

"It's Not About the Money. It's About Sending a Message!": Avengers Want Offenders to Understand the Reason for Revenge

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Motivation & Research Questions

Fictional scenario: Many revenge stories, either in movies or novels, have an ending where the protagonist (usually the hero) goes to great lengths, even risking their lives, just to make sure that the antagonist (usually an evil man) learns just before his death why, and by whom they are being punished. While this type of ending does not leave any room for the antagonist to digest the information and work on their misbehavior or actions, the readers and audience (perhaps the authors too) seem to be more satisfied with it (as opposed to the antagonist being killed without any awareness of the reason for his death). Thus, the underlying reason for having satisfaction from revenge with an explanation could be beyond the reasons of discouraging bad behavior in the future or equalizing suffering. That is, the state of the “antagonist’s beliefs” may be more of a concern for the protagonist, even if he cannot change the offender’s behavior.

Corresponding questions:

- Can such “belief-based” desires influence, and potentially motivate revenge behavior?
- Why do the avengers care about the offender’s beliefs for reasons other than deterrence?
- How much belief-based motivation shapes revenge behavior compared to other motives, including wanting the offender to suffer and wanting to restore balance in the material outcome?

Real-life scenario (workplace): Understanding the underlying motives of revenge have important implications for the workplace because cycles of aggression often begin with one offense that inspires revenge. Revenge in the workplace can hurt not only the intended target (coworker) but also the overall operations of the firm. While revenge behavior proportional to the original offense may appear justifiable, targets of revenge are likely to feel that the revenge was unjustified or disproportionate. As a result, the target might take further vengeful actions, fueling a vicious cycle of workplace aggression. Thus, in order to maintain peace in the workplace, not only it is useful to prevent any such aggressive acts, but also to help victims find less destructive ways to achieve the satisfaction that they tend to seek through revenge.

Corresponding question:

- What do the avengers aim to achieve by taking revenge?

Previous Literature (highlights) & Current Contribution

Reasons for Vengeance (beyond deterrence):

- Most researchers agree that individual acts of revenge are often driven by other more proximal, non-deterrence motives (e.g., Carlsmith, Darley, and Robinson, 2002).
- One commonly cited motive for punishment is distributive justice, which is the desire to restore fair allocation of wealth between the people involved. This desire can be the result of

fundamental preferences like negative reciprocity (Bolton and Ockenfels, 2000) or inequality aversion (Raihani and McAuliffe, 2012).

- Avengers may derive satisfaction from the awareness that the offender knows that they are the one responsible for the punishment (Schumann & Ross, 2010).
- Adam Smith's Theory of Moral Sentiments (1759).
- People's self-esteem is heavily influenced by their beliefs about what others think of them (Leary and Kowalski, 1990).

The communicative Role of Punishment:

- Punishment has an "expressive function" (Feinberg, 1965).
- Punishers understand the "utilitarian function of punishment"¹ and structure punishment as a communicative act with the aim to change the offender's behavior (Sarin et al., 2021).²

Registering the Offender's Reaction (acknowledgment and apology):

- Punishers are more satisfied when punishment is followed by a return reaction or message (an apology) from the offender (Funk et al., 2014; Gollwitzer and Denzler, 2009 and 2011).
- Even in the absence of revenge, apologies reduce anger, increase forgiveness, and mend relationships (Darby and Schenker, 1982 and many others).³

Open versus Hidden Punishment:

- When examining the demand for punishment in the case where the offender is informed about the punishment ("open punishment") compared to the case where the offender remains ignorant ("hidden punishment") the findings show that people prefer open punishment (Crockett et al., 2014, and many others).

The Current Contribution:

- This study tests the hypothesis theorized by French (2001) and Miller (2001): punishers care about the offender's beliefs (independent of whether they acknowledge their misdeed or apology), and this desire to change offenders' beliefs has a substantial impact on revenge behavior, even when deterrence is not possible. In particular, the authors examine the desire to affect offenders' beliefs regarding the reason for punishment (the *why*) as well as the source of punishment (the *who*).
- The separation of *why* and *who* represents the additional contribution of this study. Because in previous studies, the source and reason for punishment have either been confounded (i.e., both pieces of information were delivered simultaneously) or the experimental design did not explicitly control for punishers' beliefs about whether the offender would know that the punisher was the source of punishment.

¹ If the offender understands their behavior is disapproved of and that there are consequences for such behavior, they are more likely to change their behavior going forward.

² However, this work overlooks the possibility that there may be other proximal psychological reasons for communicating the reason for punishment to the offender, without necessarily fulfilling any utilitarian purpose.

³ But does not establish a causal relationship between the desire to change the offender's belief and punishment choices.

Experimental Procedures

Experiments	Question	Tools	Data	Assessment
Study 1 <i>(real-life revenge stories)</i>	How frequently do offenders learn the reason for their punishment?	Post on Quora.com in 2017; Recruitment of independent coders from Prolific	900 answers, 14 mln page views as of Feb.2020; 97 stories (out of the first 100 on the list) were selected for assessment	97 recruited coders randomly assessed 5 stories each using different scales and yes/no answers
Study 2A <i>(unconstrained hypothetical punishment)</i>	Do victims who take revenge also choose to convey the reason for, and source of, the punishment to the offender when given the opportunity?	Recruited participants from MTurk & Prolific Participants to read a hypothetical scenario and choose their action;	200 responses were received in total; The final sample contained 194 responses (96 Mturk, and 98 Prolific)	The authors assessed the responses
Study 2B <i>(constrained hypothetical punishment)⁴</i>	Do avengers want to convey the <i>reason</i> because of deterrence motivation?	Recruited participants from Prolific Participants to read a hypothetical scenario and choose their action;	The final sample consisted of 191 participants; The First 100 responses were used for the assessment	The authors assessed the responses
Study 3 <i>(Incentivized choice & Trade-Off Between Motives)</i>	<ul style="list-style-type: none"> • What are the incentivized behavioral choices in a given context? • Are avengers willing to compromise on dist.justice I favor of making the offender understand the reason for punishment? • Does ability to affect the offender’s understanding motivate compromise on dist.justice rather than to inflict suffering? 	Recruited participants from Prolific; Participants interacted with anonymous partner (the offender) & opportunity to punish them	The final sample contained 1705 responses & used the first 200 responses for the assessment	The authors assessed the responses

⁴ The offender is in prison for life without the chance of parole

Results

Study 1 Results (real-life revenge stories):

- **Making the Offender Understand the Reason for Punishment:** 69% learned the reason, 26% didn't learn (5% ambiguous);
- **Preference for Revealing the Source of Punishment:** 63% learned the source, 33% didn't learn (4% ambiguous);
- **Perceived Motives for Making the Offender Understand** (on a scale from 0 to 4):
 - **Motive 1 (M1) Teaching Lesson:** when the offender learned the *reason* for punishment $M1=2.85$ (when didn't learn the reason $M1=2.26$) $p=0.014$; when the offender learned the *source* of punishment $M1=2.91$ (when didn't learn the source $M1=2.35$) $p=0.013$;
 - **Motive 2 (M2) Deterrence:** when the offender learned the *reason* for punishment $M2=1.61$ (when didn't learn the reason $M2=0.86$) $p=0.003$; when the offender learned the *source* of punishment $p=0.139$;
 - **Motive 3 (M3) Inflict Pain:** $M3=2.20$ ($M3=1.84$) $p=0.111$ (reason); $M3=2.23$ ($M3=1.92$) $p=0.147$ (source);
 - **Motive 4 (M4) Restore Justice:** $M4=2.75$ ($M4=2.74$) $p=0.951$ (reason); $M4=2.84$ ($M4=2.65$) $p=0.450$ (source);
- **Reader Engagement** (the number of upvotes each story received on Quora=N): the stories in which the offender learned the *reason* for punishment $N=4513$ (when didn't learn the reason $N=1364$) $p=0.005$; the stories in which the offender learned the *source* for punishment $N=4114$ (when didn't learn the reason $N=2567$) $p=0.005$. A similar pattern was observed when comparing views and upvotes per view, both $p\leq 0.012$. Neither the total word count nor the age of the stories differed significantly between the two groups (source vs reason) of stories.
 - **Regression results--reason⁵:** regardless of the controls included, learning the *reason* for punishment significantly predicts both the number of upvotes and the number of views (all $p\leq 0.031$).
 - **Regression results--source⁶:** learning the *source* of punishment does not significantly predict both the number of upvotes and the number of views (all $p\leq 0.310$). However, learning the source is associated with a reduction in the number of views, when the word count and story age are controlled for, $p=0.087$.

Study 2A Results (unconstrained hypothetical punishment):

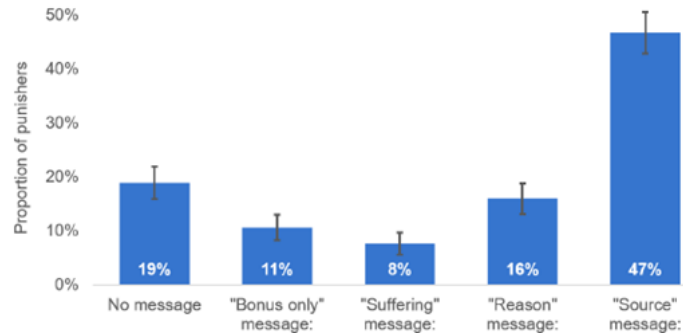
- **Punishment choices:** 87% (169 out of 174) decided to reduce the other person's payoff (on average by \$0.87). The most frequently chosen punishment was the full reduction, 46% of punishers reduced their partner's bonus to \$0. These results indicate a strong overall performance for *distributive justice*.
- **Message choices:** Among the 169 participants who decided to reduce their hypothetical offender's payoff, the majority (63%) either the reason or source message to their offenders. Among the five options shown below, the source message was chosen by the most (47%). This

⁵ dependent variables: *log-transformed number of upvotes and views*; independent variable: *offender learns the reason*; control variables: *offender suffers, word count, and age of the story*

⁶ dependent variables: *log-transformed number of upvotes and views*; independent variable: *offender learns the source*; control variables: *offender suffers, word count, and age of the story*

suggests that avengers in this hypothetical scenario had a preference for not just conveying the reason for punishment, but also the source of the punishment.

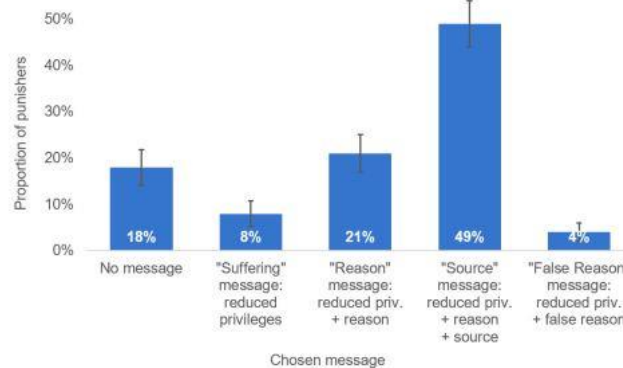
Figure 1. Proportion of Punishers Choosing Each Message, Study 2A



Study 2B Results (constrained hypothetical punishment):

- Punishment choices:** 52% of 191 participants reduced Jamie’s privilege to some extent. Of 100 punishers, 51% chose to 100% revoke Jamie’s privilege, while 11%, 21% and 17% of punishers chose the 25%-50%-75% reductions respectively.
- Message choices:** A vast majority of punishers (70%) sent either Reason (21%) or Source (49%) message. Source message was significantly higher than Reason message. Only 8% chose the “Suffering” message and 4% chose the “False Reason” --> most punishers wanted the offender to know the true reason behind their punishment, not just any reason.

Figure 3. Proportion of Punishers Choosing Each Message, Study 2B



- Motives for sending reason and source messages:** Conducted paired (within subjects) t-test to see which ones were rated as significantly stronger or weaker than the desire to change the offender’s future behavior. Seven were rated as significantly more important than deterrence: *letting the offender know that what they did was unfair; that they hurt the victim; making the offender have correct beliefs; making the offender have the same beliefs as the victim; serving distributive justice; inducing guilt; and suffering.* The two non-deterrence messages on *self-esteem* and *power goals* were not significantly different from deterrence.

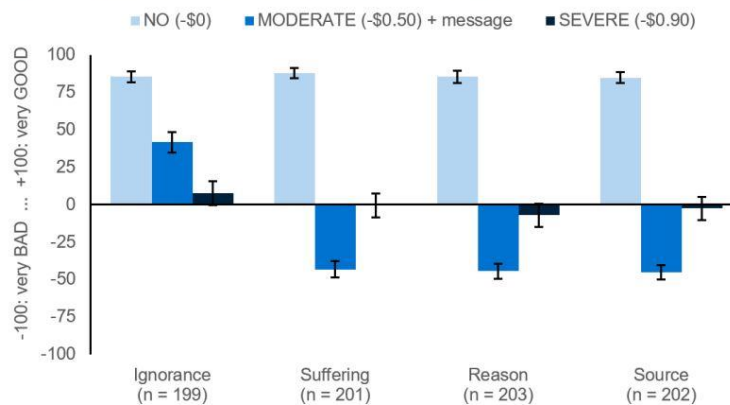
Study 3 Results (Incentivized Choice & Trade-Off Between Motives)

Manipulation check: Belief about the Offender’s Suffering

Recipients believed that the Allocator would feel significantly better when receiving the moderate punishment in the Ignorance condition ($M = 41.7$) than in the Suffering ($M = -43.2$), Reason ($M = -44.5$), or Source ($M = -45.2$) conditions.

Furthermore, in the Suffering, Reason, and Source conditions moderate punishment was also perceived to cause significantly more suffering than no punishment or severe punishment:

Figure S.15. Recipients' Beliefs About the Allocator's Suffering, Study 3



Notes. The bars indicate Recipients' responses to the question: "Would YOUR PARTNER feel bad (experience suffering) or feel good (experience joy)?" for each of the three possible punishment options, across the four conditions in Study 3. Error bars represent 95% Confidence Intervals.

Punishment Decisions:

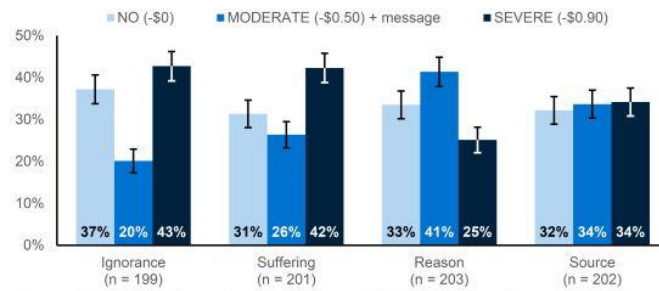
H1 hypothesis is not supported: Given the support for H3, we did not find support for H1, i.e., that suffering, reason, and source information will have no impact on the preference for the moderate option.

H2 hypothesis (avengers are willing to compromise on distributive justice to make the offender suffer (without offering a reason)) is not evidently supported either: The rate of selecting the moderate option in the Suffering condition (26%) did not differ from the rate of selecting it in the Ignorance condition (20%).

H3 hypothesis is supported: people are willing to compromise on distributive justice to have the offender understand the reason for punishment, as a significantly higher proportion of Recipients chose the moderate punishment option in the conditions revealing the reason for punishment—41% in the Reason condition and 34% in the Source condition—than in the Ignorance condition (20%). Recipients were also significantly more likely to choose the moderate punishment option in Reason condition than "Ignorance", "Suffering", and "Source". However, the likelihood of choosing the moderate option was not significantly higher in the "Source" condition than in the "Suffering" condition, $\chi^2(1, N = 403) = 2.22, p = .137$.

H4 hypothesis (avengers are willing to compromise on distributive justice to reveal the source of punishment to offenders *in addition* to revealing the reason) is not supported: Avengers were not more likely to select the moderate option in the Source condition (34%) than in the Reason condition (41%)

Figure 5. Main Results, Study 3



Notes. The bars indicate the proportions of Recipients choosing no, moderate, or severe punishment across conditions. The proportion choosing the moderate option (medium blue bars) is our key variable of interest. Error bars represent ± 1 standard error.

General Discussion, Implications & Future Study Directions

Across the experiments, the authors show that avengers have a strong desire to make sure that the offenders understand that their misbehavior was the reason for the punishment. This desire is not only reflective of a desire to change the offender's behavior in the future, but also in the absence of the benefit of changing the offender's action or inability to re-offend. Therefore, belief-based motives (making the offender understand the unfairness) motivate avengers to decide to convey the reasons for punishment.

The desire to induce suffering is stronger when avengers can convey a reason for punishment, and that they care about communicating to the offender even when the behavioral change is irrelevant >< past research work that focuses on comparative suffering and distributive justice as main drivers of punishment, while this study suggests avengers' decisions to punish can be motivated by the desire to make offenders understand why they are being punished.

Two of the studies found evidence that that avengers value sending source information (i.e., revealing who was responsible for punishment) in addition to reason information, despite in contrast, in Study 3, adding source information to the moderate punishment option *did not* lead more victims to select the moderate punishment option compared to when only suffering information was included.

In combination, these results suggest that the motive to provide source information is likely weaker than the motive to provide a reason for the punishment and suggests that the former may depend on contextual factors.

Application to real-life situations: Findings from Study 3 suggest that the ability to explain to a target of punishment the reason why they are being punished could potentially reduce workplace aggression that stems from the desire for revenge, by moving people away from more severe forms of revenge.

Managers could mediate between employees by listening to the grievances of those who feel wronged by their colleagues and then assure them that their complaints will be taken seriously and conveyed to the offender. If the manager's mediation effort can guarantee to the victim that the offender will better understand the victim's perspective and grievances, then this approach might reduce the victim employees' desire to engage in costly revenge and other kinds of harmful and unproductive behavior.