



# Promiscuous condemnation: People assume ambiguous actions are immoral<sup>☆</sup>



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## ABSTRACT

Do people view others as good or evil? Although people generally cooperate with others and view others' "true selves" as intrinsically good, we suggest that they are likely to assume that the actions of others are evil—at least when they are ambiguous. Nine experiments provide support for *promiscuous condemnation*: the general tendency to assume that ambiguous actions are immoral. Both cognitive and functional arguments support the idea of promiscuous condemnation. Cognitively, dyadic completion suggests that when the mind perceives some elements of immorality (or harm), it cannot help but perceive other elements of immorality. Functionally, assuming that ambiguous actions are immoral helps people quickly identify potential harm and provide aid to others. In the first seven experiments, participants often judged neutral nonsense actions (e.g., "John pelled") as immoral, especially when the context surrounding these nonsense actions included elements of immorality (e.g., intentionality and suffering). In the last two experiments, participants showed greater promiscuous condemnation under time pressure, suggesting an automatic tendency to assume immorality that people must effortfully control.

## 1. Introduction

Morality often seems black and white. After all, most people agree that cheating, lying, and murder are wrong. Although this consensus suggests that judging others' actions is easy, real life is rife with ambiguous cases in which people's actions are unclear. Consider these examples:

A man walks behind a woman on a dark city street.

A girl screams in your neighbor's basement.

A teenager looks around with their hands in their pockets before leaving a store.

In each of these examples, the most likely explanation is relatively benign: A man and a woman are walking home from work and happen to live on the same block. A girl moves a box and discovers a cockroach. A surly teenager looks around for her friends. Despite these innocuous explanations, people may not be able to resist assuming something more nefarious—a nighttime predator, a kidnapping victim, or a shoplifter. Of course, these are only a few carefully selected examples, but we suggest that the human mind has a general tendency to jump to

conclusions of immorality. When judging ambiguous actions—that is, actions that have unclear intents and/or outcomes—we propose that people demonstrate *promiscuous condemnation* and assume that these acts are immoral. Promiscuous condemnation is not only consistent with the functional and cognitive underpinnings of morality, but also provides perspective on an emerging idea that people view others as intrinsically good.

### 1.1. Do people view others as generally evil or good?

People have long disagreed about whether humans are generally evil or good. Advocating for "generally evil" was Thomas Hobbes, who wrote that people were intrinsically evil and that, without some absolute and authoritarian government, the life of man would be "solitary, poor, nasty, brutish, and short" (Hobbes, 1651, pp. i. xiii. 9). In contrast, Jean-Jacques Rousseau believed that people were born good and instinctively compassionate (Rousseau, 1750). Social psychology long seemed to side with Hobbes, revealing the darker side of human nature. Humans show callous obedience to authority (Milgram, 1963) and easily form into combative groups that distrust each other (Sherif, 1961). Large groups of people fail to help others in need (Latané & Darley,

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1968) and even supposedly good people ignore suffering when they are in a rush (Darley & Batson, 1973). Many people willingly express prejudice toward other races and religions (e.g., Allport, 1954), which in extreme cases has devastating consequences such as genocide and slavery.

The implicit negativity in early social psychological work was so strong that “positive psychology” arose explicitly as a counterpoint (Sheldon & King, 2001). Accordingly, recent work on the moral nature of humans has arced toward Rousseau. People often endorse that the “true self” of humans is good (De Freitas, Cikara, Grossmann, & Schlegel, 2017; Newman, De Freitas, & Knobe, 2015). In situations involving cooperation, people appear motivated to act prosocially, even toward non-relatives; they contribute their resources to help others and sacrifice resources to punish wrongdoers (Fehr & Fischbacher, 2003; Fehr & Gächter, 2000; Gintis, 2003; Van Vugt & Van Lange, 2006). Of course, there are questions about how well these structured economic games translate to the real world. How do we square these tightly-controlled situations with real-world tragedies, such as when George Zimmerman fatally shot Trayvon Martin, an unarmed black teenager? Although Martin was simply walking to the store to get some Skittles, Zimmerman assumed that the hoodie-wearing student was engaging in criminal activity.

The Trayvon Martin case does not stand alone. Police often stop, frisk, and attack unarmed suspects who are acting innocently. One explanation for these assumptions of evil is prejudice: white people may just assume the worst when interacting with black people, and numerous other forms of prejudice may account for other cases. However, even within their own groups, people readily suspect others of cheating or lying given minimal evidence of infidelity (Shackelford & Buss, 1997) or deception (DePaulo et al., 2003). In these ambiguous situations, a mere cue suggesting foul play may be enough to invite assumptions of immorality.

The idea of *promiscuous condemnation* is that people are quick to assume that others are acting immorally. This idea might seem to contradict people's altruistic actions and belief that others are intrinsically good. However, judgments of the “true self” differ from judgments of individual acts. Even if people believe that others are generally virtuous and cooperative, individual acts might still seem suspicious. Furthermore, people's generous or penny-pinching decisions in economic games need not translate to real-world examples of immorality, such as murder, fraud, and abuse. These games are unambiguous and leave little room for one's partner to cause “harm” in the common sense. When people talk about moral decay, they likely refer to the spread of crime and the corruption of children, not uncooperative decisions in anonymous economic games.

People seem to have a rosy outlook on people's deep-seated goodness; and, people generally seem to trust and cooperate with others in economic games. However, as soon as people judge an ambiguous action that *might* be immoral based on contextual cues, we suggest that people assume wrongdoing—that is, show promiscuous condemnation. We draw on recent research and theory in morality to consider the contextual cues that might make an ambiguous action seem immoral.

### 1.2. Cognitive elements of morality

Moral psychologists have long debated what basic elements constitute moral judgment and how they combine with each other (Cushman, 2013; Haidt, 2012; Mikhail, 2007; Schein & Gray, 2018). Though different theoretical perspectives disagree on some aspects of moral cognition, the influence of certain elements on moral judgments—such as intentional action and suffering—is relatively undisputed. Intentionally killing someone is murder, whereas accidentally killing them is manslaughter and elicits less blame (Cushman, 2008; Malle, Guglielmo, & Monroe, 2014). Attempted assault is a crime, but successful assault elicits more blame and punishment because it actually causes physical suffering (Cushman, 2008; Young & Saxe, 2010).

One theory of morality—the theory of dyadic morality—posits that people rely on a harm-based cognitive template when making moral judgments across diverse domains (Schein & Gray, 2018). This template is called the “moral dyad” because it involves two interacting people, an intentional actor (i.e., agent) causing damage to a suffering target (i.e., patient). Studies suggest that the moral dyad exerts a kind of cognitive gravity, such that the hint of immorality—through the implied presence of intention and/or suffering—leads people to infer the presence of other elements of immorality. This phenomena is called “dyadic completion” because people cognitively complete an incomplete dyad, seeing evidence of suffering when presented with intentional counternormative acts. This is why people see “victimless wrongs” such as defiling a holy book or watching animals as nevertheless having victims and causing suffering (especially under time pressure (Gray, Schein, & Ward, 2014). Another example of dyadic completion includes when someone with bad intentions (e.g., a drug dealer) is assigned greater causal responsibility for crashing into someone's car and causing them to suffer (Alicke, 2000). Also consistent with this idea is when, in the wake of suffering, people look for agents to blame, often turning to powerful entities such as CEOs (Knobe, 2003) or God (Gray & Wegner, 2010).

Dyadic completion suggests that promiscuous condemnation should be appear more when more of these moral elements are present. As a bystander, it should seem more likely that an action is immoral if it is directed toward someone rather than performed alone? Likewise, people should assume more immorality when an action is done intentionally versus accidentally, and when an action seems to involve suffering versus not. Conversely, when people receive clear cues suggesting otherwise (e.g., the act is clearly performed alone or accidentally), we expect people to adjust their perceptions accordingly, only rarely judging these actions as immoral.

### 1.3. Differentiating between immorality and negativity

Manipulating these important elements of morality—the dyad (presence of both agent and patient), the agent's intention, and the patient's suffering—serves the key purpose of differentiating promiscuous condemnation from a more general “valence effect” in which people tend to rate ambiguous actions as negative instead of positive (see Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001). We expect large effects of these morality-specific elements on participants' judgments—effects that we would not expect if people tend to assume negativity more broadly. In particular, we expect people to mostly assume that accidental actions are *not* immoral in their responses, because immorality typically requires intention (Schein & Gray, 2018). Finding this effect would help differentiate between immorality and negativity as the “driving force”, as accidents can still be quite negative.

To further clarify that our effects pertain to judgments of immorality, we also include experiments that ask about the actor's positive and negative character traits. If ambiguous actions are simply seen as more negative, rather than more immoral, then these actions should have limited influence on participants' evaluations of character. However, if participants show promiscuous condemnation and assume immoral actions, then these actions should strongly influence their judgments of character, as moral character is a powerful driver of global evaluations (e.g., Goodwin, Piazza, & Rozin, 2014; Uhlmann, Pizarro, & Diermeier, 2015).

### 1.4. The prosociality of promiscuous condemnation

At first glance, promiscuous condemnation appears to be an anti-social tendency: is it really fair to assume someone is acting immorally if he or she is parked in front of the neighbor's driveway or hanging out near the playground? In these situations, the base rate for immorality seems quite low: the strange car might just an unexpected visit from a friend, and the person at the playground might just be waiting for his wife and kids to arrive. However, showing promiscuous condemnation

might actually be a prosocial tendency in these cases—not necessarily at odds with the altruistic cooperation and punishment observed in economic games (Fehr & Fischbacher, 2003; Fehr & Gächter, 2000). Promiscuous condemnation prepares bystanders to quickly provide aid if needed, preserving the well-being of family members, friends, and others (Schroeder, Penner, Dovidio, & Piliavin, 1995). Providing this aid not only protects others but also enhances one's own moral character, which is valuable for maintaining a good reputation (Brambilla & Leach, 2014; Goodwin et al., 2014). Even when it is not feasible to provide help, quickly identifying immorality can make it easier to avoid guilt-by-association (Fortune & Newby-Clark, 2008; Walther, 2002), also maintaining one's moral reputation.

## 2. The present research

We conducted nine experiments investigating whether people show *promiscuous condemnation*, assuming that ambiguous actions are immoral. To test promiscuous condemnation, we drew inspiration from linguistics research in which participants interpret or learn the meaning of “nonsense actions” (e.g., pelled, glotted; Oetting, 1999; Waxman, Lidz, Braun, & Lavin, 2009). In doing this, we recognize the risk of “suggestive” language such as Gricean norms. Gricean norms describe how people infer meaning from the inclusion or exclusion of certain details (Grice, 1975). If a person writes “a man slept with someone in a rundown hotel” you would likely assume that “someone” is not his wife because otherwise the sentence would have said “wife.” To minimize these issues, we use carefully controlled stimuli as well as large stimulus samples (both for names and verbs).

In the first two experiments, we considered whether promiscuous condemnation primarily occurs in a social context in which an actor might be harming a target: in these experiments, people read about nonsense actions performed in either a dyadic (e.g., “John pelled Mary”) or non-dyadic context (“John pelled”) and indicated either the immorality of the act (1a) or the character of the actor (1b). Experiments 2a, 2b, and 2c tested the role of intentionality; we predicted that people show promiscuous condemnation of actions unless acts are clearly accidental. We also used these experiments as a key test of whether our effects are about immorality or negativity more specifically; accidents can easily seem quite negative, but rarely seem immoral. For experiments 3a and 3b, we similarly predicted that people would show promiscuous condemnation unless acts clearly do *not* cause suffering.

We next considered whether promiscuous condemnation is an automatic tendency. In experiment 4, we compared ratings of nonsense actions to ratings of actual harmful actions (e.g., “harm” and “kill”) and helpful actions (e.g., “help” and “save”). We predicted that participants would tend to respond to nonsense actions as if they were harmful actions rather than helpful actions; we also predicted that this tendency would be stronger for participants under time pressure, suggesting that promiscuous condemnation is an automatic tendency to interpret ambiguous acts as immoral. In experiment 5, we replicated time pressure's effect on promiscuous condemnation using a novel set of stimuli—ambiguous short sentences such as “He picked up the knife” and “She undressed the child”—and used process dissociation to directly measure time pressure's effect on automatic versus controlled processes.

Experiments 1a, 2a, 2c, 3a, 4, and 5 use binary judgments of “Immoral” and “Not Immoral” to directly test promiscuous condemnation of ambiguous acts. However, the binary design and the focus on immorality might introduce task demands in the experiment; that is, participants may see a binary choice of “Immoral” and “Not Immoral” and infer what the “correct” answer is—for example, that immoral acts happen in dyadic contexts. For this reason, we used experiments 1b, 2b, and 3b to test for promiscuous condemnation without explicitly mentioning morality, instead asking participants to interpret the meaning of each sentence and evaluate the actor's positive and negative character traits (while still manipulating key morality-relevant elements).

### 2.1. Ethics

All experiments received approval from the UNC Ethics Board.

### 2.2. Disclosure statement

In addition to the reported measures and manipulations, we collected participants' responses to five items measuring paranoia and participants' political orientation. Participants answered these questions after completing the main tasks. Reports on these measures are not included in this manuscript. We report all other measures, manipulations, and exclusions.

### 2.3. Sample size justification

Sample sizes were determined prior to data analysis. In all experiments, we used hierarchical linear models nesting responses within both participants and nonsense actions. Our manipulations and measurements occur at the trial level, making sample size at the trial level the primary determinant of power (Snijders, 2005). In the binary choice experiments, participants completed 76 trials. We recruited at least 50 participants for each of these experiments, yielding at least 3800 observations. This number of observations provides ample power to detect even small-sized effects; this high power is illustrated by the small standard errors throughout the manuscript.<sup>1</sup>

For the character trait experiments, we included fewer trials per person (between 12 and 18 trials, depending on the number of conditions) but also more precisely measured the dependent variable by asking participants six questions per trial. Our manipulations and measurements again occur at the trial level, making sample size at the trial level the primary determinant of power. Our experiments included 960 trials (experiment 1b), 1440 trials (experiment 2b) and 2160 trials (experiment 3b), again providing ample power to detect small-sized effects.

## 3. Experiment 1a: social versus non-social context

In this first experiment, we simply test whether promiscuous condemnation primarily occurs in a social context—that is, a context in which there is both someone who might cause harm (an actor) and someone who might be harmed (a target). We predicted that participants would rate ambiguous acts as immoral more often in social contexts.

### 3.1. Method

#### 3.1.1. Participants and design

We recruited 54 United States participants via MTurk (46.3% female,  $M_{age} = 37$  years). These participants completed a two-condition (Dyad: alone, dyad) within-subjects experiment. No participants' data were excluded from the experiment.

#### 3.1.2. Procedure and materials

**3.1.2.1. Nonsense actions.** In this experiment, we used nonsense actions as ambiguous stimuli. To create our stimulus set, we compiled nonsense actions directly from 15 cognitive psychology and linguistics articles. We then excluded verbs with irregular conjugations (e.g., strink and strunk) and verbs longer than two syllables (e.g., dorfinize) to create a more uniform set of actions. This selection process left us with a word bank containing 76 nonsense actions. See Fig. 1.

<sup>1</sup> Performing exact tests of statistical power for hierarchical linear models is difficult with current tools; we instead refer pre-existing simulations of these models for low, medium, and large effect sizes.

**baffed biffed blicked blofed bozed braffed bropped**  
**chammed crived crogged cugged**  
**dacked dassed daxed doaked dotched**  
**fimed floosed freped**  
**geeped gished glorped glotted gomped goped gorped grushed gumped**  
**hirshed hooled**  
**japed**  
**kalled karded keated keefed koobed**  
**larped leamed lecked**  
**mibbed mipped moked mooked mooped**  
**norped**  
**pelled pilked plaked plammed plurded prassed prussed pudded**  
**rooged ruped**  
**satched scurred semmed sorned splinged spuffed stiped stoffed**  
**tammed**  
**tived toped trabbed**  
**vasked voozed**  
**weked wugged**  
**yoded**  
**zecked ziked zorked zoshed**

Fig. 1. Nonsense actions used in all experiments, in alphabetical order by row. Colors represent the 15 different sources of the actions. See Appendix A for nonsense actions by source. (For interpretation of the references to color in this figure legend, the reader is referred to the online version of this chapter.)

3.1.2.2. *Actor and target names.* In addition to nonsense actions, the sentences also involved specifying actors and targets. Because specific names can influence judgments (Erwin, 2006; Silver & McCann, 2014), we created two name banks to ensure that effects were not driven by certain names. The actor and target word banks each contained 40 names—20 male and 20 female—drawn from a list of the 40 most popular male and female names in the United States in the last 100 years (Social Security Administration, 2016). In all experiments, male and female names were randomly chosen to ensure that effects were not driven by particular actor or target genders. See Appendix B for a list of all names.

3.1.2.3. *Sentence presentation.* Using Inquisit Lab (version 4.0.9.0), we designed a program that dynamically creates sentences for each participant by combining a random actor, a random nonsense action, and a random target (e.g., “Jose stiped Louis”; “Helen blicked Kenneth”). This approach ensures that our effect is not driven by the inclusion of specific stimuli (Wells & Windschitl, 1999).

3.1.2.4. *Sentence categorization task.* Each participant viewed 76 unique sentences—one for each nonsense action—and categorized each as either “Immoral” or “Not Immoral”. The use of a binary outcome variable is common when participants make judgments of ambiguous or quickly-presented stimuli (e.g., Correll, Park, Judd, & Wittenbrink, 2002; Greenwald, McGhee, & Schwartz, 1998; Payne, Cheng, Govorun, & Stewart, 2005). We manipulated the context within-subjects (alone or dyadic): half of the sentences featured only an actor (e.g., “John pelled”) and half the sentences featured both an actor and a target (“John pelled Mary”). The first eight sentences were presented as practice trials and were not included for analysis. To tap intuitive moral judgment, we asked participants to provide each of their responses within 5 s. This amount of time proved sufficient, as participants successfully categorized sentences in 98.9% of trials with an average latency of 1.12 s.

3.1.2.5. *Analytic plan.* To account for variance owing to specific effects of participants, actions, or names, we analyzed the data using a fully cross-classified multilevel model with a binary outcome variable (Baayen, Davidson, & Bates, 2008). This model provided a more accurate and more powerful test of our manipulations than a traditional repeated measures ANOVA and also allowed for some missing data (i.e., missing trials; Krueger, 2004). In all of the models, the intercepts varied randomly across both participant and verb levels so that our effects generalize beyond the current sample.

## 3.2. Results

Consistent with promiscuous condemnation, participants rated nonsense actions as more immoral when the actor was with a target ( $M_{pct} = 52.2$ , 95% CI [49.8, 54.6]) than when the actor was alone ( $M_{pct} = 23.7$ , 95% CI [21.7, 25.8]),  $b_{pct} = 28.5$ ,  $F(1, 3358) = 278.44$ ,  $p < .001$ , 95% CI [25.4, 31.6]. These results provide initial evidence that people show willingness to interpret ambiguous acts as immoral, and that these responses are meaningful, such that ratings are higher in social contexts than in non-social contexts.

## 4. Experiment 1b: character replication for social context

The straightforward binary response task in experiment 1a directly tapped judgments of whether or not an act is immoral, providing high face validity; however, it also invited concern about task demands. To provide a subtler test of participants' moral judgments, we asked participants to read sentences in an open-ended fashion, view photographs of the actor and target, and provide general character ratings of the actor. This approach allowed people to ostensibly judge the actor's character based on their appearance and did not directly ask about moral judgments.

#### 4.1. Method

##### 4.1.1. Participants and design

We recruited 60 United States participants via MTurk (50% female,  $M_{age} = 34$  years). These participants completed a two-condition (Dyad: dyadic, non-dyadic) within-subjects experiment. No participants' data were excluded from the experiment.

##### 4.1.2. Procedure and materials

**4.1.2.1. Instructions.** The instructions and materials in this experiment never mention judgments of immorality; instead, participants were simply asked to “read and interpret some sentences.” They were told that the sentences would “likely include verbs that are not familiar” and asked to “guess the verbs' meanings to the best of [their] ability.” Then, this interpretation was used to make character judgments about the actor of each sentence. Each participant viewed 16 sentences and subsequently rated 16 actors.

**4.1.2.2. Sentence manipulations.** The construction and presentation of sentences was identical to experiment 1a. Participants additionally saw pictures of the actor and target, which were randomly selected from a bank of 40 photographs drawn from the Chicago Face Database (Ma, Correll, & Wittenbrink, 2015). To hold race constant, we only used photographs of white individuals. The inclusion of faces provided more potential information about the actors' character, reducing concerns about task demand.

**4.1.2.3. Ratings of actors' character.** After participants read each sentence, they then rated the actor of the sentence on six different adjectives on a five-point scale (“Not at all” to “Extremely”). Three of these adjectives were negative (aggressive, offensive, unpleasant) and three of these adjectives were positive (nice, helpful, friendly). We created an index of character judgment by subtracting the negative ratings from the positive ratings. This index adds interpretability to our findings by making “0” a meaningful point indicating a neutral evaluation of character.

#### 4.2. Results

Consistent with promiscuous condemnation, participants gave more negative character judgments when the actor was with a target ( $M = 0.44$ , 95% CI [0.73, 0.15]) than when the actor was alone ( $M = 0.50$ , 95% CI [0.21, 0.79]),  $b = 0.94$ ,  $F(1, 899) = 73.20$ ,  $p < .001$ , 95% CI [1.15, 0.72]. These results bolster the results of experiment 1a and reduce concerns about task demands.

### 5. Experiment 2a: intention and immoral acts

Experiment 2a investigates the role of the actor's intention in promiscuous condemnation. In line with previous work, we expected clearly intentional acts to be judged as immoral more often and clearly accidental acts to be judged as immoral less often. However, the most important test in this experiment was whether *intent-ambiguous actions*—defined as actions that are not clearly labeled as intentional or accidental—are judged as immoral as if they were intentional, rather than accidental. This would suggest that, even when intent is unclear, people are willing to show promiscuous condemnation.

We also manipulated social context in this experiment, as in experiments 1a and 1b. We expected to replicate our finding that social context impacts judgments of immorality; furthermore, we expected social context to moderate effects of intention, such that perceived intention matters less when the actor is alone.

#### 5.1. Method

##### 5.1.1. Participants and design

We recruited 81 United States participants via MTurk (58.0% female,  $M_{age} = 37$  years). These participants completed a 3 (Intention: intentional, accidental, intent-ambiguous) by 2 (Dyad: alone, dyad) within-subjects experiment. No participants' data were excluded from the experiment.

##### 5.1.2. Procedure and materials

**5.1.2.1. Sentence manipulations.** Participants again read sentences with nonsense actions. As in previous experiments, half the sentences featured an actor and a target (dyadic context) and half featured just an actor (non-dyadic context). In this experiment we added “by himself/herself” to make the dyad manipulation clearer (e.g., “John pelled by himself”).

We also manipulated actor intention. Participants read sentences with clearly intentional actions (e.g., “John intentionally/willfully/purposely pelled Mary”), clearly accidental actions (“John accidentally/unintentionally/inadvertently pelled Mary”), and intent-ambiguous actions (“John pelled Mary”). Because there were 76 total trials, each within-subjects cell included either 12 or 13 sentences.

**5.1.2.2. Sentence categorization task.** Participants categorized each of the sentences as “Immoral” or “Not Immoral”. The first eight sentences were presented as practice trials and were not included for analysis. We asked participants to provide each of their responses within six and a half seconds; this amount of time proved ample, with participants successfully categorizing sentences in 99.5% of trials with an average latency of 1.48 s.

#### 5.2. Results

We first tested for main effects of intention and dyad. Then, we tested our prediction that, in a context with both an actor and target, participants would judge the immorality of intent-ambiguous actions as if these actions were intentional rather than accidental. Finally, we expected immorality ratings to be much lower for accidental acts, providing evidence that our effects are about immorality specifically, rather than negativity.

##### 5.2.1. Main effects of intention and dyad

As in experiments 1a and 1b, participants categorized sentences as immoral more often when they were dyadic ( $M_{pct} = 48.8$ , 95% CI [46.6, 51.1]) than when they were non-dyadic ( $M_{pct} = 22.6$ , 95% CI [21.0, 24.3]),  $b_{pct} = 26.3$ ,  $F(1, 5636) = 304.02$ ,  $p < .001$ , 95% CI [23.4, 29.1]. Furthermore, participants rated intentional actions ( $M_{pct} = 60.3$ , 95% CI [58.0, 62.6]) as more immoral than intent-ambiguous actions ( $M_{pct} = 42.2$ , 95% CI [39.8, 44.7]), which in turn were rated as more immoral than accidental actions ( $M_{pct} = 11.6$ , 95% CI [10.2, 13.2]),  $F(2, 5636) = 383.96$ ,  $p < .001$  (see Fig. 2). Using accidental actions as a reference, the intent-ambiguous effect size is  $b_{pct} = 30.6$ , 95% CI [27.7, 33.4] and the intentional effect size is  $b_{pct} = 48.7$ , 95% CI [45.9, 51.5].

##### 5.2.2. Assuming immorality for intent-ambiguous actions

The main effects in the analysis were qualified by an interaction between dyad and intention,  $F(2, 5636) = 21.86$ ,  $p < .001$ . This interaction showed that effects of the intention manipulation were larger when both an actor and target were present, which makes sense given that the absence of a target signals that immoral actions are unlikely. Using accidental actions as a reference, the difference in intent-ambiguous effect sizes is  $b_{pctdiff} = 33.7^2$  and the difference in intentional

<sup>2</sup> We were unable to produce confidence intervals for the difference of difference scores in a multilevel framework; effect sizes for interactions in the

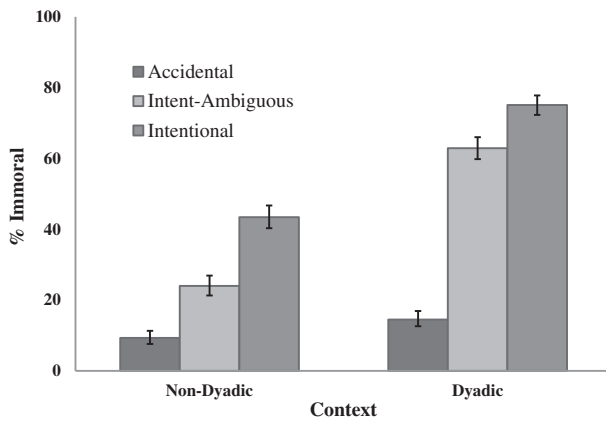


Fig. 2. Percentage of “Immoral” responses by dyad and intention. Bars represent 95% confidence intervals.

effect sizes is  $b_{pctdiff} = 26.5$ . This interaction also sets up our key prediction for the experiment: when a target is present, intent-ambiguous actions will be judged for immorality as if they were intentional rather than accidental.

Pairwise comparisons for dyadic sentences show that the difference between intentional and intent-ambiguous actions is smaller ( $M_{diffpct} = 12.2$ , 95% CI [8.1, 16.4]) than the difference between intent-ambiguous and accidental actions ( $M_{diffpct} = 48.4$ , 95% CI [44.5, 52.2]), as evidenced by the non-overlapping confidence intervals (MacGregor-Fors & Payton, 2013). When intention is unclear, people assume immoral action as if the act were intentional, providing evidence for promiscuous condemnation. This pattern of findings also suggests that participants' ratings specifically capture perceived immorality, rather than negativity; accidental acts are often negative, regardless of whether they are dyadic or not, but participants responded “Immoral” less than 20% of the time for accidental acts.

## 6. Experiment 2b: intention and actors' character

This experiment attempted to replicate the evidence for promiscuous condemnation observed in experiment 2a by asking participants to rate actors' character rather than provide a binary response about immorality.

### 6.1. Method

#### 6.1.1. Participants and design

We recruited 120 United States participants via MTurk (44% female,  $M_{age} = 37$  years). These participants completed a 3 (Intention: intentional, accidental, intent-ambiguous) by 2 (Dyad: alone, dyad) within-subjects experiment. No participants' data were excluded from the experiment.

#### 6.1.2. Procedure and materials

**6.1.2.1. Instructions.** The instructions were identical to those in experiment 1b. Each participant viewed 12 sentences and subsequently rated 12 actors.

**6.1.2.2. Sentence manipulations.** The construction and presentation of sentences was identical to experiment 2a. Participants additionally saw pictures of the actor and target from the same bank of faces used in experiment 1b.

(footnote continued)

paper will not include these intervals.

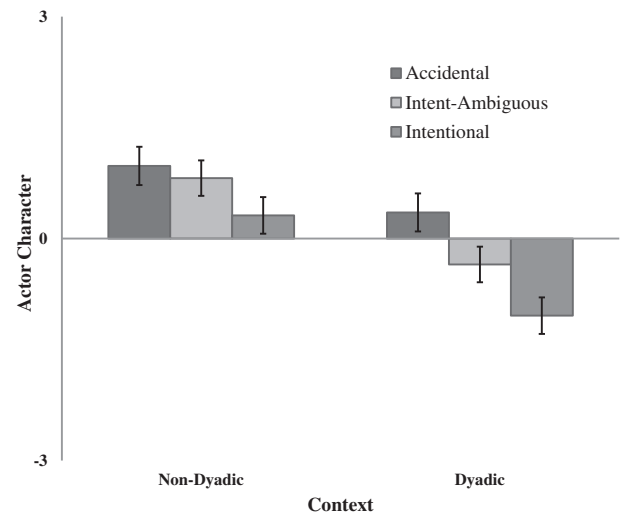


Fig. 3. Ratings of actor character by dyad and intention. Ratings above “0” are more positive than negative; ratings below “0” are more negative than positive. Bars represent 95% confidence intervals.

**6.1.2.3. Ratings of actors' character.** After participants read each sentence, they then rated the actor of the sentence on six different adjectives comprising an index of character evaluation as in experiment 1b.

### 6.2. Results

As in experiment 2a, we predicted main effects of intention and dyad as well as an interaction between intention and dyad such that the effect of intention is stronger when both an actor and a target are present. We also predicted that, when a target was present, judgments of immorality for intent-ambiguous acts would more closely resemble judgments of intentional acts than accidental acts (see Fig. 3).

#### 6.2.1. Main effects of intention and dyad

Participants rated actors more negatively when a target was present ( $M = 0.35$ , 95% CI [0.52, 0.17]) than when a target was absent ( $M = 0.70$ , 95% CI [0.53, 0.88]),  $b = 1.05$ ,  $F(1, 1315) = 137.47$ ,  $p < .001$ , 95% CI [1.23, 0.87], replicating the findings of experiment 1b. Participants also rated actors performing intentional actions more negatively ( $M = 0.37$ , 95% CI [0.56, 0.17]) than those performing intent-ambiguous actions ( $M = 0.23$ , 95% CI [0.04, 0.43]), who were rated more negatively than those performing accidental actions ( $M = 0.67$ , 95% CI [0.47, 0.87]),  $F(2, 1319) = 42.99$ ,  $p < .001$ . Using accidental actions as a reference, the intent-ambiguous effect size is  $b = 0.43$ , 95% CI [0.65, 0.22] and the intentional effect size is  $b = 1.03$ , 95% CI [1.25, 0.81].

#### 6.2.2. Assumptions of intent for intent-ambiguous actions

The main effects in the analysis were qualified by an interaction between dyad and intention,  $F(2, 1322) = 5.58$ ,  $p = .004$ . As in experiment 2a, this interaction suggests that the effect of intention was stronger when both an actor and target were present. Using accidental actions as a reference, the difference in intent-ambiguous effect sizes is  $b_{diff} = 0.54$  and the difference in intentional effect sizes is  $b_{diff} = 0.73$ .

Unlike in experiment 2a, the difference between intentional and intent-ambiguous actions ( $M_{diff} = 0.69$ , 95% CI [0.39, 0.99]) was not significantly different from the difference between intent-ambiguous and accidental actions ( $M_{diff} = 0.70$ , 95% CI [0.39, 1.01]). However, the difference between intent-ambiguous and accidental acts was significantly larger when both an actor and target were present ( $M_{diff} = 0.70$ , 84% CI [0.49, 0.92]), compared to when only an actor

was present ( $M_{diff} = 0.16$ , 84% CI [0.06, 0.38]). This finding suggests that participants still perceived intent-ambiguous acts as significantly more negative in a social context (MacGregor-Fors & Payton, 2013).

## 7. Experiment 2c: negative versus immoral judgments of accidents

Differentiating between negative and immoral judgments is essential for demonstrating promiscuous condemnation—a specific tendency to perceive ambiguous acts as immoral. It is not feasible to test contexts that are immoral but not negative, since immorality is almost always perceived as negative. However, it is possible to test contexts that are negative but not immoral. Accidents are one such context. We predicted that accidents would be perceived as much more negative than immoral, clearly illustrating that participants are sensitive to differences between “Immoral” and “Negative” in these experiments.

### 7.1. Method

#### 7.1.1. Participants and design

We recruited 120 United States participants via MTurk (28% female,  $M_{age} = 36$  years). These participants completed a 3 (within-subjects Intention: intentional, accidental, intent-ambiguous) by 2 (within-subjects Dyad: alone, dyad) by 2 (between-subjects Rating Type: negative, immoral). No participants' data were excluded from the experiment. We conducted this experiment in response to reviewer comments and preregistered our predictions here.

#### 7.1.2. Procedure and materials

**7.1.2.1. Instructions.** The instructions were identical to those in experiment 2a, with the exception of instructions to categorize sentences as “Immoral or Not Immoral” in the immoral rating condition and “Negative or Not Negative” in the negative condition.

**7.1.2.2. Sentence manipulations.** The construction and presentation of sentences was identical to experiment 2a.

**7.1.2.3. Ratings of actors' character.** After participants read each sentence, they categorized sentences as “Immoral/Negative” or “Not Immoral/Not Negative” depending on condition.

### 7.2. Results

#### 7.2.1. Replication of experiment 2a

Participants in the immoral condition completed the same experiment as all participants in experiment 2a, allowing us replicate these results. Within this condition, we again found main effects of dyad,  $F(1, 8312) = 497.50$ ,  $p < .001$ , and intention,  $F(2, 8312) = 249.12$ ,  $p < .001$ , which were qualified by a dyad-by-intention interaction,  $F(2, 8312) = 55.77$ ,  $p < .001$ . This interaction again shows that effect of the intention manipulation was larger in a dyadic context (see Fig. 4, left).

We again tested our key prediction: in a dyadic context, intent-ambiguous actions should be judged for immorality as if they were intentional rather than accidental. Pairwise comparisons for dyadic sentences show that the difference between intentional and intent-ambiguous actions is smaller ( $M_{diffpct} = 8.0$ , 95% CI [3.8, 12.2]) than the difference between intent-ambiguous and accidental actions ( $M_{diffpct} = 52.5$ , 95% CI [48.2, 56.8]), as evidenced by the non-overlapping confidence intervals (MacGregor-Fors & Payton, 2013). This again suggests that intent-ambiguous acts are interpreted as if they were immoral.

#### 7.2.2. Comparison of immoral and negative ratings

One key concern about the current methodology is whether participants' ratings are capturing perceived immorality specifically or negativity more broadly. If our observed effects really do concern

immorality, then ratings of immorality and negativity should differ substantially for accidents, which are rarely perceived as immoral but often perceived as negative. We find a significant rating type-by-intention interaction,  $F(2, 8312) = 84.77$ ,  $p < .001$ , such that accidents are perceived as negative ( $M_{pct} = 40.5$ , 95% CI [37.8, 43.4]) more often than they are perceived as immoral ( $M_{pct} = 19.3$ , 95% CI [17.4, 21.4]),  $t(8312) = 12.16$ ,  $p < .001$ .

We also find a significant rating type-by-intention-by-dyad interaction,  $F(2, 8312) = 8.67$ ,  $p < .001$ . The gap between negative and immoral ratings of accidents is somewhat larger for dyadic acts ( $M_{pctdiff} = 25.6$ , 95% CI [20.6, 30.5]) than it is for non-dyadic acts ( $M_{pctdiff} = 17.1$ , 95% CI [12.4, 21.8]). See Fig. 4 for all means and 95% confidence intervals.

### 7.3. Discussion

The results of experiments 2a, 2b, and 2c further demonstrate people's overall tendency to judge ambiguous acts as immoral, showing that this tendency is a function of the perceived intentionality of the act. Manipulations of intention impacted judgments of immorality, especially in social contexts where both an actor and target were present. Furthermore, the way that participants rated accidental actions—as less immoral and indicative of bad character than other actions—provides good evidence that participants' ratings reflect promiscuous condemnation specifically, rather than a preference for negative judgments more broadly. To continue exploring the role of context in promiscuous condemnation, we next manipulated perceptions of whether or not the target was suffering because of the action.

## 8. Experiment 3a: suffering targets and immoral acts

Experiment 3a investigates the role of the target's suffering in promiscuous condemnation. In line with previous work, we expected sentences with suffering targets to be judged as immoral more often than sentences with non-suffering targets. However, the most important test in this experiment was whether *suffering-ambiguous actions*—defined as actions for which the target's reaction is unclear—are judged as immoral as if suffering were present rather than absent, particularly when intention is already present. This result would suggest that people often show promiscuous condemnation for suffering-ambiguous actions.

We also manipulated the agent's intention in this experiment, as in experiments 2a and 2b. We expected to replicate our findings that intention impacts judgments of immorality and that intent-ambiguous sentences are judged as if they were intentional rather than accidental, particularly when suffering is already present.

### 8.1. Method

#### 8.1.1. Participants and design

We recruited 64 United States participants via MTurk (51.6% female,  $M_{age} = 39$  years). These participants completed a 3 (Suffering: suffering, non-suffering, suffering-ambiguous) by 3 (Intention: intentional, accidental, intent-ambiguous) within-subjects experiment. No participants' data were excluded from the experiment.

#### 8.1.2. Procedure and materials

**8.1.2.1. Sentence manipulations.** Participants read sentences with nonsense actions. As in experiment 2a, participants read sentences with clearly intentional, clearly accidental, or ambiguous actions.

We also manipulated target suffering. Participants read sentences with a clearly suffering target (e.g., “John pelled Mary, who cried/shuddered/screamed/yelled/sobbed”), a clearly non-suffering target (“John pelled Mary, who laughed/smiled/grinned/beamed/nodded”), or a suffering-ambiguous target (“John pelled Mary”). Because there were 76 total trials, each within-subject cell included either 8 or 9

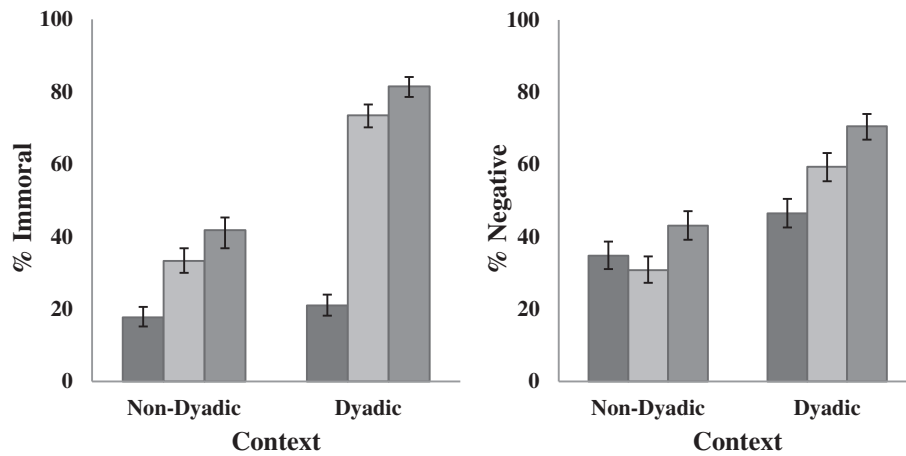


Fig. 4. Percentage of “Immoral” responses (left) and “Negative” responses (right) by dyad and intention. Bars represent 95% confidence intervals.

sentences.

8.1.2.2. *Sentence categorization task.* Participants categorized each of the sentences as “Immoral” or “Not Immoral”. The first eight sentences were presented as practice trials and were not included for analysis. We asked participants to provide each of their responses within 8 s; this amount of time proved ample, with participants successfully categorizing sentences in 99.3% of trials with an average latency of 1.78 s.

8.2. Results

We first test for main effects of both suffering and intention. Then, we test a) whether suffering-ambiguous sentences are judged for immorality as if suffering were present rather than absent, *unless* the action is clearly accidental and b) whether intent-ambiguous sentences are judged for immorality as if the act were intentional rather than accidental, *unless* target suffering is clearly absent.

8.2.1. Main effects of suffering and intention

We first tested for main effects of suffering and intention. Participants rated sentences with suffering targets ( $M_{pct} = 67.9$ , 95% CI [65.2, 70.6]) as more immoral than those with suffering-ambiguous targets ( $M_{pct} = 38.7$ , 95% CI [35.9, 41.6]), which in turn were rated as more immoral than those with non-suffering targets ( $M_{pct} = 17.3$ , 95% CI [15.4, 19.4]),  $F(2, 4311) = 293.41$ ,  $p < .001$ . Using non-suffering targets as a reference, the suffering-ambiguous effect size is  $b_{pct} = 21.4$ , 95% CI [17.9, 24.9] and the suffering effect size is  $b_{pct} = 50.6$ , 95% CI [47.2, 54.0].

Intention also showed a main effect, such that participants rated intentional actions ( $M_{pct} = 56.4$ , 95% CI [53.4, 59.4]) as more immoral than intent-ambiguous actions ( $M_{pct} = 48.7$ , 95% CI [45.7, 51.8]), which in turn were rated as more immoral than accidental actions ( $M_{pct} = 18.6$ , 95% CI [16.5, 20.8]),  $F(2, 4311) = 181.20$ ,  $p < .001$ . Using accidental actions as a reference, the intent-ambiguous effect size is  $b_{pct} = 30.2$ , 95% CI [26.4, 33.9] and the intentional effect size is  $b_{pct} = 37.9$ , 95% CI [34.2, 41.5]. See Fig. 5 for means and confidence intervals.

8.2.2. Interaction of intention and suffering

The main effects in the analysis were qualified by an interaction between intention and suffering,  $F(4, 4311) = 12.66$ ,  $p < .001$ . This interaction showed that effect of the intention manipulation was smaller when the target was clearly non-suffering than when the target was clearly suffering, which makes sense given that the absence of suffering signals that immorality is not present. Using accidental actions

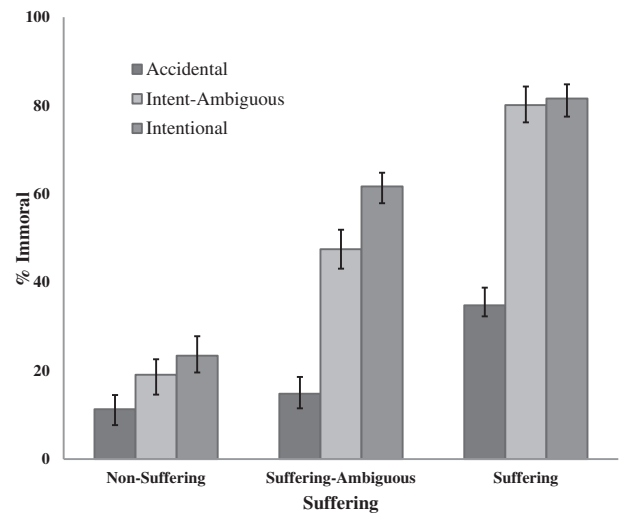


Fig. 5. Percentage of “Immoral” responses by suffering and intention. Bars represent 95% confidence intervals.

as a reference, the difference in intent-ambiguous effect sizes is  $b_{pctdiff} = 37.5$  and the difference in intentional effect sizes is  $b_{pctdiff} = 34.8$ . Similarly, the effect of the suffering manipulation was smaller when the action was clearly accidental, which makes sense given that the absence of intention also signals that immorality is not present. Using non-suffering actions as a reference, the difference in suffering-ambiguous effect sizes is  $b_{pctdiff} = 34.8$  and the difference in suffering effect sizes is  $b_{pctdiff} = 34.7$ . These findings suggest that ratings reflect perceived immorality rather than perceived negativity.

8.2.3. Assumptions of immorality for suffering-ambiguous sentences

A direct test of promiscuous condemnation examines whether suffering-ambiguous sentences are rated as if they clearly involve suffering. We tested this hypothesis in the context of intentional actions, which provide an initial cue that the act might be immoral. For intentional actions, the difference between suffering and suffering-ambiguous sentences was smaller ( $M_{diffpct} = 19.9$ , 95% CI [14.3, 25.5]) than the difference between suffering-ambiguous and non-suffering sentences ( $M_{diffpct} = 38.3$ , 95% CI [32.5, 44.1]), as evidenced by the non-overlapping confidence intervals. When suffering was ambiguous, participants tended to assume immorality, in line with promiscuous condemnation.<sup>3</sup>

<sup>3</sup> When both intention and suffering were ambiguous, the difference between



### 8.2.4. Assumptions of immorality for intent-ambiguous actions

A second direct test of promiscuous condemnation examines whether intent-ambiguous actions are rated as if they are clearly intentional. We tested this hypothesis in the context of suffering targets, which again provide an initial cue that the act might be immoral. When the target is suffering, the difference between intentional and intent-ambiguous sentences was smaller ( $M_{diffpct} = 1.5$ , 95% CI [3.5, 6.5]) than the difference between suffering-ambiguous and non-suffering sentences ( $M_{diffpct} = 45.3$ , 95% CI [39.7, 50.9]).<sup>4</sup> Thus, when intention was ambiguous, participants tended to assume immorality, in line with promiscuous condemnation.

## 9. Experiment 3b: suffering targets and actors' character

This experiment attempted to replicate the evidence for promiscuous condemnation observed in experiment 3a by asking participants to rate actors' character rather than provide a binary response about immorality.

### 9.1. Method

#### 9.1.1. Participants and design

We recruited 120 United States participants via MTurk (50% female,  $M_{age} = 36$  years). These participants completed a 3 (Suffering: suffering, non-suffering, suffering-ambiguous) by 3 (Intention: intentional, accidental, intent-ambiguous) within-subjects experiment. No participants' data were excluded from the experiment.

#### 9.1.2. Procedure and materials

**9.1.2.1. Instructions.** The instructions were identical to those in experiment 1b.

**9.1.2.2. Sentence manipulations.** The construction and presentation of sentences was identical to Experiment 3a. Participants additionally saw pictures of the actor and target from the same bank of faces used in experiment 1b.

**9.1.2.3. Ratings of actors' character.** After reading each sentence, participants rated the actor of the sentence on six different adjectives comprising an index of character evaluation, as in experiment 1b.

Each participant viewed 18 sentences and subsequently rated 18 actors. The number of trials was adjusted such that participants saw an equal number of sentences for each condition.

### 9.2. Results

We analyzed the data using a hierarchical linear model with responses nested within participants. We predicted results analogous to those in experiment 3a. One, we predicted main effects of both suffering and intention. Two, we predicted a suffering by intention interaction such that the clear absence of one element mitigates the effect of the other element. Three, we predicted that responses in the suffering-ambiguous and intent-ambiguous conditions would tend to resemble

(footnote continued)

suffering and suffering-ambiguous sentences ( $M_{diffpct} = 32.6$ , 95% CI [26.9, 38.3]) was the same as the difference between suffering-ambiguous and non-suffering sentences ( $M_{diffpct} = 28.3$ , 95% CI [22.7, 34.0]). Given that these sentences are completely ambiguous in the context of the experiment (all other sentences have information about intention and/or suffering), this result is unsurprising.

<sup>4</sup> When both intention and suffering were ambiguous, the difference between intentional and intent-ambiguous sentences ( $M_{diffpct} = 14.2$ , 95% CI [8.0, 20.5]) was still smaller than the difference between intent-ambiguous and accidental sentences ( $M_{diffpct} = 32.7$ , 95% CI [27.2, 38.1]), in line with promiscuous condemnation.

responses in the suffering and intentional conditions, respectively.

#### 9.2.1. Main effects of suffering and intention

Participants rated actors more negatively when the target was suffering ( $M = 1.31$ , 95% CI [1.45, 1.17]) than when suffering was ambiguous ( $M = 0.12$ , 95% CI [0.26, 0.02]) and rated these actors more negatively than they did when the target was not suffering ( $M = 1.40$ , 95% CI [1.25, 1.54]),  $F(2, 2086) = 544.97$ ,  $p < .001$ . Using non-suffering actions as a reference, the suffering-ambiguous effect size is  $b = 1.52$ , 95% CI [1.63, 1.40] and the suffering effect size is  $b = 2.71$ , 95% CI [2.82, 2.59]. See Fig. 5 for all means and confidence intervals.

Participants also rated actors performing intentional actions ( $M = 0.43$ , 95% CI [0.57, 0.29]) more negatively than actors performing intent-ambiguous actions ( $M = 0.04$ , 95% CI [0.18, 0.11]), who were in turn rated more negatively than actors performing accidental actions ( $M = 0.43$ , 95% CI [0.28, 0.57]),  $F(2, 2086) = 54.54$ ,  $p < .001$ . Using accidental actions as a reference, the intent-ambiguous effect size is  $b = 0.46$ , 95% CI [0.58, 0.35] and the intentional effect size is  $b = 0.86$ , 95% CI [0.97, 0.74]. See Fig. 6 for all means and confidence intervals.

#### 9.2.2. Suffering by intention interaction

The main effects were qualified by an interaction between suffering and intention,  $F(4, 2089) = 15.71$ ,  $p < .001$ . As in experiment 3a, this interaction showed that effect of the intention manipulation was smaller when the target was clearly non-suffering, which makes sense given that the absence of suffering signals that immorality is not present. Using accidental actions as a reference, the difference in intent-ambiguous effect sizes is  $b_{diff} = 1.23$  and the difference in intentional effect sizes is  $b_{diff} = 1.44$ . Similarly, the effect of the suffering manipulation was smaller when the action was clearly accidental, which makes sense given that the absence of intention also signals that immorality is not present. Using non-suffering actions as a reference, the difference in suffering-ambiguous effect sizes is  $b_{diff} = 0.85$  and the difference in suffering effect sizes is  $b_{diff} = 1.44$ . As in experiment 3a, these results suggest that the observed effects concern perceived immorality rather than perceived negativity.

#### 9.2.3. Assumptions of suffering for suffering-ambiguous sentences

A direct test of promiscuous condemnation examines whether suffering-ambiguous sentences are rated as if they clearly involve suffering. We tested this hypothesis in the context of intentional actions, which provide an initial cue that the act might be immoral. For intentional actions, the difference between suffering and suffering-ambiguous sentences was smaller ( $M_{diff} = 1.32$ , 95% CI [1.05, 1.59]) than the difference between suffering-ambiguous and non-suffering sentences ( $M_{diff} = 1.92$ , 95% CI [1.65, 2.20]), as evidenced by the non-overlapping confidence intervals.<sup>5</sup> When suffering was ambiguous, participants tended to assume the target was suffering, in line with promiscuous condemnation.

#### 9.2.4. Assumptions of intention for intent-ambiguous actions

A second direct test of promiscuous condemnation examines whether intent-ambiguous actions are rated as if they are clearly intentional. We test this hypothesis in the context of suffering targets, which again provide an initial cue that the act might be immoral. When the target was suffering, the difference between intentional and intent-ambiguous sentences was smaller ( $M_{diff} = 0.39$ , 95% CI [0.12, 0.66])

<sup>5</sup> When both intention and suffering were ambiguous, the difference between suffering and suffering-ambiguous sentences ( $M = 1.52$ , 95% CI [1.26, 1.78]) was the same as the difference between suffering-ambiguous and non-suffering sentences ( $M = 1.56$ , 95% CI [1.29, 1.82]). Given that these sentences are completely ambiguous in the context of the experiment (all other sentences have information about intention and/or suffering), this result is unsurprising.

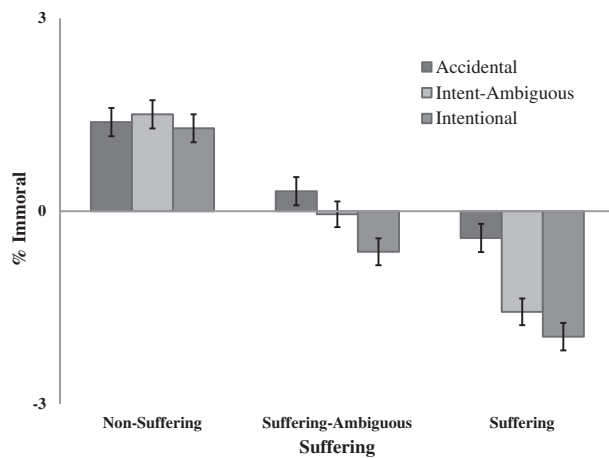


Fig. 6. Ratings of actor character by suffering and intention. Ratings above “0” are more positive than negative; ratings below “0” are more negative than positive. Bars represent 95% confidence intervals.

than the difference between suffering-ambiguous and non-suffering sentences ( $M_{diff} = 1.15$ , 95% CI [0.87, 1.43]).<sup>6</sup> Thus, when intention was ambiguous, participants tended to assume intentional (and immoral) action, in line with promiscuous condemnation.

### 9.3. Discussion

Experiments 3a and 3b again provide evidence of promiscuous condemnation. Participants are generally willing to interpret ambiguous actions as immoral, though the clear absence of an important moral element, such as intentionality or suffering, significantly reduces this willingness. Furthermore, for both intent-ambiguous and suffering-ambiguous actions, people showed a tendency to assume immorality as if these acts were intentional and involving suffering, providing further support for promiscuous condemnation.

## 10. Experiment 4: real actions and time pressure

One useful test of promiscuous condemnation is a direct comparison of participants' ratings of nonsense actions, which are inherently ambiguous, to real actions that are unambiguously harmful or helpful. If people tend to rate ambiguous actions as immoral, then nonsense actions should elicit ratings that more closely resemble harmful actions than helpful actions. To test this prediction, we presented participants with nonsense actions, real harmful actions, (e.g., killed, slapped, threatened) and real helpful actions (e.g., accepted, hugged, forgave).

We also tested the effect of time pressure on promiscuous condemnation. When people show systematic tendencies in judgment (e.g., tending to view ambiguous acts as harmful), these tendencies are typically stronger under either cognitive load (Goldinger, Kleider, Azuma, & Beike, 2003; Greene, Morelli, Lowenberg, Nystrom, & Cohen, 2008) or time pressure (Finucane, Alhakami, Slovic, & Johnson, 2000; Rosset, 2008). In this experiment, we varied how much time participants had to categorize sentences as immoral or not immoral, with the prediction that participants with less time to respond would express a stronger tendency to categorize nonsense actions as immoral.

<sup>6</sup> When both intention and suffering were ambiguous, the difference between intentional and intent-ambiguous sentences ( $M = 0.58$ , 95% CI [0.32, 0.85]) was the same as the difference between intent-ambiguous and accidental sentences ( $M = 0.36$ , 95% CI [0.09, 0.63]).

## 10.1. Method

### 10.1.1. Participants and design

We recruited United States 110 participants via MTurk (56.5% female,  $M_{age} = 38$  years), who completed a 3 (Verb Type: nonsense, harmful, helpful) by 2 (Time Pressure: fast, slow) within-between subjects experiment. No participants' data were excluded from the experiment.

### 10.1.2. Procedure and materials

**10.1.2.1. Sentence categorization task.** Participants read sentences and categorized each sentence as either “Immoral” or “Not Immoral”. Unlike in previous experiments, some of the actions included in these sentences were real actions, both harmful and helpful. These actions were chosen to be very clearly harmful or very clearly helpful so that they would provide objective comparison points, allowing us to test whether responses to nonsense actions more closely resemble responses to harmful actions than responses to helpful actions. In total, participants rated 30 nonsense actions, 30 harmful actions, and 30 helpful actions. The first twelve sentences were practice trials and were not included for analysis. See Appendix C for a full list of harmful and helpful actions.

**10.1.2.2. Time pressure manipulation.** Participants had either 1.5 s (fast) or 5 s (slow) to categorize each sentence—they read that they would either have to “answer quickly” or would have “plenty of time to respond”. When participants failed to respond in the allotted time, they received a message asking them to “Please respond more quickly”. As a manipulation check, we tested whether speed influenced response latency. We found a significant effect of time pressure,  $b_{ms} = 477.37$ ,  $F(1, 8629) = 632.28$ ,  $p < .001$ , 95% CI [440.15, 514.58] such that participants in the fast condition responded to the sentences more quickly (771 ms) than those in the slow condition (1248 ms). Participants successfully responded to 96.2% of trials, suggesting that participants had adequate time to respond.

## 10.2. Results

### 10.2.1. Comparing nonsense actions with harmful and helpful actions

The harmful and helpful actions were chosen to serve as unambiguous stimuli for comparison. We used a hierarchical linear model to analyze the effects of action type (harmful, nonsense, helpful) and speed (fast, slow) on participants' ratings of immorality. The analysis of fixed effects revealed a main effect of verb type,  $F(2, 8300) = 1127.04$ ,  $p < .001$ , such that participants rated sentences with harmful actions ( $M_{pct} = 90.3$ , 95% CI [87.7, 92.4]) as more immoral than those with nonsense actions ( $M_{pct} = 58.2$ , 95% CI [51.8, 64.3]), which in turn were rated as more immoral than those with helpful actions ( $M_{pct} = 5.5$ , 95% CI [4.2, 7.1]). Using helpful actions as a reference, the nonsense actions effect size is  $b_{pct} = 52.7$ , 95% CI [47.6, 57.9] and the harmful actions effect size is  $b_{pct} = 84.8$ , 95% CI [83.2, 86.5]. See Fig. 6 for means and confidence intervals.

In line with promiscuous condemnation, we predicted that nonsense actions would be rated more similarly to harmful actions than helpful actions. A comparison of differences supports this prediction: the difference between harmful actions and nonsense actions ( $M_{diffpct} = 32.1$ , 95% CI [27.7, 36.6]) was smaller than the difference between nonsense actions and helpful actions ( $M_{diffpct} = 52.7$ , 95% CI [47.6, 57.9]), as indicated by the non-overlap of confidence intervals. This result provides evidence that people tended to interpret ambiguous actions as immoral.

### 10.2.2. Nonsense actions are more immoral under time pressure

If people show a systematic tendency to judge ambiguous actions as immoral, then this tendency should be more pronounced when participants have less time to respond. We tested this hypothesis by

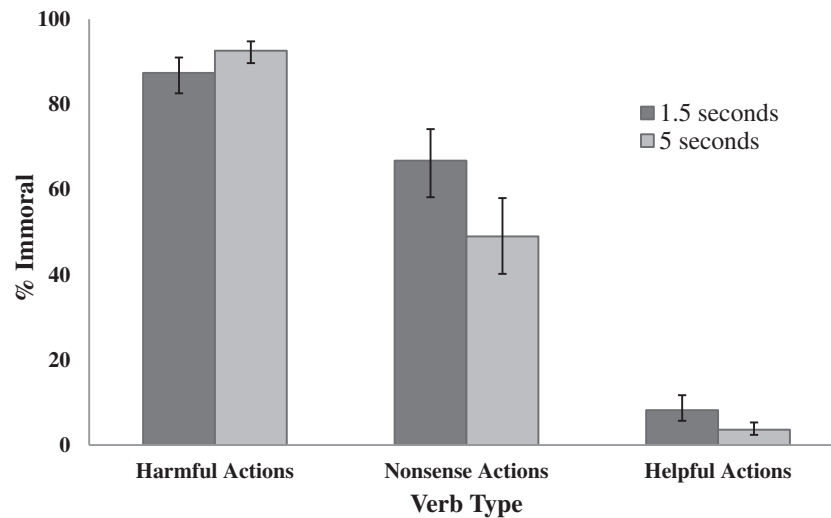


Fig. 7. Percentage of "Immoral" responses by verb type and time pressure. Bars represent 95% confidence intervals.

examining the interaction between verb type and time pressure.

The model did not show a main effect of time pressure,  $b_{pct} = 8.5$ ,  $F(1, 8300) = 1.79$ ,  $p = .18$ , 95% CI [3.9, 20.8], but did show a significant interaction between verb type and time pressure,  $F(2, 8300) = 39.00$ ,  $p < .001$ . In line with our predictions, the effect of time pressure was significant for nonsense actions,  $b_{pct} = 17.7$ ,  $t(8300) = 2.87$ ,  $p = .004$ , 95% CI [5.6, 29.8], such that participants with less time to respond categorized more of these actions as immoral ( $M_{pct} = 66.8$ , 95% CI [58.2, 74.4]) than participants with more time to respond ( $M_{pct} = 49.0$ , 95% CI [40.2, 58.0]). Importantly, these results do not suggest that participants are simply regressing toward chance (50%) under time pressure. See Fig. 7 for means and confidence intervals.

For harmful and helpful actions, time pressure appeared to significantly decrease accuracy. For harmful actions, participants with less time to respond categorized fewer sentences as immoral ( $M_{pct} = 87.4$ , 95% CI [82.6, 91.0]) than participants with more time to respond ( $M_{pct} = 92.6$ , 95% CI [89.5, 94.8]),  $b_{pct} = 5.2$ ,  $t(8300) = -2.06$ ,  $p = .04$ , 95% CI [0.2, 10.2]. For helpful actions, participants with less time to respond categorized more sentences as immoral ( $M_{pct} = 8.2$ , 95% CI [5.7, 11.7]) than those with more time to respond ( $M_{pct} = 3.6$ , 95% CI [2.4, 5.3]),  $b_{pct} = 4.6$ ,  $t(8300) = 2.77$ ,  $p = .006$ , 95% CI [1.3, 7.9].<sup>7</sup>

### 10.3. Discussion

These results provide evidence for promiscuous condemnation in two ways. One, ambiguous actions were interpreted more similarly to harmful actions than helpful actions. Two, participants' tendency to interpret ambiguous actions as immoral was more pronounced when they had less time to respond, suggesting an automatic tendency toward interpreting these acts as immoral. In experiment 5, we used process dissociation to more directly test the possibility that promiscuous condemnation is an automatic tendency to perceive immorality that can be effortfully controlled—but only when sufficient time and resources are available.

## 11. Experiment 5: process dissociation and short sentences

The influence of factors such as cognitive load and time pressure on

<sup>7</sup> It is possible that participants were actually presuming immorality for these clearly helpful actions, but a "loss of accuracy" explanation seems more sensible given the unambiguous nature of these actions.

judgments is often understood using dual process models that include both controlled and automatic pathways. These contextual factors typically inhibit controlled responding rather than increasing automatic assumptions. Though the previous experiment showed that time pressure can increase participants' promiscuous condemnation, it did not pinpoint the underlying structure of the effect.

To test whether the effect of time pressure is explained by a shift in controlled responding, we designed an experiment compatible with the process dissociation procedure to differentiate automatic and controlled processes (Jacoby, 1991; Payne, 2001). Automatic processes require little cognitive effort and operate regardless of conscious intent. Controlled processes, on the other hand, are consciously executed and require greater cognitive effort; these processes can be disturbed by time pressure, cognitive load, and depleted cognitive resources. People attempt to respond using controlled processes but are often unable to do so.

We created two sets of short sentences as stimuli that allowed us to perform process dissociation: *Probably Immoral* or *Possibly Immoral*. We predicted that participants who are unable to use controlled processes would instead rely on an automatic tendency to assume immorality. In particular, this automatic tendency would be influential when controlled and automatic processes ought to yield opposite outcomes. That is, for the *Possibly Immoral* sentences, an automatic assumption of immorality would lead subjects to respond "Immoral," but a thoughtfully controlled response would lead them to respond "Not Immoral." These results would suggest that people tend to automatically interpret ambiguous actions as immoral and that this assumption is more likely to lead to errors when it is difficult to exert effortful control over responses.

### 11.1. Method

#### 11.1.1. Participants and design

We recruited 104 United States participants (52.1% female,  $M_{age} = 33$  years) through MTurk, who completed a 2 (Sentence Type: *Probably Immoral*, *Possibly Immoral*) by 2 (Time Pressure: fast, slow) within-between subjects experiment. No participants were excluded from the multilevel analysis; however, because process dissociation does not handle missing data well, six participants' data were not used for this procedure because they failed to answer more than three of the items.

#### 11.1.2. Procedure and materials

11.1.2.1. *Piloting the short sentence sets.* To create a set of ambiguous

**Table 1**  
Sentences categorized by participants in experiment 6.

Probably immoral	Possibly immoral
He lied to his father. (71)	He stared at his daughter. (10)
He picked the car's lock. (56)	He threw the axe. (19)
He grabbed her neck. (58)	He slapped her butt. (25)
She broke his leg. (64)	He picked up the child and ran. (24)
He knocked over the man. (61)	He snuck into the house. (36)
He broke into the house. (89)	She logged on to his Facebook. (27)
She didn't pay for her meal. (76)	He took the child to the bathroom. (5)
He gave the drug to the child. (57)	He swung the baseball bat. (5)
He punched the man. (55)	He grabbed the knife. (21)
She slipped the jewelry in her purse. (74)	He kicked down the door. (38)
She lied to her brother. (88)	He thought about his sister. (19)
She bit his neck. (40)	She undressed the child. (16)
He sedated the woman. (48)	He fired a gun. (25)
She kicked him in the shin. (73)	He picked up the money. (10)

Note. Numbers in parentheses indicate the percentage of people who categorized the sentence as “Immoral” during pilot tests.

immoral sentences for this experiment, two 60-participant groups recruited through MTurk categorized 40 short sentences as either “Not Immoral” or “Immoral.” These participants were not placed under any time pressure. We created two sets of stimuli, “Probably Immoral” and “Possibly Immoral,” by sorting the scenarios by the percentage of immoral responses and creating two sets with an average of approximately 75% immoral responses (Probably Immoral) and 25% immoral responses (Possibly Immoral). The final set included 14 sentences in each category (Table 1).

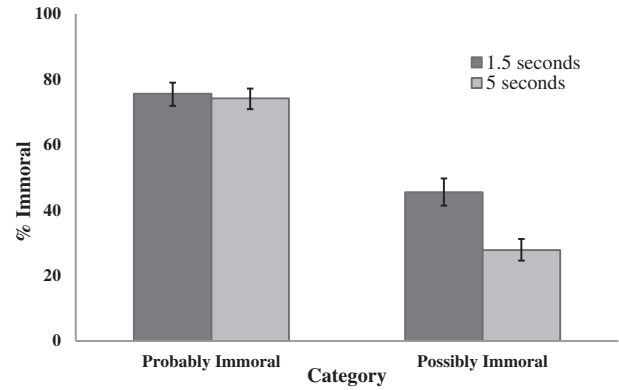
**11.1.2.2. Short sentence categorization task.** Participants received instructions to categorize each sentence that flashed on the screen as either “Not Immoral” or “Immoral.” Participants received either 1.5 s or 5 s to complete each trial. Participants had either 1.5 s (fast) or 5 s (slow) to categorize each sentence—they read that they would either have to “answer quickly” or would have “plenty of time to respond.” When participants failed to respond in the allotted time, they received a message asking them to “Please respond more quickly.” Participants completed 14 practice trials using a set of practice items, then completed 28 main trials in which the sentences from the Probably Immoral and Possibly Immoral sets were randomly presented.

**11.1.2.3. Time pressure manipulation check.** As in experiment 5, we conducted a manipulation test for time pressure and found that participants in the fast condition responded to the sentences more quickly (897 ms) than those in the slow condition (1819 ms),  $b_{ms} = 922.56$ ,  $F(1, 2908) = 104.34$ ,  $p < .001$ , 95% CI [861.69, 983.43]. Participants provided responses for 92.3% of trials, suggesting that they had adequate time to respond.

**11.2. Results**

**11.2.1. Immoral responses**

We used a fully cross-classified hierarchical linear model to analyze the effects of sentence type (Probably Immoral, Possibly Immoral) and speed (fast, slow) on participants' ratings of immorality. Unsurprisingly, the analysis of fixed effects showed a main effect of sentence type,  $b_{pct} = 39.3$ ,  $F(1, 2811) = 403.54$ ,  $p < .001$ , 95% CI [35.9, 42.7], such that participants rated Probably Immoral sentences as more immoral ( $M_{pct} = 74.9$ , 95% CI [72.5, 77.1]) than Possibly Immoral sentences ( $M_{pct} = 35.6$ , 95% CI [33.0, 38.3]). The analysis of fixed effects also revealed a main effect of speed,  $b_{pct} = 9.8$ ,  $F(1, 2811) = 20.65$ ,  $p < .001$ , 95% CI [5.6, 14.0], such that participants with less time to respond categorized more sentences as immoral ( $M_{pct} = 61.1$ , 95% CI [58.1, 64.0]) than those with more time to respond ( $M_{pct} = 51.3$ , 95% CI [48.3, 54.2]).



**Fig. 8.** Percentage of “Immoral” responses by category and time pressure. Bars represent 95% confidence intervals.

In line with our predictions, these main effects were qualified by a significant interaction,  $b_{pctdiff} = 15.1$ ,  $F(1, 2811) = 14.95$ ,  $p < .001$ . An analysis of simple effects showed that the effect of speed was significant for Possibly Immoral verbs,  $b_{pct} = 16.5$ ,  $t(2811) = 6.28$ ,  $p < .001$ , 95% CI [11.3, 21.6], such that participants with less time to respond categorized more sentences as immoral ( $M_{pct} = 44.2$ , 95% CI [40.3, 48.2]) than those with less time to respond ( $M_{pct} = 27.8$ , 95% CI [24.6, 31.2]). However, the effect of speed was not significant for Probably Immoral,  $b_{pct} = 1.4$ ,  $t(2811) = 0.60$ ,  $p = .55$ , 95% CI [3.2, 6.0]. See Fig. 8 for means and confidence intervals.

These results fit a control-impairment explanation: participants who have an automatic tendency to assume immorality will do so for both Probably and Possibly Immoral sentences, but this assumption will be opposed by more controlled thinking when the sentence is on Possibly Immoral (and thus unlikely to be immoral). Controlled processes are more likely to fail under fast responding, leading subjects to incorrectly “guess” that a sentence is immoral more often for the Possibly Immoral sentences than for the Probably Immoral sentences. We more directly addressed this possibility by analyzing the data using a process dissociation procedure.

**11.2.2. Process dissociation**

We calculated two dependent variables—controlled processing and automatic assumption—using the guidelines provided in Payne (2001). These estimates can be dissociated because the experiment includes both congruent trials, in which controlled and automatic processes lead to the same answer, and incongruent trials, in which controlled and automatic processes lead to different answers. When a trial is congruent, the probability of responding that a sentence is “Immoral” is the probability of Control, C, plus the probability of assuming immorality when control fails,  $A(1 - C)$ :

$$\text{Congruent} = C + A(1 - C). \tag{1}$$

In this experiment, Probably Immoral trials are congruent because both controlled processing and automatic assumptions lead to answering “Immoral.” Possibly Immoral trials, on the other hand, are incongruent, since controlled processing leads to answering “Not Immoral,” but automatic assumptions lead to answering “Immoral.” The probability of answering “Immoral” for an incongruent trial is the probability of assuming immorality, A, whenever control fails,  $(1 - C)$ :

$$\text{Incongruent} = A(1 - C). \tag{2}$$

These equations for congruent and incongruent trials allow for the separation of controlled and automatic processing. Estimates of controlled processing represent a person's ability to intentionally provide a certain response (i.e., “Immoral”) when they intend to, and not provide that response when they do not intend to. A higher estimate indicates greater controlled processing across all trials. The control estimate is

the difference between answering “Immoral” in congruent and incongruent trials:

$$C = \text{Congruent} - \text{Incongruent}. \quad (3)$$

On the other hand, estimates of automatic assumption represent a person's tendency to provide a certain response (i.e., “Immoral”) regardless of whether or not that response aligns with controlled processing. A higher automatic estimate indicates a stronger tendency toward immorality. Solving for an estimate of control allows the automatic estimate to be solved:

$$A = \text{Incongruent}/(1 - C). \quad (4)$$

If promiscuous condemnation is characterized by a stable automatic assumption of wrongdoing, then time pressure should influence people's ability to engage in controlled processing (i.e., their ability to accurately categorize the sentence based on its content and counteract their automatic assumptions), but not their automatic assumptions (i.e., their stable tendency to categorize sentences as immoral).

Excluding one outlier (Cook's  $D = 0.16$ ), a one-way ANOVA analyzing controlled processing revealed the expected effect of time pressure,  $F(1, 95) = 16.62, p < .001, \eta_p^2 = 0.15$ , such that participants with less time to respond showed lower levels of controlled processing ( $M = 0.31, SD = 0.24$ ) than those with more time to respond ( $M = 0.47, SD = 0.16$ ).<sup>8</sup> A one-way ANOVA examining automatic assumption showed a marginal effect of speed,  $F(1, 96) = 3.22, p = .08, \eta_p^2 = 0.03$ , such that participants with less time to respond showed greater automatic assumptions of immorality ( $M = 0.65, SD = 0.27$ ) than those with more time to respond ( $M = 0.54, SD = 0.32$ ). This result suggests that when subjects had little time to respond, they both exerted less control and relied more heavily on their automatic intuitions.

Overall, the process dissociation analysis suggests people show a relatively stable tendency for promiscuous condemnation, though controlled processing can be used to adjust these initial judgments when cognitive resources are available.

## 12. General discussion

Across nine experiments, we found evidence of promiscuous condemnation—the tendency to assume immorality for ambiguous actions. In the first six experiments, we demonstrated that people are generally willing to judge acts as immoral, though the presence or absence of contextual factors such as a dyad (experiments 1a and 1b), intentionality (experiments 2a–2c), and suffering (experiments 3a and 3b) impacted the likelihood of these judgments. Participants often assumed immorality unless contextual cues clearly suggested the absence of immorality (i.e., accidental actions or non-suffering targets). Importantly, people tended to judge intent-ambiguous actions as if they were intentional and suffering-ambiguous actions as if they involved suffering, in line with promiscuous condemnation. Two key points of evidence in these experiments suggest that these findings concern immorality, rather than negativity. One, accidental actions were rated as much less immoral, a pattern that would be unexpected for general negativity (since accidents can still be negative). Two, our manipulations influenced judgments of the actors' character: if actions were seen as broadly negative rather than specifically immoral, these actions would not strongly influence judgments of character.

To provide an objective comparison to actual harmful actions, we found that nonsense actions are judged more similarly to clearly harmful actions than to clearly helpful actions (experiment 4). Furthermore, time pressure increased participants' likelihood of judging ambiguous actions as immoral, such that time pressure impairs people's

ability to effortfully control an automatic tendency toward immorality (experiments 4 and 5). The time pressure findings fit well with the idea that promiscuous condemnation is a prosocial tendency: initially assume the worst in case you need to act quickly, then adjust perceptions accordingly.

### 12.1. Limitations

Although our experiments benefit from the greater diversity of race, gender, and age afforded by recruiting participants through MTurk (Buhrmester, Kwang, & Gosling, 2011; Goodman, Cryder, & Cheema, 2012), we nevertheless acknowledge the use of a relatively WEIRD (White, educated, industrialized, rich, democratic; Henrich, Heine, & Norenzayan, 2010) sample of participants. For this reason, cross-cultural examinations of promiscuous condemnation would provide useful insight into the generalizability of our findings. The strength of promiscuous condemnation might, for example, depend on the amount of crime or violence in a given region. We also acknowledge that the landscape of moral wrongs is remarkably diverse, as shown by theories that highlight extensive variety in moral rules and judgments (Haidt, 2013; Shweder, Mahapatra, & Miller, 1987; Shweder, Much, Mahapatra, & Park, 1997). The present research does not directly test whether promiscuous condemnation occurs across all types of moral transgressions. Nevertheless, experiment 5 included situations suggestive of incest, rape, pedophilia, theft, assault, home invasion, lying, and kidnapping. Furthermore, the ambiguity of the nonsense actions suggests that promiscuous condemnation is not limited to any specific class of moral actions.

Actions and attributions are not the only elements of the scenarios that might raise questions about the generalizability of the effect. For one, the scenarios we used always focused on two human individuals: one human actor acting on one human target. Although this structure represents the most common instances of wrongdoing, moral situations can also involve groups (Cohen, Montoya, & Insko, 2006; Waytz & Young, 2012) and nonhuman entities such as animals (Bastian, Loughnan, Haslam, & Radke, 2012; Epley, Waytz, Akalis, & Cacioppo, 2008) and machines (Melson et al., 2009; Waytz, Heafner, & Epley, 2014). The current research does not address these nonhuman entities, instead focusing on presumably adult individuals acting on other adults (or perhaps children).

Finally, the use of nonsense actions in many of our experiments might have invoked expectations of slang terms, which are often used euphemistically to describe something that is taboo or harmful (e.g., McGlone, Beck, & Pfiester, 2006). Although this explanation might partially account for our effects, it cannot fully account for our findings. First, we find promiscuous condemnation effects in experiment 5, which uses no nonsense actions. Second, people's understandings of nonsense actions varied considerably in response to manipulations of basic moral elements (and varied considerably between participants), suggesting that these actions were not perceived as slang euphemisms by default.

### 12.2. Promiscuous condemnation, automaticity, and intergroup prejudice

Ample evidence shows that black people face more police abuse and false accusations than white people (Allen, 2013; Eberhardt, Davies, Purdie-Vaughns, & Johnson, 2006; Lowenstein, 2007). These differences are partly accounted for by people's tendency to specifically assume that black people are committing crimes and then act based on those assumptions (Correll et al., 2002; Goff, Jackson, Di Leone, Culotta, & DiTomasso, 2014). In some instances, placing participants under time pressure inhibits their ability to control racial stereotyping, leading to stronger prejudice and discrimination toward black targets (see Brauer, Wasel, & Niedenthal, 2000).

In our experiments, we find that promiscuous condemnation follows a dual process framework in which people show an automatic tendency

<sup>8</sup> Including the outlier still yielded a main effect of Speed,  $F(1, 96) = 11.34, p = .001, \eta_p^2 = 0.11$ .

to perceive immorality when they are unable or unmotivated to control their responses. In the context of prejudice, people might show an automatic tendency to assume immorality in ambiguous contexts, whether the actor is white or black. However, people's motivation to effortfully control this automatic tendency might be greater for one group than another. In other words, a biased white observer might initially judge the actions of both white and black actors as immoral; however, they may exert more effort to adjust this initial judgment for white actors than for black actors, assuming they have sufficient cognitive resources to do so. In this way, time pressure might actually have different effects on observers who have low versus high motivation to control prejudice. Observers high in motivation to control prejudice will likely show greater prejudice under time pressure; however, observers low in motivation to control prejudice might instead show greater prejudice without time pressure, because they are able to effortfully adjust assumptions of immorality for white actors while choosing not to do so for black actors.

### 12.3. Conclusion

The world is rife with moral uncertainty, from the “true character” of others to the potential harm of a single ambiguous act. Although people seem to maintain a positive outlook on human nature writ large, promiscuous condemnation suggests that they are also quick to assume that ambiguous acts are immoral once they have even minimal cause for suspicion. At first glance, promiscuous condemnation might seem harsh or unwarranted, leading to false accusations; however, it might also lead to prosocial outcomes, allowing people to prevent harm and punish wrongdoers. For better or for worse, humans seem strongly attuned to potential immorality.

## Appendix A. Nonsense actions by citation

List of nonsense actions by source

Verbs	Source
Plurded, zorked, ruped, plaked, zoshed, blofed, rooged, yoded, hooled, sorned, weked, leamed, glotted	Oetting, 1999
Stoffed, cugged, trabbed, crogged, vasked, bropped, satched, grushed, plammed, scurred, spuffed, dotchedw	Thomas et al., 2001
Mooked, tived, kalled, geeped, voozed, mipped, zecked, dassed, fimed, bozed	Van der Lely, 1994
Biffed, ziked, blicked, dacked, moked	Fisher, Hall, Rakowitz, & Gleitman, 1994
Doaked, gumped, floosed, gomped, japed	Pinker, Lebeaux, & Frost, 1987
Keefed, pudded, chammed, mibbed, koobed	Olguin & Tomasello, 1993
Karded, semmed, larped, wugged, toped	Waxman et al., 2009
Splinged, prassed, crived, prussed, lecked	Van der Lely & Ullman, 1996
Pelled, norped, mooped, keated	Gropen, Pinker, Hollander, Goldberg, & Wilson, 1989
Stiped, braffed, pilked, gished	Fisher, 1996
Tammed, gorped, goped	Tomasello, 2000
Glorped, freped	Roseberry, Hirsh-Pasek, Parish-Morris, & Golinkoff, 2009
Baffed	Abbot-Smith, Lieven, & Tomasello, 2001
Daxed	Tomasello & Barton, 1994
Hirshed	Maguire, Hirsh-Pasek, Golinkoff, & Brandone, 2008

## Appendix B. Names used in experiments 1a through 4

Male names			
James	Christopher	Ronald	Frank
John	Daniel	Anthony	Scott
Robert	Paul	Kevin	Eric
Michael	Mark	Jason	Stephen
William	Donald	Matthew	Andrew
David	George	Gary	Raymond
Richard	Kenneth	Timothy	Gregory
Charles	Steven	Jose	Joshua
Joseph	Edward	Larry	Jerry
Thomas	Brian	Jeffrey	Dennis
Female names			
Mary	Lisa	Michelle	Brenda
Patricia	Nancy	Laura	Amy

## Open practices

We provide data (SPSS files) and materials (Inquisit scripts) for all experiments at <https://osf.io/9w8pg/>. We also note that, in all experiments, we collected participants' responses to five items measuring paranoia and participants' political orientation. Participants answered these questions after completing the main tasks. Reports on these measures are not included in this manuscript. We report all other measures, manipulations, and exclusions.

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## Author contributions

All authors contributed to the experiment concepts and designs. N. Hester programmed the experiments, collected the data, and analyzed the data. N. Hester and K. Gray drafted the manuscript, and K. Payne provided critical revisions. All authors approved the final version of the manuscript for submission.

## Declaration of competing interest

All authors declare that they have no conflict of interest.

Linda	Karen	Sarah	Anna
Barbara	Betty	Kimberly	Rebecca
Elizabeth	Helen	Deborah	Virginia
Jennifer	Sandra	Jessica	Kathleen
Maria	Donna	Shirley	Pamela
Susan	Carol	Cynthia	Martha
Margaret	Ruth	Angela	Debra
Dorothy	Sharon	Melissa	Amanda

**Appendix C. Harmful and helpful verbs used in experiment 4**

Harmful verbs		
Slap	Fear	Annoy
Push	Loathe	Dread
Cheat	Envied	Pitied
Misled	Hit	Harass
Betray	Kill	Gash
Hurt	Kick	Dislike
Trouble	Defied	Abhor
Annoy	Club	Punch
Bore	Pain	Stab
Hate	Threaten	Burn
Helpful verbs		
Hug	Welcome	Fancied
Kiss	Cuddle	Desire
Flatter	Relax	Prefer
Help	Met	Accept
Save	Forgave	Favor
Amuse	Romance	Believe
Trust	Charm	Love
Esteem	Admire	Praise
Respect	Cheer	Value
Answer	Enjoy	Adore

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