

# JOURNAL OF APPLIED SOCIAL PSYCHOLOGY

## Explaining the Better-Than-Average Effect among Prisoners

Journal:	<i>Journal of Applied Social Psychology</i>
Manuscript ID	19-JASP-0142.R2
Wiley - Manuscript type:	Original Article
Keywords:	better than average effect, prisoners, self-enhancement

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EXPLAINING THE BTAE AMONG PRISONERS

Favorable self-views have been linked to desirable outcomes such as task persistence, motivation to overcome setbacks, and well-being (Alicke & Sedikides, 2009). Maintaining favorable self-views, however, requires interpreting personal failures in a way that situates the self in the best possible light that reality can sustain (Sedikides & Gregg, 2008). This is achieved through self-enhancement strategies (Alicke & Sedikides, 2011).

A prototypical self-enhancement strategy, the Better-Than-Average Effect (BTAE), involves rating oneself more favorably than the average peer on global traits (e.g., honesty, warmth, intelligence, attractiveness; Alicke, 1985; Guenther & Alicke, 2010). Such widespread overestimation is statistically impossible: Assuming a normal distribution on a given trait (e.g., intelligence), not everyone can be above average. Yet, the BTAE is robust (Alicke & Govorun, 2005; Zell et al., 2020).

In a striking demonstration of the BTAE, prisoners compared themselves to the average prisoner and the average community member on nine prosocial traits (Sedikides et al., 2014). Prisoners rated themselves as better than the average prisoner on all traits. This may be unsurprising, as fellow prisoners had also been convicted of crimes (although crime severity did not influence the results). Prisoners, however, rated themselves as more moral, kind, honest, trustworthy, and compassionate than the average community member, and, perhaps most remarkably, as equally law-abiding.

The emergence of the BTAE among prisoners is consistent with a motivational, as opposed to a mere methodological or statistical, interpretation (Sedikides & Alicke, 2012, 2019). From the latter standpoint, the BTAE may be due to the distribution of a given trait being severely skewed such that most participants do fall above average. This is improbable among incarcerated individuals rating themselves on prosocial traits.

In this article, we address more systematically the issue of reality constraints. Self-enhancement works within parameters of believability to oneself and others (Gregg et al., 2011; Higgins, 2005). Prisoners have severe reality constraints in believing that they are more prosocial

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than the average community member. This population, then, provides an opportunity to understand why the BTAE is so pervasive.

We focused on three explanations for the BTAE among prisoners: (1) self-enhancing (social as well as temporal) comparisons, (2) denial of (and lack of insight about) the crimes for which prisoners were convicted, and (3) self-serving attributions. We assessed these biases by contrasting prisoners' perceptions of their own crime to their perceptions of the average prisoner's crime, and also by contrasting prisoners' and community members' perceptions of the average prisoner's crime.

In addition, we assessed the BTAE with reference to prisoners' and community members' perceptions of their worst trait relative to various referents (i.e., the average prisoner or average community member) and across time (i.e., past, present, future). We examined prisoners' perceptions of their worst trait, because we considered it implausible for the worst trait of the average prisoner to be better than that of the average community member or even the average prisoner. This seemed the most stringent test possible of self-other comparisons: If there were *any* trait on which prisoners would view themselves less favorably than the average community member, it would likely be their worst trait.

**Self-Enhancing Comparisons**

People evaluate their abilities and gain self-knowledge by comparing to others (Festinger, 1954) and to past selves (Sedikides & Skowronski, 1995). In doing so, they may make downward comparisons, contrasting their current selves or standing on a trait from worse off others (Wills, 1981) or worse off past selves (Wilson & Ross, 2001). The outcome is a boost in one's standing on the implicated trait. Alternatively, people may engage in upward comparisons, choosing better off others as referents (Collins, 1996) and searching for similarities, thus bringing conceptions of their current self closer to the better-off referent (Mussweiler, 2003).

Prisoners' current peer group—other prisoners—and their past “law-breaking” self, reflect useful referents for downward comparison. Prisoners may differentiate their past selves who committed the crime from their current reformed selves. The outcome is a contrast between

“me then” and “me now,” which allows for inflated self-evaluations. However, prisoners may not make the same distinction for their peers, perceiving them as more similar to their criminal selves and less reformed. The outcome is a contrast between prisoners’ current, reformed selves, and their peers’ downgraded status. Prisoners’ self-evaluations might inflate based on their visions of improved future selves.

**Denial and Lack of Insight**

Denial of information that reflects poorly on the self varies from blatant to subtle. On the blatant end of the spectrum, the self-enhancer may deny the wrongdoing outright (“I am innocent!”), confronting the bad behavior head-on and rejecting its connection to the self. More subtle denials function to undermine the evidence on which the negative behavior is based. For example, people engage in selective remembering, more readily recalling events that reflect favorably than unfavorably on the self, or construe events favorably (Sedikides et al., 2016; Sedikides & Skowronski, 2020). Although prisoners may deny their crimes outright, it is more likely that they will maintain positive self-views by engaging in subtle denial (Baumeister, Dale, & Sommer, 1998; Sedikides, 2012). For example, they may admit to their crime, but dispute that it was intentional, planned, or harmful.

Some prisoners, though, may lack the insight required for accurate self-perceptions. People who fall well below average on a given trait or ability are less capable of appraising correctly their standing (Kruger & Dunning, 1999). Thus, to the extent that prisoners fall short on prosocial traits (e.g., law-abidingness), they may be ill-equipped to appraise accurately their guilt and culpability along with characteristics of the crime, such as the harm it caused and its prevalence in the community. Prisoners may be so “un-law-abiding” that they lack the insight to appraise what it means to be law-abiding.

**Self-Serving Attributions**

People enhance or protect their self-views by attributing successes to internal causes (e.g., their own character) and failures to external causes (e.g., situations, others; Campbell & Sedikides, 1999). Prisoners might enhance or protect their self-views by considering their crimes

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as exceptions to their true selves. We expect that prisoners will attribute their crimes to external circumstances and distance themselves from internal causes.

**Overview of Comparisons**

Our primary goal was to assess prisoner attributions and explanations for their criminal conduct; in particular, with regard to self-enhancing social comparisons denial, and self-serving attributions.

**Self-enhancing comparisons.**

*Within- and between-group differences in perceptions of crimes and culpability.* We assessed whether prisoners would engage in downward social comparisons and differentiate themselves from their peers by holding more positive views of their crime and culpability. Given that a prisoner is also a group member, however, he might benefit from holding positive views of other prisoners (Ellemers et al., 2002; Tajfel & Turner, 1986). Prisoners, then, might hold more favorable views of other prisoners relative to views held by community members. We assessed this possibility both within groups (prisoners' self-perceptions vs. their perceptions of other prisoners) and between groups (prisoners' and community members' perceptions of the average prisoner) across variables related to denial (e.g., guilt, harm) and self-serving attributions (e.g., representativeness, hardship).

*Worst-trait ratings.* We assessed whether prisoners would perceive their current selves as better than the average prisoner, the average community member, and their past selves who committed the crime, on their worst trait. We also evaluated whether prisoners would engage in upward temporal comparisons by anticipating self-improvement and rating their future standing on their worst trait more positively than the average prisoner, average community member, and current selves.

**Denial and lack of insight.** We tested whether prisoners would exhibit denial for their criminal convictions relative to their peers' convictions across variables that assess it in its blatant (e.g., denial of guilt) and subtle (e.g., denial of intentions, planning, harm) forms. We also evaluated whether prisoners (relative to community members) lacked insight regarding their

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criminal behavior, overestimated crime prevalence in the population, and viewed these crimes as less morally wrong.

**Self-serving attributions.** We assessed whether prisoners would make more self-serving attributions for their crimes relative to those of their peers. Specifically, whether they would view their criminal convictions as less representative of their general behavior, engage in more blame externalization, and claim having experienced more hardship relative to the average prisoner and community member.

**Biases and ratings on worst trait.** We tested whether denial, self-serving attributions, and self-enhancing temporal comparisons on the part of prisoners predicted better than average ratings on their worst trait.

**Personality moderators.** We explored whether the magnitude of prisoners’ denial, self-serving attributions, and self-enhancing comparisons varied with levels of narcissism and psychopathy. Narcissism is positively related to blame externalization (Campbell et al., 2000), self-enhancing comparisons (Hepper et al., 2010), and deficits in empathy, guilt, and apologizing for wrongdoings (Leunissen et al., 2017). Psychopathy is also related to blame externalization (Sandoval et al., 2000; Delisi et al., 2013) and deficits in moral reasoning (Blair, 1995). Therefore, greater narcissism and psychopathy might be associated with stronger manifestations of the three biases. At higher levels of narcissism, we evaluated whether prisoners would be more likely to deny their crimes, commit more self-serving attributions, and engage in self-enhancing comparisons. Similarly, at higher levels of psychopathy (i.e., fearless dominance, Machiavellian egocentricity, cold-heartedness), we assessed whether prisoners would be more likely to evince blame externalization and lack of insight (e.g., overestimation of crimes’ prevalence in the community), and less likely to judge crimes as morally wrong.

Method

Participants and Procedure

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The sample included 152 men, 85 of whom were incarcerated in two UK prisons (predominantly for sexual offenses) and 67 were community members.<sup>1</sup> Prisoners' ages ranged from 21-73 years ( $M = 43.33$ ,  $SD = 13.29$ ), and community members' ages from 19-64 years ( $M = 38.33$ ,  $SD = 12.62$ ). We administered hard copies of the questionnaire. Most participants completed the questionnaire in private, and 19 in a group. We recruited community members in the same geographical area as prisoners, and by word-of-mouth. We did not remunerate participants. We obtained ethical approval from the local university.

**Measures and Materials**

**Prisoner and community member questionnaires.** The prisoner and community member questionnaires (Appendix) included (1) items that assessed denial, self-serving attributions, and self-enhancing comparisons of participants' worst-trait, (2) personality scales, and (3) demographics. The two questionnaires were identical, except that questions regarding crimes committed were absent in the community sample. All questionnaires had questions about perceptions of the average prisoner.

**Self-enhancing comparisons.**

**BTAE and Worst-trait ratings.** We assessed social and temporal comparisons with regard to prisoners' and community members' ratings of their worst trait relative to various referents and across different time frames (e.g., past, present, future). Participants reported their

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<sup>1</sup>Initially, we tested 100 male prisoners and 143 community members. We excluded: (1) 46 women from the community sample, two prisoners who reported they were women, and three participants (two prisoners, one community member) who did not disclose their gender; (2) 11 prisoners and nine community members who had reading comprehension problems; (3) 18 community members who did not complete most questionnaires, and (4) two community members aged 17. Given that our sample of prisoners came from an all-male prison, we chose to exclude women community members from the analysis. When we added the excluded participants, the results did not change, except: Prisoners rated violence ( $M = 6.12$ ) as less morally wrong than community members ( $M = 6.48$ ),  $t(221) = 2.29$ ,  $p = .023$ ; Prisoners' and community members' moral judgments of drug-related crimes did not differ,  $t(220) = -.60$ ,  $p = .55$ , ( $M = 5.56$ ,  $M = 5.60$ , respectively); and the Group  $\times$  Hardship interaction was significant,  $F(1, 219) = 7.59$ ,  $p < .001$ , with the results pattern being similar to the reported one (statistical power was greater in the original data set:  $1-\beta = .78$  vs.  $1-\beta = .35$ ).

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worst trait as an open-ended response. The open-ended response was categorized into similar types, such as stubbornness or bad temper; if answers did not fit one of the common categories they were coded as “Other.” Then participants responded to the following four questions regarding perceptions of their worst trait: “How do you compare on that trait relative to the typical community member [inmate]?”, “Five years from now, where do you think you will rate on that trait relative to the typical community member [inmate]?”, “Five years from now, where do you think you will rate on that trait relative to where you stand now?”, “Compared to how you would have rated yourself on that trait at the time of the crime, how would you rate yourself on that trait today?” (-5 = *much worse*, 0 = *the same*, 5 = *much better*).

***Within- and between-group differences in perceptions of crimes and culpability.*** We also assessed differences between prisoners’ self-perceptions and their perceptions of other prisoners, and also between prisoners’ and community members’ perceptions of the average prisoner through comparisons on variables pertinent to denial (e.g., guilt, harm) and self-serving attributions (e.g., representativeness, hardship).

***Denial.*** We assessed prisoners’ denial of their crime, and the extent to which both prisoners and community members denied the average prisoner’s crime through perceptions of guilt, intentions, blame, fault, planning, justification, and recidivism.<sup>2</sup> (Appendix). Guilt, intentions, blame, and fault were reported as yes or no responses; planning, justification, and items related to recidivism consisted of rating scales. For example, “In thinking of the crime for which you are serving time, to what extent was your behavior justified?” (1 = *not at all justified*, 7 = *extremely justified*). We assessed lack of insight regarding crimes and law-abidingness through participants’ moral judgments and their perceptions of crime prevalence in the general

<sup>2</sup>We combined the following items to compute a mean for recidivism concerning judgments of others (i.e., prisoners and community members’ perceptions of the typical prisoner;  $\alpha = .82$ ) and for prisoners’ self-judgments ( $\alpha = .84$ ): “If you [the typical inmate] were to go back in time, how likely would you [he] be to commit the crime again?”; “In general, how likely are you [the typical inmate] to commit a similar crime again?”; “In thinking of the crime for which you [the typical inmate] are serving time, how likely would you [he] be to behave the same way in the future?” (1 = *very unlikely*, 7 = *very likely*).



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population. Specifically, prisoners responded to two questions about moral judgments of their crime or someone else's: "In thinking about the crime, which you are serving time for right now, to what extent do you believe it is morally wrong?" and "In thinking about other people who have committed the same or similar crime as you, to what extent do you believe that their crime is morally wrong?" (1 = *not at all morally wrong*, 7 = *very morally wrong*). Both prisoners and community members reported their moral judgments on various crimes, and their perception of crime prevalence, as percentages (1 = 0-10%; 2 = 11-20%, 3 = 21-30%, 4 = 31-40%, 5 = 41-50%, 6 = 51-60%, 7 = 61-70%, 8 = 71-80%, 9 = 81-90%, 10 = 91-100%). The offenses were: violence against another person, sexual crimes, murder, robbery, burglary, criminal damage, theft and handling stolen goods, drug crimes, fraud and forgery, motoring crimes.

**Self-serving attributions.**<sup>3</sup> We assessed prisoners' and community members' internal and external attributions for their crime and the average prisoner's crime.

**Internal attributions: representativeness and exception to general behavior.** We assessed internal attributions in terms of prisoners' perceptions of their crime, and both prisoners' and community members' perceptions of the average prisoner's crime. Specifically, prisoners answered: "How much is the crime for which you are serving time representative of your general behavior?" and "How much is the crime for which you are serving time an exception to your general behavior?" (1 = *not at all an exception*, 7 = *very much an exception*). Both prisoners and community members indicated their perceptions of the average prisoner: "In general, how much are the crimes for which the typical inmate is serving time representative of his general behavior?" (1 = *not at all representative*, 7 = *extremely representative*) and "How much was the crime for which the typical inmate is serving time an exception to his general behavior?" (1 = *not at all an exception*, 7 = *very much an exception*).

**External attributions: hardship.** We assessed perceptions of hardship participants had experienced relative to the average community member and average prisoner: "Compared to the

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<sup>3</sup>We included two exploratory questions about "circumstances leading to the crime," but responses were uninformative.

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typical community member [inmate], to what extent have you experienced hardships in your life?” (-5 = *much less*, 0 = *the same*, 5 = *much more*) and “To what extent do you believe the hardships that the typical inmate has experienced caused them to become incarcerated?” (1 = *not at all*, 7 = *very much*). The prisoner questionnaire included: “To what extent do you believe the hardships that you have experienced caused you to become incarcerated?” (1 = *not at all*, 7 = *very much*).

**Personality Moderators.**

***Narcissism Personality Inventory (NPI).*** The 16-item NPI is a forced-choice measure of narcissism (Ames, Rose & Anderson, 2006). For each item, participants selected one of two statements that best described them, a narcissistic (e.g., “I really like to be the center of attention”) and a non-narcissistic (“It makes me uncomfortable to be the center of attention”) one.

***PPIR-40.*** The 40 items of the short version of the Psychopathic Personality Inventory (PPI-R; Lilienfeld & Widows, 2005) can be grouped into two factors: Fearless Dominance (FD), characterized by stress immunity, social dominance and fearlessness, and Self-Centered Impulsivity (SCI), characterized by blame externalization, rebellious non-conformity Machiavellian egocentrism, and carefree non-planfulness (1 = *false*, 2 = *mostly false*, 3 = *mostly true*, 4 = *true*). A third factor, Coldheartedness (CO), is unrelated to the other two.

**Demographics.** Participants reported their gender, age, ethnicity, English reading skill level, education level, and whether they had problems understanding the questionnaire.

**Results**

**Self-Enhancing Comparisons**

**Within- and between-group differences in perceptions of crimes and culpability.** We assessed whether prisoners would differentiate their current selves from other prisoners and therefore perceive their own crime and culpability more positively than the average prisoner’s crime and culpability. This occurred on recidivism, planning, exception, and representativeness

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(Table 1). We found no significant differences for guilt, blame, fault, and intentions ( $0 < \chi^2 < 1.75$ ), or harm and justification, all  $ps > .05$ .

Given their joint group membership, we evaluated whether prisoners' perceptions of the average prisoner would be more positive than community members' perceptions of the average prisoner. This is largely what we found. Prisoners were more likely than community members to deny the average prisoner's guilt,  $\chi^2(1) = 25.51, p < .001$ , blame,  $\chi^2(1) = 11.61, p = .001$ , fault,  $\chi^2(1) = 7.52, p = .006$ , and intentions,  $\chi^2(1) = 32.63, p < .001$ . Also, relative to community members, prisoners rated the average prisoner lower on recidivism, and believed the average prisoner's crime was less representative of his behavior and less planned. Prisoners and community members did not differ in their judgments of justification for the crime, harm, or whether the crime was an exception to the average prisoner's behavior (Table 2).

**Summary.** These results indicate that prisoners maintain positive self-views, in part, by engaging in self-enhancing social comparisons. Prisoners perceive the average prisoner's crime more negatively than their own, yet perceive the average prisoner's crime more positively than community members perceive it. These divergent perceptions suggest a psychological tension that prisoners undergo between differentiating from their peers in order to bolster self-evaluations and viewing their fellow prisoners positively due to joint group membership.

**BTAE on Worst-trait ratings.** We tested whether prisoners would engage in self-enhancing comparisons with regard to their self-reported worst trait. Specifically, whether prisoners' current self-perceptions would be more positive relative to the average community member, the average prisoner, and their past selves. We further evaluated whether prisoners would expect self-improvement on their worst trait in 5-years and would rate their future selves better than the average community member, average prisoner, and their past selves, as well as whether their estimations of self-improvement would be higher in comparison to those made by community members.

Twenty-six prisoners and four community members did not indicate their worst trait. The most commonly reported worst traits among prisoners were control issues (9.40%), lack of self-

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confidence (9.40%), and anger (9.40%; Table 3). The most commonly reported worst traits among community members were control issues (16.40%), lack of self-confidence (13.40%), anger (9.00%), and anxiety/worry (7.50%; Table 4).

We conducted a 2 (prisoner vs. community member) x 5 (worst-trait: average prisoner, average community member, 5-year projections compared to the average prisoner, 5-year projections compared to the average community member, 5-year projections compared to self) ANOVA. Group was the between-subjects factor, worst-trait the within-subjects one. The group main effect was not significant,  $F(1, 146) = 1.59, p = .21, \eta^2 = .011$ , but the worst-trait main effect was significant,  $F(4, 584) = 30.68, p < .001, \eta^2 = .17$ , as was the interaction,  $F(4, 584) = 6.29, p < .001, \eta^2 = .041$  (Figure 1).

We conducted 12 post-hoc-tests using a Bonferroni correction to adjust alpha to .004 (.05/12). One-sample *t*-tests with a value of 0 (0 = *average level of a trait*) indicated that prisoners rated themselves about the same on their worst trait relative to the average prisoner and the average community member (Table 5). However, in projecting five years from now, prisoners believed they would be better than the average prisoner on that trait, better than the average community member, and better than their current selves. Further, relative to where they stood on their worst trait when they committed their crime, prisoners rated themselves better on their worst trait today.

Statistically significant differences did not emerge in community members' ratings of their worst trait relative to the average prisoner or average community member. Like prisoners, community members anticipated self-improvement in five years, rating themselves better than the average prisoner, and better than their present selves. However, unlike prisoners, they anticipated being about the same as the average community member on their worst trait in five years. Group differences between prisoners and community members' future projections emerged, such that prisoners anticipated more progress in five years relative to their current selves ( $M = 2.14, SD = 2.99$ ) compared to the progress that community members anticipated relative to their current selves ( $M = .88, SD = 1.56$ ),  $t(147) = 3.12, p = .002$ .

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**Summary.** The results were mixed as to whether prisoners were exhibiting self-serving tendencies with regard to judgments about their worst trait. Prisoners' self-perceptions of falling at the average in relation to both community members and prisoners on their worse characteristic might indicate overestimation even on their weaknesses, assuming that in reality, their worst characteristic is objectively worse than that of the average community member. Further, prisoners differentiated their current selves from their past selves who committed the crime, and projected more extensive self-improvement in five years in relation to various referents (e.g., their current self, average community member, average prisoner). Prisoners' expectations for self-improvement were greater compared to the self-improvement expected of community members.

**Denial**

**Guilt, blame, fault, intentions, recidivism, planning, harm, and justification.** We assessed whether prisoners would be more likely to deny rather than admit to their own crimes, and whether they would exhibit more denial for their own crimes relative to those of the average prisoner. Surprisingly, prisoners were more likely to admit than deny their guilt,  $\chi^2(1) = 5.19, p = .023$ , blame,  $\chi^2(1) = 11.31, p = .001$ , and fault,  $\chi^2(1) = 6.86, p = .009$ , regarding their crimes. On the other hand, prisoners were more likely to deny they intended to commit their crimes,  $\chi^2(1) = 17.61, p < .001$ . Further, relative to self-judgments, prisoners rated the average prisoner higher on recidivism and believed the average prisoner's crime was more planned, but not more justified or harmful (Table 1). Prisoners' judgments of their guilt, blame, fault, and intentions did not differ from their judgments of other prisoners, ( $0 < \chi^2 < 1.75$ ), all  $ps > .05$ . Prisoners, then, engaged in subtle denial. They admitted to their own guilt, blame, and fault, yet downplayed their intentions and perceived their own crime as less planned and less likely to re-occur relative to other prisoners' crimes.

**Moral judgments of crimes.** Prisoners (relative to community members) underestimated the prevalence of crimes in the general population but did not differ in their moral judgments of most crimes. Prisoners ( $M = 6.20, SD = 1.39$ ) rated theft more morally wrong than community

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members ( $M = 5.68, SD = 1.25$ ),  $t(150) = 2.62, p = .018$ . No other differences between prisoners' and community members' moral judgments emerged. Prisoners' ( $M = 5.86, SD = 2.03$ ) moral rating of their crime did not differ from their ratings of the same crime committed by the average prisoner ( $M = 5.99, SD = 1.90$ ),  $t(83) = -.86, p = .392$ .

**Crime prevalence.** Relative to community members, prisoners reported that crimes involving violence, murder, sex, robbery, burglary, theft, fraud, criminal damage, and drugs are more prevalent in the general population (Table 6). Prisoners did not differ from community members in their perceptions of motoring crime prevalence. At least half of prisoners believed more than 50% of the population has engaged in violent, sexual, and drug related crimes. These estimations were lower for community members (26.90%, 9.00%, and 29.90%, respectively).

**Summary.** The results partially indicated that prisoners engage in denial and lack insight regarding criminal behavior and its prevalence. Although prisoners' moral judgments of crimes did not differ from those of community members for most crimes, prisoners overestimated grossly the prevalence of crimes in the population.

**Self-Serving Attributions**

The extensive literature on self-serving attributions suggests that prisoners might distance themselves from internal causes and endorse external causes for their crimes. In particular, we assessed whether prisoners would perceive their own crime as less representative and more of an exception to their general behavior relative to average prisoners' crimes. We also evaluated whether prisoners would estimate having experienced more hardship than the average prisoner and average community member, and whether these estimations would be higher than those reported by community members. Further, we examined whether prisoners would be more likely to attribute the cause of their crime to hardship.

**Internal attributions: representativeness and exception to general behavior.** In general, prisoners believed that their crime was less representative and more of an exception to their behavior relative to the average prisoner's crime (Table 1).

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**External attributions: hardship.** A 2 x 2 mixed-factor ANOVA with group (prisoners vs. community members) as the between-subjects factor and hardship (relative to the average community member vs. relative to the average prisoner) as the within-subjects factor yielded significant main effects. The first main effect compares prisoners' perceptions relative to both reference groups with community members' perceptions relative to both referent groups (Figure 2). On average, community members reported experiencing a lot less hardship relative to both reference groups ( $M = -1.80$ ,  $SE = .32$ ), more so than prisoners who in general reported experiencing only minimally different or about the same levels of hardship relative to both reference groups ( $M = .07$ ,  $SE = .28$ ),  $F(1, 149) = 19.40$ ,  $p < .001$ ,  $\eta^2 = .12$ . Further, on average, all participants reported having experienced a lot less hardship relative to the average prisoner ( $M = -1.72$ ,  $SE = .22$ ), more so than their perceptions of their experienced hardship relative to the average community member ( $M = -.01$ ,  $SE = .23$ ),  $F(1, 149) = 116.05$ ,  $p < .001$ ,  $\eta^2 = .44$  (Figure 3). The Group x Hardship interaction was not significant,  $F(1, 149) = 2.53$ ,  $p = .11$ ,  $\eta^2 = .02$ .

Prisoners were less likely to attribute the cause of the average prisoner's crime to hardship ( $M = 4.17$ ,  $SD = 1.73$ ) compared to community members ( $M = 4.70$ ,  $SD = 1.46$ ),  $t(148) = -2.01$ ,  $p = .046$ ,  $d = .33$ . Prisoners rated their hardship as having less causal role in their incarceration ( $M = 2.90$ ,  $SD = 2.21$ ) relative to the average prisoner's incarceration ( $M = 4.17$ ,  $SD = 1.73$ ),  $t(82) = -5.15$ ,  $p < .001$ ,  $d = .57$ .

**Summary.** The results regarding prisoner's self-serving attributions were mixed. Although they viewed their crime as an exception and unrepresentative of their true character, they reported having experienced about the same levels of hardship relative to the average other (in this case, an average prisoner and average community member) and did not attribute the cause of their crime to hardship.

### Biases and Ratings on Worst Trait

In separate analyses, we regressed prisoners' ratings of their worst trait relative to the average community member on temporal comparisons (e.g., future ratings of prisoners' worst



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trait), denial-related variables (guilt, blame, fault, intentions, harm, recidivism, planning, justification), and self-serving attributions (exception, representativeness, hardship; Table 7).<sup>4</sup>

**Temporal comparisons.** Higher ratings on prisoners’ worst trait relative to when they committed the crime and anticipations of self-improvement in five years were marginally associated with better current ratings of their worst trait relative to the average community member. Also, more positive projected ratings of prisoners’ worst trait in five years relative to the average prisoner and average community member were associated with higher ratings of their worst trait currently.

**Denial.** Relative to prisoners who affirmed their guilt, blame,<sup>5</sup> and fault, prisoners who denied those aspects of their culpability rated themselves better on their worst trait than the average community member. Further, the less harm prisoners perceived their crime to have caused others, the better their worst trait rating became. The remaining variables were unrelated to worst-trait ratings,  $ps > .05$ .

**Self-serving attributions.** The more hardship prisoners perceived that they had experienced relative to the average community member and average prisoner, and the more they believed their crime was caused by hardship, the lower their worst-trait ratings were relative to the average community member. Representativeness, exceptions, and worst trait ratings were unrelated,  $ps > .05$ .

**Summary.** The results suggest that denial and self-enhancing comparisons serve positive self-perceptions. Differentiating their past “criminal” selves from their reformed current selves (downward temporal comparisons) and anticipating self-improvement in five years relative to their current selves, the average prisoner, and the average community member (upward temporal

<sup>4</sup>We focused on the average community member (rather than average prisoner) as the primary referent. Given that the average prisoner had also committed (or convicted of) a crime, prisoners would not need to implicate the same self-enhancing strategies in comparing themselves to their incarcerated peers. Indeed, variables related to the three biases were unassociated with prisoners’ ratings of their worst trait relative to the average prisoner.

<sup>5</sup>This result was marginal on blame,  $p = .069$ .



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comparison) were linked to more positive current self-evaluations of prisoners' worst trait. Denial of criminal behavior was associated with more positive self-evaluations on worst trait. However, the idea that self-serving attributions would be associated with more positive self-evaluations of prisoners' worst trait was unsupported.

**Personality Moderators**

We regressed variables related to denial, self-serving attributions, and self-enhancing social comparisons separately on narcissism and group (prisoners vs. community members), and their interactions. We repeated these analyses substituting psychopathy for narcissism. In a second set of analyses, we regressed variables that assessed prisoners' denial of their own crimes, self-serving attributions, and self-enhancing comparisons separately on narcissism and psychopathy.

**Narcissism.** We found no Group x Narcissism interactions on guilt, blame, intention, fault, harm, representativeness, exceptions, planning, justified, and recidivism, all  $ps > .05$ . We obtained a narcissism main effect for harm: higher narcissism predicted lower ratings of harm for the average prisoner's crime. Further, higher narcissism predicted prisoners' rating of their crime as more representative of their behavior (Table 8).

We obtained a marginal Group x Narcissism interaction for moral judgments of sexual offenses,  $t(138) = -1.77$ ,  $b = -2.33$ ,  $SE_b = 1.31$ ,  $\beta = -.23$ ,  $p = .079$ . At high narcissism (+1SD), prisoners rated sexual crimes as less morally wrong compared to community members' ratings ( $b = -.57$ ,  $p = .012$ ). This difference was reduced and became non-significant as narcissism decreased (e.g., at -1SD,  $b = .02$ ,  $p = .95$ ). Additionally, higher narcissism predicted prisoners' ratings of their crime as less morally wrong, and of the same crime committed by someone else as less morally wrong (Table 8).

The Group x Narcissism interaction on whether hardship was perceived as causing the average prisoner's crimes was non-significant. However, across all participants, higher narcissism predicted stronger beliefs that hardship caused the average prisoner to become

incarcerated. For prisoners, higher narcissism related to lower ratings of their worst trait relative to when they committed the crime (Table 8).

**Psychopathy.**

**Denial.** We tested the PPI-R score and the factors fearless dominance (PPI-FD), self-centered impulsivity (PPI-SCI), and cold-heartedness (PPI-CO). We found no interaction between group and PPI-R score, PPI-FD, PPI-SCI, or PPI-CO on guilt, blame, intention, fault, harm, representativeness, exceptions, planned, justified, and recidivism, all  $ps > .05$ .

We obtained a Group x PPI-R score interaction on prevalence of murder,  $t(146) = 2.11$ ,  $b = 2.35$ ,  $SE_b = 1.11$ ,  $\beta = .22$ ,  $p = .037$ , sexual crimes,  $t(146) = 2.24$ ,  $b = 2.82$ ,  $SE_b = 1.26$ ,  $\beta = .23$ ,  $p = .027$ , robbery,  $t(146) = 3.01$ ,  $b = 4.16$ ,  $SE_b = 1.38$ ,  $\beta = .32$ ,  $p = .003$ , burglary,  $t(146) = 2.86$ ,  $b = 3.62$ ,  $SE_b = 1.27$ ,  $\beta = .32$ ,  $p = .005$ , and theft,  $t(145) = 2.41$ ,  $b = 3.04$ ,  $SE_b = 1.26$ ,  $\beta = .27$ ,  $p = .017$ , in the population. At high levels of psychopathy (+1SD), prisoners rated murder ( $b = 2.07$ ,  $p < .001$ ), sexual crimes ( $b = 3.51$ ,  $p < .001$ ), robbery ( $b = 3.31$ ,  $p < .001$ ), burglary ( $b = 2.41$ ,  $p < .001$ ), and theft ( $b = 1.95$ ,  $p = .001$ ), as more prevalent than community members. At lower levels of psychopathy (-1SD), these differences were reduced: murder ( $b = .58$ ,  $p = .24$ ), sexual crimes ( $b = 1.73$ ,  $p = .003$ ), robbery ( $b = .51$ ,  $p = .41$ ), burglary ( $b = .12$ ,  $p = .84$ ), theft ( $b = .03$ ,  $p = .96$ ). We also obtained a marginal Group x PPI-CO score interaction on the prevalence of sexual crimes,  $t(146) = 1.95$ ,  $b = 1.39$ ,  $SE_b = .71$ ,  $\beta = .24$ ,  $p = .053$ . A similar pattern emerged: Differences between prisoners and community members' increased at higher levels of cold-heartedness (-1SD,  $b = 1.64$ ,  $p = .01$  vs. +1SD,  $b = 3.34$ ,  $p < .001$ ).

Although relations between moral judgments and the PPI-R and PPI-CO scores were null across all participants, higher PPI-SCI predicted more lenient moral judgments and over-estimations of the prevalence of most crimes (Tables 9-10). Higher PPI-FD was related to more severe moral judgments for burglary, ( $r = .17$ ,  $p = .041$ ).

**Self-serving attributions.** We obtained a Group x PPI-R score interaction for ratings of hardship experienced relative to the average prisoner,  $t(147) = 2.35$ ,  $b = 3.22$ ,  $SE_b = 1.37$ ,  $\beta = .25$ ,  $p = .02$ . At higher psychopathy (+1SD), prisoners perceived more hardship relative to the

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average prisoner than community members perceived,  $b = 3.07, p < .001$ . The magnitude of this difference was reduced as psychopathy levels decreased (at the mean,  $b = 2.05, p < .001$ ; at 1SD below the mean,  $b = 1.03, p = .093$ ). Although the Group  $\times$  PPI-R score interaction was non-significant for hardship relative to the average community member ( $p = .11$ ), the pattern was similar. At higher psychopathy, prisoners perceived more hardship relative to the average community member than community members perceived,  $b = 2.25, p = .001$ . This difference was reduced at lower psychopathy (e.g., -1SD,  $b = .82, p = .20$ ).

The Group  $\times$  PPI-R score interaction was significant for hardship causing the average prisoner's crime,  $t(146) = -2.39, b = -1.97, SE_b = .82, \beta = -.27, p = .018$ . At higher psychopathy (+1SD), prisoners believed hardship had less of a causal impact on the average prisoner's incarceration compared to community members,  $b = -1.16, p = .002$ . As psychopathy decreased, differences between groups also decreased (at the mean,  $b = -.54, p = .043$ ; -1SD,  $b = -.09, p = .81$ ). Among prisoners, the PPI-R score did not predict stronger external attributions (i.e., blaming hardship) for own crime,  $p = .10$ .

We obtained similar relations for self-centered impulsivity. Across all participants, higher self-centered impulsivity predicted the belief that more personal hardship had been experienced relative to the average prisoner, and relative to the average community member. Among prisoners, higher self-centered impulsivity predicted attributions of the cause of their crime to hardship. This relation was absent for attributions of the cause of the average prisoner's crime (Table 11).

***Self-enhancing comparisons.*** Across all participants, higher PPI-FD scores predicted more positive worst trait projections in 5 years relative to the average community member and relative to their current selves. However, higher PPI-CO scores predicted lower ratings of participants' worst trait in relation to the average community member, the average prisoner, and in projecting 5 years from now relative to the average prisoner, the average community member, and their current selves. There was no relation between PPI-R or PPI-SCI and worst trait ratings (Table 12).

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**Summary.** Narcissism did not predict more extensive self-serving attributions or self-enhancing comparisons. However, higher narcissism was linked to accentuated differences among prisoners and community members’ moral judgments of sexual crimes, and to prisoners rating their crimes and those of others as less morally wrong. Narcissism is associated with denial of own crime by undermining its severity.

Self-centered impulsivity was associated with more lenient moral judgments of crime and more extensive overestimations of its prevalence. Differences between prisoners and community members’ perceptions of the prevalence of crime increased with psychopathy (PPI-R score). Psychopathy may conduce to denial through a lack of insight into morality and criminal activity.

Self-centered impulsivity predicted stronger external attributions for prisoners’ own crime. Although the same relation was absent for internal attributions, the general pattern indicates that psychopathy—particularly, self-centered impulsivity— conduces to more self-serving attributions.

Although fear dominance predicted more positive self-perceptions in five years relative to the average community member and current self, psychopathy was generally unassociated with positive self-perceptions of prisoners’ worst trait. That cold-heartedness predicted lower worst trait ratings suggests that the relative positive self-perception in comparison to others on a negative characteristic is linked to less emotional sharing with others.

**Discussion**

In an effort to explain previous research findings demonstrating the BTAE among prisoners (Sedikides et al., 2014), we assessed several ways in which prisoners might engage in biased thinking about their crimes and circumstances. These ways were self-enhancing comparisons, denial and lack of insight, and self-serving attributions. In addition, we examined whether narcissism or psychopathy were related to some of these ways.

**Self-Enhancing Comparisons**

Prisoners’ perceptions of their worst trait yielded mixed results. Prisoners rated themselves equivalently to the average community member and average prisoner on their worst

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trait (results presented in Table 5). However, if there were a trait on which people would rate themselves below average, this should be their worst trait. Neither prisoners nor community members did so. They believed they stacked up to most others even on their worst trait.

Ironically, one reason for this is that prisoners did not generally perceive themselves to have worse characteristics than the average community member. We acknowledge that this is possible, but we view it as unlikely. Across the board, one would expect that people who are incarcerated have more serious problems with honesty, anger-management, self-control, and so on than the average person. We speculate, therefore, that the *absence* of a difference on this measure is revealing, akin to our previous finding that prisoners view themselves as equally law-abiding as the average citizen (Sedikides et al., 2014).

Prisoners did engage in self-enhancing downward temporal comparisons, rating their current selves as better relative to when they committed their crime. Also, they displayed positive future projections, anticipating more progress on their worst trait in five years relative to the average community member, the average prisoner, and their current selves (results presented in Table 5). Crucially, prisoners (vs. community members) expected more self-improvement on their worst trait in five years. This does not necessarily indicate prisoners believe they rate so poorly on their worst trait that they have more room for improvement; indeed, they rated themselves as about the same on that trait relative to others. More likely, prisoners exaggerate their potential for growth (even on their worst trait) to maintain positive self-views (Sedikides & Hepper, 2009; Sedikides & Strube, 1997), thus paving the way for self-enhancing upward comparisons between their current self and a much improved future self.

Self-enhancing temporal comparisons were associated with prisoners' worst trait judgments. The more positively prisoners rated their current self, relative to their past self (downward temporal comparisons), and the more progress they anticipated in five years (upward temporal comparisons), the more pronounced their BTAE was on their worst trait relative to the average community member (results presented in Table 7).

Although we found no within-group differences for guilt, fault, blame, harm, and intentions, prisoners distanced from their incarcerated peers by viewing their own crime more favorably along recidivism, planning, and being an exception to their behavior (results presented in Table 1). Group differences between prisoners and community members, however, told a different story. Compared to community member’s perceptions, prisoners cast the average prisoner’s crime in a more positive light on nearly every variable except justification for the crime, harm, and the crime being an exception to their behavior (results presented in Table 2). This distinction may demonstrate different facets of self-enhancement. On the one hand, prisoners’ more positive self-evaluations compared to the average prisoner serve their self-evaluations well: “Yes, I am in jail, but I am better than my peers.” On the other hand, the average prisoner is a part of their peer group. Therefore, thinking well of fellow prisoners serves their self-evaluations: “I am, in fact, one of *them*, so prisoners must not be all that bad.” This tension between the need to establish distance from fellow prisoners while viewing them positively may be one reason why prisoners’ perceptions of their peers’ crimes did not differ from their own on guilt, blame, fault, and intentions.

**Denial and Lack of Insight**

Prisoners were more likely to admit than deny their crimes; however, they were more likely to deny than accept their intentions to commit the crimes. Overt denial is acutely constrained by reality, and perhaps by repeated admonishments for reform. On the other hand, denial of one’s intentions may require only subtle revisions of the past to be endorsed as credible.

This interpretation is bolstered by evidence for prisoners’ perceptions of their own crimes relative to those of the average prisoner. The finding that prisoners viewed their crimes as less planned, less likely to re-occur, and an exception to their behavior manifest subtle denial (results presented in Table 1). Admitting to one’s crime, while also affirming it was unplanned and unlikely to occur again, undermines perceptions of culpability.

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We found more direct evidence for a relation between prisoners' denial of guilt, fault, or blame and their self-evaluations. Prisoners who evinced (vs. lacked) denial rated themselves higher on their worst trait relative to the average community member. We obtained a similar relation between harm and self-evaluations. Less perceived harm was associated with higher worst-trait ratings (results presented in Table 7). Denial contributes to positive self-evaluations.

As an additional contributor to positive evaluations, prisoners lacked the insight to assess accurately what it means to be moral and law-abiding, as indicated by their overestimations of crime prevalence. For example, they reported that over 50% of the population has committed violent, sexual, and drug-related crimes compared to community members' ratings of 26.90%, 9.00%, and 29.90%, respectively. One reason why prisoners overestimate their morality and law-abidingness (as reported in Sedikides et al., 2014) is their beliefs that most people have also broken the law.

Narcissism and psychopathy may help to clarify these findings. Differences between prisoners and community members' moral judgments of sexual crimes increased with narcissism. Similarly, higher narcissism predicted less severe moral judgments of prisoners' own crime and the same crime committed by someone else (results presented in Table 8). Although limited to a few instances (i.e., sexual crimes, own crime, own crime committed by someone else), the relation between narcissism and more lenient moral judgments suggests that deficits in moral aptitude may be exacerbated by higher narcissism. The psychopathy findings were consistent with this explanation. Higher self-centered impulsivity predicted more lenient moral judgments, yet more extreme overestimations of crime prevalence, indicating that this psychopathy component conduces to general lack of insight and moral shortcomings (results presented in Table 9-10). Fearless dominance—reflecting higher emotional stability and being associated with restrictive social thinking (Patil, 2015)—predicted more severe moral judgments of burglary.

**Self-Serving Attributions**

Prisoners distanced themselves from internal causes for their crimes relative to other prisoners (by rating their own crime as less representative, and an exception to their behavior;



results presented in Table 1), but they did not make self-serving external attributions; instead, they rated their peers' crimes as caused more by hardship than their own. This finding is surprising. Similarly, distancing from internal causes for their crime was unassociated with more positive worst-trait ratings, and blaming hardship for their crime was linked to more negative worst-trait ratings (results presented in Table 7). Given that prisoners distance their character as a cause of their criminal convictions, yet abstain from blaming external circumstances, a critical question is what or whom do they blame for their incarcerated status?

The relations between psychopathy and hardship offer an answer. Self-centered impulsivity predicted stronger external attributions (hardship) for prisoners' own crime, but not for other's crime (results presented in Table 11). As such, psychopathy—particularly, self-centered impulsivity—conduces to stronger self-serving attribution. Also, at higher psychopathy, prisoners were more likely than community members to downplay external causes for the average prisoner's crime. Thus, psychopathy predicted a stronger proclivity for prisoners to blame hardship for their crime, and a weaker proclivity to blame hardship for other prisoners' crime.

**Limitations**

We acknowledge several limitations. To begin, we did not account for crime severity. Prisoners who committed more (vs. less) severe crimes may require more extensive self-enhancement to maintain positive self-views; alternatively, they may require less extensive self-enhancement due to imposing reality constraints. We note, however, that crime severity did not moderate the BTAE in the study reported by Sedikides et al. (2014). Also, we restricted our sample to men and a single culture. Future research would need to test the generalizability of our findings on gender and culture. Female prisoners and prisoners in collectivistic cultures may self-enhance less or differently than male prisoners or prisoners in individualistic cultures (Grijalva et al., 2015; Sedikides et al., 2015).

Future research should also address the relation between prisoner self-enhancement and psychological well-being. Such a (positive) relation exists in community samples (Dufner et al.,



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2019; Sedikides, 2020), and the relation can be causal (O'Mara et al., 2012). Self-enhancement may be a means to maintain one's well-being during harsh times.

Because we obtained open-ended responses, there was no way to equate the severity of the characteristics that prisoners and community members reported. In previous research (Sedikides et al., 2014), we circumvented this problem by using ratings rather than open-ended responses. Nevertheless, the current methodology does provide the opportunity to assess characteristics that come spontaneously to mind when prisoners think about their traits. Finally, we interpreted these results as reflecting overly positive self-perceptions among prisoners. However, differences observed between prisoners and community members could also be due to community members holding overly negative views of prisoners.

**Conclusions**

We attempted to explain why prisoners regard themselves as superior to other prisoners and community members in obvious disregard of reality. We focused on three biases—denial, self-serving attributions, self-enhancing comparisons. Prisoners manifested subtle denial, made self-serving internal attributions for their criminal convictions, and engaged in self-enhancing comparisons. The more prisoners engaged in denial and made self-enhancing temporal comparisons, the more positively they evaluated themselves on their worst trait. Denial and temporal comparisons assist in prisoners' maintenance of positive self-views, in the face of reality constraints.

**References**

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For Peer Review

**Table 1**

*Within Group Differences on Prisoners' Perceptions of Their Own Crime and Those of the Typical Prisoner*

Crimes	Perception of the Typical Prisoner's Crimes	Perception of their own Crime	<i>t</i> -value	<i>df</i>	<i>Cohen's d</i>
Recidivism	2.60 (1.15)	1.49 (1.07)	6.53**	81	.72
Planning	3.48 (1.86)	2.74 (2.20)	2.52*	76	.29
Harm	4.21 (2.03)	3.91 (2.31)	1.16	76	.13
Justification	2.44 (1.85)	2.35 (1.99)	.35	74	.04
Exception	3.87 (1.92)	4.80 (2.32)	-3.24**	75	.37
Representativeness	3.17 (1.69)	2.25 (1.80)	3.33**	80	.37

\*  $p < .05$ , \*\*  $p < .01$

Table 2

*Group Differences between Prisoners and Community Members' Perceptions of the Typical Prisoner's Crimes*

Crimes	Prisoners	Community Members	<i>t</i> -value	<i>df</i>	<i>Cohen's d</i>
Recidivism	2.59 (1.15)	3.87 (.84)	-7.62**	148	1.25
Planning	3.41 (1.86)	4.40 (1.19)	-3.78**	146	.62
Exception	3.90 (1.91)	3.66 (1.21)	.91	146	.15
Representativeness	3.18 (1.69)	4.45 (1.18)	-5.20**	147	.85
Harm	4.25 (2.00)	4.69 (1.08)	-1.61	146	.27
Justification	2.43 (1.86)	2.42 (1.22)	.05	146	.01

\* *p* < .05, \*\* *p* < .01



**Table 3***Self-Reported Worst-Trait Among Prisoners*

Worst-trait	Frequency	Percentage
Anxiety/Worry	3	3.50
Sarcastic	2	2.40
Goodness	3	3.50
Too relaxed/passive	2	2.40
Control Issues	8	9.40
Self confidence	8	9.40
Anger	8	9.40
Selfishness	1	1.20
Poor organization	5	5.90
Other	19	22.40
No answer	26	30.60

**Table 4**  
*Self-Reported Worst-Trait Among Community Members*

Worst-trait	Frequency	Percentage
Anxiety/Worry	5	7.50
Laziness	2	3.00
Sarcastic	2	3.00
Goodness	1	1.50
Over-Tolerant	1	1.50
Temper	2	3.00
Lack of Assertiveness	3	4.50
Stubborn	2	3.00
Get Frustrated	1	1.50
Not Committing to Changes	1	1.50
Control Issues	11	16.4
Too Reserved	1	1.50
Self Confidence	9	13.40
Anger	6	9.00
Selfishness	2	3.00
Poor Organization	4	6.00
Other	10	14.90
No Answer	4	6.00

**Table 5**

*Prisoners' and Community Members' Ratings of Their Worst Trait Compared to Various Referents*

Referent	Prisoners	<i>t</i>	<i>df</i>	Community members	<i>t</i>	<i>df</i>
Prisoners	-.06 (2.65)	-.21	81	.66 (2.47)	2.18	66
Community Members	-.46 (2.75)	-1.52	82	-.46 (1.78)	-2.07	65
5-years- prisoners	1.83 (3.05)	5.47*	82	1.20 (1.99)	4.88*	65
5-years- community members	1.22 (2.98)	3.72*	82	.30 (1.72)	1.43	65
5-years- current self	2.14 (2.99)	6.54*	82	.88 (1.56)	4.56*	65
Today compared to when committed the crime	1.72 (2.63)	5.88*	80			

\*  $p < .001$

*Note.* "0" represents the average standing of given referent (e.g., the average community member).

Table 6

Group Differences in Perceptions of the Prevalence of Crimes in the General Population

Crimes	Prisoners	Community Members	t-value	df	Cohen's d
Violence	5.43 (2.58)	3.90 (2.56)	3.64**	148	.60
Murder	2.99 (2.53)	1.66 (1.62)	3.73**	148	.61
Sex	5.49 (2.79)	2.87 (1.98)	6.50**	148	1.06
Robbery	5.20 (3.01)	3.37 (2.35)	4.08**	148	.67
Burglary	4.24 (2.68)	2.96 (2.29)	3.12**	147	.51
Theft	4.89 (2.56)	3.87 (2.39)	2.51*	147	.41
Fraud	4.04 (2.39)	3.22 (2.49)	2.03*	147	.34
Criminal Damage	4.95 (2.64)	3.56 (2.33)	3.36**	147	.55
Drugs	5.60(2.71)	4.34 (2.65)	2.84**	147	.47
Motoring Crimes	5.62 (2.56)	5.67 (2.36)	-.12	147	.02

\* p < .05, \*\* p < .01

**Table 7**

*Correlations Between Prisoners' Current Worst-Trait Ratings Relative to the Average Community Member and Guilt, Blame, Fault, Harm, Hardship, and Past and Future Ratings of their Worst Trait*

	1	2	3	4	5	6	7	8	9	10	11	12
Ratings of worst trait relative to CM	-											
Guilt	.29***	-										
Blame	.20*	.77***	-									
Fault	.23**	.69***	.82***	-								
Harm	-.38***	-.68***	-.66***	-.59***	-							
Hardship relative to CM	-.40***	-.03	-.10	-.04	.23**	-						
Hardship relative to prisoners	-.40***	-.04	.07	.06	.19*	.79***	-					
Hardship caused crime	-.20*	-.33***	-.22**	-.14	.27**	.46***	.47***	-				
Current rating of worst trait relative to past self	.19*	-.12	-.12	-.11	.03	-.25**	-.13	-.13	-			
Ratings of worst trait in 5-years relative to current self	.21*	-.02	-.05	-.12	.00	-.26**	-.14	-.01	.67***	-		
Ratings of worst trait in 5-yrs. Relative to CM	.44***	.04	.05	-.02	-.16	-.31***	-.19*	-.03	.53***	.81***	-	
Ratings of worst trait in 5-years relative to prisoner	.31***	-.08	-.05	-.03	-.02	-.33***	-.17	.00	.63***	.88***	.83***	-

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ .

Table 8

*Correlations Between Narcissism (NPI) and Perceptions of Harm, Representativeness, Moral Judgments, Causal Attributions for the Average Prisoner’s Crime (Hardships), Prisoner’s Current Rating on their Worst Trait Relative to when the Committed their Crime, and Harm caused by the Average Prisoner’s Crime*

	1	2	3	4	5	6	7
1. NPI	-						
2. Representativeness of Crime	.28*	-					
3. Moral Judgment of Own crime	-.27*	-.14	-				
4. Moral judgment of same crime committed by someone else	-.31**	-.34**	.75**	-			
5. Hardship causing the Avg Prisoner’s Crime	.18*	.08	.06	.05	-		
6. Current rating of worst trait relative to past self	-.27**	-.01	.16**	.13	-.09	-	
7. Harm caused by the Avg Prisoner’s crime	-.18*	.35**	.26*	.11	.15	.03	-

\*  $p < .05$ , \*\*  $p < .01$ .

**Table 9***Correlations Between Self-Centered Impulsivity (PPI-SCI) and Moral Judgments of Crimes*

	1	2	3	4	5	6	7	8	9	10	11
1. PPI-SCI	-										
2. Violence	-.17*	-									
3. Murder	-.21*	.57**	-								
4. Sex	-.22*	.52**	.67**	-							
5. Robbery	-.26**	.62**	.58**	.61**	-						
6. Burglary	-.17*	.62**	.56**	.54**	.90**	-					
7. Theft	-.22*	.60**	.48**	.47**	.83**	.85**	-				
8. Fraud	-.22*	.52**	.45**	.50**	.72**	.72**	.73**	-			
9. Criminal Act.	-.15	.55**	.34**	.38**	.67**	.67**	.66**	.74**	-		
10. Drugs	-.18*	.37**	.39**	.37**	.65**	.62**	.58**	.48**	.56**	-	
11. Motoring	-.12	.51**	.29**	.31**	.48**	.45**	.51**	.68**	.64**	.51**	-

\*  $p < .05$ , \*\*  $p < .01$ .

Table 10

*Correlations Between Self-Centered Impulsivity (PPI-SCI) and Prevalence of Crimes*

	1	2	3	4	5	6	7	8	9	10	11
1. PPI-SCI	-										
2. Violence	.18*	-									
3. Murder	.18*	.52**	-								
4. Sex	.22*	.59**	.68**	-							
5. Robbery	.14	.65**	.66**	.66**	-						
6. Burglary	.24*	.57**	.64**	.62**	.82**	-					
7. Theft	.19*	.62**	.55**	.62**	.75**	.80**	-				
8. Fraud	.20*	.50**	.57**	.60**	.67**	.73**	.74**	-			
9. Criminal Act.	.17	.66**	.51**	.63**	.73**	.76**	.75**	.71**	-		
10. Drugs	.23*	.52**	.47**	.56**	.59**	.62**	.65**	.61**	.68**	-	
11. Motoring	.19*	.46**	.26*	.35**	.47**	.39**	.55**	.45**	.51**	.48**	-

\*  $p < .05$ , \*\*  $p < .01$ .



Table 11

*Correlations Between Self-Centered Impulsivity (PPI-SCI), and Perceptions of Hardships*

	1	2	3	4
1. PPI-SCI	-			
2. Hardship relative to Avg. Prisoner	.27**	-		
3. Hardship relative to Avg. Community Member	.24**	.78**	-	
4. Hardships causing Own Crime	.23*	.46**	.47**	-
5. Hardship causing the Avg Prisoner’s Crime	-.04	-.15	-.25**	.38**

\*  $p < .05$ , \*\*  $p < .01$ .

**Table 12**  
*Correlations Between Cold-heartedness (PPI-CO), Fear Dominance (FD) and Worst Trait Ratings compared to various referents*

	1	2	3	4	5	6	7
1. PPI-CO	-						
2. PPI-FD	.08	-					
3. Worst trait relative to community member	-.19*	.06	-				
4. Worst trait relative to prisoner	-.17*	-.09	.49**	-			
5. 5-yrs, relative to community member	-.20*	.21**	.42**	.28**	-		
6. 5-yrs, relative to prisoner	-.24**	.11	.35**	.41**	.78**	-	
7. 5-years, relative to self	-.25**	.18*	.17*	.16	.76**	.77**	-

\*  $p < .05$ , \*\*  $p < .01$ .

EXPLAINING THE BTAE AMONG PRISONERS

1

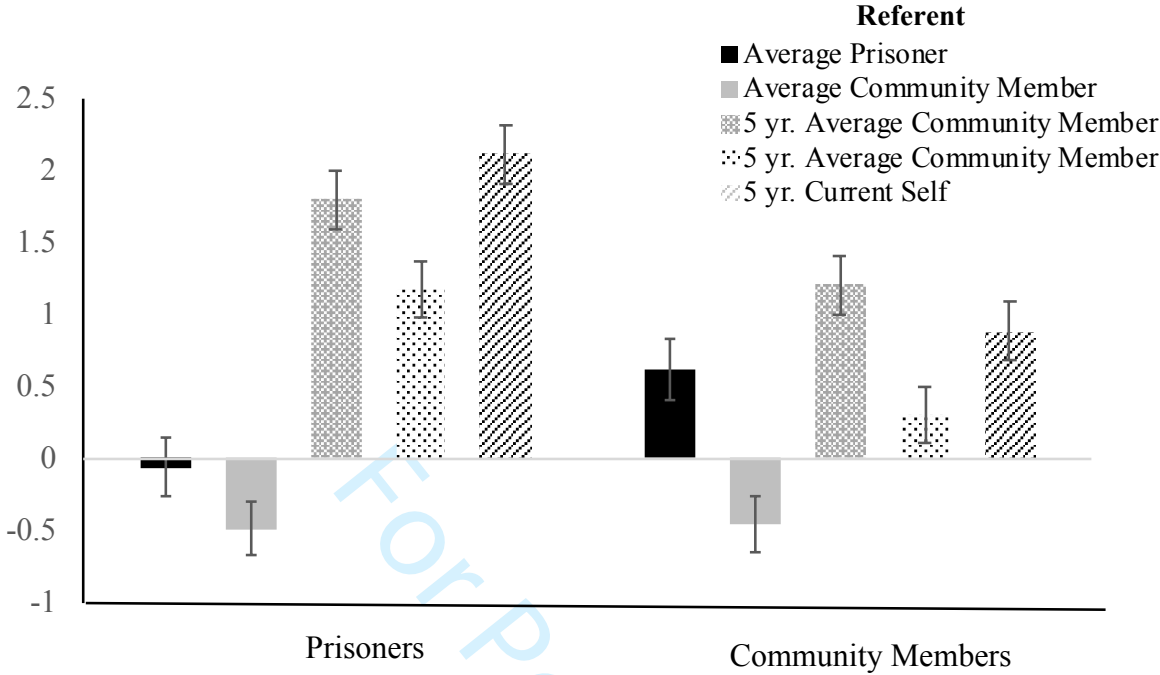


Figure 1. Prisoners' and community members' ratings of their worst trait compared to various referents

Note. "0" represents the average standing of given referent (e.g., the average community member). Error bars represent standard errors.

EXPLAINING THE BTAE AMONG PRISONERS

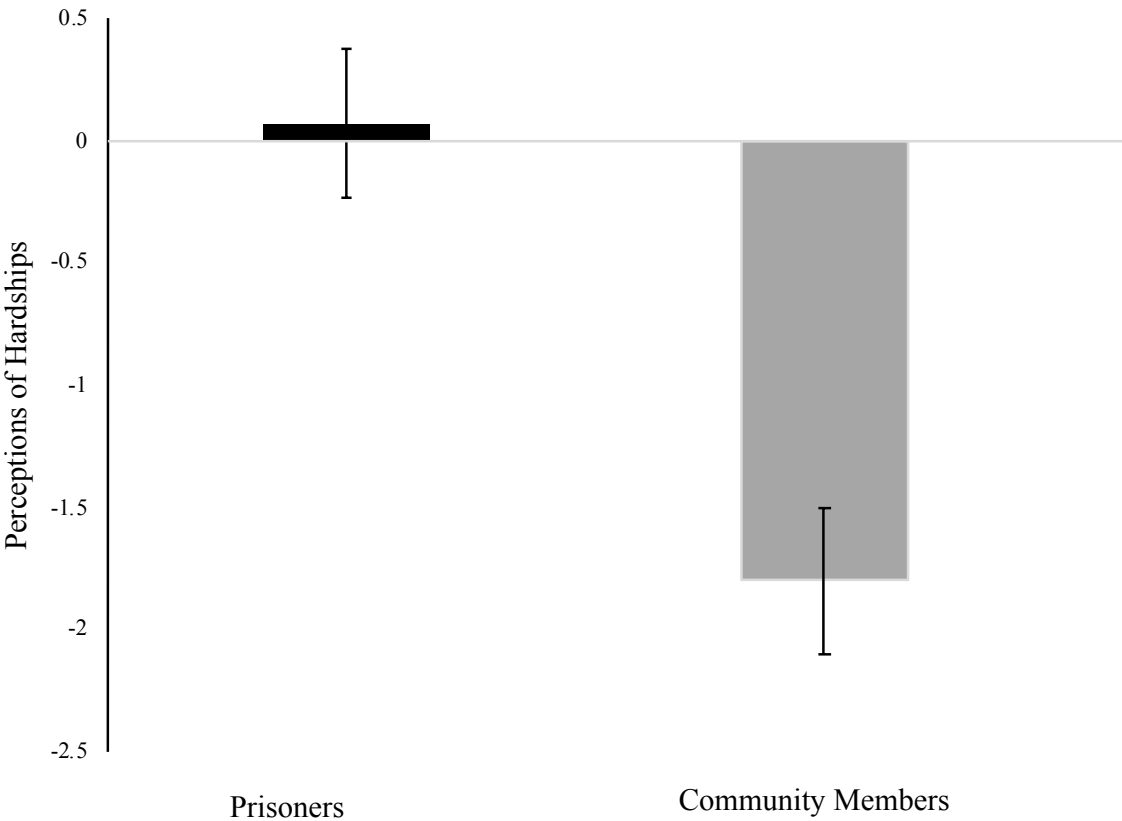


Figure 2. Prisoners’ and community members’ perceptions of hardships relative to the average other (i.e., the average prisoner and average community member).

Note. “0” represents the average level of hardship experienced by the referent (either the average community member or average prisoner). Error bars represent standard errors.

EXPLAINING THE BTAE AMONG PRISONERS

3

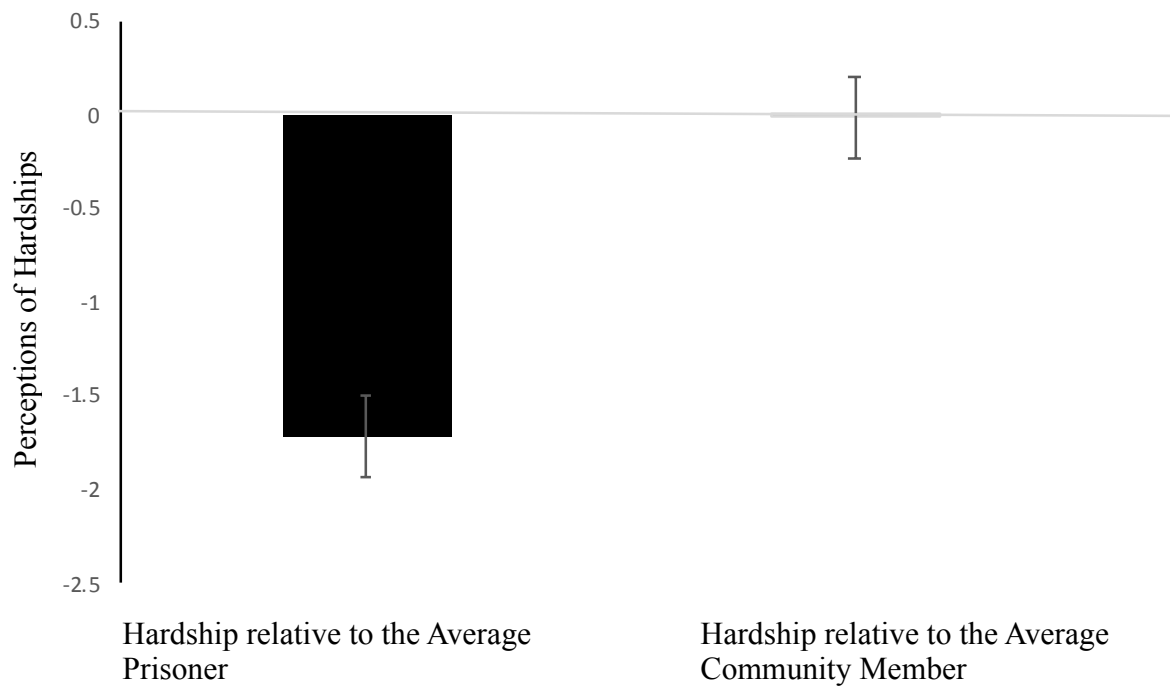


Figure 3. Participants’ perceptions of hardships relative to the average prisoner and average community member.

Note. “0” represents the average level of hardship experienced by the referent (either the average community member or average prisoner). Error bars represent standard errors.

Appendix

Prisoner and Community Member Questionnaires

Prisoners responded to a series of questions about the crime for which they were currently serving time. We asked both prisoners and community members identical questions about the crime for which the typical prisoner was serving time. In this way, the community member questionnaire was identical to the prisoner questionnaire, except that items that assessed perceptions of one’s own criminal behavior or incarceration were omitted. Specifically, all of section A (“Questions about the crime for which you are currently serving time”) were omitted, as were all other items that referred to one’s own crime (e.g., “What is your current sentence length?”). The prisoner questionnaire is listed below.

Please answer the following questions. In case there are multiple answer options, please choose one.

A. Questions about the crime for which you are currently serving time

- 1) Are you guilty of the crime for which you are serving time?  
☐ Yes  
☐ No
- 2) Are *you* to blame for the crime for which you are serving time?  
☐ Yes  
☐ No
- 3) Was the crime for which you are serving time your fault?  
☐ Yes  
☐ No
- 4) Did you intend to commit the crime for which you are serving time?  
☐ Yes  
☐ No

5) If you were to go back in time, how likely would you be to commit the crime again?

- ☐ Very Unlikely  
☐ Unlikely  
☐ Somewhat Unlikely  
☐ Somewhat Likely  
☐ Likely  
☐ Very Likely

6) In general, how likely are you to commit a similar crime again?

- ☐ Very Unlikely  
☐ Unlikely  
☐ Somewhat Unlikely  
☐ Somewhat Likely  
☐ Likely  
☐ Very Likely

7) To what extent did your crime cause harm to others?

No harm

1

2

3

4

5

6

Extreme harm

7

8) How much is the crime for which you are serving time representative of your general behavior?

Not at all  
Representative

1

2

3

4

5

6

7

Extremely  
Representative

9) How much is the crime for which you are serving time an exception to your general behavior?

Not at all  
an Exception

1

2

3

4

5

6

7

Very much an  
Exception

10) In thinking of the crime for which you are serving time, to what extent was your behavior planned?

Not at all  
Planned

1

2

3

4

5

6

7

Extremely  
Planned

11) In thinking of the crime for which you are serving time, to what extent was your behavior justified?

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Not at all Justified							Extremely Justified
1	2	3	4	5	6	7	

- 12) In thinking of the crime for which you are serving time, how likely would you be to behave the same way in the future?
- ☐ Very Unlikely
  - ☐ Unlikely
  - ☐ Somewhat Unlikely
  - ☐ Somewhat Likely
  - ☐ Likely
  - ☐ Very Likely

For Peer Review



**B. Comparison to other prisoners:**

1) In general, is the typical inmate guilty of the crimes for which he is serving time?

- ☐ Yes  
☐ No

2) In general, is the typical inmate to blame for his crimes?

- ☐ Yes  
☐ No

3) In general, are the crimes for which the typical inmate is serving time his fault?

- ☐ Yes  
☐ No

4) In general, do you believe that the typical inmate intended to commit his crimes?

- ☐ Yes  
☐ No

5) In general, if the typical inmate could go back in time, how likely would he be to commit the same crime again?

- ☐ Very Unlikely  
☐ Unlikely  
☐ Somewhat Unlikely  
☐ Somewhat Likely  
☐ Likely  
☐ Very Likely

6) In general, how likely is the typical inmate to commit a similar crime again?

- ☐ Very Unlikely  
☐ Unlikely  
☐ Somewhat Unlikely  
☐ Somewhat Likely  
☐ Likely  
☐ Very Likely

7) In general, to what extent did the typical inmate's crimes cause harm to others?

No harm

1

2

3

4

5

6

7

Extreme harm

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8) In general, how much are the crimes for which the typical inmate is serving time representative of his general behavior?

Not at all Representative							Extremely Representative
1	2	3	4	5	6	7	

9) How much was the crime for which the typical inmate is serving time an exception to his general behavior?

Not at all an Exception							Very much an Exception
1	2	3	4	5	6	7	

10) In general, in thinking of the crimes for which the typical inmate is serving time, to what extent was his behavior planned?

Not at all Planned							Extremely Planned
1	2	3	4	5	6	7	

11) In general, in thinking of the crimes for which the typical inmate is serving time, to what extent was his behavior justified?

Not at all Justified							Extremely Justified
1	2	3	4	5	6	7	

12) In general, in thinking of the crimes for which the typical inmate is serving time, how likely would he be to behave the same way in the future?

- ☐ Very Unlikely
- ☐ Unlikely
- ☐ Somewhat Unlikely
- ☐ Somewhat Likely
- ☐ Likely
- ☐ Very Likely

**C Further questions on crime**

1) Rate the extent to which you believe the following crimes are morally wrong.

## Violence against another person

- ☐ 1 Not at all morally wrong
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7 Very morally wrong

## Theft and handling stolen goods

- ☐ 1 Not at all morally wrong
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7 Very morally wrong

## Murder

- ☐ 1 Not at all morally wrong
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7 Very morally wrong

## Fraud and forgery

- ☐ 1 Not at all morally wrong
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7 Very morally wrong

## Sexual Crimes

- ☐ 1 Not at all morally wrong
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7 Very morally wrong

## Criminal damage

- ☐ 1 Not at all morally wrong
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7 Very morally wrong

## Robbery

- ☐ 1 Not at all morally wrong
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7 Very morally wrong

## Drug crimes

- ☐ 1 Not at all morally wrong
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7 Very morally wrong

## Burglary

- ☐ 1 Not at all morally wrong
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7 Very morally wrong

## Motoring crimes

- ☐ 1 Not at all morally wrong
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7 Very morally wrong

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- 2) Which of the following categories best describes the crime for which you are serving time?
- ☐ Violence against another person
  - ☐ Sexual crimes
  - ☐ Robbery
  - ☐ Burglary
  - ☐ Theft and handling stolen goods
  - ☐ Fraud and forgery
  - ☐ Criminal damage
  - ☐ Drug crimes
  - ☐ Motoring crimes
- 3) What is your current sentence length? \_\_\_\_\_
- 4) Including your current sentence, how many other times have you been incarcerated?  
\_\_\_\_\_
- 5) In thinking about the crime, which you are serving time for right now, to what extent do you believe it is morally wrong?
- ☐ 1 Not at all morally wrong
  - ☐ 2
  - ☐ 3
  - ☐ 4
  - ☐ 5
  - ☐ 6
  - ☐ 7 Very morally wrong
- 6) In thinking about other people who have committed the same or similar crime as you, to what extent do you believe that their crime is morally wrong?
- ☐ 1 Not at all morally wrong
  - ☐ 2
  - ☐ 3
  - ☐ 4
  - ☐ 5
  - ☐ 6
  - ☐ 7 Very morally wrong
- 7) In your opinion, what percentage of the general population has committed the following crimes (in other words, how common are these crimes):

**Violence against another person**

- ☐ 0-10%  
☐ 11-20%  
☐ 21-30%  
☐ 31-40%  
☐ 41-50%  
☐ 51-60%  
☐ 61-70%  
☐ 71-80%  
☐ 81-90%  
☐ 91-100%

**Murder**

- ☐ 0-10%  
☐ 11-20%  
☐ 21-30%  
☐ 31-40%  
☐ 41-50%  
☐ 51-60%  
☐ 61-70%  
☐ 71-80%  
☐ 81-90%  
☐ 91-100%

**Sexual crimes**

- ☐ 0-10%  
☐ 11-20%  
☐ 21-30%  
☐ 31-40%  
☐ 41-50%  
☐ 51-60%  
☐ 61-70%  
☐ 71-80%  
☐ 81-90%  
☐ 91-100%

**Robbery**

- ☐ 0-10%  
☐ 11-20%  
☐ 21-30%  
☐ 31-40%  
☐ 41-50%  
☐ 51-60%  
☐ 61-70%  
☐ 71-80%  
☐ 81-90%  
☐ 91-100%

7 cont. ) In your opinion, what percentage of the general population has committed the following crimes (in other words, how common are these crimes):

**Burglary**

- ☐ 0-10%  
☐ 11-20%  
☐ 21-30%  
☐ 31-40%  
☐ 41-50%  
☐ 51-60%  
☐ 61-70%  
☐ 71-80%  
☐ 81-90%  
☐ 91-100%

**Theft and handling stolen goods**

- ☐ 0-10%  
☐ 11-20%  
☐ 21-30%  
☐ 31-40%  
☐ 41-50%  
☐ 51-60%  
☐ 61-70%  
☐ 71-80%  
☐ 81-90%  
☐ 91-100%

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- Fraud and forgery**
- ☐ 0-10%
  - ☐ 11-20%
  - ☐ 21-30%
  - ☐ 31-40%
  - ☐ 41-50%
  - ☐ 51-60%
  - ☐ 61-70%
  - ☐ 71-80%
  - ☐ 81-90%
  - ☐ 91-100%

- Drug crimes**
- ☐ 0-10%
  - ☐ 11-20%
  - ☐ 21-30%
  - ☐ 31-40%
  - ☐ 41-50%
  - ☐ 51-60%
  - ☐ 61-70%
  - ☐ 71-80%
  - ☐ 81-90%
  - ☐ 91-100%

- Motoring crimes**
- ☐ 0-10%
  - ☐ 11-20%
  - ☐ 21-30%
  - ☐ 31-40%
  - ☐ 41-50%
  - ☐ 51-60%
  - ☐ 61-70%
  - ☐ 71-80%
  - ☐ 81-90%
  - ☐ 91-100%

- Criminal damage**
- ☐ 0-10%
  - ☐ 11-20%
  - ☐ 21-30%
  - ☐ 31-40%
  - ☐ 41-50%
  - ☐ 51-60%
  - ☐ 61-70%
  - ☐ 71-80%
  - ☐ 81-90%
  - ☐ 91-100%

8) Given the same circumstances that you encountered leading up to your offense, what percentage of people do you believe would have committed the same crime for which you are currently serving time?

- ☐ 0-10%
- ☐ 11-20%
- ☐ 21-30%
- ☐ 31-40%
- ☐ 41-50%
- ☐ 51-60%
- ☐ 61-70%
- ☐ 71-80%
- ☐ 81-90%
- ☐ 91-100%

9) Given the same circumstances that you encountered leading up to your offense, what percentage of people do you believe would have committed an even worse crime compared to the one for which you are currently serving time?

- ☐ 0-10%  
☐ 11-20%  
☐ 21-30%  
☐ 31-40%  
☐ 41-50%  
☐ 51-60%  
☐ 61-70%  
☐ 71-80%  
☐ 81-90%  
☐ 91-100%

10) Given the same life experiences and history, what percentage of people do you believe would have committed an even worse crime compared to the one for which you are currently serving time?

- ☐ 0-10%  
☐ 11-20%  
☐ 21-30%  
☐ 31-40%  
☐ 41-50%  
☐ 51-60%  
☐ 61-70%  
☐ 71-80%  
☐ 81-90%  
☐ 91-100%

11) Compared to the typical community member, to what extent have you experienced hardships in your life?

Much less                      the same                      Much more  
-5      -4      -3      -2      -1      0      1      2      3      4      5

12) Compared to the typical inmate, to what extent have you experienced hardships in your life?

Much less                      the same                      Much more  
-5      -4      -3      -2      -1      0      1      2      3      4      5

13) To what extent do you believe the hardships that you have experienced caused you to become incarcerated?

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Not at all						Very much
1	2	3	4	5	6	7

14) To what extent do you believe the hardships that the typical inmate has experienced caused them to become incarcerated?

Not at all						Very much
1	2	3	4	5	6	7

For Peer Review

Journal of Applied Social Psychology



## D Questions about your personality

1) What is your worst characteristic?

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2) How do you compare on that trait relative to the typical inmate?

Much worse					the same					Much better
-5	-4	-3	-2	-1	0	1	2	3	4	5

3) How do you compare on that trait relative to the typical community member?

Much worse					the same					Much better
-5	-4	-3	-2	-1	0	1	2	3	4	5

4) Five years from now, where do you think you will rate on that trait relative to the typical inmate?

Much worse					the same					Much better
-5	-4	-3	-2	-1	0	1	2	3	4	5

5) Five years from now, where do you think you will rate on that trait relative to the typical community member?

Much worse					the same					Much better
-5	-4	-3	-2	-1	0	1	2	3	4	5

6) Five years from now, where do you think you will rate on that trait relative to where you stand now?

Much worse					the same					Much better
-5	-4	-3	-2	-1	0	1	2	3	4	5

7) Compared to how you would have rated yourself on that trait at the time of the crime, how would you rate yourself on that trait today?

Much worse					the same					Much better
-5	-4	-3	-2	-1	0	1	2	3	4	5

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The following questions measure different personality characteristics – that is, the ways in which people’s personality styles make them different from each other. Please read each statement carefully and decide how false or true it is as a description of you. Use the answer choices provided below.<sup>1</sup>

**F = False                      MF = Mostly False                      MT = Mostly True                      T = True**

Even if you feel that a statement is neither false nor true about you, or if you are not sure which answer to choose, select the answer that is the closest to describing you.

Here's an example: **I like going to movies.**

If it is true that you like going to movies, circle **T** on the answer sheet, as shown below.

**F                      MF                      MT                      T**

If it is mostly false that you like going to movies, circle **MF** on the answer sheet, as shown below.

**F                      MF                      MT                      T**

Try to be as honest as you can. Please be sure to give your own opinion about whether each statement is false or true about you.

		False	Mostly False	Mostly True	True
1.	I have always seen myself as something of a rebel.	F	MF	MT	T
2.	I am easily flustered in pressured situations.	F	MF	MT	T
3.	I would find the job of a movie stunt person exciting.	F	MF	MT	T
4.	A lot of people have tried to “stab me in the back.”	F	MF	MT	T
5.	People’s reactions to the things I do often are not what I would expect.	F	MF	MT	T
6.	I'm not good at getting people to do favors for me.	F	MF	MT	T
7.	A lot of times, I worry when a friend is having personal problems.	F	MF	MT	T
8.	I don't let everyday hassles get on my nerves.	F	MF	MT	T
9.	I could be a good "con artist."	F	MF	MT	T

<sup>1</sup> Reliability of the PPIR-40 and relevant components: PPI-R:  $\alpha = .80$ ; PPI-CO:  $\alpha = .71$ ; PPI-FD:  $\alpha = .74$ ; PPI-SCI:  $\alpha = .79$

10.	I have a talent for getting people to talk to me.	F	MF	MT	T
		<b>False</b>	<b>Mostly False</b>	<b>Mostly True</b>	<b>True</b>
11.	I might like to travel around the country with some motorcyclists and cause trouble.	F	MF	MT	T
12.	When I'm with people who do something wrong, I usually get the blame.	F	MF	MT	T
13.	I feel sure of myself when I'm around other people.	F	MF	MT	T
14.	Parachute jumping would really scare me.	F	MF	MT	T
15.	I like to dress differently from other people.	F	MF	MT	T
16.	I enjoy seeing someone I don't like get into trouble.	F	MF	MT	T
17.	It bothers me a lot when I see someone crying.	F	MF	MT	T
18.	I get stressed out when I'm "juggling" too many tasks.	F	MF	MT	T
19.	I like to (or would like to) wear expensive and "showy" clothing.	F	MF	MT	T
20.	I don't care about following the "rules"; I make my own rules as I go along.	F	MF	MT	T
21.	I've been the victim of a lot of bad luck.	F	MF	MT	T
22.	I'm hardly ever the "life of the party."	F	MF	MT	T
23.	I've thought a lot about my long-term career goals.	F	MF	MT	T
24.	I feel bad about myself after I tell a lie.	F	MF	MT	T
25.	I push myself as hard as I can when I'm working.	F	MF	MT	T
26.	I get very upset when I see photographs of starving people.	F	MF	MT	T
27.	I hardly ever end up being the leader of a group.	F	MF	MT	T
28.	I might like flying across the ocean in a hot-air balloon.	F	MF	MT	T
29.	I worry about things even when there's no reason to.	F	MF	MT	T
30.	When I am doing something important, like taking a test or doing my taxes, I check it over first.	F	MF	MT	T
31.	People I thought were my "friends" have gotten me into trouble.	F	MF	MT	T
32.	I think long and hard before I make big decisions.	F	MF	MT	T

33.	I quickly get annoyed with people who do not give me what I want.	F	MF	MT	T
		False	Mostly False	Mostly True	True
34.	If I were a firefighter, I would like the thrill of saving someone from the top of a burning building.	F	MF	MT	T
35.	I can remain calm in situations that would make many other people panic.	F	MF	MT	T
36.	I watch my finances closely.	F	MF	MT	T
37.	I am a daredevil.	F	MF	MT	T
38.	I would like to hitchhike across the country with no plans.	F	MF	MT	T
39.	I often place my friends' needs above my own.	F	MF	MT	T
40.	If I can't change the rules, I try to get others to bend them for me.	F	MF	MT	T

In the following section, please read each pair of statements below and place an “X” by the one that comes closest to describing your feelings and beliefs about yourself. You may feel that neither statement describes you well, but pick the one that comes closest. **Please complete all pairs.**<sup>2</sup>

1.

I really like to be the center of attention

It makes me uncomfortable to be the center of attention
2.

I am no better or no worse than most people

I think I am a special person
3.

Everybody likes to hear my stories

Sometimes I tell good stories
4.

I usually get the respect that I deserve

I insist upon getting the respect that is due me
5.

I don't mind following orders

I like having authority over people

<sup>2</sup> Reliability of the NPI:  $\alpha = .75$

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3 6. ☐ I am going to be a great person  
4 ☐ I hope I am going to be successful  
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7 7. ☐ People sometimes believe what I tell them  
8 ☐ I can make anybody believe anything I want them to  
9  
10 8. ☐ I expect a great deal from other people  
11 ☐ I like to do things for other people  
12  
13 9. ☐ I like to be the center of attention  
14 ☐ I prefer to blend in with the crowd  
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17 10. ☐ I am much like everybody else  
18 ☐ I am an extraordinary person  
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20 11. ☐ I always know what I am doing  
21 ☐ Sometimes I am not sure of what I am doing  
22  
23 12. ☐ I don't like it when I find myself manipulating people  
24 ☐ I find it easy to manipulate people  
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27 13. ☐ Being an authority doesn't mean that much to me  
28 ☐ People always seem to recognize my authority  
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31 14. ☐ I know that I am good because everybody keeps telling me so  
32 ☐ When people compliment me I sometimes get embarrassed  
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34 15. ☐ I try not to be a show off  
35 ☐ I am apt to show off if I get the chance  
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38 16. ☐ I am more capable than other people  
39 ☐ There is a lot that I can learn from other people  
40  
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### 42 **Demographics**

43  
44 What is your age? \_\_\_\_\_

45 What is your gender?

46 ☐ Male

47 ☐ Female

48  
49 Is English your native language?

50 ☐ Yes

51 ☐ No

Please indicate which ethnic group best describes you (please choose ONE):

**White**

- ☐ English / Welsh / Scottish / Northern Irish / British
- ☐ Irish
- ☐ Gypsy, Traveller or Irish Traveller
- ☐ Any other White background

**Mixed / Multiple ethnic groups**

- ☐ White and Black Caribbean
- ☐ White and Black African
- ☐ White and Asian
- ☐ Any other Mixed/ Multiple ethnic background

**Asian / Asian British**

- ☐ Indian
- ☐ Pakistani
- ☐ Bangladeshi
- ☐ Chinese
- ☐ Any other Asian background

**Black / African / Caribbean / Black British**

- ☐ African
- ☐ Caribbean
- ☐ Any other Black / African / Caribbean / Black British background

**Other ethnic group**

- ☐ Arab
- ☐ Any other ethnic group

What is your English reading skill level?

- ☐ native speaker
- ☐ near native / fluent
- ☐ excellent command / highly proficient in spoken and written English
- ☐ very good command
- ☐ good command / good working knowledge
- ☐ basic communication skills / working knowledge

What is your highest level of education engagement?

- ☐ Compulsory schooling
- ☐ College education
- ☐ University education
- ☐ Other professional qualifications

Did you have any problems understanding the questions in this questionnaire?

☐ Yes

☐ No

For Peer Review

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