

## Science &amp; Society

## The Upside of Outrage

Victoria L. Spring,<sup>1,\*</sup>  
C. Daryl Cameron,<sup>1,2</sup> and  
Mina Cikara<sup>3</sup>

**A debate has emerged across disciplines about why people engage in costly helping. Empathy is one mechanism. We highlight a second, more controversial motivator: moral outrage. Integrating findings from moral psychology and intergroup literatures, we suggest outrage is a critical force for collective action and highlight directions for future research.**

One of the most vigorously disputed questions across several fields is why people engage in costly helping. A debate has ignited around the utility of empathy, in particular, as a driver of costly helping. Empathy, a response to others' emotions (including sharing others' experiences), has been viewed by many as a moral force, but by others as too unreliable and biased to ground effective helping behavior [1].

Empathy has taken center stage in these debates, in part because of the common intuition that empathy is for helping victims. By contrast, outrage (anger at violation of one's subjective moral standards) is often characterized as a negative, corrosive emotion in part because it predicts disproportionately spiteful or retributive behavior toward transgressors [2]. By this account, outrage constitutes a barrier to moral progress [3]. One consequence of this characterization is that potential positive effects of outrage (e.g., cohesive collective action) are overlooked and underinvestigated. However, a growing literature has examined the mobilizing

effects of outrage in the context of intergroup relations, some of which we review here.

We call for an integration of the moral and intergroup psychology literatures on outrage for two reasons: (i) to highlight the utility of outrage for motivating collective action; and (ii) to suggest novel avenues for research at the intersection of emotion, morality, and costly helping behavior. We begin by reviewing how outrage has been studied in the moral and intergroup literatures, then turn to examining the different reactions people exhibit in response to outrage.

### A Tale of Two Literatures: Bridging Moral and Intergroup Psychology

Broadly speaking, many experiments examining costly helping in moral psychology focus on immediate, interpersonal behaviors (e.g., allocations in experimental games, third-party punishment of wrongdoers). In these contexts, anger and outrage tend to be associated with spiteful or retributive behavior. For example, incidental anger (unrelated to moral transgressions) exacerbates punishment practices (i.e., giving up one's own points in a game to subtract points from a wrongdoer's score) relative to a control condition in which no anger is induced prior to punishment [2]. These results suggest that emotions like anger and outrage may lead to disproportionate punishment of transgressors and costs to punishers.

Even studies investigating the impact of outrage outside of its effects on immediate, interpersonal behaviors paint a bleak picture. While outrage on behalf of others is useful for signaling adherence to local moral norms (i.e., 'virtue signaling'), it can also promote dehumanization and conflict escalation, particularly on social media ([3] but see Box 1). Perhaps the

most damning account of outrage is that people merely express it to manage their own guilt. For example, feeling culpable for perpetuating sweatshop labor by shopping at corporate stores predicts outrage against corporate abuse of sweatshop workers [4]. Though several accounts argue that punitive behaviors increase cooperation in the long term by deterring potential wrongdoers [5], punitive behavior may arise in the absence of outrage. So: does outrage have any utility at all? A reasonable conclusion to draw from moral psychology is that people should maintain practices and institutions that deter bad actions but minimize outrage.

This emphasis on immediate, interpersonal behaviors in moral psychology may, however, occlude positive consequences of outrage (beyond deterrence), which emerge on a broader social scale. The intergroup relations literature has investigated the consequences of outrage, but has focused instead on its impact on collective action and policy preferences. For example, across two experiments, both naturally occurring outrage (about an ongoing conflict) and induced outrage (manipulated via video footage about the conflict) predicts greater support for nonviolent peacemaking policies relative to 'induced hope' and 'neutral' emotion manipulations [6]. Similarly, women who read that the majority of men harbor hostile sexist beliefs (versus benevolent sexist beliefs or gender-unrelated beliefs) exhibit increased anger and fury, which predicts intentions to participate—and actual participation—in collective action for equal salaries [7]. By contrast, reappraisal, aimed at reducing negative emotions such as outrage, reduces participants' reported intentions to engage in political action [8].

To more completely characterize its consequences, we propose that researchers should bridge the moral and intergroup views of outrage and

**Box 1. The Double-Edged Sword of Social Media**

The United States saw some of the largest protests in the 20th century. For example, marches against the Vietnam War hosted ~500 000 attendees<sup>i</sup>. However, recent protests dwarf this number: for example, the 2017 Women's March amassed 4.6 million in nationwide protests<sup>ii</sup>. People outraged over National Football League (NFL) players' protests against police brutality flooded the internet with videos of immolated Nike shoes and over 30 000 tweets with the #BurnNike hashtag in a single morning (Nike sponsors Colin Kaepernick, a central activist in the NFL protests)<sup>iii</sup>. Why are more Americans protesting than ever before?

Some argue social media makes it too easy for outrage to swell into virtual mobbing [9], while reducing engagement in actual activism [3]. We offer a counterpoint: social media plays a crucial role in organizing outrage-inspired collective action. Sharing outrage on social media can create a sense of 'common knowledge' that an event or policy is considered unjust (which is sufficient to influence attitudes and beliefs), and promote the perception that participating in collective action is normative [12]. While social media has clearly contributed to social and political discord—which, again, may be necessary for broad-scale change—it also offers a means of transforming emotion into effective action.

conceptualize it as a motivated emotion that can be regulated depending on the context and an individual's goals and expectations [6]. Individuals must consider the potential costs of outrage (e.g., effort and exhaustion, retaliation from peers) as well as the benefits (e.g., signaling virtue, creating norms, galvanizing action). Outrage may only emerge under specific conditions, such as when benefits outweigh costs and there are mechanisms for translating it into prosocial action. One approach might be to manipulate perceived costs and benefits of outrage to determine how they influence helping. Another avenue is to incorporate more collective action-oriented dependent variables (e.g., willingness to join protests, support political candidates, or write opinion pieces) in addition to discrete helping behaviors (e.g., one-time donation). Building on previous work on incidental emotion activation, it would be beneficial to determine whether outrage in response to a specific incident motivates collective action in support of the broader cause (and related causes) or if instead it makes individuals more myopic in their responses. Finally, it would be valuable to test whether outrage, even when driven by self-serving motives (e.g., virtue signaling) still results in collective action, inviting ethical questions about whether prosocial consequences of

outrage outweigh considerations of its principled versus selfish motivation.

**Understanding Reactions to Outrage**

Yet another growing target for future scientific inquiry is the variety of responses outrage provokes. For example, one common reaction to outrage is to 'pile-on' more outrage (e.g., on social media). Recent experiments examining this phenomenon reveal that these pile-ons paradoxically produce more sympathy for the original transgressor and negative evaluations of those individuals piling on [9].

In contrast to piling-on, and perhaps in recognition of outrage's efficacy for promoting collective action, people often deploy pro-empathy rhetoric (e.g., 'thoughts and prayers', exhortations for civility) in an attempt to reduce outrage. In some cases, people argue empathy is the only appropriate emotion in response to negative, even tragic events. This promotion of empathy is a form of interpersonal emotion regulation, in which people attempt to induce emotions in others that further their own goals [10]. Such calls for empathy may have the effect of delegitimizing outrage, particularly outrage expressed by low-power groups, which could in turn reinforce the status quo (Box 2). This is a perilous situation, as empathy is considered a positive social emotion

(there are strong social norms encouraging its expression [1]), whereas expressing outrage may be seen as 'deepening the social divide' [3]. Calls for empathy to the exclusion of all other emotional reactions also neglect the human capacity for experiencing multiple emotions simultaneously.

This line of thinking invites reflection: how did outrage come to be so negatively characterized in the first place? Although moral psychology has touched on the potential utility of negative emotions such as outrage for promoting within-group cooperation [6], there is still a tendency for these emotions to be viewed as barriers to moral progress. See, for example, discussions of utilitarianism as a meta-morality to facilitate intergroup conflict resolution [11]. In this framework, emotions such as outrage might be pitted as anti-rational obstacles to constructive dialogue across groups. But we hasten to note that no emotion is intrinsically good or bad; the consequences of outrage depend on how it is used and in what context. In fact, it may be that outrage is necessary to foment change, particularly in the context of intergroup relations [6,7]. Just because outrage can have negative consequences in some instances does not minimize its potential for positive moral impact. Rather than being anti-rational simply because it's an emotion, in some cases outrage may be a rational means for achieving one's goals.

This brief review inspires numerous follow-up questions: how do attributions regarding the reason for someone's outrage (e.g., legitimate versus illegitimate) drive responses to it? How do empathy-versus outrage-charged appeals compare in their efficacy in marshaling helping behavior? Are different interpersonal emotion regulation strategies applied to outrage versus empathy expressions? And more broadly, how and why do distinct emotions (independent of valence)

**Box 2. Who Is Allowed to Experience Outrage?**

We have briefly discussed how pro-empathy rhetoric can be leveraged to delegitimize outrage, particularly among marginalized groups. Indeed, promoting intergroup harmony can reinforce an inequitable social structure: if conditions appear harmonious, high-status groups feel reassured that the status quo is fair and low-status groups feel their grievances are less legitimate [13]. This phenomenon is compounded by the observation that only certain groups are 'allowed' to express outrage. For example, stigmatized group members are often held to higher moral standards (e.g., accused of expressing inappropriate emotions, especially anger, at greater rates than majority group members [14]). In short, people often put boundary conditions on who is permitted to experience outrage. The challenge is that outrage is only effective for promoting collective action if people are allowed—and allow themselves—to feel it.

Power, status, and majority/minority group membership can all determine who is likely to express outrage versus suppress it, but this relationship may be bidirectional. In other words, expression of outrage may not just motivate collective action, but also help define the collective itself through the creation of common cause. Sharing outrage with others may act as a group-level emotion, facilitating further cohesion [15] and amplifying outrage's potency for motivating behavior.

become imbued with positive versus negative connotations? Again, we believe the most fruitful approach to answering these questions involves bringing moral psychology and intergroup researchers together.

**Concluding Remarks**

In both public discourse and in psychological research, outrage is frequently cast in a destructive light. In contrast, the intergroup literature presents several cases in which outrage can serve as an important catalyst for collective action. There is no shortage of current events that demonstrate how effective outrage can be at uniting people in democracy-preserving behavior, but we need a better account of its dynamics and efficacy in light of its costs. In merging the intergroup and moral psychology literatures, we hope to promote a more complete view of outrage—as an emotion that might lead to interpersonal antagonism, but that may also act as a lever for activism on a societal scale.

**Acknowledgments**

The writing of this paper was facilitated by a National Science Foundation Graduate Research Fellowship awarded to V.L.S., NSF 1660707 awarded to C.D.C., and NSF 1551559 awarded to M.C.

**Resources**

<sup>i</sup> <https://www.history.com/this-day-in-history/second-moratorium-against-the-war-held>

<sup>ii</sup> <https://www.theatlantic.com/technology/archive/2017/01/womens-march-protest-count/514166/>  
<sup>iii</sup> <https://nypost.com/2018/09/04/nike-shares-drop-amid-backlash-over-new-kaepemick-ad/>

<sup>1</sup>Department of Psychology, The Pennsylvania State University, University Park, PA, USA

<sup>2</sup>Rock Ethics Institute, The Pennsylvania State University, University Park, PA, USA

<sup>3</sup>Department of Psychology, Harvard University, Cambridge, MA, USA

\*Correspondence: [vis23@psu.edu](mailto:vis23@psu.edu) (V.L. Spring).  
<https://doi.org/10.1016/j.tics.2018.09.006>

**References**

1. Zaki, J. (2017) Moving beyond stereotypes of empathy. *Trends Cogn. Sci.* 21, 59–60
2. Gummerum, M. et al. (2016) Costly third-party interventions: the role of incidental anger and attention focus in punishment of the perpetrator and compensation of the victim. *J. Exp. Soc. Psychol.* 65, 94–104
3. Crockett, M.J. (2017) Moral outrage in the digital age. *Nat. Hum. Behav.* 1, 769–771
4. Rothschild, Z.K. and Keefer, L.A. (2017) A cleansing fire: moral outrage alleviates guilt and buffers threats to one's moral identity. *Motiv. Emot.* 41, 209–229
5. van Kleef, G.A. and Fischer, A.H. (2016) Emotional collectives: how groups shape emotions and emotions shape groups. *Cogn. Emot.* 30, 3–19
6. Tagar, M. et al. (2011) The positive effect of negative emotions in protracted conflict: the case of anger. *J. Exp. Soc. Psychol.* 47, 157–164
7. Becker, J.C. and Wright, S.C. (2011) Yet another dark side of chivalry: benevolent sexism undermines and hostile sexism motivates collective action for social change. *J. Pers. Soc. Psychol.* 101, 62–77
8. Ford, B.Q. et al. (2018) Using reappraisal to regulate negative emotion after the 2016 US presidential election: does emotion regulation trump political action? *J. Pers. Soc. Psychol.* Published online June 28, 2018. <http://dx.doi.org/10.1037/pspp0000200>
9. Sawaoka, T. and Monin, B. (2018) The paradox of viral outrage. *Psychol. Sci.* Published online August 9, 2018. <http://dx.doi.org/10.1177/0956797618780658>

10. Netzer, L. et al. (2015) Interpersonal instrumental emotion regulation. *J. Exp. Soc. Psychol.* 58, 124–135
11. Greene, J. (2014) *Moral Tribes: Emotion, Reason, and the Gap Between Us and Them*, Penguin
12. Shteynberg, G. (2017) A collective perspective: shared attention and the mind. *Curr. Opin. Psychol.* 23, 93–97
13. Dixon, J. et al. (2016) From prejudice reduction to collective action: two psychological models of social change (and how to reconcile them). In *Cambridge Handbook of the Psychology of Prejudice* (Barlow, F. and Sibley, C., eds), pp. 481–499, Cambridge University Press
14. Jones, T. and Norwood, K.J. (2016) Aggressive encounters & White fragility: deconstructing the trope of the angry Black woman. *Iowa Law Rev.* 102, 2017–2069
15. Smith, E.R. and Mackie, D.M. (2015) Dynamics of group-based emotions: insights from intergroup emotions theory. *Emot. Rev.* 7, 349–354

**Spotlight****Null Ain't Dull: New Perspectives on Motor Cortex**

Ta-Chu Kao<sup>1</sup> and  
Guillaume Hennequin<sup>1,\*</sup>

**Classical work has viewed primary motor cortex (M1) as a controller of muscle and body dynamics. A recent brain–computer interface (BCI) experiment suggests a new, complementary perspective: M1 is itself a dynamical system under active control of other circuits.**

Even the simplest of behaviours require concerted interactions among thousands of neurons. However, of these many neurons, only a fraction directly determine behavioural outputs. For example, reaching for a cup of coffee can potentially be achieved by myriad different activity patterns in primary motor cortex (M1): as long as corticospinal (or 'output-potent') neurons produce the correct activity, the activity of other ('output-null') neurons appears entirely unconstrained, or 'redundant'. Redundancy has attracted much attention lately due to its potential significance