=.09$ . We repeated this analysis for the two type of standard conditions separately: In line with our hypotheses, the minimal standard condition revealed significant linear and quadratic contrasts,  $F(1,37)=46.94$ ,  $p<.001$ ,  $\eta^2=.44$ , and  $F(1,37)=6.81$ ,  $p=.013$ ,  $\eta^2=.01$ , respectively, and the expected cubic contrast,  $F(1,37)=25.25$ ,  $p=.001$ ,  $\eta^2=.06$ . This pattern suggests that participants' thinking in this condition was either-or: in evaluating the target they attended to the distinction between meeting or violating the minimal standard (see Figure 1). In the maximal standard condition only the linear contrast was significant,  $F(1,38)=17.76$ ,  $p<.001$ ,  $\eta^2=.20$ . The quadratic,  $F < 1$ , and the cubic contrast,  $F(1,38)=3.11$ ,  $p=.09$ ,  $\eta^2=.01$  were not significant. This pattern indicates that participants in this condition were more graded in their evaluations and attended to the degree of deviation from the maximal standard.

In order to examine whether the results of Study 1 and 2 could be replicated, we examined the effects of standard type on behavior that constituted violation versus non-



violations of the minimal standards. A 2 (standard: minimal, maximal)  $\times$  2 (deviant behavior) ANOVA on the two violations of the minimal standard showed no significant interaction,  $F < 1$ . The ANOVA on the behavior that did not violate the minimal standard showed the expected interaction between type of standard and deviant behavior,  $F(1,75)=8.27, p = .005, \eta^2=.09$ .

### *Discussion*

The results of Study 3 show that type of standard (minimal, maximal) can be manipulated pictorially via subtle difference in the presence of a designated space (minimal standard) or the absence of this explicitly designated space (maximal standard). Supporting our hypotheses, the results show a significant cubic contrast in the minimal standard condition, indicating differentiation between behaviors that were acceptable versus unacceptable with little attention to differentiation within each of these spaces. In contrast, in the maximal standard condition the linear contrast was significant, indicating differential punishment according to the degree of deviation displayed.

More focused analyses of responses to behavior that did not violate the minimal standard revealed the expected interaction between type of standard (minimal, maximal) and degree of deviation (very close, close) on assigned punishment. However, this interaction was not significant when responses to violations of the minimal standard were examined. This may be due to the long distance of the smoker from the ashtray (see Figure 1) which made the square around the ashtray less salient and may have led our participants to focus on this deviant behavior in a maximal way therefore placing additional weight on the distance from the ashtray.

One can argue that the introduction of a line around the ashtray would make a violation of a standard clearer and that therefore the particular increase in assigned punishment would

be a reflection of this ease in detecting a deviation. We would agree (see also Fritsche et al., 2009). It is one of the specific features of a minimal standard that a deviation (e.g., being outside of the limit set by a minimal standard) is much easier to detect and evaluate because all information about degrees of deviation are irrelevant. Tenbrunsel, Wade-Benzoni, Messick, and Bazerman (2000) nicely demonstrated in their studies that the introduction of a clear standard may lead to a rejection of a proposal despite its superiority in terms of an overall goal. Thus, minimal standards may ease the detection of a violation in contrast to a maximal standard in which people have to assess various degrees in order to arrive at a judgment.

However, in order to demonstrate that the difference between minimal and maximal standards also works for people who perceive the difference in degree of deviation we conducted a fourth study in which the degree of deviation was carefully controlled. Moreover, we tried to replicate the findings of study 3 (cubic versus linear contrast) and tried also to find evidence for the interaction between type of standard and degree of deviation in both areas (non-violations and violations of minimal standards).

#### *Study 4*

In Study 4 type of standard was manipulated with a mindset priming procedure (e.g., Stapel & Koomen, 2001). Again, we examined whether people with a minimal standard assign punishment irrespective of the degree of deviance because they are concerned with violations versus non-violations of a standard. In contrast, when people operate in terms of maximal standards, they are concerned with degrees of deviation and punish more with increasing deviation. As in Study 3, we assessed the effects of minimal and maximal standards in an area in which a minimal standard is violated and in an area in which a minimal standard is not violated.

A second goal of this study was to differentiate the minimal maximal standard distinction from other, related distinctions that exist in the literature. The minimal and maximal standard distinction was developed out of the basic ideas (Brendl & Higgins, 1996) that also have led to the development of regulatory focus (promotion, prevention focus; Higgins, 1997, 1999). Thus, to control for the possibility that regulatory focus may confound our distinction between minimal and maximal standards we orthogonally manipulated regulatory focus (promotion, prevention) and type of standard (minimal, maximal) in Study 4. We expect an interaction between type of standard and degree of deviation in the area representing a violation of a minimal standard and in the area representing a non-violation of a minimal standard. Moreover, we expect type of standard to have independent effects to regulatory focus.

*Pilot study on minimal standard violations and related degree of deviance*

In a pilot study, we attempted to select four behaviors (e.g., traffic offences) that vary in their perceived degree of deviation and whether they represent the violation of a minimal standard or not. Two traffic offences should be seen as violations of minimal standards, and the other two as not violating minimal standards.

Thirty nine participants rated the minimal standard character of 18 traffic offences (“How much would you agree that these things should not happen in any case”; 1=may happen to 7=should not happen in any case). In addition, participants rated the severity of the traffic offences (“How severe would you perceive such a behavior”; 1=rather harmless to 7=very severe). We selected four traffic offences that all differed significantly in severity in increasing order with “On a highway one car overtakes another car on the right side” (M=3.23) as the most harmless, “A driver is parking his car in a firemen’s approach” (M=3.92), “A driver is driving 70km/h in a 30km/h zone and endangers children who are

playing” (M=6.25) and “A drunk driver runs into a group of people and injures some of them seriously” as the most severe (M=6.64). In addition, the first two traffic offences were generally not seen as violations of minimal standard (M=3.79 and M=3.69, respectively), whereas the latter two were clearly violations of minimal standards (M=6.44 and M=6.87, respectively).

### *Method*

#### *Participants and Design*

Forty-one students at University of Jena (17 men, 24 women; mean age=21.85 years) participated voluntarily and were compensated with a chocolate bar. We manipulated type of standard (minimal, maximal) and regulatory focus (promotion, prevention) as a mindset. Participants rated the four traffic offences (2 violating a minimal standard and two not violating a minimal standard, all differ significantly in severity). This resulted in a 2 (standard: minimal, maximal)  $\times$  2 (regulatory focus: promotion, prevention) between subject and 4 (traffic offences) within subject mixed factor design.

#### *Procedure and Materials*

Type of standard and regulatory focus was manipulated with an adapted mindset procedure by Friedman and Förster (2001). Ostensibly as an unrelated study, a maze was given that depicted a cartoon mouse at an entrance of a maze. Participants were instructed to find the way for the mouse through the maze. In the promotion focus condition a piece of cheese was shown at the end of the maze (i.e., participants were engaged in an attainment scenario); in the prevention focus condition a raptor was hovering around the maze ready to catch the mouse and at the end of the maze a mouse hole symbolized the place of safety for the mouse (i.e., participants were engaged in an avoidance scenario). Orthogonal to this scenario, we manipulated type of standard (minimal, maximal). In the minimal standard

condition, participants read that the mouse had to run through the maze to get cheese or to be saved (i.e., attainment or avoidance was absolute). In the maximal standard condition, participants read that the further the mouse comes through the maze the more cheese she will get or the higher the likelihood of being saved (i.e., attainment or avoidance was incremental).

As mind set manipulations may dissipate very fast, we did not include a manipulation check in the original study but assessed the appropriateness of the mind set manipulation in a separate pilot study. We examined the effectiveness of the manipulation type of standard and regulatory focus in a two factorial design similar to the original study assessing the four conditions promotion/minimal, promotion/maximal, prevention/minimal, prevention/maximal. Sixty seven students of the University of Jena (45 female, 22 male; mean age=22.72 years) participated in the pilot study. They indicated their strategy on two items which assessed standard type (“I attempted to move completely through the maze” vs. “I attempted to move as far as possible through the maze”) and regulatory focus (“I attempted to move away from the entrance of the maze” vs. “I attempted to move towards the end of the maze”). Participants marked on a line to which of these alternatives they tended more (the measured distances from the midpoint of the line range between -47mm and 47mm). A two-way ANOVA with the between subject factors type of standard (minimal, maximal) and regulatory focus (promotion, prevention) showed a significant main effect of type of standard on the item assessing type of standard (minimal, maximal),  $F(1,63)=7.06$ ,  $p=.01$ , no other effect approached significance,  $F(1,63)<1.90$ ,  $p>.17$ . Concerning the regulatory focus item, a similar two way ANOVA showed a significant main effect of regulatory focus,  $F(1,63)=5.38$ ,  $p=.02$ , no other effect approached significance,  $F(1,63)=1.26$ ,  $p>.26$ . These results demonstrate that the participants understood the instructions and did what they were requested to do which would make our mind set manipulations successful.

Afterward working on the maze (the mind set manipulation), participants assigned punishment to the four critical traffic offences (ranging from 1=minor punishment to 7=very severe punishment). Finally, participants rated the traffic offences on whether they represented a violation of a minimal standard and on perceived severity on the same items as in the pilot study. Analyses confirmed that the traffic offences were perceived as in the Pilot Study. All four traffic offences differed significantly,  $t(79) > 2.10$ ,  $p < .04$ , in severity in increasing order with “On a highway one car overtakes another car on the right side” ( $M=3.61$ ) as the most harmless, “A driver is parking his car in a firemen’s approach” ( $M=4.15$ ), “A driver is driving 70km/h in a 30km/h zone and endangers children who are playing” ( $M=6.03$ ) and “A drunk driver runs into a group of people and injures some of them seriously” as the most severe ( $M=6.59$ ). Again, the first two traffic offences were generally not seen as violations of minimal standard ( $M=3.95$  and  $M=4.14$ , respectively), whereas the latter two were clearly violations of minimal standards ( $M=6.33$  and  $M=6.66$ , respectively). Moreover, the manipulation of type of standard (minimal, maximal) had no significant effect on perceived severity,  $F(1,39) < 1.45$ ,  $p > .24$ , and perceived violations of a minimal standard,  $F(1,39) < 2.02$ ,  $p > .17$ .

### *Results and Discussion*

A three-way mixed factor analysis of variance (MANOVA) tested the effects of type of standard (minimal, maximal), regulatory focus (promotion, prevention), and the four traffic offences on the assigned punishment. The results showed a significant interaction effect between type of standard (minimal, maximal) and traffic offences,  $F(3,35)=3.72$ ,  $p=.020$ ,  $\eta^2=.24$ . We repeated this analysis for the two types of standard conditions separately: In line with our hypotheses, the minimal standard condition revealed a significant linear and cubic contrast,  $F(1,19)=58.56$ ,  $p<.001$ ,  $\eta^2=.44$ , and  $F(1,19)=20.69$ ,  $p<.001$ ,  $\eta^2=.14$ , respectively. This indicates that participants attended only to the difference between meeting and violating

the minimal standard (see Figure 2). However, in the maximal standard condition only the linear contrast is significant,  $F(1,20)=106.12$ ,  $p<.001$ ,  $\eta^2=.64$ , indicating a graded assignment of punishment according to the degree of deviation.

In order to examine whether the results of Study 1 and 2 could be replicated, we examined the effects of type of standard within both areas of either violations of minimal standards or non-violations of minimal standards: Two 2 (standard: minimal, maximal)  $\times$  2 (regulatory focus: promotion, prevention)  $\times$  2(traffic offences) ANOVAs showed significant interactions between type of standard and traffic offence,  $F(1,37)=6.16$ ,  $p=.018$ ,  $\eta^2=.12$  and  $F(1,37)=4.27$ ,  $p=.046$ ,  $\eta^2=.09$ , respectively<sup>2</sup>. Study 4 showed that minimal and maximal standard mindsets could be manipulated with a performance instruction (completely passing the maze vs. as far as possible passing the maze). Replicating and extending the findings of Study 1 and 2, participants in the minimal standard condition did not punish according to the degree of deviation in either the area of violations of minimal standards or in the area of non-violations of minimal standards. In contrast, participants in the maximal standard condition assigned punishment according to the degree of deviation (all traffic offences are to different degrees deviations).

### *General Discussion*

Four studies consistently showed that people arrive at different judgments (e.g., the assignment of punishment to deviants) depending on the type of standard (minimal, maximal) that they apply in their judgment. People judging deviants relative to minimal standards do not care about the degree of deviation from the standard and therefore assign punishment according to whether a standard is met or violated. In contrast, people judging deviants relative to maximal standards care about the degree of deviation and therefore assign punishment according to the degree of deviation. Moreover, we showed that type of standards

can be assessed as inter-individual differences or manipulated by framing or mindset priming procedures.

Why do individuals assign punishment independently of the degree of deviation (insensitivity to quantity) when they are oriented on minimal standards and why do they care about the degree of deviation when they are oriented on maximal standards? Orientation to minimal standards may make it easier for people to detect violations of the standard. Thus, a minimal standard may be a heuristic cue for the detection of violation. In contrast, orientation to a maximal standard may lead to more effortful consideration of degrees of deviation. This perspective would suggest that minimal versus maximal standards maps onto distinctions between effortless versus effortful processing. However, we think that orientation to minimal standards may also lead to more thinking (e.g., such as rumination) about a violation thereby leading to a clear moral disapproval and to moral emotions (e.g., Baron & Spranca, 1997; Lücke, Kessler, Mummendey, & Berthold, 2009), which in turn mediate the relationship between perceived violation and punishment. Thus, the trigger may be intuitive or heuristic but the subsequent process of rumination may require a certain amount of cognitive effort.

Alternatively, according to Tenbrunsel and colleagues (2000), a minimal standard may direct people's attention to specific reference values, which leads to more mechanical decisions about whether the reference value has been met or not. In contrast, with maximal standards people may focus more globally on the maximization of a certain good (the maximal standard or maximum goal) and thereby assess events or people according to the actual degree of deviation. To demonstrate this possibility one would have to present complex kinds of deviation (with multiple dimensions). People orientated to minimal standards should punish an overall nicer person, for example, more severely than people oriented on a maximal standard. In contrast, people oriented on a maximal standard would assess the overall quality



of the deviant person, beyond their specific violation, and reflect this in their punishment assignment.

Our conception of minimal and maximal standards bears close relations to deontological and utilitarian approaches. Minimal standards relate deontological approaches as they lead to insensitivity to quantity (e.g., degree of deviation) as it is assumed in the conception of protected values (e.g., Baron & Spranca, 1997). Maximal standards are more closely related to utilitarian approaches. Whereas protected values (as one strong example for the deontological approach) have been mainly measured, our studies show that aspects of them (i.e., the insensitivity to quantity) can also be manipulated. Thus, our approach would stress the malleability of minimal and maximal standards. However, protected values are characterized by additional aspects (e.g., agent relativity, moral obligation) on which our approach has not focused as yet. Future research may reveal whether minimal and maximal standards also show some of the additional features by which protected values are characterized. This would extend the literature on moral decisions by demonstrating the context dependency of the subjective conception of moral values.

In the present studies we did not vary the specific point at which participants set their minimal standards. Such a manipulation would be important because it would demonstrate that the effects of minimal standards are not limited to a certain level but could vary independently. Future research may either let participants choose their level of minimal standards or manipulate these experimentally (see Lücke et al, 2008). We focused predominantly on deviations in a negative area (e.g., torture, traffic offences). Here, most of the studies focused on negativity of the intention and the seriousness of the offence as determinants of punishment (e.g., Carlsmith, Darley, & Robinson, 2002). This line of research is consistent with our notion of maximal standards and the graded structure of assigned

punishment. We believe that incorporating minimal standards will broaden our understanding of punishment (see Ritov & Baron, 1999).

The distinction between minimal and maximal standards may have a broad impact on interpersonal as well as on intergroup relations. In the interpersonal realm people perceiving a minimal standard violation may tend to react harsh and aggressively because they may perceive violating a minimal standard as having a bad personality compared to people perceiving the same behavior as a deviation from a maximal standard. In line with this speculation, Trafimow and Trafimow (1999) showed that violations of perfect duties (deontological duties) lead to a stronger tendency for person attributions compared to violations of imperfect duties. In intergroup relations, whenever an ingroup and an outgroup are evaluated according to a common standard (e.g., Mummendey & Wenzel, 1999) these standards are conceived of according to ingroup attributes which leads to the perception of outgroups as deviating from this common standard (e.g., Waldzus, Mummendey, & Wenzel, 2005). Here, it is of major importance whether such a common standard is conceived of as a minimal or a maximal standard (Berthold, Mummendey, Kessler, Lücke, & Schubert, 2008). Whereas deviations from common maximal standards lead to the devaluation of an outgroup, violations of minimal standards may lead to social exclusion (Schubert, Mummendey, Waldzus, & Kessler, 2007).

Beside their theoretical implications, the presented studies shed some light on the importance of public debates like the discussion in Germany on whether torture should be banned or limited. These debates shape the societal consensus about what should be collectively banned and condemned and seen as absolutely unacceptable without even minor deviations (e.g., any torture) or what should be seen as an ideal (e.g., no torture) where degrees of deviations are important. Such a societal agreement establishes what generally has

to be punished and rejected uniformly (i.e., the minimal standards) and the areas in which subtle nuances are possible (i.e., standards that are maximal).

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*Author's Note*

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## Footnotes

<sup>1</sup> We call the proposed standards minimal or maximal standards instead of goals because they also serve for the evaluation of others. However, if one would conceptualize goals as “group goals” then the relevant other (ingroup members) are also included in the concept of goals. In addition, we stick to the labels “minimal” and “maximal” instead of others labels such as “absolute” or “relative” for several reasons. Minimal standards refer to a point of “minimal” requirements defining a threshold that one can pass or fail to pass. In contrast, maximal standards refer to reference points that are gradually approached or avoided whereby some quantity is progressively optimized (i.e., either gradually decreased or gradually increased). Moreover, the conception of “absolute standards” would imply that they are seen as more fixed (i.e., absolute) and less context dependent than “relative standards”. In contrast to this, we conceive of both minimal and maximal standards as context dependent and relative to an individual’s conception.

<sup>2</sup> Although the manipulation of regulatory focus seemed to be effective as the results of the pilot study indicates, the results of Study 4 revealed that regulatory focus had no significant main or interaction effects on assigned punishment in all analyses,  $F(1,37) > 1.32$ ,  $p < .36$ . This shows that the proposed distinction of minimal and maximal standards is independent of regulatory focus. Thus, we will not discuss the distinction between type of standard (minimal, maximal) and regulatory focus (promotion, prevention) in the remainder of the article.

*Table 1**Punishment (M, SE) as a Function of Type of Standard and Degree of Deviance (Study 1)*

		Degree of Deviance		
		Low	Medium	High
Type of	Minimal standard	.30 (.11) <sup>a</sup>	.26 (.11) <sup>a</sup>	.57 (.13) <sup>a</sup>
Standard	Maximal standard	-1.40 (.22) <sup>c</sup>	-.34 (.18) <sup>b</sup>	-.61 (.19) <sup>b</sup>

Note: Different superscripts denote significant differences between cells (Bonferroni corrected)

*Table 2**Punishment (M, SE) as a function of type of standard and degree of deviance (Study 2)*

		Degree of Deviance	
		Low	High
Type of	Minimal standard	.11 (.18)	.37 (.18)
Standard	Maximal standard	-.61 (.17)	.35 (.19)

*Note.* Means are adjusted for covariates gender and high school education.

*Table 3**Punishment (M, SD) as a function of type of standard and degree of deviance (Study 3)*

		Type of Standard	
		minimal	maximal
Degree of	Very close	1.97 (1.78)	2.62 (2.34)
Deviance	Close	1.92 (1.60)	2.92 (2.28)
	Distant	3.76 (1.98)	3.10 (2.29)
	Very distant	4.50 (1.83)	3.49 (2.36)

Maximal (left) and minimal (right) standard manipulation with increasing distance from the ashtray



Figure 1: Manipulation of type of standard (minimal, maximal) and degree of deviation (Study 3).

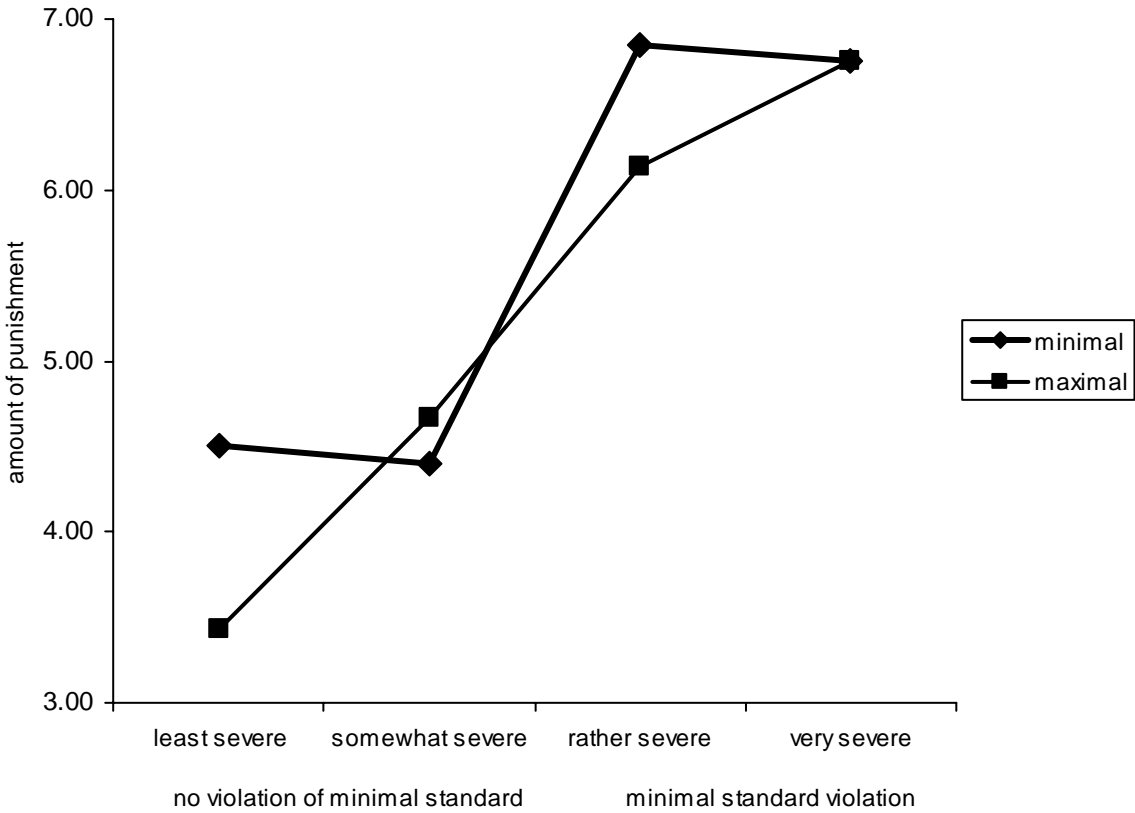


Figure 2: Punishment as a function of type of standard and kind of deviation (i.e., traffic offences) (Study 4)