

## Moral punishment in everyday life

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Moral Punishment in Everyday Life

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### Abstract

The present research investigated event-related, contextual, demographic, and dispositional predictors of the desire to punish perpetrators of immoral deeds in daily life, as well as connections among the desire to punish, moral emotions, and momentary well-being. The desire to punish was reliably predicted by linear gradients of social closeness to both the perpetrator (negative relationship) and the victim (positive relationship). Older rather than younger adults, conservatives rather than people with other political orientations, and individuals high rather than low in moral identity desired to punish perpetrators more harshly. The desire to punish was related to state anger, disgust, and embarrassment, and these were linked to lower momentary well-being. However, the negative effect of these emotions on well-being was partially compensated by a positive indirect pathway via heightened feelings of moral self-worth. Implications of the present field data for moral punishment research and the connection between morality and well-being are discussed.

[150 Words]

Keywords: Morality, Moral Punishment, Experience Sampling, Social Closeness

Whether a coworker claims your achievement for his own, your child disobeys you, or a stranger jumps the queue ahead of you, there are many situations in daily life in which we feel a desire or urge to punish someone for his or her moral transgression. The desire for moral punishment (also referred to as punitiveness) seems ubiquitous across cultures and fulfils an integral part of our evolved moral makeup as human beings. Assuming that the key purpose of moral systems is to orchestrate and coordinate social interactions, moral punishment plays an essential role in maintaining and reinforcing an established moral system (and the ensuing social harmony) as part of a “virtuous” cycle. Specifically, moral values set the abstract background from which moral rules and their corresponding legal regulations are derived to demarcate the proper from the improper way of conduct, the right from the wrong deed. To sanction immoral behavior and deter future wrongdoings, societies seek to identify and punish the perpetrators of immoral deeds. From the perspective of a virtuous cycle, moral punishment can thus be regarded as the corrective “whip” that acts as a negative reinforcer of desired values and (cooperative) behavior. Punishment is a corrective that is necessary to keep established moral systems intact (Fehr & Gächter, 2002; Rockenbach & Milinski, 2006).

### **Moral Punishment Research**

Scholars of morality have delved into the questions of *why* we punish offenders. The emerging consensus is that there are at least three possible motives or rationales at play, *retribution* of the wrong done, *prevention* of future transgressions, and *reformation* of the offender, even though lay people seem to primarily focus on the retribution rationale (Carlsmith, Darley, & Robinson, 2002; Darley, Carlsmith, & Robinson, 2000). Because moral punishment involves a relationship between offender and enforcers, moral punishment research can be divided into two major research foci. One focus is on the perpetrator’s cognitions, feelings, and behavior before and after a possible immoral act, asking questions such as: How do would-be-perpetrators simulate the negative consequences of their conduct, integrating moral (and legal) punishment into their cost-benefit analysis? Under what

conditions and in what form is moral punishment most effective at preventing (would-be) perpetrators from future wrongdoings? The other, complementary focus is on the cognitions, feelings, and behaviors of possible enforcers who are the victim of or observe/judge moral transgressions, asking questions such as: What are the key factors that determine how harshly or mildly we want to punish an offender? What obstacles and barriers keep people from punishing?, and so forth.

### **The Present Research**

In the present work, we adopt this second research focus, asking a number of basic research questions related to the antecedents and consequences of the *desire for punishment* in everyday life. Thus, rather than actual punishing behavior, the primary focus of this research is on the motivational basis for punishment for both conceptual and practical reasons. The broader literature on punishment rests on the assumption that the desire/motivation for punishment, a mental state, is a central predictor of actual punishment behavior, much in the same way as intentions are an important predictor of actual behavior in other areas of psychology (Ajzen, 1991; Armitage & Conner, 2001). Even though (or, precisely because) their correspondence may not be perfect, due to general and specific enactment constraints—including feasibility concerns, lack of opportunities, and delegation to authorities—getting a more fine-grained understanding of the motivational foundation of actual punishment is of interest in its own right. Psychologists and economists wanting to understand the function of (and ulterior motives behind) punitive sentiments as well as the neural systems that trigger the desire for punishment (e.g., Bone & Raihani, 2015; Carlsmith et al., 2002; Fehr & Gächter, 2002; Fehr & Rockenbach, 2004; Knoch, Gianotti, Baumgartner, & Fehr, 2010; McCullough, Kurzban, & Tabak, 2013) will benefit from a focus on the motivational basis underlying moral punishment.

Our approach is distinct from traditional punishment research in terms of its methodological approach. Traditional moral punishment research has mostly focused on

hypothetical scenarios, vignettes, and thought experiments to tap into the motivation to punish, as well as economic games and other experimental paradigms to study actual punishment in the laboratory. However, despite the control and standardization that these approaches enable, they are limited by the artificial nature of the stimuli used and the social relationships created, as well as the non-natural settings in which they are embedded. In spite of considerable scientific and practical interest in issues of moral punishment, little research has taken the study of moral punishment out of these artificial settings (for notable exceptions see, e.g., field research on moral punishment in lawmakers or field observation studies of direct and indirect punishment in public places Balafoutas, Nikiforakis, & Rockenbach, 2014, 2016; English, Mussweiler, & Strack, 2006). Our study is part of the current movement to study morality closer to where moral experiences actually happen. To this end, we utilized an ecologically valid approach, experience-sampling (Csikszentmihalyi & Larsen, 1987), to maximize the representativeness of—and thus the generalizability to—the settings and situations in which transgressions and the desire for punishment naturally occur. Experience-sampling entails the repeated, context-sensitive assessment of people’s thoughts, emotions, or behaviors as they occur in their everyday environments. By being as close as possible in time and space to when and where morally relevant situations occur, we sought to gain novel insights into the base rates, triggering conditions, and inter-individual differences of the desire for punishment and its associated emotional experiences.

### **Research Questions and Hypotheses**

Drawing on previously unpublished data and analyses from a project on Everyday Morality (Hofmann, Wisneski, Brandt, & Skitka, 2014), we address a number of key research questions regarding the desire for punishment in victims and observers in everyday life contexts.

**How frequently do people want to punish? Is punishment aligned with the perceived wrongness of the act?**

Very little is known about the base rates of the desire to punish moral offenders in daily life. The present dataset allows a rough approximation to this question. Specifically, we looked at the percentage of punishment desires as a proportion of the overall number of reported occasions and explored the distribution of strong and weak desires for punishment in the case a transgression was observed. We also investigated whether the desire to punish is aligned with the perceived wrongness (i.e., severity) of the immoral act, as basically all psychological accounts of punishment (i.e., retribution, prevention, reformation) predict. Thus, finding a significant relationship between perceived wrongness and the desire to punish would be consistent with the basic notion that lay people calibrate their desire to punish to how unjust they perceive the act to be as they navigate the everyday moral landscape.

### **Victim vs. Observer Perspective**

Morality and justice research has argued that it is important to consider the perspective of the adjudicator. Is he/she directly involved as a victim of the transgression, or is he/she indirectly involved as (a more or less neutral) observer of some wrongdoing? (Miller, 2001; Schmitt, Gollwitzer, Maes, & Arbach, 2005). In the present research, the victim (i.e., second-party) perspective was captured by asking participants to indicate whether they were the target of an immoral act; the observer (i.e., third-party) perspective was captured in two facets: (a) whether participants witnessed an immoral act in their immediate surroundings, or (b) whether they learned about an immoral act more indirectly such as through the media or gossip. One prediction was that punishment inclinations of victims, due to the higher degree of personal involvement and harm may be more intense than those of observers, consistent with some experimental games research comparing second- and third-party punishment (Fehr & Fischbacher, 2004; but see Leibbrandt & López-Pérez, 2012, who did not find such a general trend across ten economic games). However, these possible differences may not be very large, given others have argued that observers' reactions to the immorality they experience second hand can often be as passionate as reactions from the victim's perspective

(e.g., Miller, 2001). A further interesting question with regard to the two facets of third-party perspective was whether punishment judgments from witnessing immorality as a close bystander would be more similar in intensity to those of victims or more similar to those of more distant observers who merely learned about immorality through media or gossip.

### **Does Social Closeness to the Perpetrator and to the Victim Matter?**

Since the middle ages, Lady Justice has often been depicted wearing a blindfold, representing impartiality. According to this ideal, justice should be applied without regard to the social position and ties of the offender. The immoral deed is all that matters as a basis for moral (and legal) judgment. But are ordinary humans like that? After all, decades of research on decision making have painted a picture of humans as often influenced by supposedly irrelevant factors, thus deviating from rational models (Kahneman, 2011). In the present research, we scrutinized the potential biasing influence of one important aspect of social ties, social closeness, both with regard to the relationship between the perpetrator and the adjudicator (i.e., participant), and between the victim and the adjudicator.

That is, we investigated whether the desire for punishment may be less harsh if the moral offender is a close rather than distant other (controlling for the perceived wrongness of the immoral act). Such a social bias is likely because it may be easier for people to forgive the deed of a close other through empathizing (and trying to understand the motives and circumstances of the deed) and because people know that they will have to get along with that person in the future again. Likewise, if the victim is a close other, observers may empathize more, thus taking a stronger stand and care for the victim and consequently demanding harsher punishment.

Some prior research has addressed issues of social closeness both from an in-group/out-group and from an evolutionary perspective. For instance, research on the role of race in courtroom settings finds prejudiced responses of White juries to Black suspects and of Black juries to White suspects (Sargent & Bradfield, 2004; Sommers & Ellsworth, 2000).

Similar in-group favorability effects have been found in experimental settings using economic games (Bernhard, Fischbacher, & Fehr, 2006; Schiller, Baumgartner, & Knoch, 2014) and in the neuroscientific literature (Molenberghs et al., 2014). Moreover, using fictional vignettes, evolutionary psychology research has shown that people punish perpetrators increasingly most lenient for the same deed (theft) if the victim was a close kin (family member), and increasingly more harshly in the case of a friend (schoolmate), or a stranger (foreigner), respectively (Lieberman & Linke, 2007; Linke, 2012). The present data from everyday life allowed us to extend and generalize these prior findings regarding social closeness both across a more diverse number of social categories from actual everyday interactions as well as by creating continuous measures of social closeness to the perpetrator and to the victim.

### **Are There Differences by Type of Moral Domain/Foundation?**

Influential taxonomies of moral dimensions posit a number of core moral foundations underlying morality, such as care/harm, fairness/unfairness, loyalty/betrayal, authority/subversion, sanctity/degradation, and liberty/oppression (Graham et al., 2013; Graham et al., 2011). In our own work on which the present analyses build upon, we have identified two possible additional dimensions, honesty/dishonesty and self-discipline/lack of self-discipline (Hofmann et al., 2014). We thus explored whether the average desire for punishment varies across moral domains.

### **Do Some Individuals Want to Punish More Harshly than Others?**

We scrutinized a number of demographic (gender, age, religiosity, political orientation) as well as dispositional predictors (moral identity, moral conviction, moral intuition) that have been or may be implicated in moral judgment and decision-making.

**Gender.** Prior research into gender differences in punitiveness has yielded little evidence of a general sex differences (Kutateladze & Crossman, 2009; Mackey & Courtright, 2000). In addition, whereas some studies do report significant differences with regard to narrower issues such as a stronger tendency among males to support the death penalty, others

do not show such topic-related differences (Kutateladze & Crossman, 2009, for an overview). In light of the meager prior evidence for reliable and generalizable gender differences, we expected little evidence for gender differences, but since earlier work relied mostly on survey data and hypothetical scenarios, we refrained from making a strong prediction.

**Age.** There appears to be scarce research directly investigating age trends in punitiveness across the age spectrum from adulthood to older age. A great deal of research has focused on moral development and moral reasoning in children and teenagers, and its comparison with adults (Eisenberg, Cumberland, Guthrie, Murphy, & Shepard, 2005; Haidt, Koller, & Dias, 1993), which is outside the scope of this research. Other research has investigated positive behaviors such as generosity (Bekkers, 2007). Some opinion poll data shows a tendency among older people to hold more punitive sentiments toward six common crimes (McCorkle, 1993). Another scenario-based study found that older computer users were less permissive towards illegitimate use of a computer than younger ones (Gattiker & Kelley, 1999). The present database allowed us to add to this knowledge base by testing for a possible, more general relationship between age and the desire to punish in daily life.

**Religiosity.** Do religious people punish more or less harshly than non-religious people? Research on the connection between religiosity and morality has mostly focused on prosocial behaviors (Everett, Haque, & Rand, 2016; Shariff & Norenzayan, 2007). Some scenario-based research suggests that religiosity reduces the acceptability of ethically-questionable behaviors (Conroy & Emerson, 2004) as well as taboo-violations (Piazza & Sousa, 2014). Experimental research using second- or third-party (altruistic) punishment games (such as the ultimatum game) tend to find mixed evidence, with some studies finding an association between religiosity measures or religious primes and punishment, especially when reminded of their religion (Laurin, Shariff, Henrich, & Kay, 2012) while other studies do not (Henrich et al., 2010; McKay, Efferson, Whitehouse, & Fehr, 2011). There are a number of possible reasons why religion may not exert a strong effect on punishment: First, it

has been argued that moral systems (and associated punishment) need not be based on a religious foundation (e.g., Dawkins, 2006). Second, opposing effects may cancel each other out. That is, null effects of religion on punishment may be due to the “opposing effects of general religiosity, which appears to increase punitiveness, and the specific belief in powerful, intervening Gods, which appears to reduce it.” (Laurin et al., 2012, p. 3279). We therefore did not entertain a strong prediction regarding the role of religiosity.

***Political Orientation.*** Does political orientation moderate the desire to punish perpetrators? Research investigating how members of various political orientations approach and respond to (im)moral issues suggests a number of reasons for why conservatives, in particular, may be less forgiving on average. First, conservatives place a greater emphasis on personal agency in general, which may result in the internal attribution of more responsibility to the perpetrators of immoral acts rather than to external circumstances (Schlenker, Chambers, & Le, 2012; Weiner, Osborne, & Rudolph, 2011), and hence a stronger average desire for punishment. Consistent with this idea, conservatism is associated with a stronger belief in individual causality for crime and a punitive stance on crime. Liberalism, in contrast, is associated with belief in economic and external causes of crime and stronger endorsement of a rehabilitation over punitiveness goal when thinking about sentencing goals (Carroll, Perkowski, Lurigio, & Weaver, 1987).

Moreover, political conservatives tend to score higher on measures of right-wing authoritarianism (Jost, Glaser, Kruglanski, & Sulloway, 2003). Although this construct is complex (some have argued, too complex, e.g., Funke, 2005), one of the key components is punitiveness and punishment of people who step outside of the norm and violate moral values. This suggests that one of the characteristics of conservative orientation may be higher punishment intentions. Drawing on these notions, we were interested in whether data from everyday life would confirm a stronger desire for punishment in conservatives.

***Moral Identity.*** Building on a social-cognitive model of moral functioning, Aquino

and Reed (2002) define moral identity as a self-conception/-construction organized around a set of moral traits. Morality, in other words, is more central to the self for those high as compared to low on the trait. Individuals high in moral identity have been shown to engage in more everyday prosocial behaviors and engage in less antisocial behaviors (Aquino & Reed, 2002; for a review, see Shao, Aquino, & Freeman, 2008). However, no work we are aware of has directly linked moral identity to punishment. A straightforward hypothesis is that people high in moral identity may want to punish perpetrators of immoral deeds more; that is, given that they care more about following moral ideals and principles, they may hold higher expectations of others as well and use punishment as a means to reinforce the moral system they partake in. However, some research using specific scenario settings has also shown that people high in moral identity have a wider, more inclusive moral circle (Reed II & Aquino, 2003); such a wider moral circle may potentially also extend to perpetrators, resulting in more concern for the antecedents and consequences of the perpetrator's deed, and hence to a more balanced, milder desire to punish on average. In light of these competing predictions, it seems important to clarify the general role of moral identity across a wide range of settings.

### **What are the Emotional Correlates of the Desire to Punish?**

Lastly, we investigated how the desire for punishment relates to moral emotions, and whether desiring to punish someone can be regarded as a negative or positive state (or a "mixed" state, i.e., a combination of positive and negative emotion). In terms of moral emotions, we expected that the desire for punishment would be associated with moral emotions involved in the experience of transgressions (Rozin, Lowery, Imada, & Haidt, 1999), including anger directed at the perpetrator in particular, but possibly also disgust, and contempt. In terms of discriminant validity, there is little reason to assume the desire for punishment would be associated with the cardinal self-conscious emotions of guilt and shame which tend to be involved in transgressions committed by oneself, as well as positive moral emotions such as elevation and gratitude which tend to be evoked in response to moral rather

than immoral deeds (see Hofmann et al., 2014).

### **What are the Implications for Well-Being?**

One recent trend in morality research is to uncover the relation between moral cognitions, emotions, and behaviors on the one hand and people's momentary or long-term levels of well-being on the other (Bleidorn & Denissen, 2015; Emmons & McCullough, 2003; Hofmann et al., 2014). Due to the presumably salient negative moral emotions such as anger and disgust in response to immoral events, we expected the desire to punish to have a predominantly negative affective "tone." Hence, we expected a negative overall relationship with momentary affective well-being that is partially accounted for by the above-mentioned moral emotions. At the same time, however, desiring to punish the transgressor of an immoral deed may remind people of the moral values they subscribe to and stand for, and may thus lead them to see themselves in a particularly moral light. Taking on the identity of a moral agent who defends a moral world-order may infuse punishers with what may be termed a heightened sense of moral self-worth. Such a heightened state of moral self-worth would be positive in affective tone, and hence should contribute positively to momentary affective well-being. From a moral systems perspective, since punishment is often costly, a heightened sense of self-worth may be seen as an immediate emotional "reward" that, at least partially, compensates for the negative feelings otherwise endured. In sum, we pursued the complex and novel idea that the desire to punish may be best described as a double-edged sword or "mixed" state combining both negative as well as positive emotional aspects which may partially compensate each other.

### **Method**

Sample size was determined by trying to recruit as many participants as possible to maximize representativeness and power. Materials, data, and syntax are available online at ([https://osf.io/2jqhm/?view\\_only=84bf72729feb40a5baca76a867d21aae](https://osf.io/2jqhm/?view_only=84bf72729feb40a5baca76a867d21aae)).

### **Participants**

A heterogeneous sample of participants throughout the US and Canada was recruited in two waves via various forms of advertising (for further details, see Hofmann et al., 2014 and Supplementary Materials). Out of these, 758 provided data for the present punishment analyses. The gender proportion in this subsample was balanced (50.7% female). The average age was 32.2 years ( $SD = 9.78$ ), ranging from 18 to 68. The sample was predominantly US-based (93.9%; Canada: 6.1%). 77.6% of participants were Caucasian, 5.1% were African American, 7.1% Hispanic/Latino, 5.9% Asian, 0.4% Native American or Pacific Islander, and 3.8% were of other backgrounds. Regarding the highest level of education, 0.1% indicated “some high school,” 3.7% “completed high school,” 34.3% “some college,” 30.9% “completed college,” and 31.0% indicated “advanced/post-graduate studies.” Overall, 32.1% of participants indicated that they are currently a college student. Taken together, the present sample can be described as relatively heterogeneous compared to the typical university student sample employed in much laboratory research.

### **Experience-Sampling Procedure and Protocol**

The corresponding author’s IRB approved this procedure. Each participant was randomly signaled via text message five times daily for three days between 9 a.m. and 9 p.m (for procedural details see Hofmann et al., 2014). Embedded in each message was an individualized link directing participants to the online experience sampling survey (see details below). Each link was valid for a maximum of two hours and could only be completed once per participant. Participants were encouraged to respond as soon as possible and were reminded by SMS if a response was not received within the first 15 minutes after the signal was dispatched. The median delay in responding was 7 minutes. On average, participants replied to 10.8 out of the 15 signals sent, indicating a satisfactory response rate of 72.1%.

At each assessment, participants indicated whether they committed, were the target of, witnessed, or learned about a moral or immoral act within the last hour, or “none of the above”. For each moral/immoral event participants entered via text entry what the event was

about. They then judged the perceived wrongness of the act “Taken together, how morally right or wrong was this?” on an initial scale from -3 (*totally wrong*) to +3 (*totally right*) which was recoded for the present analyses such that higher scores indicate more perceived wrongness. Subsequently, participants provided additional contextual information on the moral event (e.g., location), and indicated their current emotional state regarding nine distinct moral emotions (anger, disgust, contempt, embarrassment, guilt, shame, pride, elevation, gratitude) on a scale from 0 (*not at all*) to 5 (*very much*) each. Note that pride was added only at Wave 2 ( $n = 925$ ; 74 % of the overall sample), hence analyses involving pride were conducted with this subset of cases.

In the case of an immoral act that they were the target of, witnessed, or learned about, participants were further asked to report their desire to punish the offender. Specifically, they indicated on 7-point scales from 0 (*not at all*) to 6 (*very much*) (a) to what extent the offender should be punished for the immoral act, (b) to what extent they wanted to personally punish the offender, (c) to what extent the offender should be required to restore the damage done by the immoral act. Because of their high intercorrelations, we combined these three items into a broad and reliable compound score representing the desire to punish the perpetrator.

Multilevel reliability analysis following the multilevel confirmatory factor analysis approach recommended by Geldhof, Preacher, and Zyphur (Geldhof, Preacher, & Zyphur, 2014) showed satisfactory within- ( $\alpha_w = .71$ ) and between-level estimates of internal consistency ( $\alpha_b = .76$ ).<sup>1</sup>

Participants also provided information on the perpetrator (actor) and the victim (target) of the immoral act. Perpetrator information was provided via open text entry and was later coded (see below). Victim information was assessed via a multiple choice selection from the following options: me; family member; partner; friend; boss; employee; teacher; student; stranger; group of people; an object; an animal; other). In addition, participants indicated their (overall) perceived closeness to the victim (“How close do you feel to the target of the moral

act?”), including themselves, on a scale from -3 (*very distant*) to +3 (*very close*).

Unfortunately, we did not assess perceived closeness to the perpetrator, but instead inferred closeness to the perpetrator from the type of perpetrator information extracted from the open text entries (see below).

Finally, a small number of state measures were assessed on 7-point scales, including moral self-worth (“How moral [virtuous] or immoral do you feel at the moment?”) from -3 (*very immoral*) to +3 (*very moral*), momentary well-being (“How happy do you feel at the moment?”) from -3 (*very unhappy*) to +3 (*very happy*), and sense of purpose (“Do you feel that your life has a clear sense of purpose at the moment?”) from 0 (*not at all*) to 6 (*very much*).

### **Demographic and Dispositional Measures**

Demographic information such as sex, age, religiosity and political orientation, and dispositional variables such as moral identity, moral conviction, and moral intuition, were assessed during a brief intake survey upon study registration. The means and intercorrelations of Level 2 demographic and dispositional variables are presented in Table 1.

*Religiosity.* Religiosity was assessed with the item “How religious are you?” on a scale from 1 [*not at all*] to 7 [*very much*].

*Political orientation.* Political orientation was assessed with a hybrid measure incorporating a scale from 1 (*very liberal*) to 7 (*very conservative*) with 4 as the middle point (“*middle of the road*”), as well as the additional response options “*libertarian*”, “*other*”, and “*apolitical*” (“*don’t know/not political*”). To investigate the role of political orientation as a categorical variable, we employed a set of five effects-codes (liberal [values from 1 to 3], moderate [value of 4], conservative [values from 5-7], libertarian, apolitical) with the category “other” as the base category in the coding scheme.

*Moral Identity.* Dispositional moral identity was assessed with the 13-item version of the Aquino and Reed scale (2002; Table 3). The scale measures the self-importance of moral

identity through a combination of internalization and symbolic demonstration of one's moral identity. The participant instructions were slightly modified from the original to (emphasis added):

Below are some characteristics that might describe a person: *moral, ethical, principled, upright, prepared to take a stand for beliefs, a person of conscience and integrity*. The person with these characteristics could be you or it could be someone else. For a moment, visualize in your mind the kind of person who has these characteristics. Imagine how that person would think, feel, and act. When you have a clear image of what this person would be like, indicate how much you agree or disagree with each of the following statements.

Responses were made on 7-point scales from 1 (*very much disagree*) to 7 (*very much agree*) regarding 13 statements such as “It would make me feel good to be a person who has these characteristics” or “I am actively involved in activities that communicate to others that I have these characteristics” (Aquino & Reed, 2002), forming a very reliable composite ( $\alpha = .86$ ).

*Further Measures.* We developed and included two further ad-hoc measures for exploratory purposes, a broad three-item measure of *generalized moral conviction*, and a two-item measure of *moral intuition*. Both measures are described in more detail in the supplementary materials for the interested reader and results using these scales are included below (Model 3).

### **Analytic Procedures and Strategy**

All core analyses—except descriptive raw data calculations—were conducted within a multilevel framework with random intercepts and fixed effects using the SPSS MIXED procedure for multilevel regression models. Denominator degrees of freedom for the test of fixed effects were obtained by the Satterthwaite approximation.

To identify the independent contribution of each predictor candidate of the desire to punish in our main analysis, we chose the following three-step multiple regression strategy: First, we built a Level-1 model including only the occasion-specific variables perceived

wrongness, perspective, and perpetrator and victim type. In the second step, we substituted the categorical type of perpetrator and victim information with the continuous closeness to perpetrator and victim data.

Continuous variables at Level 1 were person-mean centered (Enders & Tofighi, 2007). In the third step, we added the demographic measures and the three moral traits. Continuous variables at Level 2 were grand-mean centered to estimate the effects of all predictors at the mean/average of the others. Similarly, all categorical variables (perspective, perpetrator type, victim type, moral foundations, sex, political orientation) were effects-coded, indicating category deviations from the grand average. As base categories, we chose perspective: learned about, perpetrator type/victim type: uncodable/missing, moral foundations: lack of self-discipline, sex: male, and political orientation: other.

Multilevel mediation analyses presented in Figures 4 and 5 were conducted using the MLmed macro by Rockwood and Hayes (2017) which follows the approach outlined in Zhang, Zyphur, and Preacher (2009) and Preacher, Zyphur, and Zhang (2010). Both the within- and between-person effects of the model were estimated in one model, and Monte Carlo estimation was used to estimate indirect effects. All random intercepts were included in the model. Preliminary tests indicated that none of the Level-1 effects of X on the two mediator variables, nor of the two mediators on Y were random, hence no random slope effects were specified for the final model.

## **Results**

### **Descriptive and Frequency Data**

Overall, there were a total of 1,360 relevant occasions including punishment data, stemming from 758 participants. Of these occasions, 165 (12.1%) were related to being the victim of an immoral act, 317 (23.3%) to witnessing an immoral act in one's immediate surroundings, and 878 (64.6%) to learning or hearing about an immoral act more indirectly (for more information on the sources of learned about acts, see [blinded]). Scaled to the total

number of responses in the dataset (13,240; including non-moral events and committed acts), this amounts to second or third-party moral punishment being relevant on about 10.3% of all occasions. Demographic information (sex, age, religiosity, political orientation) was available for 100% of the sample, dispositional data regarding moral identity, intuition, and moral conviction was available for 99.5%, 99.5%, and 98.2% of participants, respectively.

The average punishment score across all responses was 3.26, and showed considerable variation,  $SD = 1.60$  (range from 0 to 6). Visual inspection of punishment scores suggested a normal distribution. The average perceived wrongness of the reported immoral acts (on the recoded scale from -3 [very moral] to +3 [very immoral]) was 2.23,  $SD = 0.97$ . A multilevel null model with random intercept only showed that 73.4% of the overall variance in the desire for punishment could be attributed to the within-person (event) level whereas 26.6% could be attributed to stable differences between persons.

### **Predicting the Desire to Punish**

*Perceived Wrongness.* Table 2 summarizes the multilevel regression analysis results for Model 1 (base predictors), Model 2 (closeness data) and Model 3 (Model 2 plus dispositional variables). As expected, perceived wrongness had a significant positive effect on the desire to punish across all models, such that acts perceived as being relatively more immoral were evoked a desire to punish more harshly.

*Perspective.* Controlling for the other variables in the model, there was also a remaining significant overall effect of perspective (see Table 2), such that desire for punishment was descriptively strongest when participants were the target of an immoral act,  $M = 3.22$ ,  $SE = .47$ , comparatively high when they learned about an immoral act,  $M = 2.92$ ,  $SE = .13$ , and somewhat weaker when the transgression was witnessed in one's more immediate environment  $M = 2.47$   $SE = .14$  (estimates derived from Model 1). Simple comparisons showed that, due to the relatively large standard error for the first ("target of")

category, only the difference between learned about and witnessed acts was significant,  $p < .001$ , all other  $ps > .143$ .<sup>3</sup>

*Type of Perpetrator and Victim and Social Closeness.* Regarding the type of perpetrator in question (and controlling for wrongness of the act and perspective in these analyses), there was evidence for differentially severe desire of punishment as a function of social distance. These effects are illustrated in Figure 1. Strangers, and perpetrators belonging to more abstract entities such as organizations and corporations were associated with above-average desire for punishment. There was also a marginally significant tendency for perpetrators falling into the professional category to be associated with an above-average desire for punishment. Conversely, friends and one's own partner/spouse, were systematically related to a lower desire for punishment. It is noteworthy that this advantage did not extend to close family members for which mean desire for punishment was very close to the average.<sup>4</sup>

Substituting the categorical type of perpetrator information with independent raters' continuous assessments of social closeness (Model 2), there was a highly reliable negative relationship between social closeness and the desire for punishment. Figure 2 plots these closeness ratings against the desire for punishment for the various social categories. Family members emerged as the strongest outlier from the general trend, as a social category rated as quite close on average, but being associated with a harsher desire for punishment than would be expected based on the regression. Another exception from the general trend were ex-partners. These were punished less severely, on average, than what would be expected based on their social distance rating (Figure 2).

No discernible effect emerged for type of victim category (see Table 2, Model 1). However, substituting the categorical information with participants' own closeness ratings to the victim (Model 2) revealed a small positive linear trend, such that participants desired to punish those more who offended close rather than distant others (including themselves). The fact that there was no categorical effect and only a comparatively weak continuous trend

despite a more fine-grained (i.e., event-based) and first-person assessment suggests that the desire for punishment may be more strongly driven by the attention to the perpetrator (actor) rather than the victim.

*Demographic and Dispositional Predictors.* The addition of demographic and dispositional variables in Model 3 revealed a number of additional insights: There was no gender effect in the desire to punish. Neither did religiosity affect the desire for punishment. However, increasing age was associated with increasing punitiveness. Moreover, regarding political orientation, significant above-average desire to punish was obtained for conservatives. The mean estimates per category are illustrated in Figure 3. There was also a (marginally significant) tendency for moderate people to desire above-average and for apolitical people to desire below-average levels of punishment.

Regarding psychological traits associated with moral perception and judgment, the only trait that emerged as a reliable predictor was moral identity (see Table 2).<sup>5</sup> As expected, people high in moral identity expressed a stronger desire to punish on average than those low in moral identity. Given the role of moral identity, we also conducted an exploratory multilevel multiple mediation model conducted in Mplus linking all demographic predictors (sex, age, religiosity, political orientation) to moral identity in the context of Model 3 (see Supplementary Figure 1). This model allowed us to probe whether moral identity—a latent psychological construct—transports possible effects of (surface) demographic predictors on the desire for punishment. The only reliable indirect effect of demographic variables through moral identity was for religiosity (see Supplementary Figure 1). Thus, even though religiosity was not directly associated with stronger punishment (see Table 2), this demographic variable was indirectly linked to higher desire for punishment via higher moral identity.

Finally, sensitivity analyses involving moral foundations codings showed that adding moral foundations to the model did not change any of the above conclusions and that moral foundations accounted for additional variation in the desire for punishment, over and above all

other factors in the model (see Supplementary Table 2). As depicted in Supplementary Figure 2, estimated desire for punishment (Model 3) was significantly above-average for immoral acts of harm and oppression, and significantly below-average for immoral acts of degradation, with marginal trends for above- and below-levels with regard to unfairness and disloyalty, respectively.

### **The Desire for Punishment and Moral Emotions**

Zero-order correlations among the desire for punishment and moral emotions are shown in Supplementary Table 3. We conducted two multiple multilevel regression models to determine the strongest emotional associates of the desire for punishment (Supplementary Table 4). These were anger, disgust, and contempt, a set of emotions that might be labeled punitive moral emotions or moral outrage (see also Salerno & Peter-Hagene, 2013). Guilt, shame, and embarrassment were unrelated to the desire for punishment, as were pride, elevation, and gratitude.

### **Linking Punishment and Well-Being**

To investigate whether being in a state of wanting to punish a perpetrator may have both a negative effect on momentary well-being (as transmitted via punitive emotions) as well as an opposing positive effect (as transmitted via increased feelings of moral self-worth), we conducted an exploratory multilevel mediation model linking the desire for punishment to well-being, separating these negative and positive aspects. To do so, we formed a composite measure of punitive emotions by averaging anger, disgust, and contempt ratings due to their high inter-correlations (see Supplementary Table 3), resulting in satisfactory internal consistencies at both Level 1 ( $\alpha_w = .74$ ) and Level 2 ( $\alpha_b = .88$ ). In line with earlier research, this composite may also be labelled a broad measure of moral outrage (Brandt, Crawford, & Van Tongeren, in press; Salerno & Peter-Hagene, 2013). Results are presented in Figure 4, separating within- (upper panel) and between- (lower panel) participant effects. For both levels, the overall (i.e., total) effect from the desire for punishment to well-being was

significantly negative. At both levels, there was a significant negative indirect effect of the desire to punish on happiness via punitive emotions, a marginally significant (within-level) and significant (between-level) positive indirect effect via moral self-worth. Together, the inclusion of punitive emotions and moral self-worth as mediators reduced the total negative effect to a non-significant residual effect at both the within and between level of analysis. Keeping in mind the correlational nature of these findings, one possible interpretation is that feelings of moral self-worth, derived from the desire to morally punish a given perpetrator, may partially compensate for an otherwise more negative association with happiness that may come along with a punitive want and the associated emotional moral outrage. Results were quite consistent across levels of analysis, pointing to both more stable (i.e., people who tend to punish more harshly than others tend to experience these compensatory effects more strongly) and contextual effects (i.e., situations invoking a stronger desire for punishment tend to elicit these compensatory effects more strongly). Results at the contextual (occasion-specific) level may have been somewhat weaker due to the small number of observations per persons, which renders estimating the within-person component more difficult.

Further exploratory analyses showed that the mediation pattern for momentary well-being was somewhat distinct from the pattern for sense of purpose in that there was a weaker relationship at the within-person (contextual) level of analysis: As can be seen from Figure 5, there was no overall relationship between sense of purpose and the desire to punish at the within-person level, and sense of purpose was not affected via negative moral emotions. Again, however, moral self-worth accounted for a small portion of the variance at the within-person level. This effect was also present at the between-person level, indicating that people who tend to experience a stronger desire to punish on average also experience greater feelings of moral self-worth, and these feelings of self-worth are associated with sense of purpose. However, moral outrage did not subtract very much from this (presumably more cognitive) effect between moral self-worth and purpose.

## Discussion

Utilizing unique data from people's everyday experiences of moral transgressions, the present study provides a unique window into people's reactions to immoral events in terms of the desire to punish transgressors and of the emotional correlates and consequences thereof. In contrast to specific scenario and game settings typically studied in the laboratory, the present study took a broad, ecologically valid approach in the hope of both replicating earlier work, providing more generalizable insights, and discovering overlooked connections and open research questions. The main insights from this endeavor can be summarized as follows:

First, there was clear support for the idea that people seek to punish in relation to the perceived wrongness of a given transgression, as evidenced by a substantial linear relationship. This lends further direct support to models of punishment that emphasize the retributive character inherent in human moral punishment which have been shown to be the prevalent layperson's approach to punishment (Carlsmith et al., 2002). However, it certainly does not rule out other functional accounts of punishment, of course, which emphasize deterrence or reformation motives. These account may require additional parameters not assessed in this research, such as whether the violation was hard to detect and punishment could be administered publicly (Carlsmith et al., 2002) and whether there is an expectation that the offender will be able to improve him- or herself.

Second, generalizing across many settings and types of social relationships, we find that punishment of immoral acts is not impervious to factors that should be normatively irrelevant. We found that people wish to punish those perpetrators more harshly who are further away in social distance and who transgressed against victims who are socially close rather than distant to them. These results appeared stronger at the level of perpetrator closeness, which may be a result of asymmetrical attention allocation towards the agent rather than recipient of the immoral deed. Both social distance effects, however, were statistically discernible when employing continuous measures of social closeness, suggesting that earlier

models of kin selection (e.g., Lieberman & Linke, 2007) or in-group favoritism (Bernhard et al., 2006) may be summarized more parsimoniously as typical instances of a more general (continuous) social distance metric that may underlie people's tendency to favor close others—irrespective of the specific source of closeness (such as same vs. different group memberships, kin-based relationships, intimate relationships, similarity in attitudes and beliefs, and more). This also allows for new predictions under circumstances where formal, objective and perceived, subjective closeness diverge. For instance, people may want to punish own but subjectively distant kin more harshly than non-kin but subjectively very close friends.

Third, next to these contextual effects, there was clear evidence for generalizable individual differences in the desire to punish perpetrators in quotidian life. The desire to punish, in other words, may not just be driven by situational characteristics of the immoral acts experienced, but also by a personal disposition to respond to perceived transgressions with the wish that the wrongdoer be punished. We differentiated our analysis in terms of surface-level demographics and deep-level dispositional constructs. At the surface level, there were no (independent) general effects of gender (see also Kutateladze & Crossman, 2009) or religiosity, but reliable and separable effects for age and political orientation, such that older people as well as more conservative people tended to be higher on punitiveness.

At the level of deep-level constructs, there was strong evidence for people high in moral identity wanting to punish perpetrators more harshly. However, there were no effects for generalized moral conviction and moral intuition, for which we had constructed brief exploratory measures which may have been suboptimal for capturing the intended constructs of interest. The moral identity effect is consistent with the idea that people high on the trait see morality as central to who they are as a person and how they act out their morality in socially symbolic ways to others. The additional finding that the symbolization subscale was a more potent contributor to this effect (see Footnote 5) undergirds the public dimension of the

moral self (Aquino & Reed, 2002). Being motivated to support punishment in speech and action may constitute a powerful way of signaling to the self and others that one cares deeply about norm violations and wishes to reinforce the set of moral rules and regulations to which one subscribes. Note that the positive link between moral identity and punitiveness is not supportive of the alternative idea that people high in moral identity may excuse/forgive the wrongdoings of others more readily (resulting in weaker calls for punishment) due to their harboring a wider moral circle.

Conceptualizing moral identity as a possible deep-level mediator of surface-level demographic effects revealed that religiosity was *indirectly* linked to more severe desires for punishment via heightened moral identity. Note that the above-mentioned effects of age and political orientation, however, cannot be accounted for via moral identity (or any of the other predictors in the model). This raises the interesting question of the “active ingredient(s)” in these two demographics. Regarding age, we can only speculate that the heightened desire for punishment may reflect age-related changes in moral development across the adult lifespan (Kohlberg, 1976), heightened perceived vulnerability (Kutateladze & Crossman, 2009), or age declines in cognitive flexibility/executive functioning (Jurado & Rosselli, 2007). Regarding political orientation, conservatives displayed above-average desire for punishment, replicating earlier findings (Carroll et al., 1987; Jacobs & Carmichael, 2004).

Fourth, the intense sampling of moral experiences as well as emotional states allowed us to link the desire for punishment with common moral emotions, and to explore possible overlooked links with momentary well-being/happiness. The desire for punishment was most strongly associated with the anger, disgust, and contempt, which we labelled “punitive” emotions. This suggests that the desire for punishment may be regarded as a clearly negative psychological state. However, more fine-grained analyses painted a more nuanced picture: Bridging morality and happiness research, we found that the desire for punishment may better be described as a “double-edged sword”: On the one hand, the experience of a transgression is

associated with punitive emotions, contributing to the negative overall “tone” of moral punishment. On the other hand, there was evidence of a silver lining such that desiring to punish a perpetrator was associated with a heightened sense of moral self-worth which, in turn, was positively associated with momentary well-being. These results suggest that moral punishment may contain both of these emotional elements. Perhaps this is part of a potential mechanism that may offer some (immediate) emotional compensation to those who desire to punish defectors in the service of upholding an established moral value or rule (see De Quervain, Fischbacher, Treyer, & Schellhammer, 2004, for related neuropsychological evidence). Though the present results are only a first step, we believe that further insights into the function of morality may be gleaned by a closer connection between morality science and well-being research.

A second avenue for future research (and, ideally, experimental research to follow-up upon) may be given by the side finding that some moral foundations appear to be more strongly connected with punitive desires than others. Specifically, we obtained some first indication that, controlling for the perceived wrongness of the act and other possible confounding variables in our model, moral violations of harm may be associated with a stronger desire for punishment than violations of purity. One possibility is that, due to the prototypicality of harm for judgments of immorality (Schein & Gray, 2017), perceived harm may be an especially salient and easy-to-process cue in driving punishment decisions whereas other domains such as impurity may be “fuzzier” and harder to judge. Another possibility is that the perception of harm may trigger a stronger desire to reciprocate harm in moral perceivers (i.e., personal or vicarious revenge), whereas violations of purity may trigger displays of moral condemnation intended to shame the perpetrator.

### **Limitations**

The specific advantages of the current experience-sampling approach—to be as close as possible to where (im)moral actions happen in people’s natural environments—naturally

implies some sacrifice of internal validity. Despite our attempt to simultaneously include a range of contextual and dispositional in our multiple regression models, there is always a possibility of important omissions and confounded variables. For instance, we were able to partially compensate one such omission, perceived social closeness to the perpetrator, with independent raters' assessments of average social closeness. The present results are encouraging in that such a robust effect of outsiders' social closeness ratings on participants' subjective desire for punishment was obtained despite having to revert to coarser graining. Even stronger social distance effects may have emerged with a more subjective measure.

Furthermore, the correlational nature of our findings clearly precludes any causal conclusions. For all of these reasons, the present findings need to be integrated with those gained through other approaches in the hope that the plurality of methods may provide a better triangulation of moral punishment than any one method alone. The high degree of correspondence among our findings from the "trenches" of everyday morality and those of earlier approaches, such as with regard to proportionality, social closeness, political orientation, and moral identity is encouraging, in our view, and we look forward to seeing more cross-talk among internally and externally valid approaches in the years to come.

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## Footnotes

<sup>1</sup> For exploratory reasons, we had also included two additional questions on the extent to which they felt the offender had done direct or indirect damage to themselves, as well as the extent to which the offender should restore that damage done to themselves. However, because these items were narrower in scope and because participants may have had a difficult time assessing this issue for the majority of events in which they were in an observer perspective, we decided not to include these items in the punishment score.

<sup>2</sup> As suggested by a reviewer, we conducted a sensitivity analysis to explore whether perceived severity may act as a mediator variable of the effects of the remaining predictor variables. Omitting perceived severity from Models 1-3 had only very small effects on the magnitude of estimates, and none of the statistical conclusions for the remaining variables were affected by its inclusion vs. exclusion, suggesting little potential for mediation.

<sup>3</sup> One possible interpretation of the observed pattern is in terms of a combination of personal involvement and fear of counter-punishment (Balafoutas et al., 2016): When being the target of or witnessing an immoral deed, the subject directly observes the transgression. This may imply having a relatively clear assessment of the possibly negative consequences that may result from counter-punishment. When being the target, people may be more ready to punish and more willing to accept possible counter-punishment as compared to when being only indirectly affected as a witness. In the “learned about” category the situation is indirect so there is no fear of counter-punishment.

<sup>4</sup> The relatively higher-than-expected desire for punishment towards close family members runs counter to scenario-based research arguing in favor of traditional kin altruism theory (Lieberman & Linke, 2007; Linke, 2012). The findings warrants further scrutiny. Perhaps family members feel some obligation to keep “their own” in line to appease other people who may be offended or hurt by their actions.

<sup>5</sup> Even though our main interest was in moral identity as a broad trait, we conducted additional exploratory analyses investigating the two sub-facets of the scale, internalization and symbolization separately. To this end, the seven original internalization and the six original symbolization items proposed by Aquino & Reed (2002) were combined into two separate scale score ( $\alpha = .87$  and  $\alpha = .80$ , respectively; scale intercorrelation  $r = .37$ ,  $p < .001$ ). Estimating Model 3 using the separate scale scores revealed that the above overall effect of moral identity was primarily driven by the symbolization subscale,  $B = .19$ ,  $p < .001$ , rather than the internalization subscale,  $B = -.06$ ,  $p = .361$ .

Table 1. *Means and Intercorrelations*

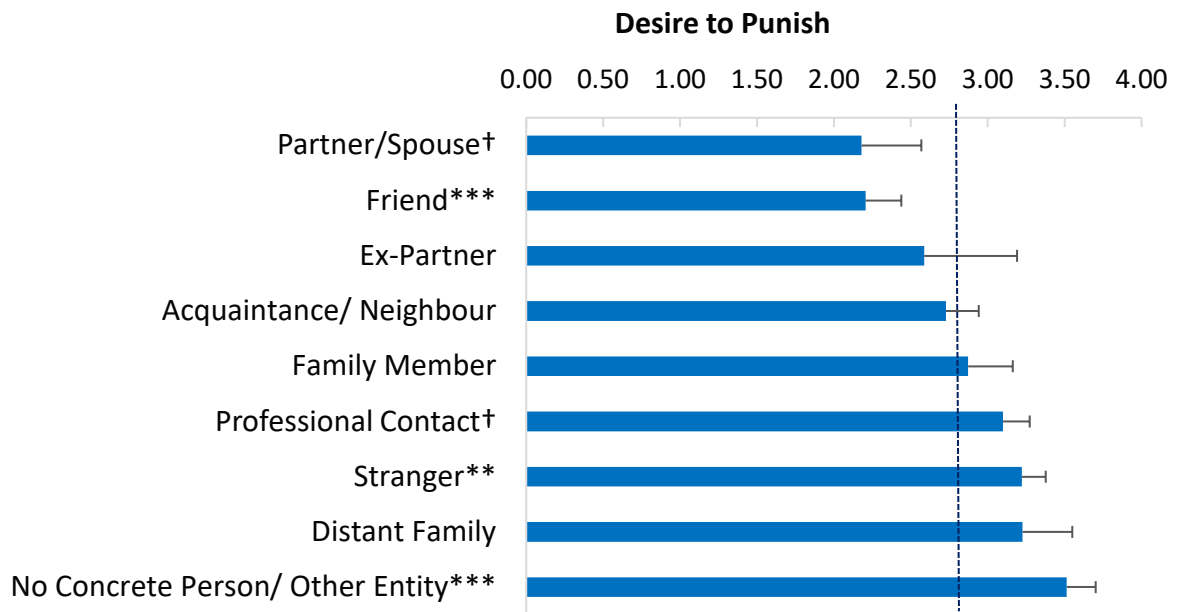
	<i>M</i>	<i>SD</i>	$\alpha$	(1)	(2)	(3)	(4)	(5)
(1) Sex	0.51	0.50	—	—				
(2) Age	32.23	9.78	—	-.046	—			
(3) Religiosity	2.92	2.21	.96	<b>.239</b>	-.014	—		
(4) Moral identity	5.31	0.82	.86	<b>.141</b>	<b>.082</b>	<b>.308</b>	—	
(5) Moral conviction	3.84	0.79	.69	-.012	<b>.147</b>	.057	<b>.344</b>	—
(6) Moral intuition	3.64	1.03	.76	<b>.197</b>	-.025	<b>.246</b>	<b>.171</b>	<b>.077</b>

*Note.* Correlations significant at  $p < .05$  are printed in bold. Sex was coded 0 (male) 1 (female). Political orientation, a multinomial variable, is not included here.

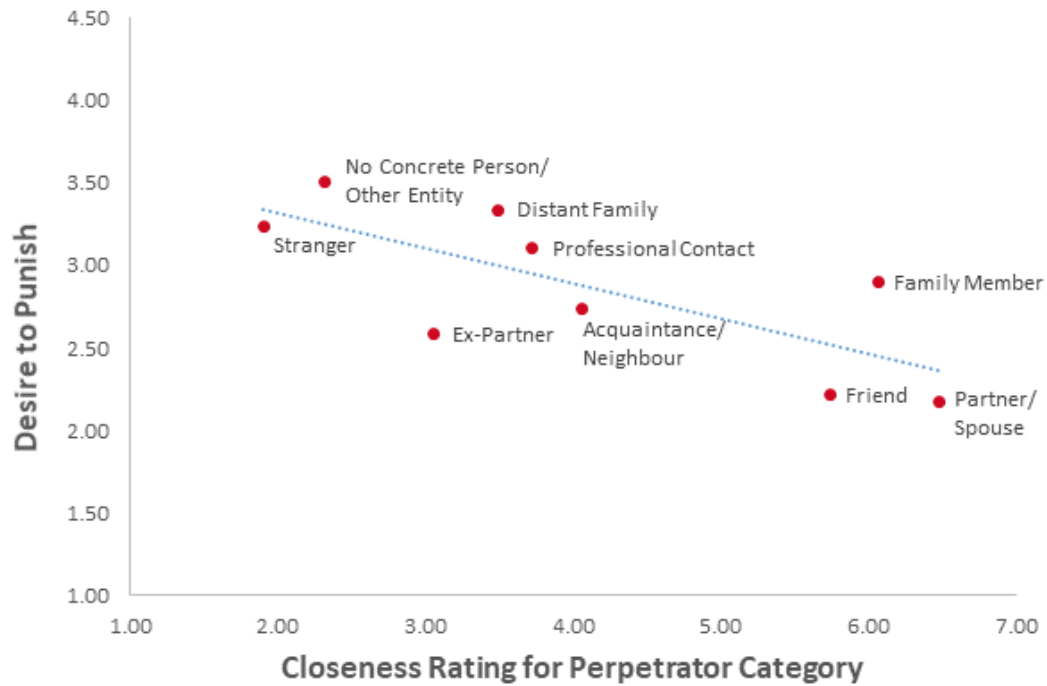
Table 2. *Multilevel regression models predicting desire for punishment from occasion-specific variables (perceived wrongness, perspective, type of actor) at Level 1 and demographic/dispositional variables at Level 2.*

Predictor	Model 1 (base predictors)			Model 2 (closeness data)			Model 3 (plus dispositional)		
	<i>B/F</i>	<i>SE (B)</i>	<i>p</i>	<i>B</i>	<i>SE (B)</i>	<i>p</i>	<i>B</i>	<i>SE (B)</i>	<i>p</i>
Intercept	2.87	0.16	< .001	3.12	0.06	< .001	3.08	0.08	< .001
<i>Level 1: Event Predictors</i>									
Perceived wrongness	0.57	0.06	< .001	0.55	0.06	< .001	0.57	0.06	< .001
Perspective	$F(2, 1281) = 11.28$		< .001	$F(2, 1282) = 15.11$		< .001	$F(2, 1268) = 11.41$		< .001
Type of perpetrator	$F(9, 1270) = 4.93$		< .001						
Type of victim	$F(8, 1247) = 0.97$		.459						
Closeness to perpetrator				-0.25	0.05	< .001	-0.26	0.05	< .001
Closeness to victim				0.09	0.03	< .001	0.09	0.03	.001
<i>Level 2: Demographic and Dispositional Predictors</i>									
Sex							0.01	0.05	.817
Age							0.02	0.005	< .001
Religiosity							-0.04	0.03	.137
Political Orientation							$F(5, 657) = 3.34$		.005
Moral identity							0.19	0.07	.004
Moral conviction							0.01	0.07	.889
Moral intuition							0.08	0.05	.088

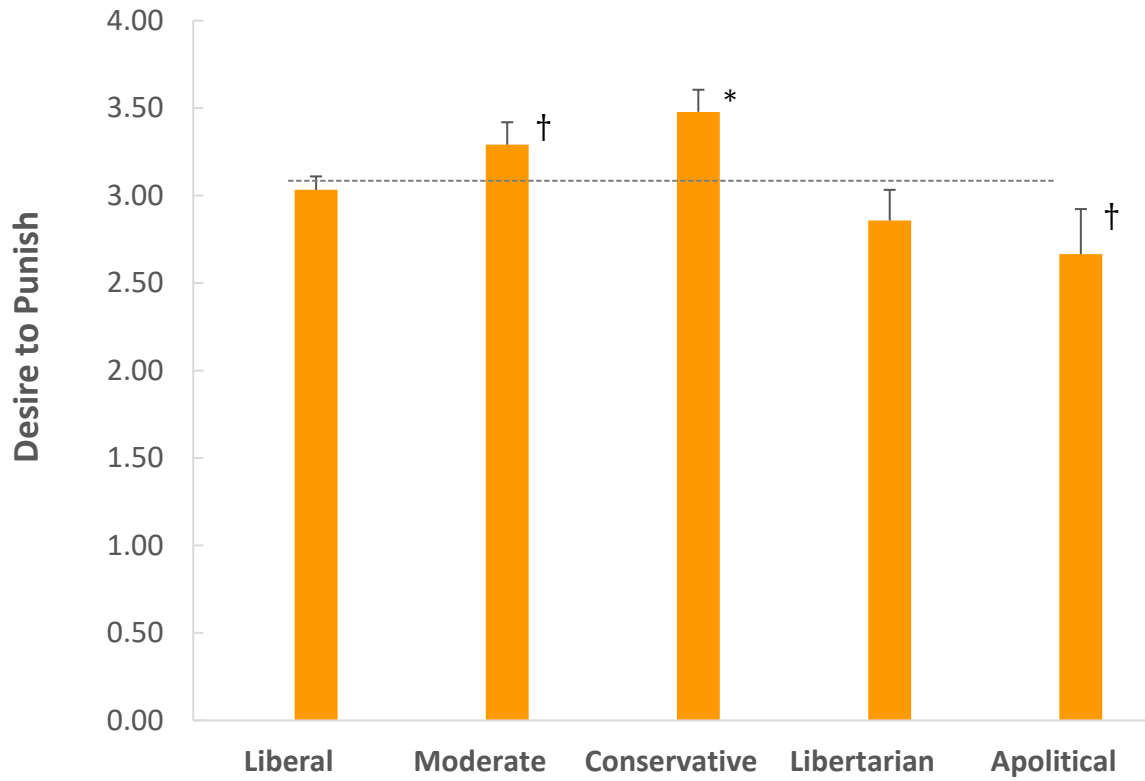
*Note:* Continuous predictors are displayed with their regression coefficient (B) and SE, categorical predictors with three or more categories with their fixed effect *F*-value. Sex was effects-coded (-1 = male; 1 = female). Type of perpetrator, type of victim, and closeness to perpetrator were rated by independent coders or participants, respectively (see main text), closeness to victim was self-reported.



**Figure 1.** Estimated Mean Desire to Punish by Type of Relationship with the Perpetrator of the Immoral Act (Model 1). Asterisks denote significant deviations from the grand average (vertical line). †  $p < .10$  \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ . Error bars indicate standard errors.

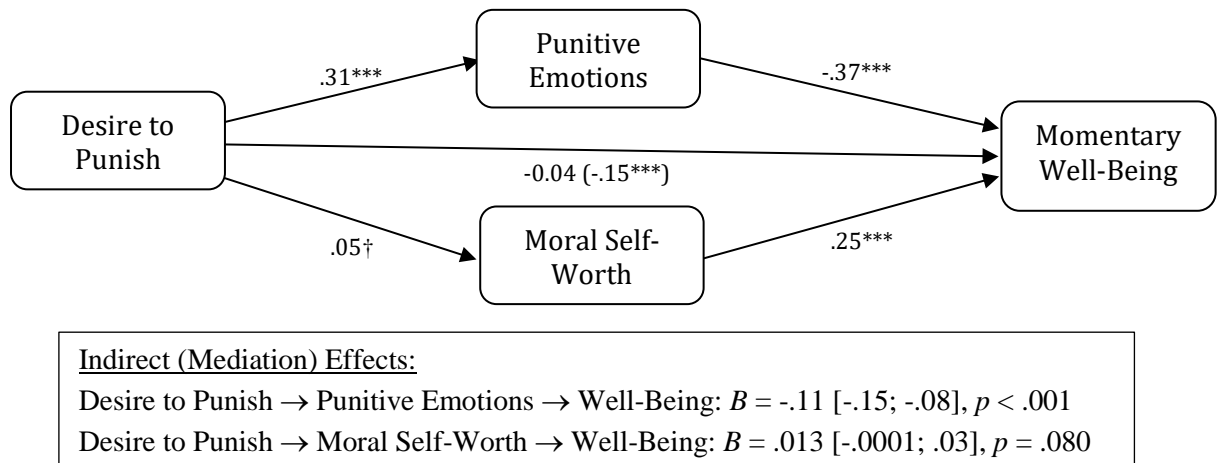


**Figure 2.** Estimated mean desire to punish by average perpetrator closeness as judged by independent raters (Model 1). The dotted line represents the estimated linear trend among data points.

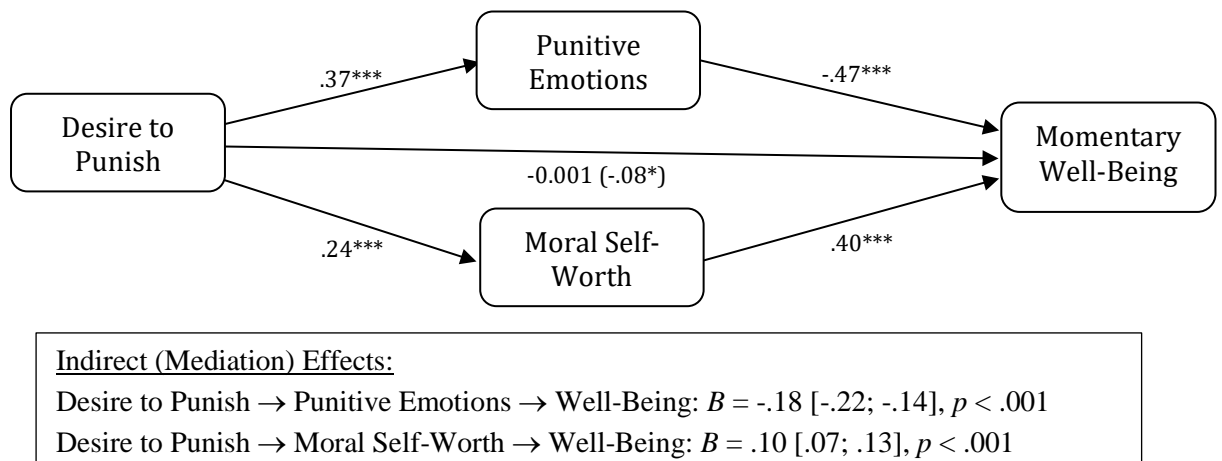


**Figure 3.** Desire to punish by political orientation (Model 3). Asterisks indicate significant deviations from the grand average (vertical line) at  $p < .05$  (†  $p < .10$ ). Error bars indicate standard errors. Base category (other) not shown.

Within

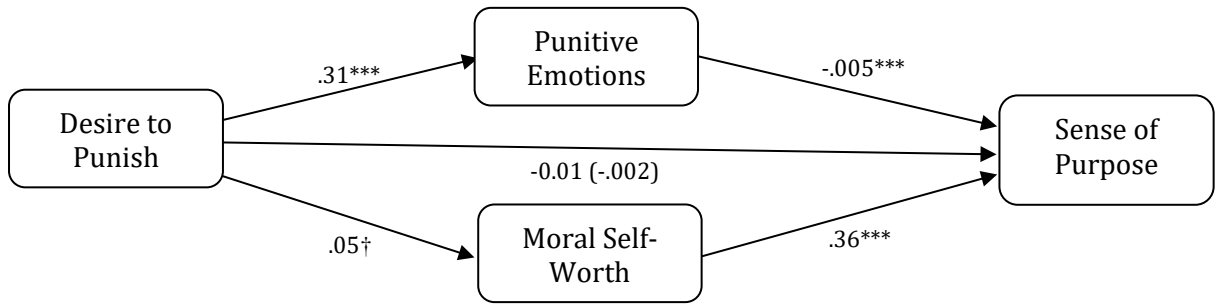


Between



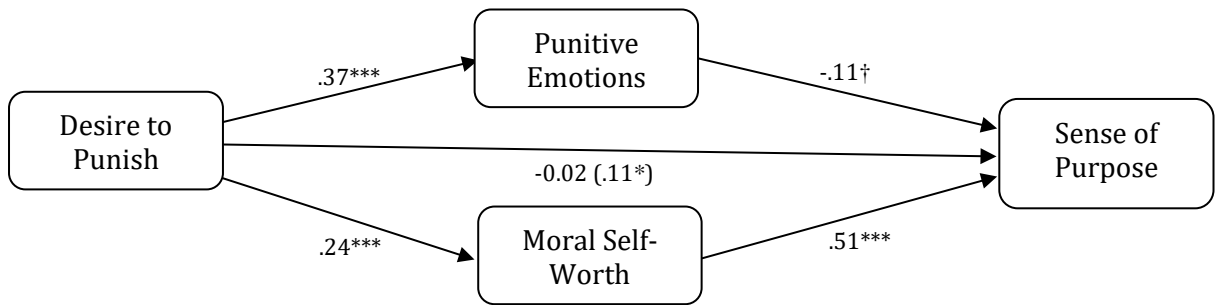
**Figure 4.** Multilevel mediation models on the relationship between the desire to punish and well-being, separately for the within- and between-person level of analysis. The model separates a negative mediation pathway via punitive emotions (composite of anger, disgust, and contempt) from a positive mediation pathway via moral self-worth. Parameters are unstandardized regression coefficients. Parameter in parentheses denote total effects when omitting the intervening mediator variables from the model. The box summarizes the estimated mediation effects. † $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Within



**Indirect (Mediation) Effects:**  
 Desire to Punish → Punitive Emotions → Purpose:  $B = -.002 [-.03; .03], p = .917$   
 Desire to Punish → Moral Self-Worth → Purpose:  $B = .018 [-.0005; .04], p = .064$

Between



**Indirect (Mediation) Effects:**  
 Desire to Punish → Punitive Emotions → Purpose:  $B = -.04 [-.09; .006], p = .095$   
 Desire to Punish → Moral Self-Worth → Purpose:  $B = .12 [.09; .17], p < .001$

**Figure 5.** Multilevel mediation models on the relationship between the desire to punish and sense of purpose, separately for the within- and between-person level of analysis. See Figure 5 notes for details.

## SUPPLEMENTARY MATERIALS

## Content Summary:

1. Further details on participant recruitment and eligibility
2. Type of Perpetrator and Closeness to Perpetrator Ratings
3. Type of Victim Ratings
4. Moral Foundation Codings
5. Description of further dispositional measures used
6. Supplementary Table 1: Means and standard deviations for social closeness ratings
7. Supplementary Table 2: Sensitivity analysis controlling for moral foundations codings
8. Supplementary Table 3: Zero-order correlations
9. Supplementary Table 4: Predicting desire to punish from moral emotions
10. Supplementary Figure 1: Mediation of demographic effects
11. Supplementary Figure 2: Desire to punish by moral foundation violation

**1. Participant Recruitment and Eligibility**

Participants were retained for analysis if they successfully registered and verified their smartphone and completed the screening and intake survey. Regarding the screening questions, participants were excluded if they fulfilled any of the following exclusion criteria (criteria-based percentages in parentheses): (a) younger than 18 years of age (0.5%), (b) not at all fluent in English (0.1%), (c) not living in the US or Canada (10.1%), (d) not owning a smartphone (0.8%), (e) not generally willing to respond to multiple, short mobile surveys each day (3.3%). In addition, participants needed to complete a short smartphone compatibility test (see Hofmann & Patel, 2015). According to benchmarking data taken around the time the study was conducted, about 91% of respondents taking the test pass it

(Hofmann & Patel, 2015). Finally, after their eligibility had been determined, participants needed to provide informed consent which 0.6% of eligible participants refused to do. The estimated number of eligible participants who did not complete the intake survey was 14%. The final sample from these exclusion criteria was 1,252.

## 2. Type of Perpetrator and Closeness to Perpetrator Ratings

To assess whether the desire to punish varies systematically as a function of how participants relate to the perpetrator of an immoral deed, we developed a coding scheme to assign open-ended text entries into 10 categories (overall valid text entries  $n = 1,360$ ): “stranger” (786), “professional relation,” (185), “no concrete person/entity (e.g., organization, corporation),” (160), “neighbor/acquaintance,” (74), “distant relatives (other than close family),” (25), “(close) family member,” (30), “friend,” (56), “partner/spouse” (15), “ex-partner,” (7), and “uncodeable/missing” (22). These assessments were made from the perspective of the participant (e.g., spouse would indicate the participant’s own spouse, not someone else’s). Two student assistants unfamiliar with the study and its hypotheses coded all responses according to the taxonomy. Interrater-agreement was very good, kappa = .94. A total of 53 cases of disagreement were resolved through discussion. The final  $n$ s for the ten categories are provided in the parentheses above. To investigate associations of perpetrator category with moral punishment (see Model 1), we employed a set of eight effects-codes with the category “other” as the base category in the coding scheme.

To get a more proximal measure of social closeness to the perpetrator of the immoral deed, and since we did not assess closeness to perpetrator in the Everyday Morality Study, we presented a sample of 103 mturk participants from the United States with the list of nine content-related categories of people (excluding the category “uncodeable” from above) and asked them to “rate for each category of people how close or distant a typical person feels, on average, towards them. The categories were presented in random order and ratings were

made on a scale from -3 (*very distant*) to +3 (*very close*). The average closeness ratings and their *SDs* are presented in Supplementary Table 1. Closeness ratings were then matched to each event in the dataset accordingly.

### 3. Type of Victim Ratings

To summarize victim information, reduce and largely mirror the categories used for perpetrator coding, we aggregated our participants' initial victim category judgments as following: "employee," "boss," "teacher," and "student" were assigned to the summary category "professional"; "group of people," "an object," and "an animal" were assigned to the summary category "No concrete person/other entity." All remaining categories (stranger, family member, friend, self) were kept as is. For multiple entries, we chose the more proximal social category (e.g., if both "stranger" and "friend" were selected, "friend" was chosen). Responses with only text entries provided under the category "other" ( $n = 173$ ), were coded and re-assigned to existing categories plus the additional category "neighbor/acquaintance" or marked as "uncodeable/missing" (interrater kappa = .78). The final frequency breakdown of victim category information was as follows: stranger (388), professional (173), no concrete person/other entity (419), neighbor/acquaintance (9), family member (63), friend (92), partner/spouse (27), self (173), uncodeable/missing (16). Furthermore, because participants had provided their own, self-reported rating of closeness to the victim, we used this proximal measure in analyses and did not assess external closeness ratings as in the case of perpetrators.

### 4. Moral Foundation Codings

We used our prior existing codings of eight moral foundations based on participants' short open text descriptions of events, as described in detail in Hofmann et al., (2014). In light of the number of missing codings for some immoral acts (3.5%), we decided to include moral foundations as part of a sensitivity analysis (summarized in the text and reported in full

in Supplementary Table 2), to explore whether (a) moral foundation accounts for additional variance in the desire for punishment when added over and above the other variables in the model and whether (b) any of the conclusions regarding the remaining variables are affected by controlling for moral foundations.

### **5. Description of Further Dispositional Measures Used**

*Generalized Moral Conviction.* Moral conviction refers to the degree to which people experience attitudes and policy preferences as indicative of their core beliefs about what is morally right or wrong (Skitka & Morgan, 2014). Attitudes held with strong moral conviction have been shown to be distinct from strong but non-moral attitudes in that they are more likely to be experienced as universally applicable rather than culturally variable, as carrying a strong prescriptive and proscriptive force, and as having deeper ties to emotion (e.g., Skitka, 2010; Skitka, Bauman, & Sargis, 2005; Skitka, Washburn, & Carsel, 2015). Work showing that moral conviction predicts stronger emotional reactions and greater acceptance of violence and/or collateral damage with regard to morally convicted ends suggests somewhat greater average levels of the desire to punish experienced transgressions. Traditionally, however, moral conviction has been measured with reference to a specific attitude object or political issue (e.g., Skitka et al., 2005). As this approach was not practical with the present idiographic approach, we deviated from this approach and explored whether moral conviction can also be assessed reliably in a more generalized way and whether generalized moral conviction accounts for systematic variance in the desire to punish.

Specifically, we sought to develop a broad measure of “generalized” moral conviction for exploratory purposes, consisting of three items tapping into the tendency to base everyday thoughts and feelings on one’s core moral beliefs and convictions: (1) “How much are your thought and feelings about various social problems and issues of the day tied to your core moral beliefs and convictions?” (2) “In daily life, how much are your thoughts and feelings

about other people's actions and behaviors tied to your core moral beliefs and convictions?"

(3) "In daily life, how much are your thoughts and feelings about your own actions and behaviors tied to your core moral beliefs and convictions?" Responses were made on 5-point scales from 0 (*not at all*) to 4 (*very much*). Internal consistency of the three-item measure was acceptable ( $\alpha = .69$ ).

***Moral Intuition.*** A deeply-rooted debate in the field of morality is about whether moral judgments are better described as intuitive (Haidt, 2001) or reasoned (Kohlberg, 1976). The degree to which people base their moral judgments more on intuition versus reason may vary from individual to individual (Hofmann & Baumert, 2010). Given our interest in the desire or want to punish, an experience that arguably has a strong emotional component, we tested the hypothesis that moral intuitionists may feel a stronger desire to punish the perpetrators of immoral acts they encounter than those who may respond to these events in a more "cool", reflective manner.

To develop a broad measure of moral intuition, we created two items tapping into the tendency to base one's moral evaluations and judgments on intuition: (1) "I can usually feel when a person is right or wrong even if I can't explain how I know." (2) "When it comes to judging whether something is right or wrong, I can usually rely on my 'gut feelings'." Responses were made on 5-point scales from 1 (*extremely uncharacteristic of me*) to 5 (*extremely characteristic of me*) ( $\alpha = .76$ ).

**6. Supplementary Table 1***Means and Standard Deviations for Social Closeness**Ratings of Perpetrator Categories*

<i>Category</i>	<i>Mean</i>	<i>SD</i>
Partner/Spouse	6.48	1.24
Family Member	6.07	1.24
Friend	5.74	0.97
Acquaintance/Neighbour	4.05	1.16
Professional	3.72	1.14
Distant Family	3.49	1.41
Ex-Partner	3.05	1.58
No Concrete Person/Other Entity	2.31	1.33
Stranger	1.90	1.28

*Note: N = 103 independent raters recruited via mTurk.*

7. **Supplementary Table 2.** *Sensitivity analysis controlling for moral foundations codings: Multilevel regression models predicting desire for punishment from occasion-specific variables (perceived wrongness, perspective, type of actor, and moral foundations) at Level 1 and demographic/dispositional variables at Level 2.*

Predictor	Model 1 (base predictors)			Model 2 (closeness data)			Model 3 (plus dispositional)		
	<i>B/F</i>	<i>SE (B)</i>	<i>p</i>	<i>B</i>	<i>SE (B)</i>	<i>p</i>	<i>B</i>	<i>SE (B)</i>	<i>p</i>
Intercept	2.82	0.16	< .001	3.03	0.07	< .001	2.98	0.09	< .001
<i>Level 1: Event Predictors</i>									
Perceived wrongness	0.55	0.06	< .001	0.53	0.06	< .001	0.56	0.06	< .001
Perspective	$F(2, 1236) = 8.95$		< .001	$F(2, 1236) = 10.93$		< .001	$F(2, 1223) = 7.81$		< .001
Type of perpetrator (rating)	$F(9, 1225) = 4.25$		< .001						
Type of victim (rating)	$F(8, 1198) = 0.58$		.798						
Moral Foundations	$F(7, 1224) = 4.45$		< .001	$F(7, 1199) = 5.57$		< .001	$F(7, 1188) = 6.20$		< .001
Closeness to perpetrator (rating)				-0.22	0.05	< .001	-0.23	0.05	< .001
Closeness to victim				0.09	0.03	< .001	0.09	0.03	.001
<i>Level 2: Demographic and Dispositional Predictors</i>									
Sex							0.02	0.05	.744
Age							0.02	0.00	< .001
Religiosity							-0.03	0.03	.271
Political Orientation							$F(5, 642) = 3.80$		< .001
Moral identity							0.18	0.07	.006
Moral conviction							0.02	0.06	.773
Moral intuition							0.08	0.05	.087

*Note:* Continuous predictors are displayed with their regression coefficient (*B*) and *SE*, categorical predictors with three or more categories with their fixed effect *F*-value. Sex was effects-coded (-1 = male; 1 = female). Type of perpetrator, type of victim, closeness to perpetrator, and moral foundation were rated by independent coders or participants, respectively (see main text), closeness to victim was self-reported.

### 8. Supplementary Table 3

*Zero-Order Correlations Among Desire for Punishment, Moral Emotions, Moral Self-Worth, and Momentary Well-Being*

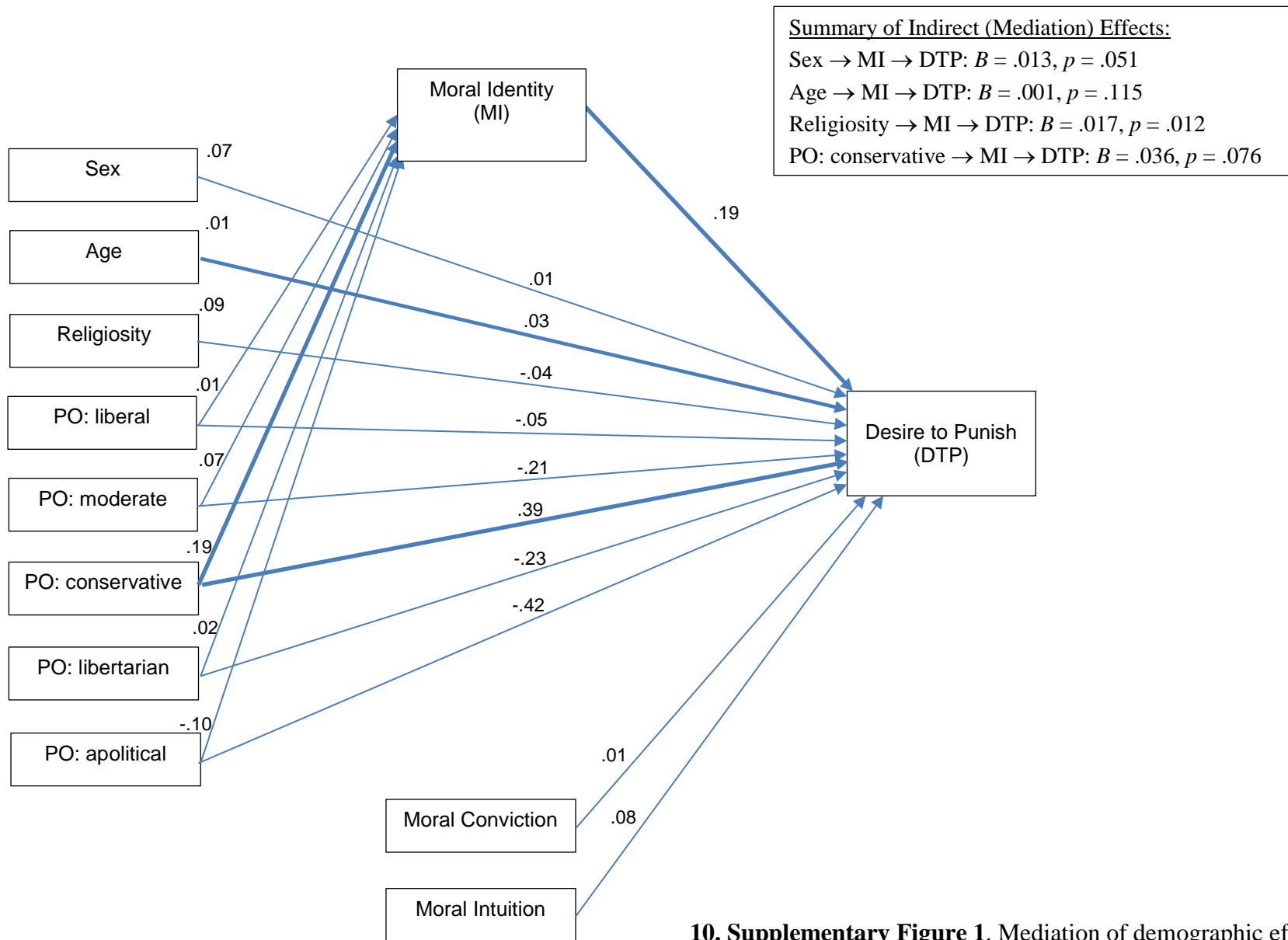
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Desire to punish	—										
(2) Anger	.48	—									
(3) Disgust	.48	.73	—								
(4) Contempt	.37	.62	.55	—							
(5) Embarrassment	.09	.31	.29	.26	—						
(6) Guilt	.00	.18	.11	.13	.54	—					
(7) Shame	.13	.33	.32	.23	.68	.62	—				
(8) Pride	-.03	-.24	-.24	-.11	-.11	.10	-.09	—			
(9) Elevation	.04	-.07	-.07	-.04	.03	.17	.12	.55	—		
(10) Gratitude	.01	-.22	-.21	-.18	-.02	.13	-.03	.64	.44	—	
(11) Moral self-worth	.24	.08	.13	.06	-.10	-.23	-.14	.20	.09	.15	—
(12) Momentary well-being	-.12	-.37	-.28	-.30	-.20	-.18	-.21	.27	.18	.29	.27

*Note.* Correlations were computed using the `cor_auto` function in R which selects the appropriate correlation method (Pearson, polyserial, polychoric) for each pair of variables.

## 9. Supplementary Table 4

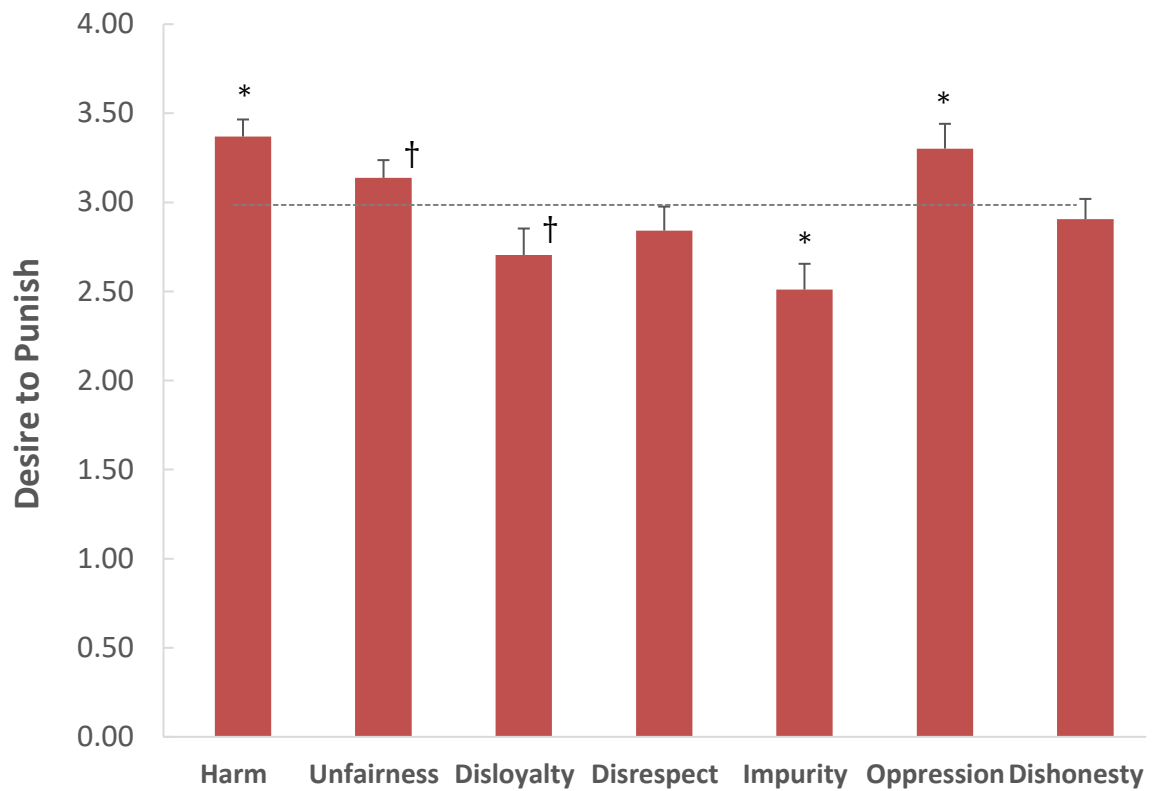
*Multiple Regression Models Predicting Desire to Punish from Moral Emotions*

Predictor	Model 1			Model 2 (all emotions)		
	<i>B</i>	<i>SE</i>	<i>p</i>	<i>B</i>	<i>SD</i>	<i>p</i>
Intercept	3.22	0.05	< .001	3.25	0.06	< .001
Anger	0.26	0.06	< .001	0.25	0.06	< .001
Disgust	0.23	0.05	< .001	0.24	0.07	.001
Contempt	0.21	0.05	< .001	0.20	0.06	.002
Embarrassment				-0.09	0.06	.154
Guilt				-0.07	0.08	.394
Shame				0.04	0.07	.627
Pride				-0.05	0.08	.542
Elevation				-0.11	0.08	.141
Gratitude				0.00	0.07	.945



10. Supplementary Figure 1. Mediation of demographic effects

(building on Model 3). Thick lines indicate significant pathways ( $p < .05$ ).



**11. Supplementary Figure 2.** Desire to punish by moral foundation of the immoral act (estimated from Model 3 in Supplementary Table 2). Asterisks indicate significant deviations from the grand average (vertical line) at  $p < .05$  ( $† p < .10$ ). Error bars indicate standard errors. Base category (lack of self-restraint) not shown.