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Empathy Is Hard Work: People Choose to Avoid Empathy Because of Its Cognitive Costs

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Empathy is considered a virtue, yet it fails in many situations, leading to a basic question: When given a choice, do people avoid empathy? And if so, why? Whereas past work has focused on material and emotional costs of empathy, here, we examined whether people experience empathy as cognitively taxing and costly, leading them to avoid it. We developed the empathy selection task, which uses free choices to assess the desire to empathize. Participants make a series of binary choices, selecting situations that lead them to engage in empathy or an alternative course of action. In each of 11 studies (N = 1,204) and a meta-analysis, we found a robust preference to avoid empathy, which was associated with perceptions of empathy as more effortful and aversive and less efficacious. Experimentally increasing empathy efficacy eliminated empathy avoidance, suggesting that cognitive costs directly cause empathy choice. When given the choice to share others' feelings, people act as if it is not worth the effort.

Keywords: empathy, altruism, motivation, effort, choice

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One of the fundamental skills for navigating everyday life is *empathy*: the ability to share in and understand others' experiences vicariously (Decety & Cowell, 2014). Empathy can promote cooperation, helping, and beneficial interactions with others (Preston, 2013). Yet empathy may entail cognitive, emotional, and material costs. Investigations into the promise and perils of empathy have thrived, with research across disciplines—including economics (Singer & Fehr, 2005), neuroscience (Decety, 2011), philosophy (Prinz, 2011), and psychology (Bloom, 2017)—attempting to understand when and why people experience empathy. Here, we use an interdisciplinary approach to address an overlooked question: To what extent do people *choose* to feel empathy, and why? We suggest that, on average, people prefer to avoid empathy—as measured via their tendency to exert situational control over its elicitation—and that this preference is driven by judgments about the *cognitive* costs inherent to empathizing.

Empathy is a motivated phenomenon: Changing people's motivations to empathize can shape empathic outcomes (Keysers & Gazzola, 2014; Zaki, 2014). We suggest that the motivation to empathize derives from its subjective expected value: People weigh different costs against offsetting rewards. Previous work has focused on obvious deterrents to empathy, such as material costs and vicarious distress. People avoid empathy-eliciting situations when empathy costs money or time (Andreoni, Rao, & Trachtman, 2017; Cameron & Payne, 2011; Pancer, McMullen, Kabatoff, Johnson, & Pond, 1979; Shaw, Batson, & Todd, 1994) and when it entails vicarious emotional costs such as distress (Cameron, Harris, & Payne, 2016).

Here, we highlight a less obvious cost that can motivate people to avoid empathy: the cognitive costs (e.g., effort, aversion, inefficacy) of empathy. We argue that over and above other costs of empathy, cognitive costs are substantial enough to cause people to systematically avoid empathy.

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Is Empathy Effortful?

In the present work, we focus on whether people exert situational control over *experience sharing*—an affective form of empathy that involves vicarious resonance with others—because of its perceived psychological costs. This facet of empathy is often distinguished from perspective taking and compassion (i.e., Decety & Cowell, 2014; Zaki, 2014), and from self-focused personal distress (Batson, 2011), and is often assumed to involve little effort. Although separable, it is important to note that these facets of empathy largely overlap and are likely coactive in many everyday situations (Zaki & Ochsner, 2012).

Here, we suggest that empathy is felt as cognitively costly, with a particular focus on effort. We define *effort* as "subjective intensification of mental and/or physical activity in the service of meeting some goal" (Inzlicht, Shenhav, & Olivola, 2018, p. 338). Subjective effort can be distinguished from demand (i.e., the objective difficulty of a task; cf. Inzlicht et al., 2018). There are good reasons to believe that empathy, and experience sharing, might be felt as cognitively taxing. Empathy can involve uncertainty, and attempting to share in others' experiences may feel demanding because of less familiarity and external information to rely upon. Given that concerns about error feed into perceptions of effort (Dunn, Inzlicht, & Risko, 2017), it may be that concerns about empathic error make empathy feel effortful. Moreover, it may be that people have a hard time generating feelings of empathy, and this felt difficulty may be a powerful motivator against empathizing. Thus, in the current studies, we also examine perceptions of efficacy at engaging in empathy as another important aspect of cognitive work.

Consistent with the claim that empathy can be effortful, perspective taking is inhibited under time pressure (Epley, Keysar, Van Boven, & Gilovich, 2004) and distraction (Davis, Conklin, Smith, & Luce, 1996). We make a number of contributions beyond this work. First, we demonstrate that effort is involved in not just perspective taking but also experience sharing, an empathy facet for which effort costs are deemed less relevant. Second, prior work imposed effort manipulations externally (e.g., Lockwood et al., 2017), not examining how empathy is intrinsically effortful. We suggest that empathy is often felt as cognitively costly (even for positive emotions) and that these costs create a robust desire to avoid empathy.

This prediction draws upon neuroscience models of goal pursuit (Apps, Grima, Manohar, & Husain, 2015; Inzlicht, Bartholow, & Hirsh, 2015; Kurzban, 2016) and decades of research demonstrating that people prefer to avoid effort (Hull, 1943; Kool, McGuire, Rosen, & Botvinick, 2010; Westbrook, Kester, & Braver, 2013; but see Inzlicht et al., 2018) unless it is offset by sufficient reward (Apps et al., 2015). The law of least effort claims that "if two or more behavioral sequences, each involving a different amount of energy consumption or work, have been equally well reinforced an equal number of times, the organism will gradually learn to choose the less laborious behavior sequence" (Hull, 1943, p. 294; cf. Kool et al., 2010). From a biological perspective, effort—even mental effort (Kool & Botvinick, 2018; Kool et al., 2010)—signals that a current course of action carries fitness costs (Kurzban, 2016); from an economics perspective, effort signals that a course of action carries inherent disutility (Kool et al., 2010).

Prior work has shown that people are motivated to avoid cognitive work, but no studies have examined how this domain-general preference applies to empathy, possibly because such cognitive factors are considered less relevant for engaging in experience sharing. Although there may be cases in which empathy is rewarding and approached rather than avoided, the point is that, at baseline, cognitive costs can lead people to avoid it altogether. In a world in which empathy is touted as helpful, its cognitive costs are underappreciated.

When deciding whether to enter into empathy-eliciting situations, people may weigh the expected value of mental costs (e.g., effort, negative affect, feelings of inefficacy) along with material costs and offsetting rewards, such as the desire to be moral or behave in accordance with social norms. Indiscriminate empathy can be overly costly, leading to fatigue, financial costs, and opportunity costs when more prudential courses of action are available (Keysers & Gazzola, 2014; Zaki, 2014). We suggest that when given the choice to empathize with strangers, people will tend to avoid empathy, and that avoidance will be associated with perceptions of cognitive work. Although there may be cases in which empathy is rewarding, and is approached rather than avoided (e.g., with kin), the point here is that felt cognitive costs can lead people to avoid it altogether. In this view, even if experience sharing is spontaneous, it need not be effortless (see Melnikoff & Bargh, 2018, on how processing features can dissociate), and this may lead people to actively choose not to engage in it.

In other words, people may be "empathy misers" in part because they are "cognitive misers": People may avoid entering into empathic situations, and this is likely to reflect domain-general effort calculations as applied to the particular case of empathy. By shaping the situations that they enter into, people have some degree of choice over a seemingly spontaneous process. Even if experience sharing occurs spontaneously once in an empathic situation, people might strategically select whether to enter such situations based on effort costs of experience sharing.

The Empathy Selection Task

To examine how cognitive costs can deter empathy, we developed the empathy selection task, which uses behaviorally revealed preferences (Kool et al., 2010) to measure motivated empathy avoidance. The task assesses situation selection (Gross & Thompson, 2007), an emotion regulation strategy whereby people choose situations to enter into based upon the emotions they want to feel. This form of empathy regulation can be seen in everyday life, as when people maintain distance from a donation solicitor or change the channel to escape a charity commercial. Our task uses the logic of behavioral economics to quantify the subjective value of empathy compared with other mental activities and to link that value to cognitive costs.

The empathy selection task was modeled on previous effort avoidance tasks (i.e., the demand selection task; Kool et al., 2010). Over repeated trials, participants chose between two card decks (see an example schematic of the task in Figure 1). After choosing, participants saw a photo of a person, with instructions differing depending on deck: If they chose the empathy deck, they were instructed to share in the experiences of the person and indicate the person's internal experiences, and if they chose the objective deck,

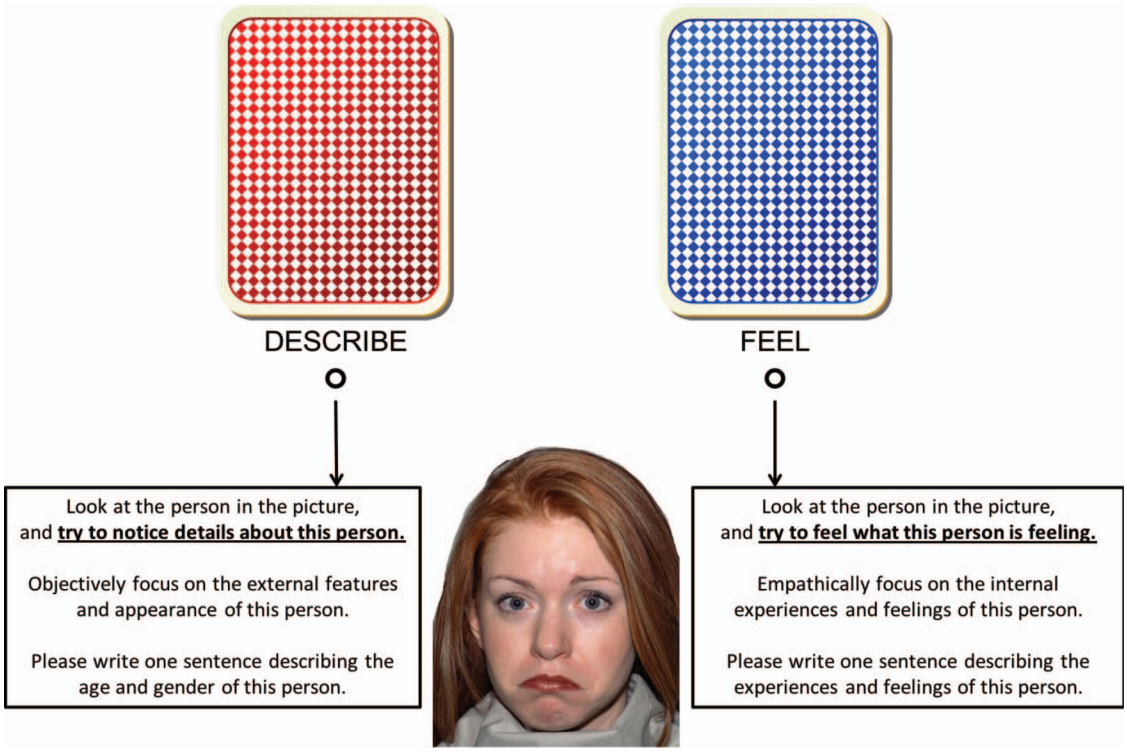

Figure 1. Schematic example of the empathy selection task. Over repeated trials, participants choose a deck and see an image of an actual person. Based upon choice, participants are instructed to feel empathy or be objective and make a response. See main text for modified variants in particular studies. The schematic includes one of the target stimuli from Study 6 (i.e., from the NimStim database; Tottenham et al., 2009). See the online article for the color version of this figure.

they were instructed to remain detached and indicate the person's external features. Across studies, we modified different task features to address different alternative explanations of empathy avoidance; however, this basic structure of choosing between empathy and an alternative course of action is the core feature of the empathy selection task.

The instructions drew from empathy manipulations in psychology (Batson et al., 1997) and neuroscience (Klimecki, Leiberg, Ricard, & Singer, 2014). Our dependent variables were spontaneous choices (i.e., proportion of choosing the empathy deck across trials compared against chance) and posttask assessments of effort costs associated with each deck. Deck selection provides a repeated-measures assessment of empathy regulation that extends beyond single-shot assessments of empathic outcomes (e.g., self-reports) and allows for variation of factors both in the task (e.g., empathy target) and testing conditions (e.g., by manipulating motivation prior to task performance). We designed the task to primarily capture the regulation of experience sharing, given the task instructions on empathy trials to vicariously feel what the target feels. However, because experience sharing can often be coactive with other empathy facets, such as perspective taking (Zaki & Ochsner, 2012), we use the broader term *empathy* to capture this possibility.

We predicted that, on average, participants would choose to avoid empathy, not because it evokes material or emotional costs but because of its cognitive costs. Much work has demonstrated that financial costs can motivate empathy avoidance (Cameron & Payne, 2011; Shaw et al., 1994); here, the focus is on cognitive costs of experience sharing divorced from the expectation of having to help. We therefore eliminated the expectation of having to engage in costly helping, which can often inhibit empathy. By removing material costs, we created a conservative test for whether cognitive costs associated with experience sharing would inhibit empathy choice. Our results support this prediction, suggesting that cognitive costs deter people from sharing in experiences of others, a central but underappreciated point in the study of empathy.

Studies 1 to 3: Validating the Empathy Selection Task

Method

We collected data for all studies from Amazon.com Mechanical Turk (MTurk), an online data collection platform that recruits diverse adult samples that are comparably attentive to student laboratory samples and provide psychometrically reliable responses (Buhrmester, Kwang, & Gosling, 2011; Hauser & Schwarz, 2016). The institutional review boards of the authors' universities approved all of the following studies. According to a power analysis using the average effect in social psychology (d = 0.40; Richard, Bond, & Stokes-Zoota, 2003), with a one-sample t test design, we could achieve 80% power with as few as 41

participants and 90% power with as few as 55 participants. We decided to collect data on no fewer than 41 participants per study, often exceeding this minimum to achieve more statistical power depending on whether a between-subjects manipulation was also employed. Study 1 included 56 participants on MTurk (29 female, 27 male; M_{age} = 38.36 years, SD_{age} = 12.22). Study 2 included 47 MTurk participants (29 female, 18 male; M_{age} = 40.45, SD_{age} = 12.66). Study 3 included 196 MTurk participants (111 female, 85 male; M_{age} = 36.60, SD_{age} = 10.76). The sample size for Study 3 was increased in order to examine individual difference correlations, given that power analyses suggest that a sample size of 193 for detecting a modest correlation (r = .20) with 80% power in a two-tailed test. The details of all samples are provided in the online supplemental materials.

In the empathy selection task in Studies 1 and 2, participants were instructed before the task that they would complete a series of trials on which they would see two decks of cards. Participants were instructed that they should choose between the decks freely, after which they would see an image of a person. Studies 1 and 2 used depictions of child refugees. Participants were told that if they chose the objective deck, they would be instructed to remain objectively detached and write a sentence about the person's age and gender; if they chose the empathy deck, they would be instructed to share in the target's feelings (i.e., feel what they feel) and write a sentence about the person's internal experiences and feelings. Complete instructions are provided in the online supplemental materials. Participants completed 40 trials, on each trial making a choice between two card decks. In Study 1, the objective deck was always on the left, was red, and was labeled "Describe," and the empathy deck was always on the right, was blue, and was labeled "Feel." In Study 2, decks were unlabeled (i.e., "Deck 1," "Deck 2"). After making a choice, participants saw an image of a child refugee. If participants chose the objective deck, they were instructed, "Look at the person in the picture, and try to notice details about the person. Objectively focus on the external features and appearance of this person. Please write one sentence describing the age and gender of this person." If participants chose the empathy deck, there were instructed, "Look at the person in the picture, and try to feel what this person is feeling. Empathically focus on the internal experiences and feelings of this person. Please write one sentence describing the experiences and feelings of this person." Trials were randomized, and a timer prevented participants from submitting written responses until 10 s had passed in Studies 1 to 10 and until 5 s had passed in Study 11. This procedural feature was implemented to make sure that time on task (i.e., time spent providing a response to the trial prompt) was structurally matched.

Study 3 provided the most conservative test of our claim by contrasting similar decks that differed only in whether experience sharing was additionally required. Participants chose between decks that asked them to describe the person's emotions with only three keywords. In the pretask instructions, participants were told that if they chose the objective deck, they would be instructed to remain detached and write three emotion keywords identifying the person's facial emotion expression, and that if they chose the empathy deck, they would be instructed to feel empathy (i.e., share in the person's experiences) and write three emotion keywords to describe the person's internal emotional experiences. Thus, the words used and the complexity of information to respond with was structurally matched. Only the requirement to empathize differentiated the decks—whereas some form of emotion recognition may have been needed for the objective deck, there was not a requirement to actively share in the experiences of the targets as there was in the empathy deck. The complete instructions are provided in the online supplemental materials. On objective trials, participants were instructed, "Look at the person in the picture, and try to identify the emotion of this person. Objectively focus on the external facial expression of this person. Please write 3 keywords describing the objective facial expression of this person." On empathy trials, participants were instructed, "Look at the person in the picture, and try to feel what this person feels. Empathically share in the internal emotional experience of this person. Please write 3 keywords describing the subjective emotional experience of this person." The people depicted were Black and White male and female adults from the Chicago Face Database (Ma, Correll, & Wittenbrink, 2015), all displaying anger. Decks were unlabeled ("Deck A," "Deck B"). We used static facial expressions to allow for ease of presentation over multiple trials and for experimental control of stimulus features (e.g., target affect) in subsequent studies. Additionally, many empathy studies use static images of empathy targets (e.g., Cameron et al., 2016; Cameron & Payne, 2011), which parallel how such images are depicted in empathy and charity appeals in everyday life.

In all studies, participants completed posttask open-ended responses (see the online supplemental materials). For each deck, participants then answered questions adapted from the NASA Task Load Index as an assessment of the subjective cognitive costs associated with each deck (Hart & Staveland, 1988). These included two questions on mental demand ("How mentally demanding was this deck?") and effort ("How hard did you have to work to accomplish your level of performance with this deck?"), which we collapsed together as *effort*. We also included one question on frustration ("How insecure, discouraged, irritated, stressed, and annoyed were you by this deck?"), which we labeled *aversion*, and one question on performance ("How successful were you in accomplishing what you were asked to do in this deck?"), which we labeled *efficacy*. Importantly, although there is an Effort subscale in the NASA Task Load Index (Hart & Staveland, 1988), all three measures—effort, aversion, efficacy—were designed to capture the general cognitive workload and costs associated with a task, which we submit is similar to our conceptualization of effort noted in the section "Is Empathy Effortful?" (i.e., the intensification of cognitive activity in pursuit of a goal). These different questions also allowed us to examine how conceptually distinct facets of cognitive work might differentially relate to empathy avoidance. Finally, participants completed individual difference measures and demographics (see the online supplemental materials for details of these measures across all studies).

Results

As shown in Table 1, in all three studies, participants avoided empathy, exhibiting a clear preference for the objective deck over the empathy deck. When given the choice to feel empathy for others, participants spontaneously opted not to. Our data and syntax are available online at the Open Science Framework: https://osf.io/j8dws/.

Table 1
Empathy Choice in Studies 1 to 11

Study	Empathy choice M (SD)	95% CI M_{diff}	t	n	Hedges' g
1	.33 (.27)	[–.24, –.10]	–4.70	56	–.62
2	.26 (.25)	[–.31, –.16]	–6.59	47	–.95
3	.41 (.29)	[–.13, –.05]	–4.19	196	–.30
4	.38 (.29)	[–.17, –.08]	–5.87	193	–.42
5	.34 (.26)	[–.19, –.12]	–8.81	206	–.61
6	.38 (.35)	[–.22, –.02]	–2.47	50	–.34
7	.30 (.19)	[–.24, –.16]	–9.69	91	–1.01
8	.34 (.18)	[–.20, –.12]	–8.46	87	–.90
9	.22 (.25)	[–.36, –.20]	–6.94	41	–1.06
10	.33 (.24)	[–.24, –.09]	–4.64	44	–.69
11	.38 (.26)	[–.16, –.08]	–6.48	193	–.46
Total				1,204	–.64

Note. The 95% confidence interval (CI) is for mean difference of proportion of empathy choice from chance (.50). All ps $< .001$ except for Study 6 ($p = .017$). Studies 9 and 10 only include low-efficacy conditions given that empathy avoidance was not expected in the high-efficacy conditions.

We conducted eight additional studies (Studies 4–11) to address questions about the nature of this effect, and although these results are detailed in the Results sections of subsequent studies, we first focus simply on establishing the robustness of the effect and its size. Table 1 depicts empathy choice across all 11 studies reported here ($N = 1{,}204$). Across all studies, participants avoided the empathy deck, choosing it, on average, 35.53% of the time ($SD = 26.74\%$). Figure 2 displays the distribution of empathy selection rates aggregated across studies. We examined mean difference of empathy choice from chance (50%), with Hedges' g reflecting whether this difference deviated from zero. Using random-effects meta-analysis (Borenstein, Hedges, Higgins, & Rothstein, 2009), the standardized mean difference of empathy choice was a Hedges' g of −.64, 95% confidence interval (CI) [–.79, −.49], $Z = -8.47$, $p < .001$, a large and robust empathy avoidance effect. Figure 3 displays the meta-analytic forest plot. In addition to these 11 studies, we conducted another 11 supplemental studies to test different alternative explanations (see the online supplemental materials for full description, and a meta-analysis of all studies, which reveals a similarly large empathy avoidance effect).

We also examined empathy choice over the duration of the empathy selection task. If empathy is felt as effortful, then people should decrease their willingness to engage in it as the task progresses (Inzlicht, Schmeichel, & Macrae, 2014; Kool et al., 2010; Kurzban, Duckworth, Kable, & Myers, 2013). Figure 4 displays the progression of choosing the empathy deck over trials of the empathy selection task, aggregated across studies. We conducted generalized linear mixed models in SPSS to examine how question order predicted the dichotomous outcome of empathy choice across trials (see the online supplemental materials for results). Across Studies 1 to 11, the meta-analytic odds ratio was .98, 95% CI [.97, .99], $Z = -4.82$, $p < .001$, suggesting that for every additional trial in the empathy selection task, the odds of choosing the empathy deck were 2% lower. In summary, willingness to choose empathy decreased the longer that people had been empathizing, consistent with prior work demonstrating that felt costs increase the longer people exert effort (Kool et al., 2010).

We suggest that people avoided empathy in the empathy selection task because of perceived cognitive costs of empathy. To test this hypothesis, in Studies 1 to 11, after the empathy selection task, participants completed the NASA Task Load Index (Hart & Staveland, 1988), rating the degree to which each deck was effortful, aversive, and efficacious. We expected that participants would rate empathy as more effortful and aversive, and less efficacious, than the alternative and that these cognitive costs would correlate with reduced empathy choice. Meta-analytically, participants perceived the empathy (vs. objective) deck as more effortful (Hedges' $g = .56$, $p < .001$) and aversive (Hedges' $g = .37$, $p < .001$) and less efficacious (Hedges' $g = -.54$, $p < .001$). Meta-analytically, participants were less likely to choose empathy when they perceived the empathy (vs. objective) deck as more effortful ($r = -.23$, $p < .001$) and aversive ($r = -.23$, $p < .001$), and more likely to choose empathy when they perceived the empathy (vs. objective) deck as more efficacious ($r = .39$, $p < .001$). Figure 5 displays each of these associations aggregating across studies. Study-specific details are provided in the online supplemental materials. Finally, we examined whether cognitive costs moderated the decline in empathy choice over time. Further supporting the claim that cognitive costs associate with empathy avoidance, there were meta-analytic interactions for Time × Effort (odds ratio = 0.99, 95% CI [0.98, 0.99], $Z = -4.08$, $p < .001$), Time × Aversion (odds ratio = 0.99, 95% CI [0.98, 0.99], $Z = -4.24$, $p < .001$), and Time × Efficacy (odds ratio = 1.02, 95% CI [1.01, 1.03], $Z = 4.85$, $p < .001$). As seen in the three panels of Figure 6, the empathy decline was buffered for participants who felt that empathy was less cognitively costly.

Studies 4 to 6: Manipulating Target Affect

Studies 4 to 6 investigated an alternative explanation: that people avoid empathy because they want to avoid vicarious distress. We tested whether people avoid empathizing with someone experiencing positive states, which does not entail costly helping or vicarious negative affect. If people were only avoiding vicarious distress, they should not avoid empathy for positive targets; if avoiding empathy per se, they should avoid empathy for negative and positive targets alike.

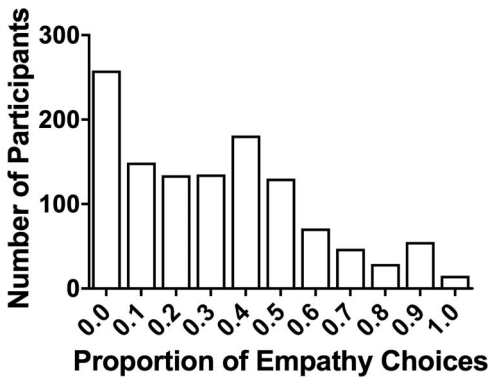

Figure 2. Distribution of empathy choice across studies. The histogram excludes high-efficacy conditions of Studies 9 and 10 because empathy avoidance was expected to be reduced.

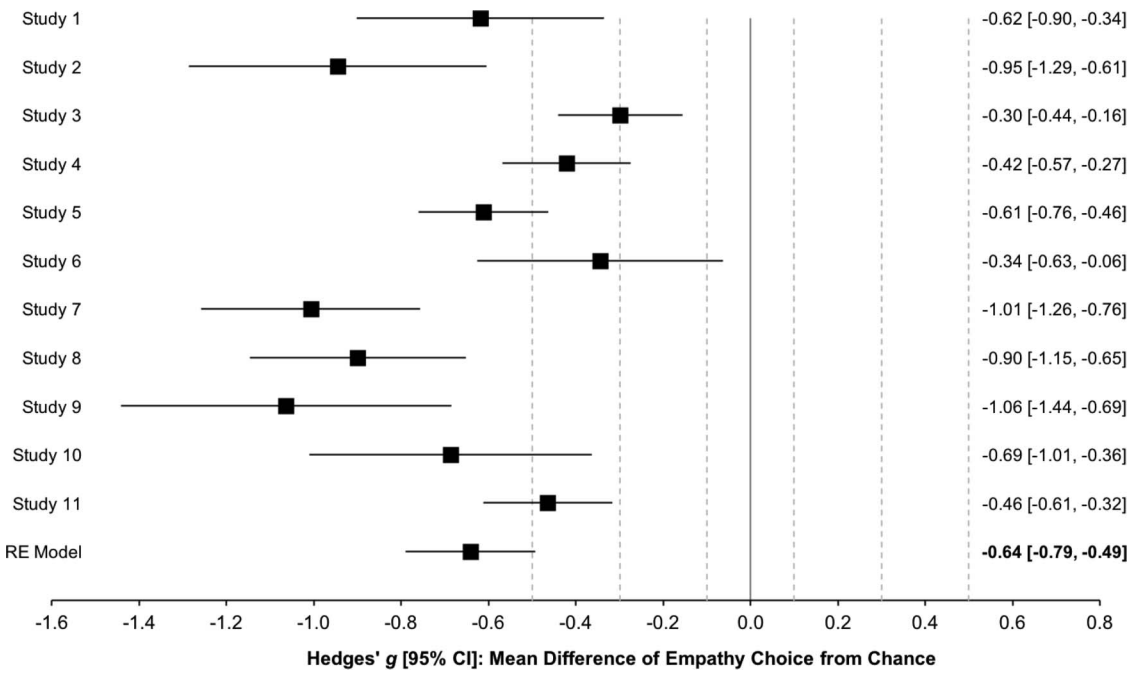

Figure 3. Meta-analytic forest plot of empathy choice across studies. The plot excludes the high-efficacy conditions of Studies 9 and 10 because empathy avoidance was expected to be reduced. CI = confidence interval; RE = random-effects.

Method

Study 4 included 193 MTurk participants (108 female, 85 male; M_{age} = 36.73, SD_{age} = 11.63). Study 5 included 206 MTurk participants (117 female, 83 male, six unreported; M_{age} = 36.48, SD_{age} = 12.16). Study 6 included 50 MTurk participants (28 female, 22 male; M_{age} = 35.14, SD_{age} = 9.67). Power analyses using G*Power 3.1 suggested that for an independent-samples *t* test to find a moderate effect (d = .40) with 80% power in a two-tailed test, a sufficient sample size is 200, and for a within-subjects test, a sufficient sample size is 52.

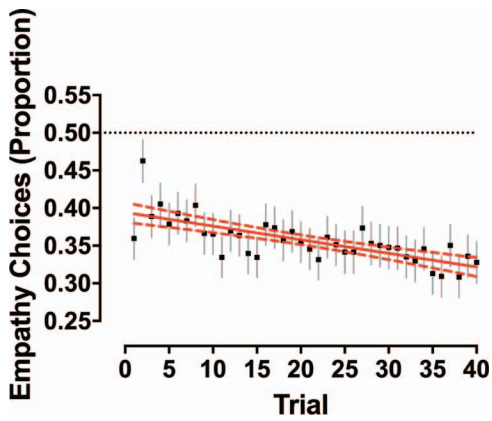

Figure 4. Proportion of empathy choice over time on the empathy selection task, aggregated across studies. Studies 9 and 10 had only 24 trials. Error bars reflect 95% confidence intervals. See the online article for the color version of this figure.

In Studies 4 and 5, the empathy selection task was nearly identical to Study 1, except that valence was manipulated between subjects, and target images were 40 Black and White female and male adults from the Chicago Face Database (Ma et al., 2015). In the negative condition, these adults displayed anger; in the positive condition, these adults displayed happiness. Decks were unlabeled in Studies 5 and 6.

In Study 6, the empathy selection task was nearly identical to Study 3, except that participants viewed targets *prior* to their choices, and sadness was the negative emotion. It might be thought that when targets precede choices, people would spontaneously empathize and so be more likely to choose empathy. Yet if people still avoided the empathy deck, this would indicate strong motivation to avoid empathizing. Target valence was manipulated within subjects, such that participants saw 20 White female and male adults from the NimStim database (Tottenham et al., 2009) displaying sadness or happiness (i.e., 20 distinct face models, with each model once displaying sadness and once displaying happiness). Thus, we could examine whether even when participants knew that empathy would be for positive states, they would still avoid it.

The empathy avoidance findings raise an additional question: How much would it cost to motivate people to choose empathy? In Study 5, participants also completed the empathy discounting paradigm (see Figure 7), adapted from previous effort discounting tasks (Westbrook et al., 2013). Participants made a series of choices between an objective deck trial for a varying lesser amount or an empathy deck trial for a fixed larger amount ($2). Financial payouts were hypothetical. The cost for the objective deck was adjusted up or down depending on previous choices, with the value

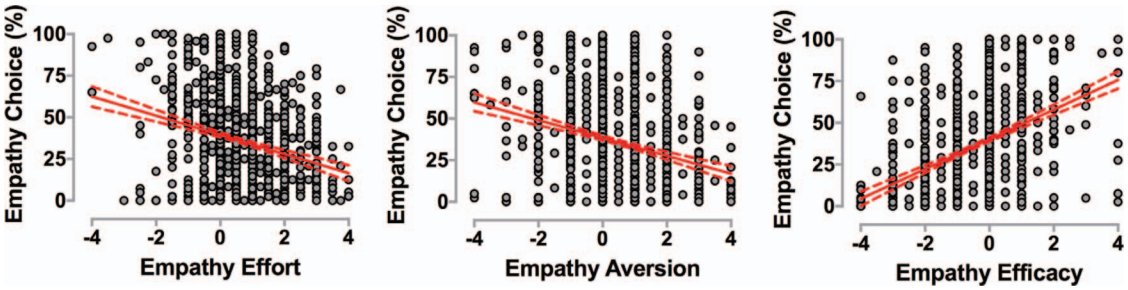

Figure 5. Associations of empathy choice with NASA Task Load Index ratings of effort, aversion, and efficacy. See the online article for the color version of this figure.

after the final choice (rounded to the nearest cent) reflecting the point of indifference between the decks.

Results

Empathy choice. As expected, participants avoided empathy for both negative and positive targets, and avoidance rates did not differ by valence (Study 4: $F[1, 191] = 3.15$, $p = .078$, 95% CI [–.16, .01], $\eta_p^2 = .02$; Study 5: $F[1, 204] = .03$, $p = .872$, 95% CI [–.08, .07], $\eta_p^2 = .00$; Study 6: $F[1, 49] = .16$, $p = .694$, 95% CI [–.09, .06], $\eta_p^2 = .00$). Participants avoided empathy in the negative conditions (Study 4: $M = .41$, $SD = .30$, 95% CI of mean difference from chance [–.15, −.03], $t[95] = -2.80$, $p = .006$, Hedges' $g = -.28$; Study 5: $M = .35$, $SD = .25$, 95% CI [–.20, −.11], $t[107] = -6.37$, $p < .001$, Hedges' $g = -.61$; Study 6: $M = .37$, $SD = .38$, 95% CI [–.24, −.02], $t[49] = -2.46$, $p = .017$, Hedges' $g = -.34$) and positive conditions (Study 4: $M = .34$, $SD = .28$, 95% CI [–.22, −.11], $t[96] = -5.66$, $p < .001$, Hedges' $g = -.57$; Study 5: $M = .34$, $SD = .26$, 95% CI [–.21, −.11], $t[97] = -6.05$, $p < .001$, Hedges' $g = -.61$; Study 6: $M = .38$, $SD = .38$, 95% CI [–.22, −.01], $t[49] = -2.20$, $p = .032$, Hedges' $g = -.31$). Figure 8 displays empathy choice by valence condition for Studies 4 to 6. These results suggest that people avoided empathy per se, not merely vicarious negative affect or implicit demands for help.

The price of empathy. For the empathy discounting paradigm, the average indifference point was \$1.61 (SD = \$0.52), indicating that the subjective cost required for empathy was an additional \$0.39. Does this additional cost translate into reduced empathy choice? Because its distribution was skewed, we first square root transformed the cost measure, and then correlated it with individual differences in empathy selection. Participants who assigned greater cost to empathy chose empathy less ($r = -.29$, $p < .001$; see the online supplemental materials for replication). These results provide additional evidence that people were motivated to avoid empathy, and that its costs may be able to be offset with sufficient external reward.

Studies 7 and 8: Avoidance of Empathy or Emotion Verbalization

In Studies 7 and 8, we excluded two additional alternative explanations: that people were avoiding *any* kind of emotional state or were avoiding having to verbalize feelings. We modified the task so that participants chose between two decks that instructed them to make binary ratings about their own or others' emotional responses. Inasmuch as the empathy instruction involved predicting how others would respond emotionally, this variation of the empathy selection task may be thought to capture both perspective taking and experience sharing. Importantly, if

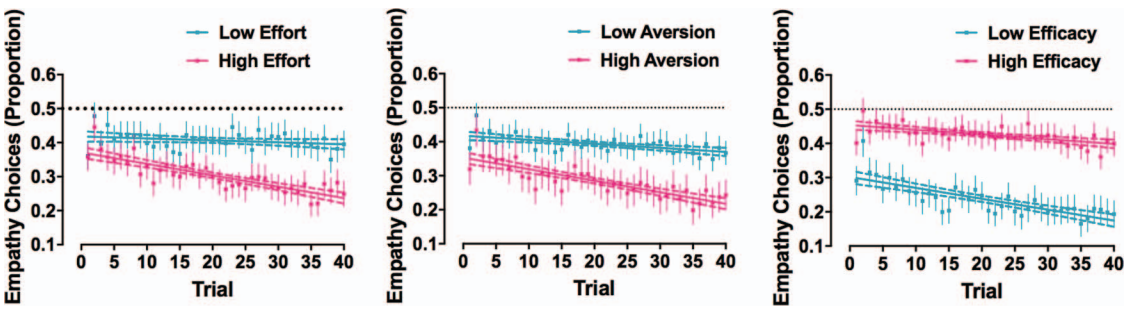

Figure 6. Proportion of empathy choice over time on the empathy selection task, aggregated across studies and split by each of the NASA Task Load Index ratings. The first panel is split by NASA ratings of efficacy (high = effort of empathy greater than zero; low = effort of empathy less than or equal to zero). The second panel is split by NASA ratings of aversion (high = aversion of empathy greater than zero; low = aversion of empathy less than or equal to zero). The third panel is split by NASA ratings of efficacy (high = efficacy at empathy greater than or equal to zero; low = efficacy at empathy less than zero). Studies 9 and 10 had only 24 trials. Error bars reflect 95% confidence intervals. See the online article for the color version of this figure.

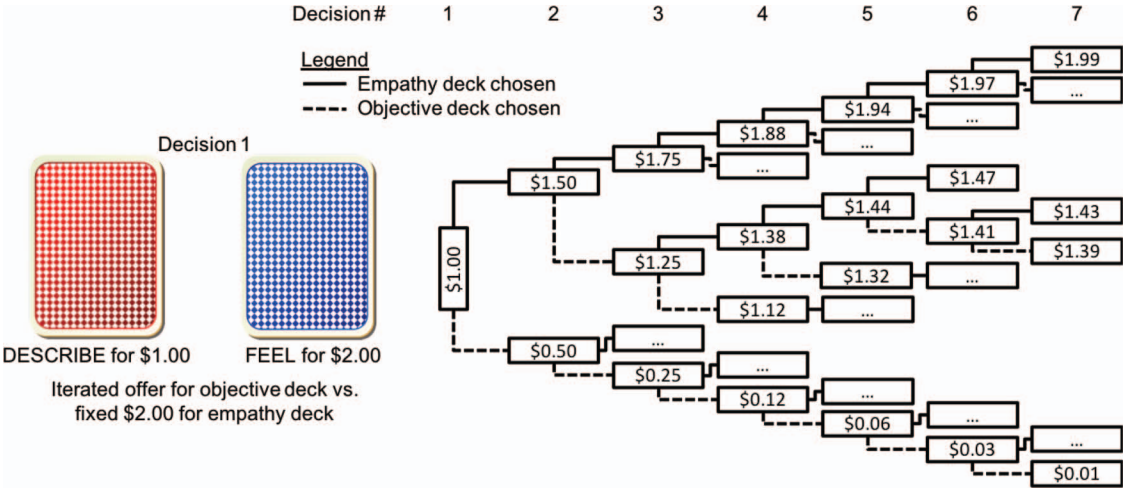

Figure 7. Empathy discounting paradigm, Study 5 (adapted from Westbrook et al., 2013). Dollar values indicate iterated cost of objective deck on each trial, depending on previous choice. Participants make a series of choices between objective deck for a varying lesser amount or empathy deck for fixed larger amount ($2.00). If the larger (smaller) offer is selected, the offer for the objective deck is increased (decreased) on the next choice. The amount of increase or decrease halves with each choice, and value after final adjustment (rounded to nearest cent) reflects the point of indifference between the decks. Subjective cost of empathy is the offer for the empathy deck ($2.00) minus the indifference point, quantifying additional money required to empathize. See the online article for the color version of this figure.

people were only avoiding emotionality or verbalization, they should not show a clear preference for *whose* emotions to focus on; if avoiding empathy per se, people should avoid focusing on feelings of others.

Method

Study 7 included 91 MTurk participants (39 female, 51 male, one other; M_{age} = 35.31, SD_{age} = 12.41). Study 8 included 87 MTurk participants (46 female, 41 male; M_{age} = 38.28, SD_{age} = 12.54). The empathy selection task was similar to previous studies, except that decks were labeled "Feel-Self" or "Feel-Other," and after making a choice, participants saw an image from the International Affect Picture System (Lang, Bradley, & Cuthbert, 1999) and evaluated how it made them or another person feel. If participants chose the empathy (Feel-Other) deck, they were instructed to make a binary rating (positive–negative) of how the image made another person feel; if participants chose the objective (Feel-Self) deck, they were instructed to make the same rating about how the image made them feel. The full details are provided in the online supplemental materials.

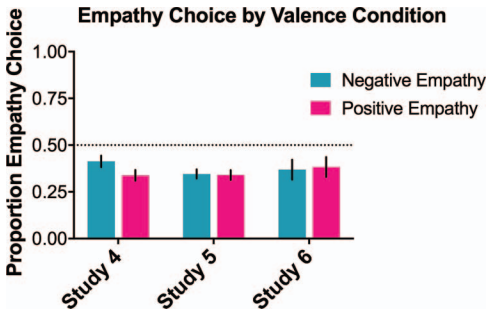

Figure 8. Empathy choice by valence condition, Studies 4 to 6. Error bars reflect standard error of the mean. See the online article for the color version of this figure.

Results

Replicating earlier results, and as depicted in Table 1, participants avoided empathy (i.e., the Feel-Other deck). These results rule out alternative explanations that people were avoiding empathy verbalization or emotions more generally.

Studies 9 and 10: Manipulating Empathy Efficacy

If cognitive costs of empathy lead people to avoid choosing empathy, reducing these costs should increase empathy choice. We tested this prediction in Studies 9 and 10 by experimentally manipulating perceived efficacy of engaging in empathy.

Method

Study 9 included 90 MTurk participants (50 female, 40 male; M_{age} = 34.51, SD_{age} = 10.13). Study 10 included 93 MTurk participants (57 female, 36 male; M_{age} = 37.64, SD_{age} = 12.11). Participants completed pretest manipulation checks for efficacy of empathy and emotion self-awareness: "I usually feel like I am very aware of and good at understanding exactly what other people are feeling"; "I usually feel like I am very aware of and good at understanding exactly what I'm feeling." Instructions for the empathy selection task were similar to Study 3, except that participants were instructed to enter three emotion keywords on the empathy deck and three physical descriptor keywords on the objective deck.

The efficacy manipulation was embedded into counterbalanced practice blocks for the empathy and objective decks. In objective deck practice, participants completed four trials with four White female adults from the Chicago Face Database (two happy, two angry) and were instructed, "Look at the person in the picture, and try to notice details about this person. Objectively focus on the external features and appearance of this person. Please provide 3 keywords describing the objective physical features of this person." In empathy deck practice, participants completed four trials with the same adults displaying the other emotion. On each trial, participants were instructed, "Look at the person in the picture, and try to feel what this person is feeling. Empathically focus on the internal experiences and feelings of this person. Please write 3 keywords describing the experiences and feelings of this person." Participants saw their responses along with accuracy feedback. In the low-efficacy condition, participants were told they were accurate on all objective trials and half of empathy trials, and that they were better than 50% of others on the empathy deck and 95% of others on the objective deck. In the high-efficacy condition, this feedback was reversed: Participants were told they were accurate on all empathy trials and half of objective trials, and that they were better than 95% of others on the empathy deck and 50% of others on the objective deck. Full details are provided in the online supplemental materials.

After the manipulation, participants completed the efficacy manipulation checks again, followed by the NASA Task Load Index. Participants then completed 24 test trials of the empathy selection task, which were identical to practice except that participants chose between decks and no feedback was provided. Targets were 12 novel Black and White female adults from the Chicago Face Database (Ma et al., 2015), with each adult presented twice (once each displaying anger and happiness). Lastly, participants completed the NASA Task Load Index a second time.

Results

As expected, the manipulation checks indicated that the efficacy manipulation caused specific increases in subjective ratings of empathy efficacy and reduced perceived costs of empathy on the NASA Task Load Index measures (see the online supplemental materials for analyses of manipulation checks). Importantly, the efficacy manipulation decreased all cognitive costs, not just feelings of inefficacy. This finding is consistent with our view that these different cognitive costs covary with each other as aspects of cognitive work linked with empathizing.

We expected that increasing empathy efficacy would increase empathy choice, which would support the construct validity of the empathy selection task. As predicted, participants were more likely to choose empathy in the high-efficacy conditions than the low-efficacy conditions (Study 9: $F[1, 88] = 22.45$, $p < .001$, 95% CI [.15, .37], $\eta_p^2 = .20$; Study 10: $F[1, 91] = 10.80$, $p = .001$, 95% CI [.07, .28], $\eta_p^2 = .11$). Participants avoided empathy in the low-efficacy conditions (Study 9: $M = .22$, $SD = .25$, 95% CI of mean difference from chance [−.36, −.20], $t[40] = -6.94$, $p < .001$, Hedges' $g = -1.06$; Study 10: $M = .33$, $SD = .24$, 95% CI [−.24, −.09], $t[43] = -4.64$, $p < .001$, Hedges' $g = -.69$) but not in the high-efficacy conditions (Study 9: $M = .48$, $SD = .26$, 95% CI [−.09, .06], $t[48] = -.41$, $p = .686$, Hedges' $g = -.06$; Study 10: $M = .51$, $SD = .27$, 95% CI [−.07, .08], $t[48] = .18$, $p = .860$, Hedges' $g = .02$). Figure 9 displays empathy choice by efficacy condition for Studies 9 and 10. Critically, the efficacy manipulation not only led to differences in empathy choice between groups—it eliminated empathy avoidance altogether for those in the high-efficacy conditions. Consistent with our claim that cognitive costs are interrelated aspects of cognitive work, the efficacy manipulation impacted all three measures of cognitive cost on the NASA Task Load Index (effort, aversion, efficacy). Supporting our main hypothesis, subjective cognitive costs of empathy caused empathy avoidance.

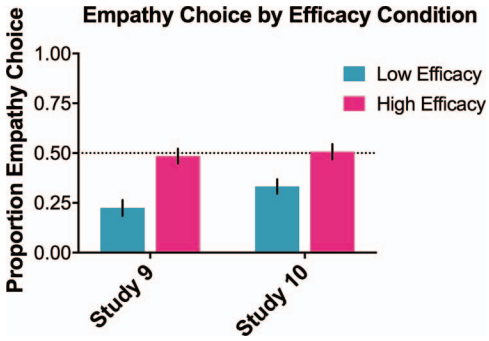

Figure 9. Empathy choice by efficacy condition, Studies 9 and 10. Error bars reflect standard error of the mean. See the online article for the color version of this figure.

Study 11: Varying Empathic Demand

In the preceding studies, participants avoided empathizing compared with other mental activities, with preferences strongly relating to subjective differences in cognitive costs. However, this left open the possibility that avoidance resulted from unidentified differences between the tasks assigned to each deck. Thus, in the final study, we provided an even more stringent test: If empathy is cognitively costly, then having to empathize for a longer duration should be costlier than having to empathize for a shorter duration. To manipulate the degree of empathy required, participants chose between high-demand empathy trials (i.e., empathize for 10 s) and low-demand empathy trials (i.e., empathize for 3 s). To verify that participants engaged in more empathy, we confirmed that choices to empathize longer resulted in increased self-reports of upset feelings, taken to reflect how much participants shared in the experiences of suffering in the images. In addition, we investigated the construct validity of the empathy selection task by examining how it predicted willingness to engage in prosocial behavior.

Method

Study 11 included 193 MTurk participants (109 female, 83 male, one unreported; $M_{age} = 38.78$ years, $SD_{age} = 12.69$ years). The empathy selection task resembled earlier studies but offered different amounts of empathy as the choice options. Participants were told that depending on their choices, they would be asked to empathize (i.e., share in the feelings and experiences of a target) for either 3 s or 10 s and then write three keywords about the target's internal emotional experience. Target images were the same child refugee stimuli as in Studies 1, 2, 4, and 5. Participants completed 40 trials, on each trial making a choice between two

card decks. The decks were a red deck labeled "Feel-3" and a blue deck labeled "Feel-10," and across trials the positions of these decks were randomly counterbalanced. Complete instructions are provided in the online supplemental materials. After making a choice, participants saw an image of a child refugee. For both decks, once participants made a choice they were instructed: "Look at the person in the picture. EMPATHIZE. Try to feel what this person feels." If participants selected the Feel-3 deck, they viewed the refugee and empathy instruction for 3 s; if they selected the Feel-10 deck, they viewed these for 10 s. After the empathy instruction screen, they viewed the target image again and were instructed "Please write 3 keywords describing the feelings and experiences of this person." A timer prevented participants from submitting written responses until 5 s had passed. After entering a response, participants completed a single self-report rating of feeling upset: "How upset are you for the child you just saw?" (from 1 = *not at all upset* to 9 = *extremely upset*), paired with a self-assessment manikin (i.e., an image of a person of increasing size from left to right; Bradley & Lang, 1994). Finally, the last component of the trial was a question asking participants to indicate time spent on task. Participants were asked "Did you work at your empathy task for the full 3 [10] seconds? If not, how many seconds did try you empathize?" The majority of participants (n = 151) answered affirmatively for all trials; results for choice are presented, both with and without the remaining 42 participants who indicated not working at empathy on at least one trial, and the choice outcomes are quite similar.

After the empathy selection task, participants completed the NASA Task Load Index (Hart & Staveland, 1988), as in earlier studies. Participants also completed questions about the reward and value associated with each deck: "How emotionally rewarding was this deck?"; "How socially rewarding was this deck?"; and "How valuable did you find this deck?" Participants then completed a hypothetical donation question: "How much would you be willing to donate to Save the Children, an international relief organization?" Scale anchors ranged from $0.00 to $5.00 in increments of $0.50, with a slider that allowed participants to move in increments of $0.01. One participant skipped the cost–reward measures, and two skipped the donation measure.

Results

As expected, participants avoided the high-demand empathy deck in favor of the low-demand empathy deck (M = .38, SD = .26, 95% CI of mean difference from chance [–.16, −.08]), $t(192) = -6.48$, $p < .001$, Hedges' $g = -.46$. When excluding the 42 participants who indicated not empathizing for the full time on at least one trial, results were similar (M = .36, SD = .26, 95% CI [−.18, −.10]), $t(150) = -6.51$, $p < .001$, Hedges' $g = -.53$. These results suggest that previous results are not simply because of unidentified task differences. *Quantity* of empathy matters: When more empathy is required, people prefer it less.

To confirm that participants empathized more on the high-demand trials, we compared state upset ratings for high-demand and low-demand trials. To the extent that participants empathized for longer periods of time with suffering targets on high-demand trials, this should lead to increased feelings of being upset. To examine this question, we conducted a multilevel model with trials nested within participants using SPSS MIXED. The model predicted state upset ratings from empathy choice (dummy coded) and included a random intercept. As expected, there was a significant effect for empathy choice (B = .17, standard error [SE] = .04), t = 4.38, $p < .001$, 95% CI [.09, .24], such that upset ratings were higher on high-demand than on low-demand trials (estimated marginal means: M_{high} = 6.05, SE_{high} = .13, and M_{low} = 5.88, SE_{low} = .13). This model retained one participant who skipped one state upset rating, and results are similar when excluding this participant. This result suggests that participants followed task instructions and that participants may have empathized more during the high-demand deck. State upset ratings did not associate with choosing the high-demand deck more often (r = .03, p = .668; note that this and subsequent analyses using the aggregated upset ratings excluded the one person who skipped a state upset rating), suggesting that people were not simply avoiding more intense feelings in selecting the low-demand deck.

Within Study 11, participants rated the high-demand deck as more effortful, $F(1, 191) = 7.46$, p = .007, and less efficacious, $F(1, 191) = 7.54$, p = .007, than the low-demand deck, but not more aversive, $F(1, 191) = .18$, p = .675, rewarding, $F(1, 191)$ = .15, p = .696, or valuable, $F(1, 191) = .26$, p = .613. Participants selected the high-demand deck more often when they felt more efficacious at it (r = .21, p = .004) and when they found it more valuable (r = .20, p = .006). Even when controlling for state upset ratings, efficacy at empathy still associated with choosing the high-demand deck (β = .21, t = 2.89, p = .004), suggesting this relationship is not simply a matter of people avoiding feeling upset. Full details are provided in the online supplemental materials.

Next, we examined the relationship between empathy choice and willingness to donate. The donation outcome was bimodal (M = $1.94, SD = $2.07), with many participants donating the minimum ($0.00; n = 46) or maximum ($5.00; n = 49), so analyses were conducted using the nonparametric Spearman's rank-order correlation. Participants were willing to donate more when they chose relatively more from the high-demand empathy deck (r = .32, $p < .001$) and when they reported feeling more upset collapsing across deck choice (r = .24, $p < .001$).

Together, these results suggest that participants preferred to feel less rather than more empathy, and that empathizing for longer was felt as more cognitively costly. This, in turn, predicted avoidance of empathy. Choosing higher empathic demand (i.e., empathizing for longer) resulted in feeling more upset, as would be expected given that participants were empathizing for a longer time with suffering targets. Importantly, efficacy of empathy predicted empathy choice when controlling for feelings of upset, suggesting that the avoidance of higher empathic demand was linked to cognitive costs, not merely the avoidance of feeling more upset. Lastly, choosing higher empathic demand correlated with more willingness to help children in need, providing predictive validity for the prosocial consequences of empathic choices in the task.

General Discussion

Empathy is foundational to many moral systems. Yet empathy can be expensive, often entailing material and emotional costs. Here, we focused on a neglected deterrent to empathy: cognitive costs such as effort and inefficacy. Using a novel free-choice measure of empathy regulation—the empathy selection task—we

found that people robustly and strongly preferred to avoid empathizing with strangers. Rather than simply asking people to self-report their empathy, we observed how motivated they were to feel empathy by examining how they chose which situations to enter into. We examined whether cognitive costs of empathy alone led people to avoid empathy, even without requirements to help and for targets displaying positive affect. When given the opportunity to share in the experiences of strangers, people chose to turn away.

Our results suggest that people avoid empathy because of its inherent cognitive costs, an underappreciated factor that may powerfully shape empathy. Cognitive costs of empathy may derive in part from uncertainty about others' experiences and the risk of making errors (Dunn et al., 2017), and such costs are phenomenological signals that alternative goals should be pursued (Apps et al., 2015; Kurzban, 2016). In the current studies, participants felt that empathy was cognitively taxing—rating it as more effortful, aversive, and inefficacious than comparison tasks and as more cognitively costly when asked to empathize for longer—and these costs associated robustly with choices to avoid empathy. In short, trying to share in others' feelings was experienced as a cognitive struggle, and this perception was linked with empathy avoidance.

The Cognitive Work of Empathy

What facets underlie this cognitive struggle? Although subjective measures of effort, aversion, and efficacy were generally associated with each other across studies (see the online supplemental materials), they are not synonymous. Notably, although both effort and aversion correlated with empathy avoidance, the strongest unique predictor was felt inefficacy at empathizing. We suspect that this felt inefficacy may reflect two related concerns: concerns about being *accurate* and concerns about *insufficiently* feeling/sharing in the target emotion. For example, concern about inaccuracy has been shown to increase feelings of effort (Dunn et al., 2017), and this may have driven participants to avoid empathy in these studies. Similarly, if our participants attempted but failed to feel sufficient emotions in response to others (as might happen frequently in real life), this could have motivated them to avoid tasks highlighting this failure. More work will need to be done in future studies to examine the reasons for why empathy is felt as cognitively taxing and inefficacious, and to tease apart concerns about accuracy from concerns about insufficient emotional resonance. More work will also need to be done to determine whether feelings of effort per se, or simply concerns about inaccurate or insufficient empathy, also lead people to avoid empathy.

Empathy avoidance because of time on task in Study 11 (which should increase both accuracy and emotional intensity) suggested that effort may yet be an important part of the story. That is, spending more time appraising another person's feelings should increase one's confidence in that person's feelings yet not make it any easier; rather, it should make things more cognitively demanding. As such, observing that increasing the time to empathize only increases effort avoidance suggests that effort per se plays a critical role. Future work might more systematically explore how demands for working memory and cognitive control (Shenhav et al., 2017) manifest in empathic contexts, shaping how people decide whether to empathize. For example, studies might test the association between empathic choices in the empathy selection task and classical measures of cognitive control to examine how domain-general effort avoidance preferences in a nonempathic task correspond to selecting empathic effort.

Further work will also be needed to determine how these distinct facets of cognitive work relate to each other: As we have noted, the uncertainty involved in empathizing with others may create greater demands for control, entailing greater feelings of effort. Additionally, more research will be needed to examine the relationship between anticipated and experienced cognitive costs—for example, is the forecast or experience of cognitive work more important for motivating empathy choice, and is actual efficacy at empathy as or more important than perceived efficacy at empathizing with others? Our studies point to the potential fruitfulness of these lines of inquiry, revealing that above and beyond other commonly acknowledged impediments, like financial loss or vicarious distress, empathy may be undesirable because it represents cognitive work.

Our results also point to potential interventions for decreasing empathy avoidance by manipulating cognitive workload. Experimentally increasing perceived efficacy at empathy eliminated empathy avoidance and reduced other perceived cognitive costs, like felt effort and aversion, suggesting that subjective cognitive costs of empathy *cause* empathy avoidance. Similarly, people felt that empathizing for a longer (vs. shorter) period of time was more effortful and less efficacious, and opted to avoid the less cognitively demanding empathy. Importantly, the efficacy manipulations in Studies 9 and 10 and the timing variation in Study 11 shaped perceptions of cognitive work. In other words, although the efficacy manipulation specifically focused on one aspect (e.g., efficacy), it impacted all of the cognitive cost measures assessed by the NASA Task Load Index, suggesting that the manipulation can be conceived of as a broader manipulation of cognitive cost.

Our work is the first to show that reducing the cognitive costs of empathy can increase willingness to empathize. Although some work has shown that extraneously imposing cognitive effort inhibits perspective taking (Epley et al., 2004), no work has examined the inherent cognitive costs of experience sharing, nor how such costs lead people to actively avoid it. Given that experience sharing is often stipulated to be effortless (e.g., Decety, Echols, & Correll, 2010), this is a novel contribution to the study of empathy.

Empathy is often assumed to be effortless, but our results suggest that this assumption needs to be questioned, at least for certain types of experience sharing. Prosociality may become an overlearned heuristic for some (Rand et al., 2014), but the current research found that empathy—often a precursor to prosociality—can be seen as cognitively taxing and avoided for that reason. Other work has found that people are less willing to exert effort to benefit others (Lockwood et al., 2017). Although related, the studies by Lockwood and colleagues (2017) focused on extraneous effort costs, asking whether people physically work hard for others (Inzlicht & Hutcherson, 2017); in contrast, our findings suggest that empathy is cognitively challenging even without demands imposed from the outside. Critically, the studies by Lockwood and colleagues (2017) focused on prosocial behavior, not empathy. Empathy can motivate prosociality, but empathy and prosocial behavior are distinct constructs. Future work will be needed to fully examine the extent to which empathy avoidance because of cognitive costs reduces prosocial motivations to help. Study 11 revealed that when people opted to feel empathy for greater (vs. lesser) amounts of time and, in turn, felt more upset, they were

more willing to donate to help children in need. In this study, when participants chose to empathize despite its cognitive costs, it carried over to prosocial intentions.

Refining the Empathy Selection Task

It might be argued that in the empathy selection task, empathy was cognitively costly because of mundane task features. For instance, constructing a response about gender and age might be easier than constructing internal experiences. In one sense, this is our point: Empathy requires cognitive work, and this may in part be because it involves greater uncertainty or because of worry of empathic inaccuracy. By comparing empathy with closely matched tasks, we have shown that avoidance results from empathy per se as opposed to uninteresting features of the tasks used to evoke it. This was particularly evident for Studies 3 and 6, which solicited *identical* emotion information across decks but only varied whether participants were also instructed to engage in experience sharing. The evidence from Study 11 further bolsters this claim: When participants were given the choice between empathizing for longer or shorter periods of time, with the same kind of response required afterward, they opted for the less empathically demanding option, which they rated as less effortful and inefficacious. The robustness of empathy avoidance when task complexity was controlled supports our suggestion that empathy itself is cognitively costly and is thus avoided.

These results support our suggestion that participants were primarily avoiding experience sharing. Trial-level instructions for the empathy deck in the empathy selection task—which were likely to be at the forefront of participants' minds as they were making choices on each trial—encouraged experience sharing (e.g., "try to feel what this person is feeling" or "try to feel what this person feels" in Studies 1–11; "empathically share in the feelings and experiences of this person" in Supplemental Studies 9 and 10—see the online supplemental materials). Across studies, the empathy selection task was refined to minimize reference to perspective taking that might be implied by the instructions, although we cannot definitively rule out that some perspective taking may have been occurring. Participants in Studies 3 and 6 were told that empathy means "share in the emotional experience of the person in the image" and contrasted it against an emotion identification task that may have involved perspective taking but not also experience sharing. Similarly, participants in Study 11 were told that empathy means "share in the person's suffering, feelings, and experiences." These instructions, in combination with the control tasks, support the inference that participants were most likely avoiding experience sharing. The empathy instructions in Studies 7 and 8 involved imagining how someone else felt in response to emotional images, which might be closer to perspective taking. However, given the instructions in the majority of studies, it is plausible that experience sharing was the main target of avoidance.

A related concern is whether the empathy selection task captures everyday experiences of empathy. The type of emotion regulation captured by the task—situation selection—has many examples in everyday life, such as avoiding charity solicitors or emotional stories, and has been related to empathy avoidance in prior work (e.g., Pancer et al., 1979; Shaw et al., 1994). In the empathy selection task, social targets are presented without identifying information or context, which might increase uncertainty and the felt effort of trying to empathize or possibly create confusion about what to empathize with. Although we suggest that many real-world experiences of empathy resemble this task, as when we encounter strangers in social interactions, in many situations, more details are provided to scaffold empathic understanding. Future work should examine contextual information as a possible boundary condition on the empathy avoidance effect. If adding more details makes people more likely to approach rather than avoid empathy, it will also be important to examine whether this is because of reducing cognitive effort costs of empathy or to adding offsetting rewards that balance against these costs. In one of our supplemental studies (Study S11; see the online supplemental materials), participants approached rather than avoided empathy for positive and negative events described in vignettes, although in that study, they rated empathy as more, rather than less, efficacious than objectivity, and this cost perception tracked empathy choice, suggesting that more work is needed to understand the conditions under which empathy is felt as costly and avoided.

In the current work, we removed any expectation of having to engage in costly helping behavior, which can often inhibit empathy (Cameron & Payne, 2011; Shaw et al., 1994), in order to create a conservative test for whether cognitive costs would inhibit empathy choice. The empathy avoidance effect in these studies did not appear to be about avoidance of helping and emerged even without explicit or implicit requirements to help and for targets displaying positive affect (i.e., smiling strangers). It is possible that removing the opportunity to help others on the basis of empathy increases felt cognitive workload or that empathy without consequence may seem to have no rewards to offset such costs. Future work should consider whether framing empathy as having utility for helping others increases empathy choice (Tamir, 2009). Related to this point, future work should examine whether implied helping demands, or guilt at not helping, shape empathy choice. If guilt drives empathy avoidance, then allowing people to make a donation beforehand should reduce the effect; if the experience of empathy itself is driving avoidance, then a donation beforehand should strengthen empathy avoidance or have no effect.

These results might seem to relate to other work on the cognitive costs of emotion regulation strategies, such as cognitive reappraisal—that is, reinterpreting the meaning of an emotional stimulus to reduce its intensity (Gross & Thompson, 2007). Some work has found that objectively reappraising emotions after they have come online can create cognitive effort costs, as revealed by interference on the Stroop task (Sheppes & Meiran, 2008) and physiological measures of skin conductance (Sheppes, Catran, & Meiran, 2009). Allowing feelings to arise naturally may seem less cognitively difficult than trying to regulate them, but we found that engaging with empathic feelings was felt as more taxing than objective detachment. Despite the appearance of a discrepancy between these results, the objective deck instructions here are somewhat different from traditional reappraisal instructions, by encouraging detached focus on external features of social targets. Moreover, the empathy deck instructions do not encourage passive viewing but rather active upregulation of empathy. To the degree that experience sharing involves cognitive work, this is different than mere passive elicitation of emotion.

Advancing the Study of Motivated Empathy

Our results do not imply that people will always avoid empathy. Cognitive costs of empathy are likely contextually sensitive and depend on opportunity costs of other available courses of action (Kurzban et al., 2013): When alternatives to empathy are also costly, then the costs of empathy, and empathy avoidance, should both be reduced. Moreover, cognitive costs may not deter empathy if sufficient rewards offset these costs—people with internalized empathic goals may choose empathy because their identification with empathy is a potent reward (Inzlicht, Legault, & Teper, 2014). In some cases, effort itself may be rewarding, adding meaning and commitment (Inzlicht et al., 2018; Olivola & Shafir, 2013). Building from this finding, subjective cognitive costs could be reframed to support increased choices to approach rather than avoid empathy. Construing effort and inefficacy as challenges to overcome could mitigate these cues' effects on empathy choice. Introducing competing goals that support empathy, such as social norms or the desire to maintain moral identity, might also override cognitive costs.

The results from the study using the empathy discounting paradigm suggest that introducing a modest sum of money may provide extrinsic motivation for people to choose empathy. People also choose to empathize by immersing themselves in narratives. Much as the satisfaction from solving a puzzle can be rewarding, so, too, resonating with and understanding someone else may be rewarding and offset the costs involved. Indeed, a number of studies suggest that prosocial behaviors can lead to increased positive feelings and hedonic benefits (for reviews, see Aknin, Van de Vondervoort, & Hamlin, 2018; Dunn, Aknin, & Norton, 2014) and that prosocial acts relate to neural signatures of value and reward (for review, see Zaki & Mitchell, 2013). However, many of these studies examine prosocial behavior, not empathy. Because interest in an activity can predict engaging in more effortful versions of it (Milyavskaya, Galla, Inzlicht, & Duckworth, 2018), and because effort can itself be rewarding, especially retrospectively (Inzlicht et al., 2018), it stands to reason that people who are interested in and enriched by others' internal lives might be more willing to put in the work of empathizing and find it rewarding as a result. The role of cognitive costs in empathy is understudied, and more research is needed to understand which contexts and motivators can offset cognitive costs of empathy. The empathy selection task provides a powerful tool for doing so.

The current approach is optimally designed to allow for precise tests of motivational interventions on empathy choice behavior. It shows that reducing cognitive costs of experience sharing can increase empathy choice, and future work should test other motivational interventions, such as framing empathy as morally desirable or socially normative. Moreover, the task can be readily adapted to test how empathy choice shifts based on target features such as race, gender, and identifiability, and can be used to determine whether effects of such features operate by changing the effort of empathy or through other channels. Much prior work on motivated empathy examines empathy outcomes (e.g., reduced empathy for outgroups) without examining the intervening mechanism of emotion regulation. By applying the empathy selection task, researchers can examine whether various empathy deficits may reflect strategic decisions to avoid empathy, driven by perceived cognitive costs. Many situations may suggest that empathy is an obstacle, such as when there is a need to punish people who engage in exploitation, or to negotiate or compete with an antagonist. Future work should explore how empathy choice and cognitive costs vary as a function of the social environments in which these decisions are being made (for a similar approach to cooperation, see Rand et al., 2014).

Conclusion

Our research advances the study of prosocial emotions by suggesting that empathy may not be easy—in many cases, particularly with strangers, it may require cognitive work. Our studies provide a counterpoint to strong claims about intuitive prosociality—although in some cases people act *more* prosocially when they do not have time to engage in effortful thought (Rand et al., 2014), our research suggests that some aspects of prosociality, such as empathy, may be less automatic. Importantly, intuitive prosociality as a "default" varies depending on the choice context, and on salient experiences and norms (Rand et al., 2014). So, too, whether empathy is felt as cognitively challenging, and thus avoided, is likely to depend on opportunity costs and the targets involved. Empathy may seem less taxing for loved ones or in environments that scaffold empathy with social rewards, and so may be selected rather than suppressed. Yet at baseline, it appears the very *act* of trying to empathize may serve as its own deterrent, because it is felt as cognitively effortful, aversive, and inefficacious. People may set the limits of empathy based upon how hard they want to work.

Context of the Research

This research developed in concert with the growing interest in motivated empathy (e.g., Shaw et al., 1994; Zaki, 2014)—that people amplify or inhibit empathy for others depending on its perceived costs and benefits. The current work develops a novel method for capturing motivated empathy avoidance as it happens in real time, drawing together the two previously disconnected literatures on empathy and effort avoidance (Kool et al., 2010). These studies continue the authors' distinct research programs, including Cameron's studies of motivational factors that contribute to empathy deficits (Cameron et al., 2016; Cameron & Payne, 2011), Hutcherson's studies of prosocial choice (Hutcherson et al., 2015), and Inzlicht et al.'s studies of empathy deficits (Gutsell & Inzlicht, 2012) and effort-based decision making (Inzlicht et al., 2018; Lin, Saunders, Hutcherson, & Inzlicht, 2018). The current findings suggest that cognitive costs contribute to empathy avoidance, and future studies should examine whether and how empathy choice fluctuates across different populations (e.g., among physicians) and social contexts (e.g., during intergroup conflict), with cognitive costs as a potential mediator of such effects. By modeling when and why people choose empathy, the current work can contribute to broader debates about the ethics and usefulness of empathy in everyday life (e.g., Bloom, 2017): Empathy may wane not because it is limited in scope, but rather because people desire to avoid the cognitive work involved in experiencing it.

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