

Anticipated effort and morality of segregated versus aggregated volunteering

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Abstract

Does the way individuals think about the burdens and benefits of giving time to charity depend on how that time is distributed? Prior work shows that the assessment of a whole is different than the assessment of the sum of its parts. Drawing on this work, we demonstrate that when a volunteer experience is segregated into multiple parts (vs. aggregated into a whole)—for example, volunteering 4 h a day for 2 days versus 8 h in a single day—individuals expect the process to feel less effortful but also the outcome to feel less morally right. In addition, we find that contribution size has a moderating effect on anticipated effort (but not on anticipated morality). Lastly, we find that individuals who focus on minimizing the effort involved in volunteering (vs. maximizing the impact of volunteering) show a greater likelihood of volunteering in a segregated (vs. aggregated) manner. We discuss theoretical and practical implications of these findings.

KEY WORDS

volunteering, anticipated effort, anticipated morality, prosocial behavior, segregation, aggregation, forecast

1 | INTRODUCTION

Individuals are sometimes willing to give their time to others. For example, through acts of volunteerism individuals provide things as varied as companionship to the lonely, tutoring to the illiterate, emotional support to the suffering, and health care to the sick (Clary et al., 1998). In the United States alone, one in four adults (approximately 63 million individuals) contributes time for a charitable cause (www.nationalservice.gov), with the estimated value of their service exceeding \$203.4 billion (Independent Sector, 2019). Countless charitable organizations are able to exist because millions of individuals donate their time as a source of free labor (Fisher & Ackerman, 1998; Kotler & Kotler, 1982).

Despite the prevalence of volunteerism, research suggests that many individuals feel ambivalent towards donating their time. Specifically, individuals think giving time is costly because time has a finite supply (i.e., 24 h a day) that cannot be recovered or replaced once spent (Foa & Foa, 1980). Consequently, volunteering prevents

individuals from doing other things. At the same time, research has also shown that individuals who have a highly self-important moral identity think volunteering, compared to giving other resources such as money, is more moral (Reed, Aquino, & Levy, 2007). For example, Reed et al. (2007) found that individuals considered a company that donated \$100,000 in employee working hours to charity to be more caring, socially responsible, involved, and moral, compared to a company that donated \$100,000 in cash. Likewise, when the cost of time and money were held equivalent, a moral cue enhanced the likelihood of contributing time but not of contributing money (Reed, Kay, Finnel, Aquino, & Levy, 2016).

When solicited to volunteer, individuals must weigh the burdens and benefits of doing so: on the one hand, time is a costly and limited resource, but on the other hand, contributions of time are seen as especially morally relevant. In the present research, we examine how scheduling a volunteer activity in a segregated (e.g., 4 h a day for 2 days) or aggregated (e.g., 8 h in 1 day) manner impacts the anticipated cost and value of volunteering and consequently individuals'

likelihood to volunteer. Although previous research has identified many factors that affect individuals' willingness to volunteer, no research has examined how people perceive segregated versus aggregated ways of volunteering. In what follows, we first review relevant literature as we lay out our predictions. Next, we present a set of experiments testing our predictions. Finally, we discuss theoretical and practical implications of our findings.

2 | SCHEDULING VOLUNTEERISM: ANTICIPATED EFFORT AND MORALITY

Charitable organizations sometimes allow individuals to schedule their volunteerism, but they often request that volunteering be done in a particular way (e.g., see Eliasoph, 2013). Importantly, how the volunteer activity is scheduled is usually specified in the ask when charities seek volunteers (see volunteermatch.org). Thus, a volunteering schedule is a critical factor that individuals may consider when deciding whether to participate, especially when volunteering has to be carved out from other social roles (Musick & Wilson, 2003). Consider, then, a charitable organization that requests for volunteers to contribute a specified amount of time (e.g., 8 h). Would individuals anticipate the volunteer experience to be different when the activity is segregated (e.g., 2 h a day for 4 days), taking place over multiple periods with interruptions, or aggregated (e.g., 8 h in 1 day) without breaks or interruptions in between?

Prior research is consistent with the idea that segregation or aggregation of a volunteer experience is likely to impact perceptions of the activity. For example, although the principle of descriptive invariance (Kahneman & Tversky, 1979; Tversky, Sattath, & Slovic, 1988) suggests that perceptions ought to be invariant across different presentations of the same objective stimuli, Gourville (1998) showed that individuals were more willing to donate to a charity when an identical amount of money was framed as "pennies a day" (e.g., 85 cents a day) rather than aggregately (e.g., \$300 a year). Applying this insight to temporal costs rather than financial ones, Peetz, Buehler, and Britten (2011) found that individuals were more likely to commit to an exercise program when the duration was framed as 17 minutes per day versus an equivalent 2 h per week.

The root of these findings seems to lay in how people make sense of aggregates that have been broken into parts. Research suggests that when a stimulus, regardless of whether it is an object (Kimchi, 1992) or experience (Ariely & Carmon, 2003), is broken down into parts, the parts exhibit and retain their individual properties, which interferes with how they are perceived as a whole (Mishra, Mishra, & Nayakankuppam, 2006). To illustrate, Ariely and Zauberman (2003) showed that when experiences are partitioned, taking place over multiple periods with interruptions, people tend to evaluate the experience based on the mean intensity of the individual parts, rather than the overall pattern or trend (i.e., improving vs. deteriorating) of the experience. Accordingly, when a monetary or temporal expense is segregated into parts (e.g., pennies a day, minutes a day), people may readily attend to its individual parts that are then

equated to other relatively small and ongoing commitments (e.g., buying a coffee, taking a coffee break). In contrast, when expenses are aggregated as a whole, people equate the amount to other relatively large and infrequent commitments, such as buying a suit or going on a vacation. As a result, segregated (vs. aggregated) representations make monetary as well as temporal commitments seem relatively more affordable and easier to manage.

At the same time, as segregation increases perceptions of manageability, we propose that it should also influence overall perceptions of value. Consider, for example, Mishra et al. (2006) who illustrated a "bias for the whole," wherein greater value was perceived for money in the form of a whole than for equivalent amounts of money in parts. Likewise, Raghbir and Srivastava (2009) demonstrated that individuals were reluctant to spend an equivalent sum of money when it was represented by a single large denomination (e.g., one \$20 bill) relative to smaller denominations (e.g., 20 \$1 bills). One explanation offered for these findings (see Mishra et al., 2006) comes from Gestalt psychology, which has found that wholes are often coded more efficiently and economically than their constituent elements (Palmer, 1982). When a whole is presented as its parts—for example, \$100 as 10 \$10 bills rather than a single \$100 bill—the parts retain their individual characteristics and can be thought about and combined in various ways, impeding the efficient processing of the overall unique meaning of the whole. Thus, amounts presented as a single whole are associated with greater processing fluency, and this fluency is hedonically marked leading to greater positive valuation of the whole compared to its components. Although prior work has specifically argued this in relation to monetary denominations, the same logic should hold true for processing any type of amount thus, we expect a similar effect in relation to valuation of amounts of time, which should be associated with greater value when presented in the aggregate rather than in a distributed fashion.

Together, then, a variety of prior findings converge to demonstrate that a whole is not simply the sum of its parts and that segregation versus aggregation of an identical event can change how people perceive the cost and value associated with the event. We predict that in the context of volunteerism, segregating the experience into smaller pieces should decrease the anticipated pain of sacrificing one's time to benefit others. When a volunteer activity is scheduled over multiple periods with interruptions, people should readily anchor their evaluations on its individual pieces, making the activity seem like a relatively easier and more manageable time investment compared to when the same activity is aggregated into a larger chunk without interruptions. This is conceptually similar to the "minutes a day" reframing of self-control related behaviors (Peetz et al., 2011); although, in our case, we focus on actual segregation rather than reframing in a segregated manner.

On the other hand, we hypothesize that aggregating (vs. segregating) a volunteer activity should increase the anticipated value of the activity. As prior work suggests, the hedonic value derived from the perception of a "whole" is greater than the value derived from the sum of its components (Mishra et al., 2006; see also Shaddy & Fishbach, 2017). Therefore, individuals should find it easier

to process an aggregated amount of volunteering time rather than an equivalent amount of time spread across days and consequently expect the volunteering to feel more valuable when it is aggregated rather than segregated. In the current research, we focus specifically on anticipated morality as one important metric of value derived from volunteering. Although there are other values derived from volunteering, such as enhanced self-efficacy (Brown, Hoye, & Nicholson, 2012) and social connectedness (Creaven, Healy, & Howard, 2017), the feeling of morality has been identified as a key emotional benefit of giving time to others (Reed et al., 2007; Reed et al., 2016).

3 | MODERATING ROLE OF TOTAL ASK AMOUNT

Although a shorter volunteer activity requires less effort, when a volunteer activity is segregated across multiple time points, individuals are required to return to the activity more frequently. Consequently, one might wonder why individuals would not consider the costs associated with traveling to the volunteer experience, in addition to the time it would take to do the volunteer activity itself, when making judgments of the effort required for segregated volunteer experiences. Indeed, one might expect that individuals should anticipate giving time in a segregated (vs. aggregated) manner to feel *more* effortful, because there are more costs (volunteer work and travel) to be considered.

Prior work suggests that when it comes to the appreciation of time, individuals often fail to forecast the amount of time they will need to do things (i.e., the planning fallacy; Kahneman & Tversky, 1979). Moreover, research has shown that individuals do not attend to commute time, as long as it remains below some threshold (e.g., see Clark & Burt, 1980; Getis, 1969). This threshold is subjective, however, such that other attributes associated with the travel make commuting time more or less salient (Rouwendal & Meijer, 2001). Specifically, findings have shown that the amount individuals are willing to spend on commuting is proportionate to the amount of time individuals are expected to spend on an activity (Dijst & Vidakovic, 2000). For example, consider a person planning long-distance travel to a foreign country. If the person is planning to stay in the country for a single day, the traveling cost of reaching the country should loom larger compared to when the person is planning to stay in the country for a month. Indeed, prior work shows that individuals often deliberately plan for longer stays when the overall travel cost is high (de Menezes, Moniz, & Vieira, 2008). This line of work suggests that individuals will become more (vs. less) attentive to travel costs as stay time (i.e., time expected to be spent on an activity) decreases (vs. increases).

Likewise, we expect that the travel cost associated with more frequent visits to the volunteer activity should loom larger and thus be more likely to be incorporated into individuals' judgments of anticipated effort when the total amount individuals expect to spend doing the volunteer activity is relatively small (vs. large). Consequently,

when the volunteer ask amount is small, the anticipated effort of segregated time contributions may become similar to or even larger than the anticipated effort of aggregated time contributions, which involve less travel costs. In contrast, when the ask amount is large, individuals should be less attentive to commute costs and more attentive to the time spent on the volunteer activity itself. Consequently, when the ask amount is large, individuals should anticipate segregated (vs. aggregated) volunteering to feel less effortful.

Note that we do not expect the effect of type of scheduling (segregated vs. aggregated) on anticipated morality to be moderated by ask amount. This is because unlike anticipated effort, which involves several inputs such as the anticipated effort of doing the volunteer activity as well as the anticipated effort of traveling to the volunteer activity, judgments of how moral it would feel to volunteer should only be made based on forecasts about *doing* the volunteer activity. Therefore, we predict that regardless of ask amount, individuals would anticipate giving their time in a whole (i.e., aggregate) to feel more moral than giving equivalent amounts in pieces. In summary, we propose the following hypotheses:

Hypothesis 1. When ask amount is relatively large, individuals will anticipate a segregated volunteer experience to feel less effortful than an aggregated volunteer experience.

Hypothesis 2. When ask amount is relatively small, individuals will no longer anticipate a segregated volunteer experience to feel less effortful than an aggregated volunteer experience.

Hypothesis 3. Regardless of ask amount, individuals will anticipate an aggregated volunteer experience to feel more moral than a segregated volunteer experience.

4 | EXPERIMENT 1

We predict that when individuals are asked to imagine spending a large amount of time doing volunteer work, they will anticipate a volunteer experience that is segregated (vs. aggregated) to feel less effortful. However, when individuals are asked to imagine spending a small amount of time doing volunteer work, segregating the experience should no longer lower people's expectations about how effortful it will feel. In fact, commute considerations may play such a large role when the ask amount is small, that individuals might even anticipate segregated (vs. aggregated) experiences to feel more effortful.

5 | METHOD

Ninety-five U. S.-based individuals participated on mTurk (52 females, 43 males, $M_{age} = 36.82$, $SD_{age} = 12.21$). Sample sizes for Experiments 1 and 2 were set without strong justification, in line with prevailing norms at the time. In Experiments 3 and 4, power analyses were conducted to set sample sizes. Experiments 3 and 4 were also

preregistered. In all cases, sample size was determined before data analyses and no participants were excluded. All data and materials can be found on the project's OSF page (https://osf.io/r93pm/?view_only=dc89bae025264c2095fe2fce53a8dbb0).

We asked participants to imagine volunteering in 12 different scenarios (e.g., consider yourself volunteering for a charity 1 h in 1 day). We manipulated ask amount by varying the total time expected to be spent volunteering (1, 2, 4, and 8 h). We manipulated volunteer schedule by varying the activity's level of segregation (aggregated, segregated across 2 days, segregated across 4 days). Ask amount and volunteer schedule were within-participants factors and thus participants considered 12 volunteer scenarios (for the full list of scenarios, see Data S1). We randomized presentation order of scenarios. Overall, we utilized a 4 (ask amount) \times 3 (volunteer schedule) within-participants design, and we asked participants to rate "How effortful would it feel to volunteer?; 1 = not at all effortful to 7 = extremely effortful" for each scenario.

6 | RESULTS

We conducted a repeated-measures ANOVA with ask amount and volunteer schedule as within-participants factors. Results revealed significant effects of ask amount ($F(3, 282) = 49.31, p < .001$) and schedule ($F(2, 188) = 162.53, p < .001$). More importantly, results revealed a significant interaction effect ($F(6, 564) = 12.05, p < .001$, see Figure 1). To explore this interaction, we conducted within ask amount comparisons starting with the largest ask amount. When we asked participants to imagine volunteering for 8 h, they anticipated it would feel more effortful when it was aggregated in 1 day ($M = 5.81, SD = 1.25$) compared to when it was segregated across 2 days ($M = 5.16, SD = 1.42, t(94) = 5.46, p < .001, r = .49, 95\% \text{ CI } [0.33, 0.74]$) or 4 days ($M = 4.85, SD = 1.37, t(94) = 7.45, p < .001, r = .61, 95\% \text{ CI } [0.50, 0.91]$). Further, participants anticipated that it would feel more effortful to volunteer when it was segregated across 2 rather than 4 days ($t(94) = 2.37, p = .02, r = .24, 95\% \text{ CI } [0.04, 0.45]$).

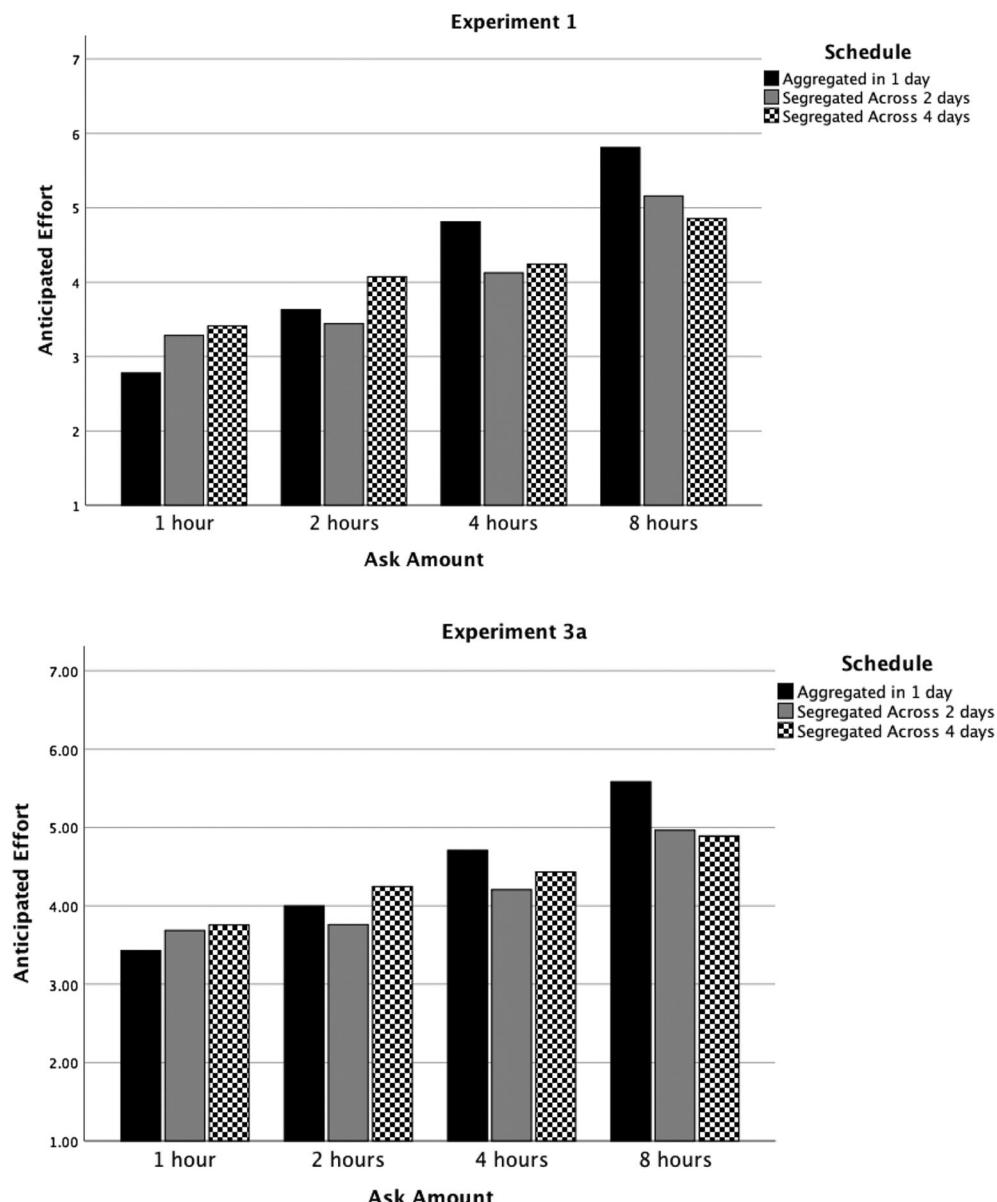


FIGURE 1 Anticipated effort as a function of total ask amount and volunteer schedule

When we asked participants to imagine volunteering for 4 h, they anticipated it would feel more effortful when it was aggregated in 1 day ($M = 4.81$, $SD = 1.35$) compared to when it was segregated across 2 days ($M = 4.13$, $SD = 1.49$, $t(94) = 5.14$, $p < .001$, $r = .47$, 95% CI [0.30, 0.71]) or 4 days ($M = 4.24$, $SD = 1.76$, $t(94) = 3.16$, $p = .002$, $r = .31$, 95% CI [0.12, 0.52]). Anticipated effort was not significantly different when the volunteer experience was segregated across 2 rather than 4 days ($t(94) = .76$, $p = .45$, $r = .08$, 95% CI [−0.13, 0.28]).

When we asked participants to imagine volunteering for 2 h, there was no significant difference in anticipated effort when it was aggregated in 1 day ($M = 3.63$, $SD = 1.57$) compared to when it was segregated across 2 days ($M = 3.44$, $SD = 1.51$, $t(94) = 1.45$, $p = .15$, $r = .15$, 95% CI [−0.06, 0.35]). However, anticipated effort was significantly lower when it was aggregated in 1 day as compared to when it was segregated across 4 days ($M = 4.07$, $SD = 1.72$, $t(94) = 2.49$, $p = .02$, $r = .25$, 95% CI [0.05, 0.46]). Similarly, anticipated effort was significantly lower when it was segregated across 2 rather than 4 days ($t(94) = 4.04$, $p < .001$, $r = .38$, 95% CI [0.20, 0.61]).

When we asked participants to imagine volunteering for 1 h, they anticipated it would feel less effortful when it was aggregated in 1 day ($M = 2.78$, $SD = 1.63$) compared to when it was segregated across 2 days ($M = 3.28$, $SD = 1.66$, $t(94) = 3.50$, $p = .001$, $r = .34$, 95% CI [0.15, 0.56]) or 4 days ($M = 3.41$, $SD = 1.84$, $t(94) = 3.85$, $p < .001$, $r = .37$, 95% CI [0.18, 0.59]). Anticipated effort did not significantly differ across volunteer experiences segregated across 2 versus 4 days ($t(94) = .96$, $p = .34$, $r = .10$, 95% CI [−0.11, 0.30]).

7 | DISCUSSION

Overall, when people imagined volunteering for a relatively large amount of time (4 or 8 h), they expected the experience to feel less effortful when it was spread across multiple days rather than aggregated in 1 day. However, when people imagined volunteering for a relatively small amount of time (1 or 2 h), they expected the experience to either feel just as effortful or even more effortful when it was segregated over multiple days rather than scheduled in a single day. Regarding the effect of the degree of segregation (2 versus 4 days) on participants' anticipated effort, the results were inconsistent across different ask amounts. That is, participants expected the volunteer experience to feel less effortful when it was segregated over fewer days when they imagined volunteering for 2 or 8 h but expected the activity to feel just as effortful when they imagined volunteering for 1 or 4 h. We return to this inconsistency in Section 22.

8 | EXPERIMENT 2

Findings from Experiment 1 demonstrate that perceived effort is impacted by both volunteer schedule (segregated versus aggregated) and ask amount. Whereas participants' judgments of anticipated

effort for small time contributions will sometimes be sensitive to the number of visits involved, their judgments of anticipated effort for large time contributions will be mostly influenced by the daily commitments required for doing the actual volunteer work. As a result, segregating large amounts of volunteer time into smaller chunks reduces people's anticipated effort for completing it.

Unlike for anticipated effort, however, we predict that the effect of segregation (vs. aggregation) on anticipated morality should not be moderated by ask amount. Specifically, expectations about how moral it would feel to volunteer should be based solely on the time spent doing the actual volunteer work. Given that wholes are valued more than their disconnected parts, we argue that individuals should derive more value from giving their time in a "whole." In the context of prosociality, such anticipated value should be indicated by how moral individuals expect they will feel after completing the volunteer activity. We predict that regardless of ask amount, individuals will anticipate giving their time in a whole (i.e., aggregate) to feel more moral than giving equivalent amounts in pieces.

9 | METHOD

Ninety-seven U. S.-based individuals participated on mTurk (51 females, 46 males, $M_{age} = 35.70$, $SD_{age} = 12.01$). As in the previous experiment, we asked participants to imagine volunteering in 12 scenarios and manipulated ask amount and volunteer schedule. However, unlike in Experiment 1, in this experiment, we asked participants to rate "How moral would it feel to volunteer?; 1 = less morally right than other good deeds to 7 = more morally right than other good deeds" for each scenario.

10 | RESULTS

We conducted a repeated-measures ANOVA with contribution amount and volunteer schedule as within-participants factors. Results revealed a significant effect of ask amount ($F(3, 288) = 54.18$, $p < .001$). More relevant to our current focus, results revealed a significant effect of volunteer schedule ($F(2, 192) = 23.39$, $p < .001$), such that participants expected it would feel more morally right giving their time in an aggregated manner ($M = 5.53$, $SD = .93$) compared to giving their time in a segregated manner across 2 days ($M = 5.25$, $SD = 1.05$; $t(96) = 4.81$, $p < .001$, $r = .44$, 95% CI [0.27, 0.68]), or across 4 days ($M = 5.11$, $SD = 1.02$, $t(96) = 6.16$, $p < .001$, $r = .53$, 95% CI [0.39, 0.80]). Volunteer activities segregated across 2 days were anticipated to feel more morally right compared to activities that were segregated across 4 days ($t(96) = 2.29$, $p = .02$, $r = .23$, 95% CI [0.03, 0.43]). There was no significant interaction between ask amount and volunteer schedule ($F(6, 576) = 1.71$, $p = .12$), suggesting that participants anticipated aggregated (vs. segregated) volunteer experiences to feel more morally right regardless of ask amount (see Figure 2).

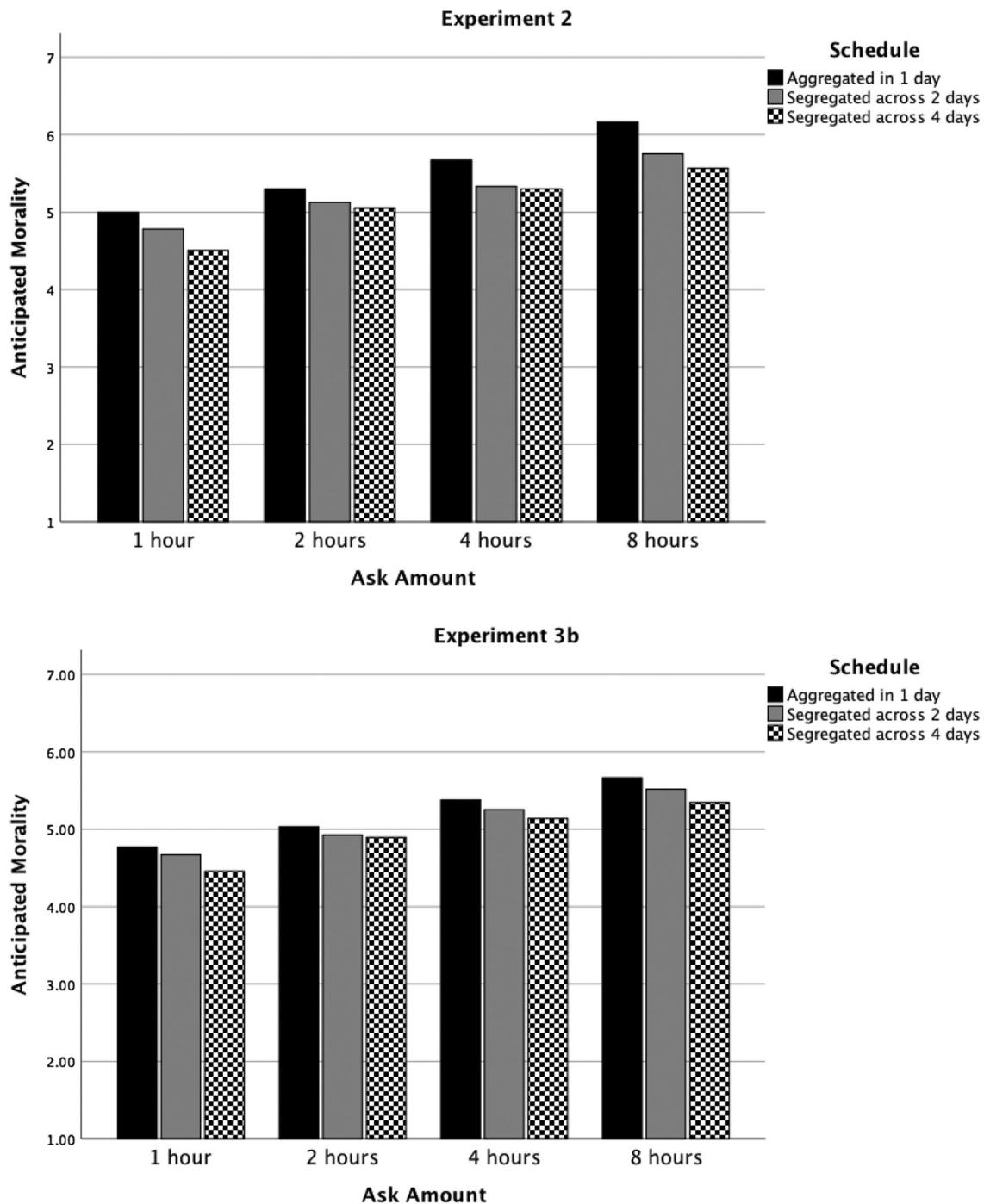


FIGURE 2 Anticipated morality as a function of total ask amount and volunteer schedule

11 | DISCUSSION

Overall, when people imagined volunteering for either a large amount of time (4 or 8 h) or small amount of time (1 or 2 h), they expected the experience to feel more moral when it was scheduled in a single day rather than segregated across multiple days. Moreover, even when people imagined volunteering across multiple days, they expected the experience to feel more moral when it was less segregated (spread across 2 rather than 4 days).

Note that this study provides a rigorous test of our assumed perceptual fluency mechanism against an effort justification mechanism. Research has shown that individuals often justify engaging in effortful behaviors by deriving more meaning or value from them (Cardozo, 1965) and that such effort justification can happen even when *anticipating* behavior (Wicklund, Cooper, & Linder, 1967). Indeed, many popular adages center on people's lay belief that valuable outcomes require effort to attain them (e.g., "Nothing in life worth having comes easy"), and research supports the idea that

people's judgments and decisions are commonly guided by such a lay belief (Kruger, Wirtz, Van Boven, & Altermatt, 2004). However, if effort justification rather than perceptual fluency was responsible for the anticipated morality effects observed in this study, we should have found ask amount moderated our effect. That is, given that Experiment 1 found ask amount moderated participants' anticipated effort, we should have found parallel moderation on anticipated morality in this study, which we did not. Instead, we found that the more the volunteer experience was aggregated, the more value (in the form of morality) that participants expected to derive from the experience, which is consistent with our perceptual fluency account.

12 | EXPERIMENTS 3A AND 3B: PREREGISTERED REPLICATIONS OF EXPERIMENTS 1 AND 2

Experiments 1 and 2 showed that participants' judgments of how effortful and moral it would feel to volunteer were each influenced by volunteer schedule, but only for judgments of effort was this moderated by ask amount. In this manner, judgments of effort and morality did not always map onto each other. Specifically, although participants did not anticipate aggregated (vs. segregated) volunteer experiences to feel more effortful when the total time volunteering was relatively small (Experiment 1), they still anticipated such experiences to feel more morally right. However, one limitation of the previous experiments is that they were conducted separately at different time points. Therefore, the fact that ask amount did not moderate the effect of segregation (vs. aggregation) on anticipated morality in Experiment 2 may have been due to something about when the experiment was conducted that diminished or negated any effect of ask amount rather than the nature of anticipated morality. Further, although we did not find a significant interaction between volunteer schedule and ask amount on morality judgments, this interaction approached significance, suggesting a higher-powered study might have found such an effect. In order to address these limitations, we conducted high-powered replication experiments of both studies, in which we randomly assigned participants to the design of Experiment 1 or 2. We describe results of these concurrent replications below.

Experiment 3a: Replication of Experiment 1.

13 | METHOD

Three-hundred and sixty-five U. S.-based individuals participated on mTurk (127 females, 233 males, 1 missing, $M_{age} = 37.34$, $SD_{age} = 11.96$). Our sample size was based on a power analysis that estimated 327 as the minimum sample required to achieve 95% power to detect a small effect size ($d = .20$) at an alpha of .05 (two-sided) using a two-tailed paired t test. We did not exclude any participants and did not commence data analyses until all data were collected. We preregistered our experiment on aspredicted.org (<https://aspredicted.org/gt7x9.pdf>).

As in the previous experiments, we asked participants to imagine volunteering in 12 scenarios and manipulated ask amount and volunteer schedule. We then asked participants to rate how effortful they thought it would feel to volunteer in each scenario.

14 | RESULTS

14.1 | Anticipated effort

We conducted a repeated-measures ANOVA on participants' effort ratings with ask amount and volunteer schedule as within-participants factors. Results revealed significant effects of ask amount ($F(3, 1092) = 232.19, p < .001$) and schedule ($F(2, 728) = 14.95, p < .001$). As expected, results also revealed a significant interaction effect ($F(6, 2184) = 30.93, p < .001$; see Figure 1). To explore this interaction, we conducted within ask amount comparisons starting with the largest ask amount. When we asked participants to imagine volunteering for 8 h, they anticipated it would feel more effortful when it was aggregated in 1 day ($M = 5.58, SD = 1.38$) compared to when it was segregated across 2 days ($M = 4.96, SD = 1.44, t(364) = 8.24, p < .001, r = .40, 95\% CI [0.32, 0.52]$) or 4 days ($M = 4.89, SD = 1.49, t(364) = 7.75, p < .001, r = .38, 95\% CI [0.29, 0.50]$). Anticipated effort did not significantly differ across volunteer experiences segregated across 2 versus 4 days ($t(364) = 1.02, p = .31, r = .05, 95\% CI [-0.05, 0.16]$).

When we asked participants to imagine volunteering for 4 h, they anticipated it would feel more effortful when it was aggregated in 1 day ($M = 4.71, SD = 1.43$) compared to when it was segregated across 2 days ($M = 4.21, SD = 1.58, t(364) = 6.54, p < .001, r = .32, 95\% CI [0.23, 0.44]$) or 4 days ($M = 4.43, SD = 1.59, t(364) = 3.25, p = .001, r = .17, 95\% CI [0.07, 0.27]$). We also found that anticipated effort was significantly lower when the volunteer experience was segregated across 2 rather than 4 days ($t(364) = 3.33, p = .001, r = .17, 95\% CI [0.07, 0.28]$).

When we asked participants to imagine volunteering for 2 h, they anticipated it would feel more effortful when it was aggregated in 1 day ($M = 4.00, SD = 1.85$) compared to when it was segregated across 2 days ($M = 3.76, SD = 1.80, t(364) = 3.42, p = .001, r = .18, 95\% CI [0.08, 0.28]$) but less effortful compared to when it was segregated across 4 days ($M = 4.25, SD = 1.71, t(364) = 2.73, p = .007, r = .14, 95\% CI [0.04, 0.25]$). Not surprisingly then, anticipated effort was significantly lower when it was segregated across 2 rather than 4 days ($t(364) = 6.37, p < .001, r = .32, 95\% CI [0.22, 0.43]$).

When we asked participants to imagine volunteering for 1 h, they anticipated it would feel less effortful when it was aggregated in 1 day ($M = 3.43, SD = 2.09$) compared to when it was segregated across 2 days ($M = 3.68, SD = 1.94, t(364) = 3.43, p = .001, r = .18, 95\% CI [0.08, 0.28]$) or 4 days ($M = 3.76, SD = 2.01, t(364) = 3.79, p < .001, r = .19, 95\% CI [0.09, 0.30]$). Anticipated effort did not significantly differ across volunteer experiences segregated across 2 versus 4 days ($t(364) = .99, p = .33, r = .05, 95\% CI [-0.05, 0.15]$).

15 | DISCUSSION

Overall, these results were consistent with Experiment 1's results and again support the idea that commute considerations play more or less of a role in people's forecast depending on the total amount of volunteer time required of them. That is, when participants were asked to imagine engaging in a volunteer activity all in 1 day and the ask amount was relatively large (4 or 8 h), they anticipated it would feel more effortful than when it was spread out across multiple days. In contrast, when the volunteer activity required a relatively small amount of time (1 or 2 h), participants anticipated volunteering all in 1 day would feel less effortful than volunteering across multiple days. Regarding the effect of the degree of segregation (2 versus 4 days) on participants' anticipated effort, as we observed in Experiment 1, the results were inconsistent across different ask amounts. Participants expected the volunteer experience to feel just as effortful when it was segregated over fewer days when they imagined volunteering for 1 or 8 h but expected the activity to feel less effortful when they imagined volunteering for 2 or 4 h. In Section 22, we offer a potential explanation for this pattern of results.

Experiment 3b: Replication of Experiment 2.

16 | METHOD

Three-hundred and fifty-four U. S.-based individuals participated on mTurk (139 females, 205 males, 10 missing, $M_{age} = 37.17$, $SD_{age} = 11.77$). Our sample size was based on a power analysis estimated that 327 was the minimum sample required to achieve 95% power to detect a small effect size ($d = .20$) at an alpha of .05 (two-sided) using a two-tailed paired *t* test. We did not exclude any participants and did not commence data analyses until all data were collected. We preregistered our experiment on aspredicted.org (<https://aspredicted.org/gt7x9.pdf>).

As in the previous experiments, we asked participants to imagine volunteering in 12 scenarios and manipulated ask amount and volunteer schedule. We then asked participants to rate how morally right they thought it would feel to volunteer in each scenario. In addition to directly replicating Experiment 2, we also used this data collection opportunity to ask participants how they interpreted the idea of "moral rightness." That is, because the concept of morality can mean different things to different people, we asked participants to indicate how they interpreted moral rightness in order to better understand the criteria they used to judge one good deed as more morally right than another good deed. Specifically, we told participants "In the survey you just completed, we asked you about how morally right some volunteer actions felt compared to other volunteer actions. When you read the phrase 'morally right,' what did this mean to you? Below are possible ways you may have interpreted 'morally right.' We then randomly presented participants with the following options: how much doing the volunteer action would make me feel like a good person compared to doing other volunteer actions, how much doing the volunteer

action would prevent me from getting bored, how much of a positive impact I would have on others' lives doing the volunteer action compared to doing other volunteer actions, how much doing the volunteer action would make me look good in others' eyes compared to doing other volunteer actions, how difficult it would feel doing the volunteer action compared to doing other volunteer actions, how much I would learn doing the volunteer action compared to doing other volunteer actions, and how much doing the volunteer action would make me feel happy compared to doing other volunteer actions. We asked participants to rank the options in the order in which they represented what "morally right" personally meant to them. Specifically, we asked them to place the option that best fit with how they interpreted "morally right" at 1 and place the option that least fit with how they interpreted "morally right" at 7.

16.1 | Anticipated morality

We conducted a repeated-measures ANOVA on participants' morality ratings with ask amount and volunteer schedule as within-participants factors. Results revealed a significant effect of ask amount ($F(3, 1053) = 111.78, p < .001$). More relevant to the current focus, results also revealed a significant effect of schedule ($F(2, 2106) = 20.70, p < .001$), such that participants expected it would feel more morally right giving their time in an aggregated manner ($M = 5.21, SD = 1.02$) compared to giving their time segregated across 2 days ($M = 5.10, SD = 1.05$; $t(353) = 3.29, p = .001, r = .17, 95\% CI [0.07, 0.28]$) or 4 days ($M = 4.96, SD = 1.14, t(353) = 5.26, p < .001, r = .27, 95\% CI [0.17, 0.38]$). Volunteer activities segregated across 2 days were anticipated to feel more moral compared to activities segregated across 4 days ($t(353) = 4.29, p < .001, r = .22, 95\% CI [0.12, 0.33]$). As in Experiment 2, we found no significant interaction between ask amount and volunteer schedule ($F(6, 2106) = 1.33, p = .24$), supporting our hypothesis that participants will anticipate aggregated (vs. segregated) volunteer experiences to feel more moral regardless of ask amount (see Figure 2).

16.2 | Interpretation of morality

Nine participants failed to complete the measure. Of those who did respond, moral rightness was most likely to be interpreted as making a positive impact on others' lives (53.9% ranked it highest, 18% ranked it second highest), followed by the feeling of being a good person (14.5% ranked it highest, 28.4% ranked it second highest; see Table 1 for rankings of all options). This is consistent with prior research that has equated morality with positively impacting people's lives (Cohen, Panter, Turan, Morse, & Kim, 2014) or a sense of being good (Aquino & Reed, 2002). It is worth noting that only a few participants interpreted morality in terms of the amount of difficulty they thought would be involved in volunteering (5.9% ranked it highest, 12.4% ranked it second highest). This again rules out effort justification as the mechanism of our observed effects.

TABLE 1 Participants' ranking of interpretation of moral rightness in Exp. 3b

Options	Ranked 1st	Ranked 2nd	Ranked 3rd	Ranked 4th	Ranked 5th	Ranked 6th	Ranked 7th
How much of a positive impact I would have on others' lives doing the volunteer action compared to doing other volunteer actions	53.9%	18.0%	7.5%	7.5%	4.1%	6.4%	2.6%
How much doing the volunteer action would make me feel like a good person compared to doing other volunteer actions	14.5%	28.4%	16.5%	17.1%	11.9%	5.8%	5.8%
How much doing the volunteer action would make me look good in others' eyes compared to doing other volunteer actions	7.2%	7.0%	12.5%	13.0%	12.5%	25.8%	22.0%
How much doing the volunteer action would make me feel happy compared to doing other volunteer actions	7.0%	12.5%	24.1%	20.6%	21.2%	7.8%	7.0%
How much I would learn doing the volunteer action compared to doing other volunteer actions	6.1%	18.0%	18.6%	19.1%	17.4%	15.9%	4.9%
How difficult it would feel doing the volunteer action compared to doing other volunteer actions	6.1%	12.8%	14.8%	13.6%	22.6%	18.6%	11.6%
How much doing the volunteer action would prevent me from getting bored	5.2%	3.5%	6.1%	9.0%	10.4%	19.7%	46.1%

17 | DISCUSSION

Overall, these results replicated those of Experiment 2. That is, when people imagined volunteering for either a large amount of time (4 or 8 h) or small amount of time (1 or 2 h), they expected the experience to feel more moral when it was scheduled in a single day rather than segregated across multiple days. Moreover, as in Experiment 2, we found that when people imagined volunteering across multiple days, they expected the experience to feel more moral when it was segregated across fewer days (2 rather than 4).

18 | EXPERIMENT 4

Experiments 1–3 showed that volunteer schedules influence perceptions of effort and morality. In Experiment 4, we focus on the downstream consequences of people's expectations about volunteer schedules. Specifically, we examine the type of volunteer activities that people are likely to participate in when they are solicited to volunteer for a relatively large amount of time. When considering volunteer activities that are segregated or aggregated, when will people be most open to getting involved? We believe the answer will depend on whether people are focused more on maximizing the morality of volunteering or minimizing the effort of volunteering. In this experiment, we therefore had some participants focus on maximizing the impact of volunteering, as this was shown in Experiment 3 to be what most people think about when they consider how moral it would feel to volunteer. We had other participants focus on minimizing the effort involved in volunteering. If greater weight is placed on minimizing the effort involved in volunteering rather than maximizing the impact of volunteering, individuals should exhibit a greater willingness to get

involved when the volunteer experience is spread out across days rather than concentrated in 1 day. The following experiment tests this hypothesis.

19 | METHODS

One-hundred and twenty-eight U.S.-based individuals participated on mTurk (81 females, 45 males, 2 other; $M_{age} = 37.17$, $SD_{age} = 12.20$). Pilot testing suggested we would observe a medium sized effect on participants' volunteer intention. Thus, our sample size was based on a power analysis that estimated that 128 was the minimum sample required to achieve 80% power. We preregistered our experiment on aspredicted.org (<https://aspredicted.org/blind.php?x=74vz6p>).

We first presented participants with 10 areas of volunteering (animal services, housing repair for low-income people, library services, homeless services, senior/elderly services, blood banks and plasma services, food pantries, park clean-up/preservation efforts, hospitals and healthcare, and after school tutoring) and asked them to indicate which area would be most appealing to them if they were to get involved with volunteering. Then, we manipulated whether participants focused on minimizing effort ("Imagine you saw an advertisement that was seeking people to volunteer with a charity that deals with [area chosen by participants]. But, imagine you would only volunteer with the charity if you felt like it would not be too effortful or exhausting.") or maximizing impact ("Imagine you saw an advertisement that was seeking people to volunteer with a charity that deals with [area chosen by participants]. But, imagine you would only volunteer with the charity if you felt like it would have a major impact.").

Next, we presented participants with two hypothetical volunteer requests. We held the ask amount (8 h) constant across the request

but manipulated the volunteer schedule across requests. Specifically, for one of the requests, we asked participants to consider a segregated request ("How likely would you be then to volunteer with the charity if they asked you to do it for 2 hours a day across 4 different days?"). For the other request, we asked participants to consider an aggregated request ("How likely would you be then to volunteer with the charity if they asked you to do it for 8 hours in one day?"). We counterbalanced the order of which request participants considered first, but order did not affect the results and is thus not discussed further.

20 | RESULTS

20.1 | Volunteer likelihood

We present the results in two ways. First, we calculated a relative volunteer likelihood score, which is based on participants' likelihood of volunteering in a segregated manner minus their likelihood of volunteering in an aggregated manner. As expected, results revealed that participants who were told to focus on minimizing effort when volunteering reported a greater relative likelihood of volunteering in a segregated (vs. aggregated) manner than participants who were told to focus on maximizing the impact of volunteering ($M = 1.20$, $SD = 1.44$ vs. $M = .50$, $SD = 1.51$, $t(126) = 2.67$, $p = .009$, $r = .23$, 95% CI [0.06, 0.41]). Second, to better understand this relative likelihood difference between conditions, we conducted a repeated-measures ANOVA on participants' likelihood rating with schedule (segregated vs. aggregated) as a within-participant factor and focus (minimizing effort vs. maximizing impact) as a between-participant factor. Results revealed significant main effects of schedule ($F(1, 126) = 42.34$; $p < .001$) and focus ($F(1, 126) = 6.48$, $p = .01$). As expected, results also revealed a significant focus \times schedule effect ($F(1, 126) = 7.14$, $p = .009$; see Figure 3). Note the interaction effect is statistically

equivalent to the analysis of the relative volunteer likelihood score reported earlier.

To explore the focus \times schedule effect, we conducted within focus comparisons. When participants were told to focus on minimizing the effort involved in volunteering, they were more likely to say they would volunteer when they considered a segregated (vs. aggregated) request ($M = 4.39$, $SD = 1.14$ vs. $M = 3.20$, $SD = 1.35$, $t(65) = 6.76$, $p < .001$, $r = .64$, 95% CI [0.52, 1.10]). Notably, however, this greater willingness to volunteer in a segregated (vs. aggregated) manner was significantly reduced when participants were told to focus on maximizing the impact of volunteering ($M = 4.50$, $SD = 1.18$ vs. $M = 4.00$, $SD = 1.32$, $t(61) = 2.60$, $p = .01$, $r = .32$, 95% CI [0.07, 0.58]). Additional analyses revealed this smaller relative likelihood was driven by differences in participants' ratings on the aggregated volunteer measure. That is, when participants considered an aggregated request, those who were told to focus on maximizing impact versus minimizing effort were more likely to volunteer ($t(126) = 3.40$, $p = .001$, $r = .29$, 95% CI [0.12, 0.47]). In contrast, when participants considered a segregated request, those who were told to focus on maximizing impact reported they were just as likely to volunteer as those who were told to focus on minimizing effort ($t(126) = .52$, $p = .61$, $r = .05$, 95% CI [-0.12, 0.23]).

21 | DISCUSSION

Overall, results showed that people who were told to focus on minimizing effort when volunteering exhibited a greater relative likelihood of volunteering in a segregated (vs. aggregated) manner than participants who were told to focus on maximizing the impact of volunteering. This pattern of results is line with our argument that the type of schedule affects people's anticipated effort and morality of volunteering. However, it is interesting to note that participants in the minimize effort and maximize impact conditions did not differ in their

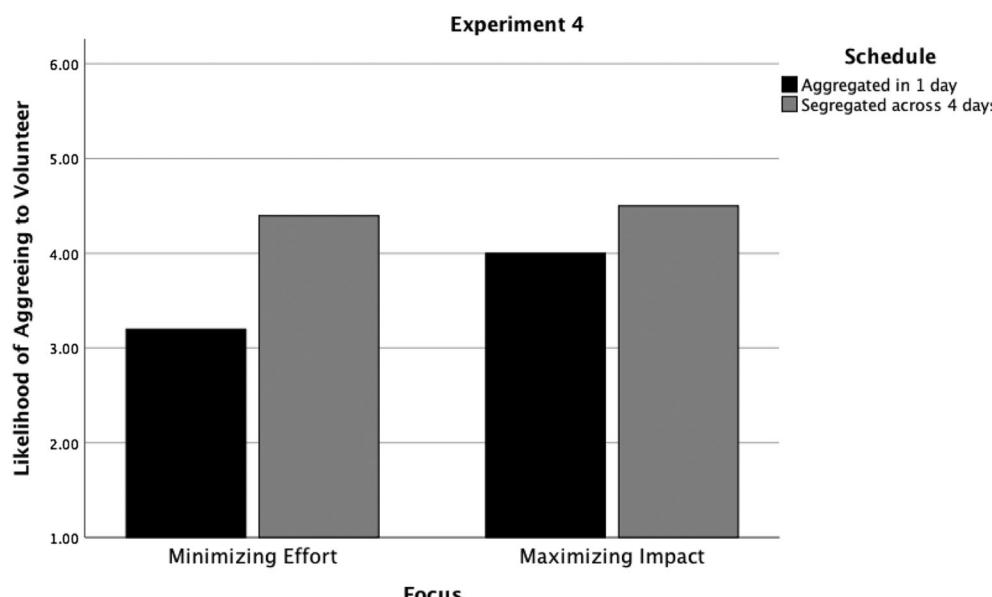


FIGURE 3 Likelihood of agreeing to volunteer as a function of focus and volunteer schedule

likelihood of volunteering in a segregated manner. The lack of difference on segregated volunteering may reflect the fact most participants, regardless of condition, still cared about the amount of effort that would be required of them if they were to get involved. Indeed, our instructions did not preclude participants from considering other factors when deciding whether to volunteer. That is, we simply told participants that low effort or high impact should be a necessary precondition for them to get involved. Regardless, the overall pattern of results was consistent with our argument that the weight placed on effort versus impact can influence people's relative attraction to segregated versus aggregated volunteer requests.

22 | GENERAL DISCUSSION

In the present research, we found that scheduling volunteering in a segregated versus aggregated manner influenced individuals' expectations about two key components of a volunteer experience: process, or the effort of volunteering, and outcome, or the morality of volunteering. Regarding the process of volunteering, our findings showed that when people were asked to imagine volunteering for a relatively large amount of time, they anticipated a segregated volunteer experience would feel less effortful than an aggregated one. However, when people were asked to imagine volunteering for a relatively small amount of time, they anticipated a segregated volunteer experience to feel more effortful than an aggregated one. Regarding the anticipated outcome of volunteering, our findings demonstrated that regardless of ask amount, people anticipated that an aggregated volunteer experience would feel more moral than a segregated one.

23 | THEORETICAL IMPLICATIONS

23.1 | Segregating versus aggregating experiences

Much research has been devoted to understanding preferences for separating or combining experiences when experiences are perceived as negative (losses) or positive (gains). However, there are numerous instances in which an experience may contain negative *and* positive aspects and we believe that contributing time for charity is one of them. Giving away time for the benefit of others entails sacrificing valuable resources that could otherwise be spent on the self, but it also entails numerous benefits for the giver, including self-efficacy (Mogilner, Chance, & Norton, 2012), stronger interpersonal connections (Liu & Aaker, 2008), and happiness (Aaker, Rudd, & Mogilner, 2011). We demonstrate that when experiences involve cost *and* value, the degree to which individuals expect to feel each aspect is influenced by whether the experiences will be separated or combined. Accordingly, the extent to which individuals focus on cost or value affects their preference for separating or combining events.

Furthermore, it could be expected that our findings extend to other experiences that contain negative and positive aspects. Studying, for example, often requires a considerable amount of cognitive

effort. Yet studying has numerous desirable consequences, such as the acquisition of new knowledge. Thus, it is plausible that people may anticipate segregated studying to feel less effortful but expect to gain greater psychological value from aggregated studying experiences. Importantly, the anticipated value gained from aggregated experiences in this context should be specific to values that are directly relevant to studying (e.g., feeling smart).

23.2 | Reframing experiences

As we mentioned earlier, prior work has demonstrated that reframing yearly donations as pennies-a-day (Gourville, 1998) or weekly exercise routines as minutes-a-day (Peetz et al., 2011) increases compliance because segregating these experiences make them seem more affordable and manageable. In the present research, we tested what happens when people forecast about experiences that are actually segregated rather than merely reframed as segregated. Nevertheless, our finding that individuals anticipate segregated (vs. aggregated) volunteering to feel less effortful resembles previous reframing research. However, our findings add to this literature in two ways. First, we identified a novel boundary condition (ask amount) that appears to completely reverse people's expectations about effort. That is, we showed that when individuals were asked to imagine volunteering for a relatively small amount of time (1 or 2 h), segregating the activity across multiple days actually led them to anticipate it would feel more effortful to complete it. In other words, segregating activities that require traveling to participate in them can sometimes make those activities seem less manageable. Indeed, as we noted earlier, research has shown that the amount of time individuals are willing to devote to traveling to participate in an activity is proportionate to the amount of time individuals expect to spend on the activity (Dijst & Vidakovic, 2000). Our findings are consistent with this idea that commute considerations will loom larger as the total required time to complete an activity gets smaller.

Second, our findings make a theoretical contribution to the literature by identifying a novel downstream consequence of segregating versus aggregating experiences. Prior reframing research has uniformly focused on how segregating an experience should minimize the psychological costs associated with it. As a result, prior work has overlooked how segregation affects the psychological value of an experience.¹ In this regard, the current research suggests that reframing experiences in a segregated manner can make a costly activity seem relatively more manageable but may also decrease the

¹Research inspired by Tversky and Koehler's (1994) Support Theory has shown that unpacking events can sometimes produce more extreme judgements of those events. Therefore, on the surface, our finding that aggregating (vs. segregating) a volunteer experience increases people's anticipated effort and morality from it may appear inconsistent with research inspired by Support Theory. However, there is a notable difference between our approach and research inspired by Support Theory. Namely, the method that we used to segregate the volunteer event involved breaking the event into smaller pieces across multiple days. In contrast, studies using a Support Theory framework have unpacked an event by adding additional details into the description of the event (e.g., "an accidental plane crash caused by human error" rather than just "a plane crash"; see Rottenstreich & Tversky, 1997; Van Boven & Epley, 2003).

psychological value associated with the activity. Indeed, our findings show that volunteer experiences were expected to feel less moral once it was segregated across multiple days. Thus, our findings point to an intriguing possibility that although individuals perceive contributing pennies-a-day to a charity as relatively costless, they may concurrently expect contributing a larger aggregated amount to feel like the more morally right thing to do. Future research should test this possibility.

23.3 | Practical implications

Charitable marketers are constantly looking for ways to recruit volunteers (see Gillespie, 2014) and reports have shown that the number one reason why individuals get involved in volunteering is “because they were asked by someone” (Independent Sector, 2019). Of course, the type of volunteer schedule that people are solicited with is unlikely to be the initial impetus that attracts them to a volunteer experience. We expect other factors, such as individuals’ prosocial motivation (Van Lange, Schippers, & Balliet, 2011) or the extent to which a specific volunteer activity satisfies individuals’ motives, such as the expression of their values (Houle, Sagarin, & Kaplan, 2005), to play a larger initial role. Nevertheless, our findings do suggest that once individuals are at least open to the possibility of volunteering, whether the activity requires their time in a segregated or aggregated manner may play a pivotal role in their ultimate likelihood of committing to volunteer. Thus, it is useful for charities to know how they should ask for time from whom. Our findings suggest that when charities need volunteers to contribute their time in smaller amounts across different days rather than in one big block, those individuals who care about the demands that volunteering will place on them should be more amenable to volunteering. Conversely, when charities need volunteers to contribute a large chunk of time in 1 day rather than in smaller increments across multiple days, those individuals who care more about the moral implications of volunteering should be less resistant to these experiences. But what exactly should managers do in terms of setting up their schedules when soliciting potential volunteers?

Based on our findings, there are three reasonable strategies managers might employ when using different volunteer schedules to increase individuals’ commitment to volunteering. First, managers could devise marketing tactics that prime potential volunteers to care more about the low costs or high benefits of volunteering (Handy & Mook, 2011). For example, leveraging prior work that has shown that cues of resource scarcity in the environment (e.g., news of food shortages) lead individuals to reduce their effort in physically demanding work (Pitesa & Thau, 2018), managers could highlight such scarcity in their advertisements to nudge individuals towards volunteer experiences that require low effort. Alternatively, managers could increase the salience of individuals’ moral identity to nudge them towards more moral experiences (see Choi & Winterich, 2013). Then, when asking for a large amount of volunteering time, managers could solicit individuals with segregated and aggregated schedules, respectively, in order to maximize the likelihood that they commit to volunteering.

Second, instead of trying to alter whether potential volunteers care more about effort versus morality, managers could identify individuals who are predisposed to care more about one versus the other and then present them with different volunteer schedules when soliciting them. For example, certain factors have been shown to influence whether individuals focus more on the process versus outcomes of actions, such as individuals’ tendency to think about actions in more concrete versus abstract terms (see Freitas, Salovey, & Liberman, 2001; also see Vallacher & Wegner, 1987). Managers could tailor solicitations to potential volunteers based on their language use on social media (e.g., blogs, Facebook, and Twitter) to identify their natural thinking style (see Namkoong, Ro, & Henderson, 2019). This would enable managers to predict which individuals are likely to respond more positively when they are solicited for segregated versus aggregated volunteering. Indeed, in our preliminary work, we found that individuals with a concrete thinking style complied more with a segregated (vs. aggregated) volunteer request, whereas individuals with an abstract thinking style complied more with an aggregated (vs. segregated) volunteer request (see Data S1 for a description of study).

Third, instead of being concerned about whether potential volunteers care more about the ease or morality of volunteering and presenting different volunteer schedules in their solicitations, managers could simply forgo aggregated volunteer requests altogether. The results from Experiment 4 showed that segregated requests were less likely to be turned down, regardless of whether participants were told to minimize the effort or maximize the impact of volunteering. We assumed that the lack of difference in participants’ likelihood of complying with a segregated volunteer request reflected the fact most participants, regardless of whether they were told to minimize effort or maximize impact, still cared about the amount of effort that would be required of them, as our instructions did not preclude them from considering effort. However, it is also possible that when individuals are concerned about the moral implications of their actions, they recognize that volunteering (vs. not volunteering) will feel more moral. Thus, even if a segregated (vs. aggregated) schedule is anticipated to feel less moral, people may be just as likely to commit to volunteering for either type of schedule rather than turn down the request when they are focused on the morality of their actions. In contrast, when people are focused on the effort involved in their actions, the type of schedule may be a critical factor in whether they even consider volunteering in the first place. Thus, assuming managers have the option, using only segregated schedules may be the less risky approach to get individuals to commit to volunteering. Of course, if managers only have aggregated schedules available, then our findings suggest that they would do well to either nudge individuals to care more about the morality of their actions or identify individuals who are predisposed to do so, as we mentioned above.

24 | FUTURE RESEARCH

The current research points to several areas for future research. First, it is interesting to note that the degree of segregation yielded

inconsistent results across different ask amounts on participants' anticipated effort. For example, Experiment 3 showed that participants expected splitting 8 hours of volunteering across 4 rather than 2 days to feel the same, but expected splitting 4 hours of volunteering across 4 rather than 2 days to feel more effortful. While we are confident that aggregated experiences will be anticipated to feel more effortful than segregated ones (when amount is relatively large), we are less sure about the role of the degree of segregation on anticipated effort (which is not the main focus of the current research), mainly because there is likely to be more uncertainties involved in forecasting time use across multiple days. Thus, segregating 2 days may sometimes be perceived the same as segregating across 4 days, but sometimes it may be perceived as more or less effortful. In fact, it is possible that once the degree of segregation goes over a certain mental threshold, people may construe it as a long-term commitment and consequently prefer less segregated activities. We look forward to future research that directly examines the effect of the degree of segregation of an experience rather than whether an experience is simply segregated.

Second, researchers should examine whether aggregated (vs. segregated) volunteer experiences are anticipated to differ on other metrics of value besides morality. We focused specifically on anticipated morality as one metric of value derived from volunteering because the feeling of morality has been identified as a key emotional benefit of giving time to others (Reed et al., 2007; Reed et al., 2016). Nevertheless, researchers should test whether individuals are more inclined to anticipate that aggregated (vs. segregated) volunteer experiences will provide benefits on other indicators of value, such as self-efficacy, meaning, and well-being.

Third, the present research centered on people's expectations about how they would feel after volunteering in a segregated or aggregated manner. Research has shown that individuals' forecasts in the prosocial domain can sometimes be quite inaccurate (Robinson, 2013). Thus, researchers should test whether people's forecasts about the process and outcome of different volunteer schedules are actually accurate, as the alignment between expectations and experiences may ultimately shape people's long-term commitment to volunteering.

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of this article.

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**Anticipated Effort and Morality of
Segregated Versus Aggregated Volunteering**

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Supplement 2: Study examining whether individuals' construal level predicts their compliance with a segregated versus aggregated volunteer request

Supplement 1: Scenarios used in Experiments 1-3**1 hour ask amount**

- Consider yourself volunteering for a charity for one hour in one day.
- Consider yourself volunteering for a charity for 30 minutes a day across 2 different days.
- Consider yourself volunteering for a charity for 15 minutes a day across 4 different days.

2 hours ask amount

- Consider yourself volunteering for a charity for 2 hours in one day.
- Consider yourself volunteering for a charity for 1 hour a day across 2 different days.
- Consider yourself volunteering for a charity for 30 minutes a day across 4 different days.

4 hours ask amount

- Consider yourself volunteering for a charity for 4 hours in one day.
- Consider yourself volunteering for a charity for 2 hours a day across 2 different days.
- Consider yourself volunteering for a charity for 1 hour a day across 4 different days.

8 hours ask amount

- Consider yourself volunteering for a charity for 8 hours in one day.
- Consider yourself volunteering for a charity for 4 hours a day across 2 different days.
- Consider yourself volunteering for a charity for 2 hours a day across 4 different days.

Supplement 2: Study examining whether individuals' construal level predicts their compliance with a segregated versus aggregated volunteer request.

How might one predict which individuals will be more open to the possibility of volunteering in a segregated versus aggregated manner? Our main findings suggest that this may depend on the relative weight individuals place on the anticipated effort versus morality that occurs from helping. If individuals are predisposed to place greater weight on the ease (vs. morality) of helping, individuals should respond more positively to a segregated (vs. aggregated) volunteer request. In contrast, if individuals are predisposed to place greater weight on the morality (vs. ease) of helping, individuals should respond more positively to an aggregated (vs. segregated) volunteer request. This raises the question then --- which kinds of individuals are predisposed to care more about the effort versus morality of helping?

Prior work using a Construal Level Theory framework (Trope & Liberman, 2010) suggests that individuals who think in more concrete, low-level terms should care more about how much effort is involved in acting and that individuals who think in more abstract, high-level terms should care more about the moral implications of acting. Specifically, a more concrete construal level incorporates the specific, mechanistic details of performing actions and thus increases the weight individuals place on the feasibility of action implementation (Baskin, Wakslak, Trope, & Novemsky, 2014; Liberman & Trope, 1998; Wan & Agrawal, 2011). A more abstract construal level incorporates the broader implications of behavior, including the anticipated value of achieving outcomes, such as the moral implications of one's behavior (Agerström & Björklund, 2009a, 2009b). Thus, when individuals engage in more concrete thinking, they should attend more to the feasibility related issues of volunteering, such as how effortful it would feel to engage in volunteer work. On the other hand, when individuals engage in more abstract thinking, they should attend more to the value of giving away their time, such as how moral it would make them feel. Therefore, based on the results presented in our main text, we tested the following hypotheses:

H1: Concrete thinkers should be more willing to comply when they are asked to volunteer for large amount of time in a segregated (vs. aggregated) manner.

H2: Abstract thinkers should be more willing to comply when they are asked to volunteer for a large amount of time in an aggregated (vs. segregated) manner.

Method

Seventy-eight students in a social psychology course at a large southwestern university in the US participated (55 females, $M_{age} = 19.80$, $SD_{age} = 1.92$, 9 unreported). On the first day of the semester, participants completed a series of personality measures, including a breadth of categorization task that has been used to measure differences in construal level (Liberman, Sagristano, & Trope, 2002; see also Burgoon, Henderson, & Markman, 2013). We presented participants with three different lists, each including 39 objects (e.g., television, lantern, tent). For each list, participants classified the objects into as many or few categories as they thought appropriate. We calculated the average number of categories participants generated across the three lists of objects ($\alpha = .84$; $M = 5.29$, $SD = 2.01$). More abstract thinkers categorize objects into broader, more inclusive groups. Thus, fewer categories generated represent more abstract thinking.

Thirty-four days after participants completed the personality measures, participants received the following e-mail from their instructor, which presented an opportunity to write letters to sick children in hospitals:

Hi class. As you may know, the university is in the midst of its charity campaign. This is a great opportunity to get involved and give back to your community. I thought it would be a good idea to organize a volunteer experience for my class. I want to organize a volunteer experience where university students can write letters to sick kids in hospitals. I have identified hospitals that would welcome this. Note, this is purely a volunteer experience and your participation will not affect your grade in any way.

Half of the participants ($n = 39$) were randomly assigned to the segregated schedule condition and read: "Are you willing to volunteer writing to sick kids one hour a day for 2 days?", whereas the other half of the participants ($n = 39$) were assigned to the aggregated schedule condition and read: "Are you willing to volunteer writing to sick kids 2 hours for one day?" Given the extremely depressing nature of the volunteer task, we reasoned that asking participants to volunteer two hours would be considered a large ask of them. For our dependent variable, participants indicated whether they were willing to volunteer (no coded 0; yes coded 1) and those who agreed to volunteer came to the lab and wrote letters to sick children. Specifically, we presented participants with a photograph and a description of twenty children from the Hugs and Hope for Sick Children website and had them write letters to them. We printed and mailed the letters to the children.

Results

Twenty out of seventy-eight participants (26%) indicated that they were willing to volunteer. Participants' intentions to volunteer matched actual behavior (all 20 participants came to the laboratory and wrote letters). We analyzed the likelihood of writing the letters using a binary logistic regression, with volunteer schedule (aggregated coded 0; segregated coded 1) and measured construal level as predictors. As shown in Figure A, we found a significant volunteer schedule \times construal level interaction effect ($\beta = .72$, $SE = .31$, $p = .02$). Spotlight analyses at the lowest observed value on the construal level measure (1.67) revealed that for abstract thinkers, they were significantly more likely to volunteer when they were solicited in an aggregated (vs. segregated) manner ($\beta = -3.01$, $SE = 1.22$, $Z = -2.46$, $p = .01$). In contrast, analyses at the highest observed value in our dataset (11.67) revealed that for concrete thinkers, they were significantly more likely to volunteer when they were solicited in a segregated (vs. aggregated) manner ($\beta = 4.19$, $SE = 2.13$, $Z = 1.97$, $p = .05$). These results suggest that individual differences in construal level can be leveraged to identify potential volunteers who are predisposed to respond more positively to solicitations for aggregated versus segregated volunteering.

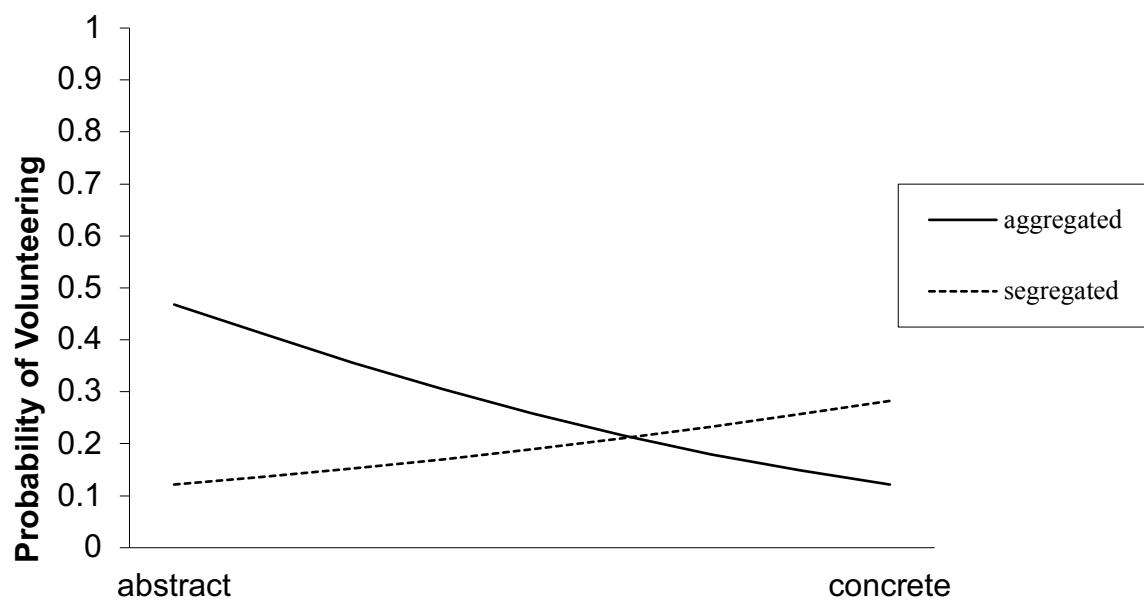


Figure A. Probability of volunteering as a function of construal level (measured) and volunteer schedule (manipulated) for Supplement 2.

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