

## Indelible Victims and Persistent Punishers in Moral Cognition

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Pinocchio is alone on a lifeless planet. Is it possible for Pinocchio to do something morally wrong? If he shouts falsehoods into empty space, will his nose grow longer? Will the moral lessons he learned from Jiminy Cricket be of any use? Pinocchio certainly *can* take actions prohibited by moral rules. He can commit suicide, eat pork, take drugs, worship pagan gods, speak false oaths, desecrate graves, or cannibalize the dead bodies of other marionettes. Are these actions morally wrong, even when there are no other living individuals and no victims?

Gray, Young, and Waytz (this issue) argue that victims are essential elements of moral judgment, implying that Pinocchio is incapable of wrongdoing. The authors write that “despite the variety of moral transgressions, there is a cognitive template of morality—the moral dyad—which not only integrates across various moral transgressions, but also serves as a working model for understanding the moral world” (pp. 102–103). According to this hypothesis, people have a cognitive template for moral interactions that includes both an agent and a patient. Hence, if there are no patients, then there is no wrongdoing.

If it is true that victims are fundamental to moral judgment, then there are two ways that people could respond to Pinocchio’s predicament. First, they could say that it is impossible for Pinocchio to commit wrongdoing in isolation from other individuals. We refer to this idea as a “victim requirement” for wrongdoing. Second, people could deny the premise of the thought experiment by representing victims for the prohibited actions, even when actual victims are unavailable. We refer to this idea as “victim completion.”

Gray et al. (this issue) favor the victim requirement view in their argument that a victim’s harm and suffering are required for moral judgment. They offer a bottom-up account in which lower level judgments about harm are inputs to higher level moral judgments. They argue that “mind perception is crucial for switching on the ‘moral faculty’” (p. 115), implying that moral judgment is not activated until *after* a victim’s suffering mind has been perceived. This idea is further clarified in their argument that “intent, cause, personal force, and valuation may be combined into a moral

judgment, but mind perception precedes these computations” (p. 115). If a victim’s suffering has to be perceived first, as the authors argue, then solo agents like Pinocchio will be incapable of wrongdoing.

However, there is another way that victims could be central to moral judgments. People could show victim completion—the perception of a victim of a moral offense even when an actual victim is absent or unclear. We suggest a top-down account of moral judgment in which the moral faculty can be switched on by a variety of factors that compose cognitive models of moral events. These models could include suffering victims as one element while also including other elements such as menacing perpetrators, righteous punishers, or specific violating actions. Evidence for any one of these elements could potentially activate moral computations. Once activated, moral cognition could seek to fill the remaining slots of the cognitive template with the best available alternatives. These mechanisms could cause people to perceive victims even if little evidence exists for genuine victims or suffering.

These models can be empirically tested by examining the association between wrongness judgments and victim perceptions, and further by looking at the specific victims people perceive and the evidence they use to identify these victims. If victims are not core elements of moral judgment, then people will readily judge some actions to be morally wrong while perceiving no victim. In contrast, if victims are fundamental, then wrongness judgments will strongly predict victim perceptions. In this case, there are two possibilities—a victim requirement or victim completion—which can be empirically distinguished by examining the specific victims that people nominate. The required victim model predicts that people will perceive a particular victim only when there is clear evidence for the victim’s suffering. The victim completion model, in contrast, predicts that people will often perceive “unverifiable victims” based on little or no evidence of their suffering.

Here we report a study of victim completion effects. We present the results of the moral victim study, address different potential interpretations, and discuss the evolved functions of people’s moral models.

### Moral Victim Study

We presented people with “victimless” offenses such as suicide, drug use, and grave desecration, in which the victim is ambiguous or nonexistent. We asked participants whether these actions were wrong and also who, if anyone, was wronged. If people process information about perpetrators and victims independently, then different participants can agree that a perpetrator was wrong while disagreeing on whether a victim was wronged. If, however, victim representations are fundamental to moral judgment, then wrongness judgments will strongly predict victim perceptions. Further, we looked at the specific victims that were nominated to examine whether people’s perceptions were based on evidence of suffering. We also asked whether the action was punishable and who, if anyone, should punish. This allowed us to probe people’s representations of punishers, which might indicate polyadic moral models that represent perpetrators, victims, and punishers (DeScioli & Kurzban, 2009).

### Methods

We recruited 65 participants (48 female, 17 male) using the Penn Experiments website. The mean (standard deviation) age of the sample was 21.4 (3.6). Data were collected using a web-based service designed for administering surveys (<http://www.surveymonkey.com>). The stimuli were 12 moral offenses (see Table 1). Crucial to our research aims, we selected moral violations for which a victim is ambiguous or nonexistent. The infractions were the following: abortion, cannibalism, drug use (heroin), dog-eating, euthanasia, flag-burning, grave desecration, homosexuality, human cloning, incest, prostitution, and suicide.

**Table 1.** *Moral Victim Stimuli.*

Offense	Description
Abortion	A WOMAN gets an abortion.
Cannibalism	An INDIVIDUAL cooks and eats a person who died of a heart attack.
Dog-eating	An INDIVIDUAL kills, cooks and eats their dog.
Drug use	An INDIVIDUAL uses heroin.
Euthanasia	A DOCTOR helps a terminally ill patient die.
Flag-burning	An American CITIZEN burns the American flag.
Grave desecration	An INDIVIDUAL urinates on a tombstone.
Homosexuality	An INDIVIDUAL has protected sex with a same-sex partner.
Human cloning	A SCIENTIST clones humans.
Incest	An INDIVIDUAL has mutually consensual, protected sex with their sibling.
Prostitution	A WOMAN exchanges sexual intercourse for money.
Suicide	An INDIVIDUAL ends their own life.

For each infraction, participants answered the following items.

*Moral wrongness item.* “Is this action wrong (yes or no)?”

*Victim nomination task.* “Is someone wronged (yes or no)?” If the participant answered “yes,” then they also answered “Who is wronged?” by listing up to five individuals or groups wronged by the action, in descending order with the most wronged party listed first.

*Punisher nomination task.* “Should someone punish the actor (yes or no)?” If the participant answered “yes,” then they also answered “Who should punish?” by listing up to five individuals or groups who should punish, in descending order with the most appropriate punisher listed first.

The study was conducted at the Penn Laboratory for Experimental Evolutionary Psychology. Participants were assigned to one of two counterbalanced orders (actor nominations before wrongness judgments, or vice versa). Participants read an informed consent form, answered the questionnaire items, were debriefed, paid \$10, and dismissed.

### Results

Table 2 shows the proportion who perceived a victim when the offense was judged as wrong and not wrong. In aggregate, when people judged an offense as wrong, they perceived a victim 89% of the time, versus 15% when the offense was judged not wrong. The odds ratio between these proportions is 43 (Fisher’s exact test,  $p < .001$ ), indicating that people who thought an offense was wrong were 43 times more likely to perceive a victim who was wronged. We also looked at each violation independently. Grave desecration could not be analyzed because all participants thought it was wrong. For all other offenses, wrongness judgments significantly predicted victim perception.

Table 3 shows the results of the victim nomination task. There was considerable variation in participants’ perceptions of the moral victim for each offense. Ten of 12 offenses had three or more different victims who were nominated by greater than 5% of participants. The self was frequently nominated as the victim for abortion (11%), cannibalism (15%), drug use (80%), incest (51%), prostitution (52%), and suicide (51%). Dead bodies were frequently nominated as victims for cannibalism (69%) and grave desecration (59%). Participants’ responses to the dog-eating item showed that nonhuman animals can be morally wronged (75%). The offender’s family was frequently nominated as a victim for drug use (34%), incest (37%), prostitution (9%), and suicide (54%).

**Table 2.** *Proportion Perceiving Victim by Wrongness.*

Offense	Wrong		Not Wrong		Odds Ratio
	<i>n</i>	Proportion	<i>n</i>	Proportion	
Abortion	15	.93	50	.28	36.00***
Cannibalism	62	.94	3	.33	29.00*
Drug use	55	.89	10	.40	12.25**
Dog-eating	54	.93	11	.09	125.00***
Euthanasia	18	.94	47	.06	249.33***
Flag-burning	40	.80	25	.12	29.33***
Grave desecration	65	.95	0	—	—
Homosexuality	6	.67	59	.00	214.20 <sup>a</sup> ***
Human cloning	36	.97	29	.10	303.33***
Incest	53	.77	12	.08	37.58***
Prostitution	42	.81	23	.26	12.04***
Suicide	42	.88	23	.39	11.51***
Total	488	.89	292	.15	43.21***

*Note.* Significance reflects Fisher's exact test.

<sup>a</sup>Haldane's estimator of the odds ratio was used when one cell value was zero.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Next we looked at whether wrongness judgments predicted whether participants thought someone should punish. Table 4 reports the proportion calling for a punisher when offenses were judged wrong and not wrong. In aggregate, when participants judged an offense as wrong, they thought someone should punish 85% of the time, versus 3% when the offense was viewed as not wrong. The odds ratio for these proportions is 119 (Fisher's exact test,  $p < .001$ ). With the exception of grave desecration, which could not be analyzed, wrongness significantly predicted punisher perception for all offenses.

Table 5 reports the results of the punisher nomination task. Participants most often nominated the legal system to act as the punisher for 10 of 12 offenses. For incest, the most nominated punisher was the offender's family (45%), and the actor's family was also nominated for drug use (26%) and prostitution (8%).

## Discussion

In sum, participants who condemned behaviors as wrong perceived a victim 89% of the time, whereas other participants responding to the same stimuli, but judging behaviors as not wrong, perceived a victim only 15% of the time. Many participants identified vague or unverifiable victims such as dead bodies, the self, and society. These results support the idea that victims are essential elements of moral models. Given condemnation, moral cognition fills a victim slot in the moral model with the best available candidate, even when there is little or no evidence for a victim. Similarly, we found that wrongness judgments predicted people's perceptions of whether someone should punish the perpetrator, suggesting that punishers might also be core elements of moral models.

**Table 3.** *Percentage of Participants Nominating Each Victim.*

Offense	None	Victim
Abortion	57%	fetus (42%), father (20%), self (11%)
Cannibalism	8%	deceased (69%), family of deceased (65%), self (15%), society (11%)
Drug use	18%	self (80%), one's family (34%), society (14%), one's community (17%), drug sellers (6%)
Eating dog	22%	dog (75%), society (12%), owner (8%)
Euthanasia	69%	patient (25%), patient's family (17%)
Flag-burning	46%	U.S. citizens (29%), U.S. country (18%), U.S. soldiers (12%), U.S. government (9%)
Grave desecration	5%	family of deceased (88%), deceased (59%), society (11%), cemetery administration (9%),
Homosexuality	94%	—
Human cloning	42%	clone (29%), society (20%), person cloned (17%), humanity (11%)
Incest	35%	self (51%), one's family (37%), society (14%), potential resulting children (9%)
Prostitution	38%	self (52%), client (17%), society (17%), one's family (9%), clients' spouses (6%)
Suicide	29%	one's family (54%), self (51%), one's community (6%)

*Note.* Victims were included if nominated by greater than 5% of participants. Values do not sum to 100% because participants could nominate up to five victims.

**Table 4.** *Proportion Perceiving Punisher by Wrongness.*

Offense	Wrong		Not Wrong		Odds Ratio
	<i>n</i>	Proportion	<i>n</i>	Proportion	
Abortion	15	.53	50	.02	56.00 <sup>***</sup>
Cannibalism	62	.98	3	.33	122.00 <sup>**</sup>
Drug use	55	.85	10	.30	13.71 <sup>***</sup>
Dog-eating	54	.91	11	.00	207.00 <sup>a,***</sup>
Euthanasia	18	.78	47	.02	161.00 <sup>***</sup>
Flag-burning	40	.85	25	.00	270.69 <sup>a,***</sup>
Grave desecration	65	.95	0	—	—
Homosexuality	6	.33	59	.00	66.11 <sup>a,**</sup>
Human cloning	36	.94	29	.03	476.00 <sup>***</sup>
Incest	53	.77	12	.17	17.08 <sup>***</sup>
Prostitution	42	.62	23	.00	75.48 <sup>a,***</sup>
Suicide	42	.19	23	.00	11.58 <sup>a,*</sup>
Total <sup>b</sup>	488	.85	292	.03	160.59 <sup>***</sup>

Note. Significance reflects Fisher’s exact test.

<sup>a</sup>Haldane’s estimator of the odds ratio was used when one cell value was zero. <sup>b</sup>Suicide not included in total because punishment after suicide is not possible.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

### Interpretations of Victim Completion

The data reported here taken together with the evidence reviewed by Gray et al. (this issue) suggest that victims are essential elements in moral thinking. Victims are so fundamental that people perceive and represent victims even when they are absent or ambiguous. This phenomenon—victim completion—has important implications for theories about the information-processing structure of moral cognition.

The hypothesis advanced by Gray et al. (this issue) addresses a critical debate in moral psychology: whether moral cognition is composed of different cognitive mechanisms with different functions, or rather is a single integrated cognitive system with an overarching function (DeScioli & Kurzban, 2009; Haidt, 2007; Haidt & Joseph, 2008; Stich, 2006). The com-

pletion data reviewed by Gray et al. add to the weight of evidence showing common processing features across moral domains (e.g., moralization, Rozin, 1999; moral emotions, Keltner & Buswell, 1996; Tangney, Stuewig, & Mashek, 2007; Tracy & Robins, 2006). Gray et al. argue that victim completion indicates a common representational format that operates across the diversity of moral domains. This hypothesis holds that the human mind applies a specialized cognitive template to interpret moral events and this template has slots for agents who choose actions and patients who are affected by agents’ actions. Our evidence supports this claim by showing the importance of victims across a wide variety of moral domains.

Gray et al. (this issue) also argue that victim completion indicates that a victim’s harm and suffering are fundamental to moral judgment. We suggest that the

**Table 5.** *Percentage of Participants Nominating Each Punisher.*

Offense	None	Punisher
Abortion	86%	legal system (9%)
Cannibalism	5%	legal system (74%), family of the deceased (38%), society (15%)
Drug use	23%	legal system (65%), one’s family (26%), society (11%), self (9%)
Dog-eating	25%	legal system (60%), animal rights activists (14%), society (9%), one’s community (6%)
Euthanasia	77%	legal system (12%), hospital administration (8%), patient’s family (8%)
Flag-burning	48%	legal system (45%), society (8%), U.S. citizens (6%)
Grave desecration	5%	legal system (77%), family of the deceased (38%), cemetery administration (11%)
Homosexuality	97%	—
Human cloning	46%	legal system (40%), coworkers (14%), scientific community (9%), society (9%)
Incest	34%	one’s family (45%), legal system (42%), society (9%)
Prostitution	60%	legal system (37%), one’s family (8%)
Suicide	88%	legal system (6%)

Note. Punishers were included if nominated by greater than 5% of participants. Values do not sum to 100% because participants could nominate up to five punishers.

opposite interpretation is also possible: The observation that victims can be readily fabricated might indicate that perceptions of victim suffering do not always drive moral judgments. Both interpretations are supported by the main finding reported here that wrongness judgments are associated with perceptions of victims. We suggest, however, that people's specific victim nominations support the latter view: People often nominated unverifiable victims suggesting that people readily fabricate victims when they are unavailable.

We suggest distinguishing two questions. The first issue is about the elements of *moral models*—the cognitive templates that organize and represent incoming data about moral events. The second issue is about *moral inputs*—the variables that influence the construction of moral models and wrongness judgments. We suggest that the evidence for victim completion indicates that victim suffering is an essential element of moral models. However, victim completion also indicates that victim suffering is *not* an essential input to moral computations—welfare perceptions are readily fabricated or ignored in order to suit the broader goals that people use their moral models to achieve.

The difference between these interpretations is highlighted by Gray et al.'s discussion of honor killing: "These culturally motivated killings are noteworthy not because they devalue suffering per se, but because of the extent to which people are stripped of mind to justify potential collective benefits" (p. 110). They argue that in order to morally justify honor killing, the agents need to cognitively strip away the minds of the victims—the authors take this to indicate the importance of the perception of suffering. However, the opposite interpretation also seems consistent with these observations. If suffering were fundamental, then it would be difficult or impossible for people to "strip away" their perceptions of suffering minds. The fact that people are capable of disregarding suffering in their moral judgments indicates instead that suffering is not a central input in these computations.

A similar distinction can be made for perpetrator agency. One possibility is that a perceiver must detect agency in order to arrive at a judgment of moral wrongness. A second possibility is that once an act is seen by a perceiver as morally wrong, the perceiver generates a culpable moral agent (Knobe, 2005). Gray et al. review evidence indicating that "when we see a suffering patient, we infer the presence of another mind to take responsibility as a moral agent" (p. 111). The authors discuss striking cases such as the trial and execution of non-human animals in legal systems (Kadri, 2005). They argue that "when suffering cannot be attributed to human agents, people often blame non-human agents . . . a pig was discovered next to a dead child and was subsequently tried, found guilty, and hanged" (p. 112). This point seems to conflict with their previous discussion of nonhuman animals: "A puppy, by contrast, is a

mere moral patient; we seek to protect it from harm but do not blame it for injustice" (p. 104). We agree that these examples illustrate that agency is part of the representation of moral wrongs. However, the possibility remains that representations of a perpetrator's agency can be outputs downstream of moral judgments rather than being a required input for moral judgment.

### **Selves, Societies, and Other Unverifiable Victims**

Our results show that participants often nominated the self as victim, especially for drug use, incest, prostitution, and suicide. That is, they perceived the same individual as both offender and victim. This seemingly contradictory judgment shows that moral models do not involve mutually exclusive elements. In addition, participants often nominated dead bodies as victims. This is consistent with court trials that included human corpses as perpetrators and victims (Kadri, 2005). Also interesting, society was nominated as a victim for several offenses.

The finding that the self can be a moral victim illuminates the psychology underlying a long-standing philosophical debate. Philosophers like Mill and Locke have argued that actions should not be condemned unless they harm someone else, whereas others like Sedgwick and Kant disagree. Gray et al. (this issue) argued that if we "imagine that both the thief and the victim are the same person – the act loses its moral status and becomes simply taking money out of your own wallet. Moral acts therefore typically require two different people" (p. 113). Our findings show that at least some moral offenses require only one person. For offenses such as suicide and drug use, people spontaneously nominated the self as both perpetrator and victim of wrongdoing.

One property that is shared among self, corpse, and society is that they are all unverifiable victims. This feature seems to have two implications. First, a bottom-up processing system would be unlikely to identify these victims because evidence that these entities have been victimized or harmed is difficult or impossible to attain. Second, a top-down processing system could come to rest on unverifiable victims when no other victim is apparent because they are unfalsifiable. It is difficult to provide clear evidence for or against the claim that suicide or consensual incest cause harm to the self or society. Therefore, unverifiable victims might end up as defaults when moral cognition cannot locate a more compelling victim.

### **Condemn First and Ask Questions Later**

What are the functions of moral judgment and how might victim completion contribute to these goals?

Here we take the perspective that moral cognition is designed for *strategic* problems (DeScioli, Bruening, & Kurzban, 2011; DeScioli, Christner, & Kurzban, 2011; DeScioli & Kurzban, 2009; Kurzban, DeScioli, & Fein, in press; Kurzban, DeScioli, & O'Brien, 2007).

Top-down processing of moral events might offer functional advantages. Moral events, such as when an adulterous affair is exposed, can unfold quickly and often involve high costs from condemnation attacks. A careful computational system that waits to confirm key moral elements before activating moral cognition might fail to anticipate crucial events, such as the moralistic execution of a sibling. In contrast, a top-down system can require much less evidence before activating moral cognition, using a variety of cues for moral events, such as prohibited actions or other people's outrage. Once a moral event is identified, the system can apply a moral model embodying the typical structure of these situations. The system would determine the most likely candidate for each element of the moral model, including perpetrator, victim, and punisher.

A key distinction between top-down and bottom-up accounts is the different thresholds of evidence applied to lower level perceptions. Bottom-up processes minimize errors by requiring solid evidence for, say, a suffering victim; a low threshold would result in many false identifications. Top-down processes can use other information besides information about the victim to filter out errors; thus, the system can afford a low threshold (even zero) for victim identification. Top-down processes can assume that there is a victim and then choose the most likely candidate (even with little or no specific evidence for a given element).

One strategic quandary, in particular, might help explain why people can be trigger-happy in applying moral models with role completion. Frequently the perpetrator of a crime is unknown. In this situation, potential suspects face the problem of avoiding (true or false) accusations and condemnation. One way people can try to exonerate themselves is to find an alternative perpetrator—accuse someone else. This sets up a strategic problem among potential suspects in which they each stand to gain by accusing and condemning someone else—even an innocent person—to prevent the spotlight of condemnation from turning to them. In game theoretic terms, this is a “surprise attack problem” because each player is vulnerable to a first attack by another player, leading them all to consider preemptive strikes (Schelling, 1960). It is often a good strategy in these situations to strike as soon as possible. In moral situations, this means condemning someone else quickly, with or without solid evidence for suffering in victims or agency in perpetrators. In moral games, humans might be designed to condemn first and ask questions later.

Top-down processing of moral events might explain some otherwise puzzling phenomena. The history of trials shows that humans have frequently regarded animals, corpses, and inanimate objects as valid perpetrators or victims (Kadri, 2005). Plato (trans. 2004) declared that

if any lifeless thing deprive a man of life, except in the case of a thunderbolt or other fatal dart sent from the Gods—whether a man is killed by lifeless objects falling upon him, or by his falling upon them . . . cast forth the guilty thing beyond the border. (Laws IX, p. 460)

Also, many cultures have carried out human and animal sacrifices to appease gods who are thought to be angry for moral reasons. If sacrifices fit with intuitions about punishing perpetrators, they might result from low thresholds of evidence for identifying perpetrators (e.g., allowing a sacrificial lamb to be killed “for our sins”).

Another historically widespread phenomenon is that people interpret misfortune in moral terms. Fiske (2000) wrote that “in every culture, people attribute many or all deaths and much suffering to wrongdoing: by the victim or against the victim” (p. 81). Across cultures, people attribute bad weather, disease, injury, infertility, and impotence to moral violations such as black magic, illicit sex, men and women eating in the same room, a commoner touching a king, and other condemned actions. For instance, many people blamed Hurricane Katrina on wrongdoing. New Orleans mayor Ray Nagin thought the hurricane occurred because “God is mad at America” for illegitimate parenthood in the African American community. Other people like Reverend Bill Shanks blamed the hurricane on homosexuality.

These puzzling inferences might be driven by a top-down processing system that uses cues like high costs or traumatic occurrences to identify moral events. Once the situation is identified as a potential moral event, low evidence thresholds might allow inanimate objects or angry gods to be perceived as perpetrators, victims, or punishers.

## Conclusion

To return to the opening thought experiment, the (whimsical) question of whether or not a solitary Pinocchio can commit moral wrongs speaks to the (important) question about whether people's moral judgments require a distinct victim who is harmed by a perpetrator's actions. Gray et al. (this issue) argue that victims are required, implying that the apocryphal puppet is incapable of wrongdoing. An alternative to this possibility, which we raise here, is that there are other

criteria by which humans evaluate that a wrong has occurred, and, after having judged that an infraction has occurred, a suffering victim is located or, if necessary, fabricated. If this view is correct, then Pinocchio, even alone on his planet, would indeed be capable of wrongdoing.

Establishing the answer to this question might help illuminate the function of moral cognition more broadly. For example, suppose that the moral judgment system is designed to promote welfare and reduce harm. To accomplish this goal, a good design feature would be to identify cases in which harm occurs and support the imposition of costs on the individual harming, thus deterring harm. In this case, the presence of a victim might well be expected to be a key *input* to the moral judgment system. The data we review here does not settle the matter, but it raises the possibility that this is not the case. If humans have the intuition that morality applies even to an isolated individual's actions, then morality might not be designed for deterrence.

Elsewhere, we have suggested that moral judgment has a strategic function (DeScioli & Kurzban, 2009). For example, nominating a victim, even if no one has in fact been harmed, might help condemners recruit other bystanders to attack the violator. Nominating a victim might, in other words, serve a rhetorical recruitment function, helping people to convince other bystanders to condemn the perpetrator. Victims might not always be the main characters in human moral dramas. Perhaps some victims are not real people but are merely puppets used by condemners to further their strategic aims.

### Note

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