Consumer Behavior in Close Relationships

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Accessibility
Consumer Behavior in Close Relationships

A dissertation presented

by

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to

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Consumer Behavior in Close Relationships

My dissertation is composed of three papers examining consumer decision-making in the context of close, personal relationships. Countless consumer decisions, from small (e.g., bringing soup to a sick friend) to large (e.g., buying a house with a partner), require consumers to consider and incorporate not only their own feelings and preferences, but also the feelings and preferences of close others. Because close relationships are characterized by high interdependence, commitment, and investment, they exert a profound influence on consumers’ thoughts, feelings, and behaviors. Therefore, in my dissertation, I investigate how consumers make decisions that involve close others and how these decisions affect their well-being and relationships.

The first essay (A Preference for Effort when Caring for Close Others) examines how consumers respond to products designed to make it easier to take care of close others—ranging from pre-made meals to robo-cribs that automatically rock babies back to sleep. A series of experiments demonstrate that using effort-reducing products to care for close others taints consumers’ self-perceptions as caregivers. The second essay (Shared Time Scarcity and the Pursuit of Extraordinary Experiences) demonstrates that consumers prioritize extraordinary experiences when they perceive the shared time with relationship partners as scarce. The third essay (Sacrificing Enjoyment for the Sake of the Relationship) examines when and why consumers forgo the objective quality of an experience to obtain interpersonal benefits—for example, when flying with a partner and forgoing two non-adjacent seats in the economy-comfort section. I conclude with a discussion of my future research agenda.
## Contents

<table>
<thead>
<tr>
<th>Essay 1: A Preference for Effort when Caring for Close Others</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essay 2: Shared Time and the Pursuit of Extraordinary Experiences</td>
<td>49</td>
</tr>
<tr>
<td>Essay 3: Sacrificing Enjoyment for the Sake of the Relationship</td>
<td>72</td>
</tr>
<tr>
<td>Conclusion and Future Direction</td>
<td>97</td>
</tr>
<tr>
<td>Appendix</td>
<td>98</td>
</tr>
<tr>
<td>References</td>
<td>110</td>
</tr>
</tbody>
</table>
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A Preference for Effort When Caring for Close Others

Ximena Garcia-Rada
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Michael I. Norton

Abstract

Many new products and services are designed to make caregiving easier, from premade meals to feed families to robo-cribs that automatically rock babies to sleep. Yet, using these products may come with a cost: consumers may feel they have not exerted enough effort. Ten experiments show that consumers feel like worse caregivers when using an effort-reducing alternative. The effect of effort on caregivers’ self-perceptions is driven by symbolic meaning rather than perceptions of quality of care provided: i.e., choosing effort-reducing products makes consumers feel that they are doing a worse job of showing they care about their loved ones because they are taking the “easy way out.” This work also establishes when and with whom effortful caregiving is most meaningful. The effect of effort on self-perceptions is most pronounced when expressing symbolic meaning is especially important, in particular, when caregivers are providing emotional support rather than physical support, when they are caring for another person with whom they have an established, close relationship, and when there is a shared expectation that putting effort shows love. Taken together, these findings expand our current understanding of effort, caregiving, and how consumers make choices in the context of close relationships.
INTRODUCTION

The SNOO bassinette is a “smart” crib designed by parenting expert Harvey Karp to help infants sleep better by playing white noise and rocking them gently to sleep when they cry. In popular press profiles of the SNOO on Buzzfeed (Buzzfeed News 2016) and in the New York Times (Margalit 2018), Karp describes the crib as a way to not only soothe fussy infants but also improve parent-child bonding and reduce stress and post-partum depression. However, many of the readers who commented on these articles had a more negative view, with comments such as, “More lazy parenting products…sacrificing sleep is part of parenthood” and “This seems so detached, hold your baby.” But given the potential upsides of the SNOO—better-rested babies and parents—why do people react so negatively to the idea of it?

The SNOO is just one of the many products designed to not only make consumers’ own lives a little bit easier but also to make it easier for them to care for close others. Yet innovations intended to make caregiving less effortful may come with a cost, one that the comments on the SNOO exemplify: when consumers choose easy options for caregiving, that very ease may signal that they are failing to be as good parents—or friends or relatives or spouses—as they could be. Our work investigates how consumers respond to products that simplify caregiving. As we will show, a preference for effort in caregiving can make consumers avoid options that simplify caring for others and feel like worse caregivers when they do use such options.

The caregiving situations we examine are those in which consumers provide direct care to close others (e.g., children, spouses, elderly relatives, close friends). Drawing on the theoretical framework developed by Liu, Dallas, and Fitzsimons (2019), we consider caregiving to be recipient-focused consumer behavior in which consumers must balance their own and the recipient’s preferences. In these caregiving situations, consumers make choices for others who
need support by balancing a number of competing interests, including their loved ones’ preferences, their own preferences regarding shared outcomes, their available time, energy, money, and other resources, and so on. Our particular focus on consumers’ sometimes-conflicted responses to products that simplify—and in some cases objectively improve—their caregiving allows us to explore a core proposition of the Liu et al. (2019) framework by examining the consumer self-perceptions that result from attempts by caregivers to balance their own preferences and those of the recipient.

Building on work showing that people value effort (Cutright and Samper 2014; Kruger et al. 2004; Morales 2005; Olivola and Shafir 2013), we argue that when taking care of close others, consumers feel like less dedicated caregivers when they use effort-reducing products or services that do not allow them to symbolically signal their love. Instead of focusing on how effort impacts valuation of products and services (Buell and Norton 2011; Norton, Mochon, and Ariely 2012), we examine how it influences consumers’ self-evaluations as caregivers. In short, a sick partner might prefer soup made by a professional cook and an infant might get more rest due to a product actually proven to help them sleep—but when consumers balance these recipients’ needs against their own desire to feel like a good caregiver, they may sometimes prioritize the symbolism of caregiving over its functional benefits.

EFFORT AND CAREGIVING

Consumers often have multiple close relationships—as a parent, sibling, child, romantic partner, or friend, among others—and these relationships are central to their emotions, identities, and well-being (Cavanaugh 2016). They often have to take care of these close others, in both day-to-day circumstances (like making dinner for one’s family) and more extreme ones (like
comforting a friend going through a rough time). Research using the “Day Reconstruction Method,” developed by Kahneman et al. (2004) to assess how people spend their time, found that the sample of employed women spent on average 1.1 hours per day taking care of their children and 1.5 hours per day doing other activities that relate to caregiving (e.g., preparing food, shopping). Caregiving situations are ubiquitous and intimately tied to a variety of consumption decisions. Consumers must decide how they will take care of their loved ones, how they will perform caregiving tasks, and what products they will use in the service of providing care.

Not surprisingly, then, companies regularly design products that simplify caregiving tasks and then pointedly advertise this ease as a special feature or advantage. For example, Sara Lee sells their frozen pies saying “Holidays are hard, pies are easy,” Campbell’s soup is marketed as “Convenient, tasty solutions for everyone and every meal,” and Betty Crocker’s cake mix slogan is “So simple, so delicious.” Given that many consumers often feel stressed about time, products like these may seem to be the perfect solution to help them juggle multiple caregiving tasks. But the possibly apocryphal yet plausible tale about instant cake mix—that sales did not take off until manufacturers made baking cakes with it more effortful by requiring bakers to add a fresh egg (Mikkelson 2008)—suggests that consumers’ appreciation for products that make their lives easier may not be as straightforward as it might seem on the surface. The idea behind this story was that by investing minimal effort by just adding water, home bakers felt as if they were “taking the easy way out” rather than being good caregivers. In other words, baking, cooking, and other caregiving tasks seem to lose their ability to communicate caring for loved ones when products that facilitate those tasks do not require enough effort on the part of the caregiver.

Given the prevalence of time and effort-reducing products on the market, it is reasonable to ask under what circumstances less effort is preferred to more effort and more effort preferred
to less. According to a survey conducted by Pew Research Center (2013), approximately 40% of working parents say they always feel rushed and such time stress has a number of negative consequences, including poorer health (e.g., Roxburgh 2004) and increased family conflict (Höge 2009). Moreover, research shows that using money to improve the quality of one’s time—for example, by outsourcing disliked tasks and purchasing time-saving products such as Roombas—increases consumer well-being (Whillans et al. 2017). Together, this work on time stress and consumer responses to it suggests that consumers should often prefer products that can help them save time and effort, which they can then devote to more enjoyable activities.

At the same time, however, other research has shown that consumers do not always shun products that require effort or time, particularly when those products can be used symbolically to signal closeness and love to others. For example, gift givers believe that effort is valued by recipients, so that giving a “good gift” means investing extra time, money, and thought into searching for what to get a recipient (Flynn and Adams 2009; Ward and Broniarczyk 2016; Zhang and Epley 2012) even in situations when recipients do not know who the giver is (e.g., a Secret Santa exchange; Steffel and LeBoeuf 2013). Additionally, hard work and effort in the creation of products not only signals care and concern to others, but it can also serve as a signal to oneself, as effort increases consumers’ feelings of self-efficacy, competence, and control (Cutright and Samper 2014; Norton, Mochon, and Ariely 2012; Schunk 1983); in the domain of charitable giving, for example, consumers change their moral self-perceptions only after a costly prosocial behavior (Gneezy et al. 2012). We suggest that in the domain of caregiving, consumers use effort to signal to recipients and to themselves that they deeply care.

Here, we bridge the literatures on effort in both personal consumption and choices for others to suggest that, in the domain of caregiving, consumers choose effortful products and
services in order to balance their symbolic needs (showing love) with recipients’ functional needs (receiving actual care). Indeed, this particular balancing of symbolic and functional benefits is one critical conceptual differentiator between caregiving and gift-giving. In this work, the most important distinction between the two types of choosing for others in Liu et al.’s (2019) framework is that gift-giving emphasizes the recipient’s preferences, whereas caregiving entails a balance between the recipient’s and the caregiver’s preferences. As just one example of this distinction, although gift-givers might buy their partner’s favorite cake for his or her birthday, they might choose a healthier option in a caregiving situation if they believe that their partner should have something different.

In addition, we argue that the stakes are often higher in caregiving than in gift-giving because consumers feel the weight of responsibility for the recipient’s welfare and needs (Clark, Mills, and Powell 1986; Thompson 1996). Although being loved and cared for is a universal human need (Baumeister and Leary 1995; Maslow 1968) that can manifest in both gifts and caregiving gestures, a friend does not typically “need” a specific new sweater or an iPhone, whereas a sick friend actually needs food and a baby actually needs to sleep. As a result, caregivers’ tradeoffs between their own symbolic needs to feel like a good caregiver and the actual functional benefits to recipients offers a conceptually novel case of balancing in consumer relationships.

In our research, we focus on the role of effort in consumers’ choices in contexts in which caregivers are responsible for providing direct care to others and in their self-evaluations as caregivers. We build on qualitative research on maternal guilt showing that mothers experience guilt when they feel accountable for the development and well-being of their children but cannot fulfill their own and societal expectations (Eyer 1996; Rotkirch and Janhunen 2009). Notably,
Seagram and Daniluk (2002) argue that mothers’ intense feelings of love and connection to their children motivate their desires to serve them well and that they set very high standards for themselves as parents. Extending these ideas to caregivers more broadly, we argue that consumers are likely to feel worse about their choices to use effort-reducing products when caring for loved ones because they think that they are not serving the recipients as well as they should. More formally, we hypothesize:

**H1:** Consumers feel like worse caregivers when they use an effort-reducing product to take care of a recipient compared to when they use a more effortful process.

Earlier work on cognitive dissonance and self-perception suggests that the more effort people invest in a task, the more they value the outcome of that task (Bem 1967; Festinger 1957); indeed, people make inferences about quality from effort (Kruger et al. 2004). Prior work conceptualizes effort in terms of investment of time, physical exertion, pain, or money, but resources are often valued and treated differently. For example, consumers view their time as a more unlimited resource than money (Zauberman and Lynch Jr. 2005) and as a stronger signal of their preferences (Mogilner and Aaker 2009; Shaddy and Shah 2018) and moral identity (Reed, Aquino, and Levy 2007).

We suggest that effort is uniquely valued in caregiving because it serves as a symbol of love; essentially, putting in effort means people have poured their hearts and souls into taking care of their loved ones. Relatedly, people value their contributions to a charitable cause when they overcome pain and effort to raise that money because of the symbolic significance of their sacrifice (i.e., the martyrdom effect; Olivola and Shafir 2013). And even though tasks that require more effort usually take longer to be completed, we suggest that exerting effort in a
caregiving task, independent of other resources like time or money, uniquely leads to consumers feeling like better caregivers. More formally, we hypothesize:

**H2:** Consumers feel like better caregivers when they invest effort into taking care of loved ones compared to when they invest other resources like time or money.

**CAREGIVING GOALS**

Effort-reducing products can help caregivers accomplish functional goals and, on some occasions, do so better than consumers themselves could: a housecleaner can probably clean the house better and more efficiently than the typical homeowner could, store-bought organic soup can nourish children just as well as homemade soup, and a professional massage can often be more relaxing to a stressed-out spouse than an amateur backrub on the couch. Thus, one prediction might be that consumers in caregiving roles would be interested in products that are especially efficient at achieving these functional goals. Yet previous research has shown that consumers often sacrifice product functionality in service of fulfilling other goals, such as to appear interesting (Thompson and Norton 2011), to express their identity (Ariely and Levav 2000; Berger and Heath 2007), and to obtain variety (Ratner, Kahn, and Kahneman 1999). We suggest that caregiving is a specific interpersonal context that involves a unique sacrifice of functionality in the service of fulfilling symbolic goals, which products and technologies that simplify caregiving are not able to satisfy nearly as well.

Symbolic caregiving goals are defined as showing love and making the recipient feel cared for. Prior qualitative work demonstrates that caregiving activities are opportunities for people to express love, sacrifice, and family identity (Coskuner-Balli and Thompson 2013; Epp and Price 2008; Moisio, Arnould and Price 2004; Thompson 1996). Epp and Velagaleti (2014)
conducted in-depth interviews and showed that consumers face tensions regarding control, intimacy, and substitutability when outsourcing parenting tasks. And recent work shows that automation is less desirable when identity motives are important drivers of consumption (Leung, Paolacci, and Puntoni 2018). We build on this research to suggest that using products that simplify caregiving does not accomplish caregivers’ symbolic goals as successfully as doing something more effortful because people feel that they are not exerting *enough* effort to be good caregivers. More formally, we hypothesize:

**H3:** Consumers feel like worse caregivers when using an effort-reducing product (vs. a more effortful process) to take care of a recipient because they believe they are less able to fulfill a symbolic caregiving goal.

**WHEN AND WITH WHOM IS EFFORT MEANINGFUL?**

Caregiving tasks are highly varied: consumers might directly help loved ones with daily life by feeding them or bathing them, handle indirect care tasks like laundry and housecleaning, coordinate care with other caregivers like babysitters or doctors, and so on (Berry, Dalwadi and Jacobson 2017). If effort matters because of the symbolic meaning of a caregiving task, one might expect that certain kinds of tasks could be more effective at showing how much a caregiver loves and cares for a recipient than others. One dimension of particular importance is whether the caregiving task is providing physical support or emotional support. Effort put into emotional support may serve as more of a signal of love and care, as emotional support is often uniquely the domain of a close loved one, and only their comfort and encouragement will do (Dakof and Taylor 1990; Lanza, Cameron, and Revenson 1995). A mother offloading the task of making sure there are always bandages in the medicine cabinet for her children’s cuts and
scrapes creates very different impression from that same mother offloading the task of kissing her children’s booboos to make them better, for instance. More formally, we hypothesize:

**H4:** Consumers feel like worse caregivers when using an effort-reducing product (vs. a more effortful process) to perform a caregiving task intended to provide the recipient with emotional (vs. physical) support.

Not only might the type of task matter when it comes to the necessity of putting in effort, but the relationship between the caregiver and the recipient is also likely to be influential. To start, a person’s steadiest and most meaningful relationship is with their own self, and self-care is common and purposeful (Silva 2017; Lieberman 2019). However, taking care of oneself is meaningfully different from caring for others; for example, we suspect that self-care is one domain in which the functional output outweighs any signaling that might occur, and therefore saving effort will be more appealing in self-care contexts and shortcuts will seem acceptable or even preferable. In other words, people will prefer to put in effort when caring for another person more than when caring for themselves.

Given that, which other people is it most important to signal love to and therefore put in effort on behalf of? For one, it seems important that a caregiver has an established relationship with the person being cared for. If a person has never seen the recipient of care before and may never interact them again, signaling is likely to be lower on the list of priorities than is successfully completing the task, meaning that people are likely to prefer putting in effort when caring for someone for whom signaling love and care will have longer-term impact, rather than someone they do not know. And even when there is an established relationship between a caregiver and a recipient, that relationship can be anywhere on a continuum from especially
close to especially distant (Aron, Aron, and Smollan 1992). People are highly committed to and
invested in maintaining their close relationships in particular (Rusbult 1980), and expressing that
to their loved ones is often a priority (Laurenceau, Barrett, and Pietromonaco 1998). We expect
that signaling love and care and thus putting in effort is more important when caregiving for
especially close others, rather than more distant friends and acquaintances. Putting this together,
we predict that:

**H5A-C:** Consumers will choose an effortful process over an effort-reducing product
when taking care of (a) another person (b) with whom they have an established
relationship that (c) is especially close.

Relationships vary in many ways beyond how close they are. Relevant to our thinking,
each relationship may be unique in the degree to which effort is treated as an important form of
symbolic currency. For example, effort—in the form of “acts of service”—is only one of five
“love languages” in a popular framework of how people communicate their love (Chapman
2009), suggesting that while effort is a key way that people can express love to those they deeply
care about, it may not necessarily be important or symbolic in all relationships. One way it can
be established whether effort can serve as symbolic currency in a relationship is by one partner
setting a norm through their own behavior that it is (or is not) expected; the other person in the
relationship is likely to act in accordance with that norm, at least in the context of that specific
relationship (McGraw and Tetlock 2005). If the recipient of care had in the past used an effort-
reducing product for caregiving when the roles were reversed, for instance, they may have
signaled to the caregiver that their relationship is not one in which effort is expected in order to
show love. More formally, we propose:
**H5D:** Consumers feel like worse caregivers when using effort-reducing products (vs. a more effortful process) unless the recipient establishes a relationship norm that effort is not expected to show love.

**PILOT STUDY: YOU SNOO, YOU LOSE?**

Returning to the SNOO example from our introduction, we can use consumer reactions to this product to explore whether people draw inferences about the amount of effort invested in caregiving and perceptions about parenting.

**Method**

The two articles mentioned earlier—one released by BuzzFeed in October 2016 (BuzzFeed News 2016) and one in the New York Times in April 2018 (Margalit 2018)—were both posted on social media. We retrieved comments on these posts that were the main comment (not responses), were in English, and were not a junk comment (i.e., included only emojis, stickers, names, and/or only tags of people). This left us with 675 comments: 450 comments from the BuzzFeed Facebook post and 225 comments from the New York Times Instagram post. Two coders blind to our research question read all comments and indicated (a) whether the person suggested that the SNOO reduced the amount of effort invested when taking care of a baby; (b) whether the person said something negative about parents who use the SNOO; and (c) whether the overall tone of the comment was negative, neutral, or positive. Intercoder agreement was 93% for the first dimension, 96% for the second one, and 77% for the third one; disagreements were resolved through discussion between the two coders.
Results

First, we find that 19% of the commenters \((n = 129)\) mentioned that the SNOO reduced the amount of effort that parents invested when taking care of their baby. And, 76% of the comments that mentioned that the SNOO would reduce caregiving effort had a negative tone, compared to only 32% of the comments that did not mention effort \((\chi^2(2, N = 675) = 84.35, p < .001)\), suggesting that at least in this specific context, people perceive this effort-reducing product negatively. Coders identified comments of people highlighting that this product would automate parenting tasks (e.g., “You could just take care of your baby without technology like every other generation of parents did”) or that it would reduce the amount of effort that parents would spend holding, soothing, rocking, or putting their baby back to sleep (e.g., “This seems so detached. Hold your child. Yes your arms ache. Yes your back hurts.”)

Second, some commenters \((n = 57)\) spontaneously mentioned something negative about parents who use the SNOO. For example, commenters said things like, “Just lazy,” “You can stop being a shitty parent and take care of your kids,” and “If you need that device, you shouldn't have kids.” Clearly, the benefits of using the SNOO mentioned in the articles did not translate to commenters perceiving parents who use the SNOO to be smart or efficient but instead neglectful, detached, and lazy. And, even though some commenters acknowledged the functional benefits the SNOO provides and highlighted that parents and babies will sleep better (e.g., “you can get your sleep back now”), this did not appear to offset in commenters’ eyes the possibility that the SNOO might hamper parent-child emotional bonding.

Third, we find a significant correlation between perceptions that the SNOO reduces effort when taking care of a baby and perceptions of poor parenting \((r = .45, p < .001)\), supporting the notion that effortful caregiving is closely linked to being a loving and dedicated parent. Taken
together, this initial example provides preliminary evidence to support the idea that people equate effortful caregiving with proper caregiving. Next, we turn to more controlled experiments involving random assignment to examine when and why consumers might feel like worse caregivers when they use effort-reducing products to take care of close others.

**RESEARCH OVERVIEW**

The present research examines how consumers respond to products and services that simplify caregiving and explores how using effort-reducing alternatives affects caregivers’ self-perceptions. We find that consumers feel they are taking the easy way out rather than being dedicated parents, spouses, or friends when using products that simplify caregiving because they believe their gesture lacks symbolic meaning.

We test our predictions in ten experiments. First, we show that, both when they recall a past caregiving situation (Study 1A) and in a laboratory experiment involving a real caregiving task (Study 1B), consumers feel like worse caregivers when they use effort-reducing products that simplify their tasks. Next, we assess why effort-reducing products that simplify caregiving have these effects, by examining whether and to what extent easier-to-use products fulfill functional and symbolic caregiving goals. Study 2 shows that effort is especially valued in caregiving, compared to other resources like time and money, because it best conveys that the person truly cares about the recipient. Study 3 then reveals that the relationship between effort and feelings of satisfactory caregiving is largely due to the symbolic meaning of using such products; choosing easier caregiving products makes consumers feel that they are doing a worse job of signaling that they care about the recipient. Study 4 demonstrates that the type of support provided by the caregiving task, emotional versus physical, moderates the effect of effort on self-
perceptions. Studies 5A–C use choice paradigms to show that caregivers prefer more effortful processes when taking care of others with whom they have established, close relationships—as opposed to when taking care of themselves, strangers, or more distant others—because the symbolic meaning of the gesture and its ability to show caring is more important. Study 6 demonstrates that the effect of effort on self-perceptions is attenuated when the recipient establishes a relationship norm that effort is not expected and does not have symbolic currency. Finally, Study 7 tests an intervention to reduce the negative self-perceptions that arise when consumers use products that simplify caregiving, namely, highlighting caregivers’ effort rather than the ease of use of effort-reducing products.

**STUDIES 1A-B: EFFORT AND FEELINGS OF SATISFACTORY CAREGIVING**

In Studies 1A-B, we examine the effect of using effort-reducing products on caregivers’ self-perceptions. First, in Study 1A, we use a recall paradigm to explore caregiving situations involving a variety of contexts and relationships. Using a between-subjects design in an online experiment, we assessed whether consumers who were prompted to think of a time when they cared for a loved one and used a product to simplify their task (vs. those who were prompted to think of a time when they cared for a loved one and did not use a product to simplify their task) report feeling like worse caregivers.

Next, in Study 1B, we further explored the impact of using an effort-reducing product (vs. a more effortful alternative) on caregiver self-perceptions using a consequential caregiving task in a laboratory setting, in which they sent their grandparent or an elderly relative a postcard to let them know they were thinking about them. Participants were randomly assigned to make a postcard themselves or to choose a premade postcard. We predicted that those who invested less
effort in the task by merely choosing a postcard would perceive themselves to be worse caregivers than those who made a postcard themselves.

Study 1A Method

Participants. Five hundred and one participants recruited through MTurk completed an online study for monetary compensation (48% male; $M_{age} = 38.82$ years, $SD = 11.63$).

Procedure. Participants read that the purpose of the study was to understand decisions that consumers make in the context of caregiving and were asked to describe the last time they took care of a close other and used a product or service to simplify the caregiving task (low effort condition, $n = 247$) or when they took care of a close other and did the task themselves without using a product or service to simplify the caregiving task (high effort condition, $n = 254$).

Next, participants indicated the extent to which they agreed with three statements: “I felt like a dedicated caregiver,” “I felt like a loving caregiver,” and “I felt like a good caregiver,” on 7-point scales ($1 = $not at all; $7 = $very much). The average of these items served as our dependent measure in this and future studies unless otherwise indicated (here, $\alpha = .91$).

On the next pages, participants answered follow-up questions about the caregiving situation they described. They reported how responsible they felt for taking care of the recipient, how effortful the task was, what their relationship with the recipient was, how old the recipient was, how long they had known the recipient, whether they lived with the recipient, how close they felt to the recipient, how long ago this had happened, how difficult it was to think about a situation to write about, and how difficult it was to remember details about the situation. This and all subsequent studies concluded with basic demographic questions (e.g., gender, age, income, relationship status).
Study 1A Results

Caregiving context. One-third of participants (33.3%) described a situation that involved taking care of a child, followed by taking care of a partner (17.6%), a parent (16.6%), an elderly relative (9.8%), another family member (8.6%), a sibling (5.2%), a friend (5.2%), and other recipients (3.7%); there were no differences between conditions in terms of recipients involved ($\chi^2(7, N = 501) = 6.61, p = .470$). Recipients of care were on average 35.07 years old ($SD = 29.49$) and ranged from 0–96 years old; there were no differences between conditions in terms of how old the recipient was ($t(499) = 1.09, p = .276, d = .10$). More than half of the caregiving situations described (53.5%) had taken place within the last month and there were no differences between conditions in terms of when the situation took place ($\chi^2(5, N = 501) = 4.47, p = .483$; see Table 1.1 for examples of caregiving situations described).

Perceptions of effort. As intended, participants who performed the caregiving task themselves without using a product reported exerting more effort than those who used a product to simplify the caregiving task ($M_{high\_effort} = 5.17, SD = 1.49$ vs. $M_{low\_effort} = 4.66, SD = 1.61$; $t(499) = 3.66, p < .001, d = .33$).

Caregivers’ self-perceptions. Supporting our first hypothesis, participants who used a product to simplify the caregiving task reported that they felt like worse caregivers than those who did the task themselves ($M_{low\_effort} = 5.91, SD = 1.17$ vs. $M_{high\_effort} = 6.19, SD = .92$; $t(499) = 2.97, p = .003, d = .27$). This effect held when controlling for responsibility, relationship type, relationship closeness, and recipient’s age ($b = .28, SE = .08, p = .001$; see Table 1.2).
Table 1.1
Examples of Caregiving Situations Described in Study 1A

<table>
<thead>
<tr>
<th>Recipient of Care</th>
<th>Examples</th>
</tr>
</thead>
</table>
| Child             | Making meals and getting my child ready for school.  
I made a loaf of bread for my kids.  
Watching my baby and feeding him.  
I took care of my fiancée when he was ill by cooking and doing errands.  
|         |         |
| Partner or spouse | I gave a neck massage to relieve my boyfriend’s pain and stiffness.  
I gave my husband a haircut at home.  
Helping my mother after surgery.  
|         |         |
| Parent           | I had to take care of my dad when he had the flu.  
Helped moving my mom to a new house.  
Helping my grandfather use the restroom.  
|         |         |
| Elderly relative | Eating dinner with my grandmother every Saturday.  
Bathing my elderly grandmother.  
I helped my sister with her newborn baby the first week after she gave birth.  
|         |         |
| Sibling          | I made homemade soup for my sick brother.  
Babysitting my brother.  
I had to clean my relative’s house.  
|         |         |
| Other family     | I took care of my uncle after dialysis.  
I had to take care of a family member and I used GrubHub for delivery.  
Helping friend going through chemo treatment.  
|         |         |
| Friend           | I was helping a friend who had a hurt leg.  
I was taking care of a friend who was going through a breakup.  
|         |         |

Recall difficulty. On average, participants did not have a hard time thinking about a situation to write about ($M_{val} = 2.38, SD = 1.84$) or remembering details about the situation ($M_{nar} = 2.28, SD = 1.82$). Most importantly, we do not observe differences between conditions in terms of how difficult it was to think about a situation to write about ($t(499) = .26, p = .796, d = .02$) or to remember details about the situation ($t(499) = .17, p = .864, d = .02$). Additionally, a research assistant reviewed all responses and identified that only 2.4% of participants said they could not
remember a situation to write about; there were no differences between conditions on this dimension ($\chi(1, N = 501) = 1.25, p = .263$).

### Table 1.2
Results from Study 1A

<table>
<thead>
<tr>
<th>Caregiver self-perceptions</th>
<th>Condition</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.28**</td>
<td>0.19*</td>
<td>0.20**</td>
<td></td>
</tr>
<tr>
<td>(1 = effortful caregiving)</td>
<td>(0.09)</td>
<td>(0.09)</td>
<td>(0.08)</td>
<td></td>
</tr>
<tr>
<td>Sense of responsibility</td>
<td>0.22***</td>
<td>0.14***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.04)</td>
<td>(0.03)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spouse</td>
<td>-0.01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.14)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent</td>
<td>0.03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.17)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child</td>
<td>0.19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.13)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elderly relative</td>
<td>0.04</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.22)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recipient's age (years)</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.00)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationship closeness</td>
<td>0.42***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.04)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

***p < .001, **p < .01, *p < .05. SE in parentheses.

Study 1B Method

*Participants.* Two hundred and fifty-one undergraduates (69% male; $M_{age} = 20.76$ years, $SD = 1.89$) at a Midwestern university participated in a laboratory study in exchange for course
credit. The sample size was determined by the number of students participating for credit in studies in the lab over the course of two months (February 24 through April 25, 2017).

Procedure. Participants read that research has shown the effect of social connection on health and happiness, especially among hard-to-access populations like the elderly. Participants were then told that they would send a grandparent or an elderly relative a postcard to let them know they were thinking about them and give them these same benefits. They learned that half of the participants would make the postcards themselves (high effort condition) and the other half would choose premade postcards from a set of eight options (low effort condition). Whether they would make or choose postcards was randomized at the session level.

All participants received a package with materials for the task: those choosing a postcard had a packet that showed the eight premade postcards, while those making a postcard had a package that included a blank card, colored pencils, markers, and stickers. Participants choosing a premade postcard looked through their options, requested their favorite from the experimenter, and then filled it out. Participants making the postcard crafted the front and then filled it out. Every package included a stamp, and participants were informed that at the end of the study they could leave their postcard and the researcher would mail it. If they did not have their relative’s address, they could take the postcard and mail it later (see examples of premade and handmade postcards in Appendix A).

Participants had unlimited time to work on the task, but after 10 minutes, the research assistant supervising the session nudged them to wrap up. As soon as they finished making or choosing the card, participants completed our dependent measures on a computer. They reported the level of effort involved in the process of making a handmade postcard compared to choosing a premade postcard on a 7-point scale (1 = Choosing a premade card is more effortful; 7 =

20
Making a handmade card is more effortful. They also reported the extent to which they felt (a) like a dedicated family member, (b) that they were taking good care of their grandparent, and (c) guilty about sending a premade/handmade card instead of a handmade/premade card on 7-point scales (1 = Strongly disagree; 7 = Strongly agree).

Study 1B Results

As intended, participants thought that making a postcard was more effortful than choosing a premade card ($M_{made} = 6.03, SD = 1.48$; one-sample $t(250) = 21.71, p < .001, d = 1.37$ vs. midpoint = 4) and this perception did not vary based on whether they were assigned to make a postcard themselves or choose a premade card ($M_{made} = 6.17, SD = 1.45$ vs. $M_{chose} = 5.89, SD = 1.50; t(249) = 1.54, p = .126, d = .19$). Germane to our hypotheses, participants who chose a premade postcard felt like less dedicated family members than those who made a card ($M_{chose} = 3.93, SD = 1.28$ vs. $M_{made} = 5.28, SD = 1.22; t(249) = 8.57, p < .001, d = 1.08$), felt that they took worse care of their grandparent ($M_{chose} = 3.90, SD = 1.46$ vs. $M_{made} = 5.17, SD = 1.24; t(249) = 7.41, p < .001, d = .94$), and felt guiltier ($M_{chose} = 2.78, SD = 1.52$ vs. $M_{made} = 2.05, SD = 1.23; t(249) = -4.22, p < .001, d = -53$).

Discussion

Study 1A used a recall paradigm to support our first hypothesis: across a wide variety of caregiving situations and relationships, consumers who used a product to simplify a caregiving task felt like worse caregivers compared to those who did the task without any help. Study 1B further demonstrates that individuals who exerted less effort in a caregiving task felt like worse caregivers than those who exerted more effort by creating a postcard from scratch.
STUDY 2: INVESTING EFFORT VS. TIME VS. MONEY IN CAREGIVING

Caregivers invest many different resources into those they love—their effort, as we have seen, but also their time, their money, and more. Do caregivers feel more negatively about themselves when they invest less of any resource in a loved one, or is effort special? Here, we test the idea that people believe that effort uniquely signals they truly care about someone by examining whether participants who invested effort when taking care of a friend at the hospital would feel like better caregivers than participants who invested time or money.

Method

Participants. Three hundred and one participants (58% male; $M_{age} = 38.38$ years, $SD = 10.96$) recruited through MTurk completed an online study for monetary compensation.

Procedure. Participants imagined a situation in which they, together with two other friends, were taking care of a fourth friend in the hospital (Alex) by bringing Alex’s favorite dish for dinner. They read the following:

“One person will be responsible for ordering and paying for the ingredients for the dish from Whole Foods and arranging to have them delivered to the person who will cook the meal. This task will cost money but shouldn’t take a lot of time or effort. Another person will be responsible for cooking the dish. Cooking the dish requires concentration because it involves a lot of multi-tasking. This task will be effortful but shouldn’t take a lot of time and won’t cost any money. Another person will be responsible for picking up the dish and delivering it to the hospital. They won’t be able to see Alex because the hospital does not
allow visits yet. This task will be time-consuming but shouldn’t take a lot of effort and won’t cost any money.”

Next, participants were randomly assigned to imagine that they performed one of these three tasks and indicated to what extent they would feel like a dedicated, loving, and good friend using the same three measures as in Study 1A (α = .93). Participants also indicated which task they thought best showed that they cared for their friend at the hospital and which task they would prefer to do (in both cases, they selected one of the three tasks).

Results

Consistent with our theorizing, we find that not all resources invested in caregiving have the same impact on caregivers’ self-perceptions ($F(2, 298) = 8.45, p < .001, \eta^2 = .05$). Participants who imagined investing effort reported feeling like better caregivers ($M = 5.95, SD = 1.14$) compared to those who invested time ($M = 5.43, SD = 1.12$) or money ($M = 5.29, SD = 1.33$). Post hoc Bonferroni tests revealed that effort differed from money ($p < .001$) and time ($p = .007$) but the latter two were not significantly different from each other ($p > .250$).

Similarly, most participants indicated that the task that would best show that they care for their friend would be investing effort to cook the meal (76.4%) rather than the task that involved time (14.3%) or money (9.3%), supporting the claim that effort is uniquely valued because of its symbolic signal; this distribution was significantly different from an expected distribution with three equal categories ($\chi^2(2, N = 301) = 252.49, p < .001$). Finally, 43.9% of participants reported they would choose to cook the dish (the task that involved investing effort) rather than the task that involved investing time (36.5%) or money (19.6%); this distribution was significantly
different from an expected distribution where the three resources were chosen evenly ($\chi^2(2, N = 301) = 27.95, p < .001$).

Discussion

Consumers feel like better caregivers when they invest effort rather than when they invest other resources like time or money. Time spent and effort exerted are often correlated, but by separating them out in this study, we can establish that when caring for others, consumers value effort more than time because of its unique ability to signal love and care.

**STUDY 3: FUNCTIONAL VS. SYMBOLIC GOALS**

Consumers may have at least two goals when caring for close others: one is functional (whether they succeed at taking care of their loved one) and another is symbolic (whether they demonstrate that they care for their loved one). When using an effort-reducing product that simplifies caregiving, consumers are likely to fulfill their functional goals but perhaps not the more symbolic ones, to the degree that effort signals caring for others. Study 3 tests why using an effort-reducing product to simplify caregiving negatively affects caregivers’ self-perceptions.

In this study, consumers imagined using an automatic or a manual coffee maker to prepare coffee for their partner every morning. We predicted that consumers who used the automatic coffee maker would feel like worse caregivers and would think their caregiving task was less successful at achieving the symbolic goal of showing they love their partner. Most importantly, we predicted that symbolic meaning of the task would mediate the effect of effort on caregivers’ self-perceptions. This study was preregistered on AsPredicted.org (#35852).
Method

Participants. Four hundred participants (51% male; $M_{\text{age}} = 40.37$ years, $SD = 12.22$) recruited through MTurk completed an online study for monetary compensation.

Procedure. Participants imagined they prepared coffee for their partner every morning using an automatic or a manual coffee maker and read one of two descriptions of their task:

**Automatic coffee maker** condition: “This means that you don’t have to wake up because you already set a timer once so the machine automatically prepares the coffee every morning. When you set the timer, you also adjusted the water temperature and brew time so you don’t have to do this every morning.”

**Manual coffee maker** condition: “This means that every morning, you have to wake up and press a button to start the coffee machine. You also have to adjust the water temperature and brew time every morning.”

Participants answered the three-item caregiver self-perception scale used in previous studies ($\alpha = .95$). Then, they answered two questions about the functional and symbolic goals of their caregiving task: they indicated to what extent they thought that their task of preparing coffee for their partner using this coffee maker achieved the goal of (a) satisfying their partner’s need for caffeine (functional goal) and (b) showing that they love their partner (symbolic goal); both items were presented on 7-point scales ($1 = \text{Not at all}; 7 = \text{Very much}$).

On the next page, participants answered two questions presented in a random order: “How tasty do you think the coffee you prepare with this machine is?” ($1 = \text{Not at all tasty}; 7 = \text{Very tasty}$) and “How would you describe your task of preparing coffee for your partner every morning using this coffee maker?” ($1 = \text{Definitely effortless}; 7 = \text{Definitely effortful}$).
Results

*Perceptions of effort.* As intended, participants assigned to the manual coffee maker condition reported that preparing coffee for their partner every morning would require more effort than those who imagined using the automatic coffee maker (\(M_{\text{manual}} = 4.33, SD = 1.59\) vs. \(M_{\text{automatic}} = 2.81, SD = 1.44\); \(t(398) = 9.99, p < .001, d = 1.00\)).

*Caregivers’ self-perceptions.* Replicating results from previous studies, participants using the effort-reducing automatic coffee maker reported feeling like worse caregivers than those who used the more effortful manual coffee maker (\(M_{\text{automatic}} = 5.59, SD = 1.36\) vs. \(M_{\text{manual}} = 5.97, SD = 1.00\); \(t(398) = 3.22, p = .001, d = .32\)).

*Functional versus symbolic goals.* Participants using the automatic coffee maker thought they would achieve their functional goal of satisfying their partner’s need for caffeine equally as well as those using the manual coffee maker (\(M_{\text{automatic}} = 6.20, SD = 1.23\) vs. \(M_{\text{manual}} = 6.03, SD = 1.19\); \(t(398) = 1.33, p = .183, d = .14\)). However, participants using the automatic coffee maker thought they would not achieve their symbolic goal of showing that they loved their partner as well as participants using the manual coffee maker (\(M_{\text{automatic}} = 5.52, SD = 1.45\) vs. \(M_{\text{manual}} = 5.80, SD = 1.21\); \(t(398) = 2.06, p = .041, d = .21\)).

*Mediation.* Finally, the effect of effort on caregivers’ self-perceptions was mediated by their perceived success at achieving their symbolic goal of signaling their love. We tested this indirect effect using model 4 in PROCESS MACRO (Hayes 2017), with 5,000 bootstrapped samples. When we entered symbolic goal into the model, the impact of effort on caregivers’ self-perceptions was reduced from \(b = .38, SE = .12, p = .001\) to \(b = .20, SE = .08, p = .012\). More importantly, we find a significant indirect effect of effort on caregivers’ self-perceptions through
symbolic goal, \( a \times b = .19, \text{SE} = .09, 95\% \text{ CI} [.01, .37] \). When we added the functional goal item to a second model testing for parallel mediation, the indirect effect of symbolic goal held \( (a \times b = .17, \text{SE} = .08, 95\% \text{ CI} [.01, .35]) \) and the indirect effect of functional goal was not significant \( (a \times b = -.03, \text{SE} = .02, 95\% \text{ CI} [-.08, .01]) \).

*Quality of care.* Participants using the automatic coffee maker thought the coffee would taste just as good as those using the manual coffee maker \( (M_{\text{automatic}} = 5.56, SD = 1.15 \text{ vs. } M_{\text{manual}} = 5.67, SD = 1.15; t(398) = .95, p = .344, d = .10) \). All results held when controlling for how tasty the coffee was perceived to be, suggesting that differences in perceived quality of care cannot account for the relationship between effort and self-perceptions.

Discussion

We again demonstrate that consumers feel like worse caregivers when they use an effort-reducing product that simplifies caregiving. We show that this relationship is rooted in the symbolic meaning of using an effort-reducing product, rather than to that product’s functional ability to provide care or to perceptions that effortful caregiving leads to higher quality of care.

While participants in our initial studies received information about the counterfactual option, in this study as well as in the remaining studies assessing caregivers’ self-perceptions, participants only considered a single option (e.g., in this study, participants read only about using an automatic or a manual coffee maker). Our results replicate in studies with single evaluation addressing the possibility that consumers might feel like worse caregivers not because they exerted less effort, but because they were made explicitly aware of the more effortful alternative.

**STUDY 4: WHICH CAREGIVING TASKS HAVE THE MOST SYMBOLIC MEANING?**
Effort may be more meaningful in some caregiving tasks than others. In particular, caring for a loved one’s feelings may do more to show the caregiver’s own feelings for that person than taking care of a loved one’s physical self—something that is still important, but less unique and revealing of the relationship between the caregiver and the recipient. Indeed, participants in a pilot study on MTurk (N = 100; 55% male; M = 38.20 years, SD = 10.52) were asked whether they can better show their love by taking care of a loved one’s emotional or physical well-being on 7-point scale (1 = Definitely by taking care of their emotional well-being; 7 = Definitely by taking care of their physical well-being). Participants gave a mean response (M = 3.26, SD = 1.47; t(99) = -5.02, p < .001) that indicated that people believe that a better way to show someone how much they are loved and cared about is by taking care of that person’s emotional self rather than their physical self. With this in mind, in Study 4, we examine whether the tendency for consumers to feel like worse caregivers when they use an effort-reducing alternative for caregiving is stronger for caregiving tasks intended to provide emotional (vs. physical) support, as such tasks likely have greater symbolic meaning.

Method

Participants. Four hundred participants recruited through MTurk completed an online study for monetary compensation (50% male; M = 41.67 years, SD = 12.19).

Procedure. We manipulated between-subjects whether participants used a service to perform the caregiving task (low vs. high effort) and the type of support that the caregiving task gave the recipient (physical vs. emotional). Participants imagined that an elderly relative who lived nearby needed to go for a walk every day. The relative needed someone to walk with them to help them keep their balance so that they did not fall down (physical support conditions) or to
keep them company so that they did not feel lonely (emotional support conditions). Participants read that they hired a nurse to accompany their relative on their walk (low effort conditions) or that they themselves accompanied their relative on their walk (high effort conditions).

Immediately after, participants completed the caregiver self-perceptions scale used in previous studies ($\alpha = .95$). On the next page, participants indicated how effortful it would be for them to hire a nurse or accompany their relative on a walk, depending on the condition to which they were assigned ($1 = $ Not at all effortful; $7 = $ Extremely effortful). Finally, participants answered two reading checks identifying details from the scenario.

Results

Perceptions of effort. As intended, participants who accompanied their relative for a walk every day reported it would be more effortful for them ($M = 4.39, SD = 1.67$) than those who hired a nurse ($M = 3.73, SD = 1.53; F(1, 396) = 17.26, p < .001, \eta^2 = .04$). However, we do not observe an effect of type of support on perceived effort ($F(1, 396) = .28, p = .595, \eta^2 < .001$) or an interaction ($F(1, 396) = .09, p = .762, \eta^2 < .001$).

Caregivers' self-perceptions. Both whether participants used a service to perform the caregiving task ($F(1, 396) = 95.33, p < .001, \eta^2 = .19$) and the type of support that the caregiving task gave the recipient impacted self-perceptions ($F(1, 396) = 7.71, p = .006, \eta^2 = .02$); these two main effects were qualified by a significant interaction ($F(1, 396) = 6.97, p = .009, \eta^2 = .02$). Participants who hired a nurse to provide emotional support felt like worse caregivers ($M = 5.05, SD = 1.47$) than those who provided emotional support themselves ($M = 6.41, SD = .77; F(1, 396) = 75.40, p < .001, \eta^2 = .16$). The effect was attenuated for physical support, albeit still significant: those who hired a nurse to provide physical support felt like worse caregivers ($M =$
5.65, SD = 1.21) than those who provided physical support themselves (M = 6.43, SD = .76; F(1, 396) = 25.90, p < .001, η² = .06). All effects held when excluding participants who failed at least one of the two reading checks included at the end of the study (e.g., the interaction of effort and support type remained significant: F(1, 368) = 11.35, p = .001, η² = .03).

Discussion

We again demonstrate that consumers feel like worse caregivers when using effort-reducing products and services to take care of close others. However, this effect is stronger when the caregiving task is intended to provide emotional rather than physical support, consistent with the notion that caring for someone’s feelings is likely to hold more symbolic meaning. Given that effort in caregiving matters more for certain tasks, might it also matter more for certain relationships?

STUDIES 5A–C: WITH WHOM IS EFFORT MOST MEANINGFUL?

Our studies to this point have shown that the use of effort-saving products and services makes people feel like worse caregivers. But might that lead them to avoid using such products and services in the first place? And does it matter for whom they are caring? We first tested whether people are especially averse to using effort-reducing products when caring for another person versus when caring for themselves (Study 5A), because using more effortful processes when taking care of someone else has greater potential to serve not just a functional purpose but also a symbolic purpose. Study 5B then tests whether people must have an established relationship with the other person for them to prefer an effortful option. Finally, Study 5C examines whether the relationship between the caregiver and the recipient must be close for
caregivers to avoid effort-reducing products. These studies were preregistered on AsPredicted.org (Study 5A: #45419; Study 5B: #35697; Study 5C: #46046).

Study 5A Method

Participants. Eight hundred and seven adults (48% male; \(M_{\text{age}} = 37.77\) years, \(SD = 11.94\)) recruited via Prolific Academic completed an online study for monetary compensation.

Procedure. We recruited participants who were living with their spouse or partner using one of Prolific’s custom prescreening questions (i.e., Do you live with a spouse or partner?). Participants who qualified were offered the opportunity to give themselves (self condition) or their partner (other condition) a little TLC (i.e., tender loving care) during the COVID-19 pandemic in the form of freshly baked cookies. Participants then made a choice between cookie mix that needed additional effort before baking (high effort option) and frozen cookie dough that was ready to be baked (low effort option). Both options were offered by the same vendor (Le Marais Bakery), had a similar price, and yielded the same amount of cookies (see study materials in Appendix B). To make the choice consequential, participants read that we had partnered with Le Marais Bakery and that one participant would be randomly selected as the winner of a $50 gift certificate to purchase the product they selected in the study.

Next, participants indicated how tasty the cookies they would make with the mix and the frozen dough would be, how enjoyable the process of making cookies with both alternatives would be, and how effortful making cookies with both alternatives would be; all measures were presented on 7-point scales. Finally, participants completed three measures adapted from Leung et al. (2018) to measure the extent to which baking was part of their identity (\(\alpha = .94\); e.g., “Baking is one of my favorite hobbies”). Once the study closed, we randomly selected one
winner and sent them a $50 Gifly ecard to purchase the product from Le Marais that they had selected.

Study 5A Results

Perceptions of effort. As intended, participants indicated that making cookies with a mix would be more effortful than with frozen dough ($M_{\text{high effort}} = 5.00, SD = 1.48$ vs. $M_{\text{low effort}} = 2.87, SD = 1.77; t(806) = 33.04, p < .001, d = 1.16$) and these perceptions did not vary by condition (high effort: $t(805) = .38, p = .704, d = .03$; low effort: $t(805) = .72, p = .474, d = .05$).

Choice. As predicted, more participants chose the more effortful option when taking care of their partner (44.1%) than themselves (36.0%; $\chi^2(1, N = 807) = 5.49, p = .019, \phi = .08$).

Quality of care. Even though participants thought that baking cookies using a mix would result in tastier cookies than using the frozen dough ($M_{\text{high effort}} = 6.00, SD = 1.04$ vs. $M_{\text{low effort}} = 5.69, SD = 1.16; t(806) = 6.66, p < .001, d = .24$), the effect of condition on choice remained significant when controlling for how tasty both options were perceived to be ($b = .33, SE = .16, \text{Wald} = 4.47, p = .035, \text{Exp}(B) = 1.40$).

Baking identity. Participants who had a strong identity as a baker were more likely to choose the effortful option ($b = .40, SE = .05, \text{Wald} = 77.40, p < .001, \text{Exp}(B) = 1.49$). Importantly, the effect of condition on choice remained significant ($b = .37, SE = .15, \text{Wald} = 5.94, p = .015, \text{Exp}(B) = 1.45$) when controlling for baking identity; a follow-up binary logistic regression revealed that baking identity did not moderate the effect of condition on choice.

Enjoyment. Participants thought that making cookies with a mix would be as enjoyable as making cookies with frozen dough ($M_{\text{high effort}} = 5.24, SD = 1.57$ vs. $M_{\text{low effort}} = 5.22, SD = 1.38; t(806) = .27, p = .789, d = .01$).
Study 5B Method

Participants. Two hundred and fourteen undergraduates (44% male; \( M_{\text{age}} = 19.47 \) years, \( SD = 1.02 \)) at a Midwestern university participated in a laboratory study in exchange for course credit. The sample size was determined by the number of students participating for credit in studies in the behavioral lab in one week (February 17 through February 21, 2020).

Procedure. Participants first read that February 26, 2020 was “Letter to an Elder Day” and that, as part of the study, they would write a letter to take care of an elderly person. As in study 1B, this task was framed as a caregiving gesture by including a similar description of the effect of social connection on a variety of outcomes related to well-being, especially among the elderly. Participants then read that they would send a card to their grandparent or an elderly relative (grandparent condition) or to an elderly stranger (stranger condition). To make this task consequential, everyone was informed that at the end of the week, their card would be mailed to their grandparent or an elderly stranger.

On the next pages, participants made two choices about the postcard they would send. They first chose the front of the postcard by selecting one of two alternatives; this first step was used to disguise the purpose of the study. Next, they chose the back of the postcard; this choice was our key dependent measure because participants made a choice between using a card with a prewritten message (low effort option) and using a card with a blank space for them to write their own message (high effort option; see postcard options in Appendix C).

After choosing their postcard, participants answered two manipulation check questions: they indicated how close they felt to the recipient of the card they would send (1 = Not at all close; 7 = Extremely close) and what would be more effortful for them (1 = Using a postcard
with a prewritten message would be more effortful; 7 = Writing your own message would be more effortful). All participants then asked a research assistant for the postcard they had chosen and filled out the card. At the end of the study, we mailed the postcards to grandparents (participants wrote their grandparents’ address on the postcard) and to the organization “Love for the Elderly” for them to distribute the cards in nursing homes.

Study 5B Results

*Manipulation checks.* As expected, participants writing to a grandparent felt closer to the recipient of their card (\(M = 5.43, SD = 1.32\)) than those writing to a stranger (\(M = 2.10, SD = 1.80\); \(t(212) = 15.42, p < .001, d = 2.11\)). Additionally, participants agreed that writing their own message would more effortful than using a card with a premade message (\(M_{\text{own}} = 6.18, SD = 1.15\); one-sample \(t(213) = 27.62, p < .001, d = 1.90\) vs. midpoint = 4) and this perception did not vary by condition (\(M_{\text{grandparent}} = 6.20, SD = 1.05\) vs. \(M_{\text{stranger}} = 6.16, SD = 1.25\); \(t(212) = .24, p = .813, d = .03\)).

*Choice.* More participants invested greater effort and chose the blank postcard when taking care of a grandparent (73.8%), compared to participants sending a postcard to an elderly stranger (60.7%; \(\chi^2(1, N = 214) = 4.16, p = .041, \phi = .14\)).

Study 5C Method

*Participants.* Four hundred adults (50% male; \(M_{\text{age}} = 42.18\) years, \(SD = 13.24\)) recruited through MTurk completed an online study for monetary compensation.

*Procedure.* This study was similar to Study 5A, where participants made a consequential choice between baking cookies with a mix or with frozen dough to take care of someone else
during the COVID-19 pandemic. Here, however, participants thought of the first name of a neighbor they felt very close to (close condition) or they did not feel very close to (distant condition) and decided which of the two cookies to bake for that person. After, participants answered questions about functional and symbolic caregiving goals: they indicated to what extent it was important for them to (a) satisfy their neighbor’s appetite for baked goods (functional goal) and (b) show they cared for their neighbor (symbolic goal); both items were presented on 7-point scales (1 = Not at all; 7 = Very much).

On the next page, participants answered the same follow-up measures as in Study 5A reporting how tasty the cookies would be, how enjoyable the baking process would be, and how effortful it would be for them to bake cookies using both products. As a manipulation check, participants indicated how close their relationship with the neighbor they named at the beginning of the study was (1 = Not at all close; 7 = Extremely close). Finally, participants answered the baking identity measures from Study 5A. Again, we randomly sent one participant a $50 Gifly ecard to purchase the product they had selected.

Study 5C Results

*Manipulation checks.* As intended, participants in the close condition reported they had a closer relationship with the neighbor they named than participants in the distant condition ($M_{close} = 5.72, SD = 1.04$ vs. $M_{distant} = 1.96, SD = 1.03$; $t(398) = 36.40, p < .001, d = 3.64$). Also as intended, participants indicated that making cookies with a mix would be more effortful than using frozen dough ($M_{mix} = 5.31, SD = 1.32$ vs. $M_{dough} = 3.02, SD = 1.49$; $t(399) = 27.86, p < .001, d = 1.39$) and these perceptions did not vary by condition (cookie mix: $t(398) = .51, p = .612, d = .05$; frozen cookie dough: $t(398) = 1.32, p = .189, d = .13$).
Choice. As predicted, more participants chose the effortful option for a neighbor with whom they had a close relationship (28.6%) than for a neighbor with whom they had a distant relationship (15.4%; $\chi^2(1, N = 400) = 10.19, p = .001, \phi = .16$).

Functional versus symbolic goals. Compared to participants caring for a distant neighbor, participants caring for a close one indicated it was more important to satisfy their neighbor’s appetite for baked good ($M_{\text{close}} = 5.38, SD = 1.48$ vs. $M_{\text{distant}} = 3.70, SD = 1.86$; $t(398) = 9.99, p < .001, d = 1.00$) and also showed they cared about their neighbor ($M_{\text{close}} = 6.03, SD = 1.05$ vs. $M_{\text{distant}} = 3.79, SD = 1.72$; $t(398) = 15.68, p < .001, d = 1.57$).

To test whether symbolic or functional goals explained the effect of condition on choice, we conducted a parallel mediation analysis using model 4 in PROCESS MACRO with 5,000 bootstrapped samples (Hayes 2017). When both mediators were added to the model, the effect of closeness condition on choice decreased from $b = .79, SE = .25, p = .002$ to $b = .14, SE = .31, p = .652$. Importantly, we find a significant indirect effect of condition on choice through symbolic goal, $a \times b = .90, SE = .33$, 95% CI [.30, 1.57]; however, the indirect effect through functional goal was not significant: $a \times b = -.18, SE = .17$, 95% CI [-.51, .15].

Quality of care. As in study 5A, participants thought that baking cookies using a mix would lead to tastier cookies than using the frozen dough ($M_{\text{high effort}} = 5.84, SD = 1.09$ vs. $M_{\text{low effort}} = 5.67, SD = 1.23$; $t(399) = 2.58, p = .010, d = .13$). However, the effect of condition on choice remained significant when controlling for how tasty both options were perceived to be ($b = .86, SE = .27, Wald = 9.98, p = .002, \text{Exp}(B) = 2.37$).

Baking identity. As in Study 5A, participants who had a strong identity as a baker were more likely to choose the effortful option ($b = .46, SE = .07, Wald = 38.98, p < .001, \text{Exp}(B) = 1.58$). The effect of condition on choice remained significant ($b = .78, SE = .27, Wald = 8.54, p =
.003, \( \text{Exp}(B) = 2.17 \) when controlling for baking identity; a follow-up binary logistic regression model showed that baking identity did not moderate the effect of condition on choice.

*Enjoyment.* Participants thought that making cookies with a mix would be less enjoyable than making cookies with frozen dough (\( M_{\text{high effort}} = 4.36, SD = 1.77 \) vs. \( M_{\text{low effort}} = 4.84, SD = 1.46; t(399) = 5.18, p < .001, d = .26 \)). Importantly, the effect of condition on choice remained significant (\( b = .72, SE = .31, \text{Wald} = 5.52, p = .019, \text{Exp}(B) = 2.06 \)) when controlling for how enjoyable both types of cookies were to make.

Discussion

Together, these three studies show that the preference for effort is stronger when the caregiving task has more potential to serve a symbolic purpose: consumers are more likely to prefer effortful options when caring for another person with whom they have an established relationship that is especially close, versus when caring for themselves, for strangers, or for more distant others. Relationships do not vary only according to how close they are, however; they also have their own norms and expectations. In particular, caregivers may feel more comfortable using effort-reducing products when a loved one has shown in the past that effort is not expected. We test this idea next.

**STUDY 6: CAREGIVING RELATIONSHIP NORMS AND SYMBOLIC CURRENCY**

The studies presented so far suggest that the default expectation in many relationships is that caregiving should be effortful in order to signal love and care. In Study 6, we examine what happens when the recipient establishes a norm that effort is not expected in the context of that relationship. We hypothesize that when a recipient changes the norm and signals to the caregiver...
that the relationship is one in which effort is not required—for example, by using an effort-reducing product when the roles were reversed and the recipient was the caregiver—using an effort-reducing product should be less damaging to caregivers’ self-perceptions. This study was preregistered on AsPredicted.org (#36522).

Method

Participants. Six hundred and two participants recruited through MTurk completed an online study for monetary compensation (51% male; $M_{age} = 41.01$ years, $SD = 12.24$).

Procedure. Participants imagined their romantic partner was sick. They were told that they were taking care of their partner and opted to cook chicken noodle soup (self-high effort conditions) or to buy chicken noodle soup from a local store (self-low effort conditions). Participants also learned that the last time they themselves were sick, their partner cooked soup (partner-high effort conditions) or bought soup for them (partner-low effort conditions).

Participants completed the caregiver self-perceptions scale used in previous studies ($\alpha = .97$). On the next page, participants answered questions about functional and symbolic goals: they indicated to what extent they thought that cooking/buying soup for their partner achieved the goal of (a) satisfying their partner’s hunger and (b) showing they love their partner; both items were presented on 7-point scales (1 = Not at all; 7 = Very much). Next, participants reported how nutritious and tasty the soup would be (1 = Not at all; 7 = Very much) and how effortful they thought the task of providing dinner for their partner was (1 = Definitely effortless; 7 = definitely effortful).

Results
Perceptions of effort. As intended, participants who cooked the soup reported they exerted more effort than those who bought the soup \((M_{\text{self-high effort}} = 5.14, SD = 1.54 \text{ vs. } M_{\text{self-low effort}} = 3.67, SD = 1.64; F(1, 598) = 129.27, p < .001, \eta^2_p = .18)\). We do not observe an effect of partner’s past behavior \((F(1, 598) = .08, p = .776, \eta^2_p < .001)\) or a significant interaction \((F(1, 598) = .12, p = .726, \eta^2_p < .001)\), demonstrating that knowing about a partner’s past effort on a similar task does not change individuals’ perceptions about how effortful a task is.

Caregivers’ self-perceptions. Both the caregiver’s effort \((F(1, 598) = 45.55, p < .001, \eta^2_p = .07)\) and the partner’s past behavior impacted self-perceptions \((F(1, 598) = 13.20, p < .001, \eta^2_p = .02)\). However, these two main effects were qualified by a significant interaction \((F(1, 598) = 11.09, p = .001, \eta^2_p = .02)\). When their partner cooked soup for them the last time they were sick, we replicate our effect: simple effects revealed that participants who bought soup felt like worse caregivers than those who cooked soup \((M_{\text{self-low effort}} = 5.36, SD = 1.46 \text{ vs. } M_{\text{self-high effort}} = 6.32, SD = 1.01; F(1, 598) = 50.80, p < .001)\). In contrast, the effect of effort is attenuated when there is a different norm: participants who bought the soup did not feel as bad about themselves when they knew their partner bought soup for them in the past \((M_{\text{self-low effort}} = 6.02, SD = 1.16 \text{ vs. } M_{\text{self-high effort}} = 6.34, SD = .96; F(1, 598) = 5.84, p = .016; \text{ See Figure 1.1})\).

Symbolic goal. The caregiver’s effort \((F(1, 598) = 25.09, p < .001, \eta^2_p = .04)\) and the partner’s past behavior also impacted symbolic meaning \((F(1, 598) = 6.60, p = .010, \eta^2_p = .01)\); these main effects were qualified by a significant interaction \((F(1, 598) = 10.32, p = .001, \eta^2_p = .02)\). When their partner cooked soup for them the last time they were sick, simple effects revealed that participants who bought soup thought their gesture had less symbolic meaning than those who cooked soup \((M_{\text{self-low effort}} = 5.65, SD = 1.33 \text{ vs. } M_{\text{self-high effort}} = 6.39, SD = .95; F(1, 598) = 33.81, p < .001)\). In contrast, this effect is attenuated when participants read that their partner...
previously bought soup ($M_{\text{self-low}} = 6.17, SD = 1.06$ vs. $M_{\text{self-high}} = 6.33, SD = 1.03$; $F(1, 598) = 1.61, p = .205$; See Figure 1.2).
Moderated mediation. Finally, to test whether symbolic meaning explained the effect of effort on caregivers’ self-perceptions, we conducted a moderated mediation analysis using model 7 in PROCESS MACRO with 5,000 bootstrapped samples (Hayes 2017). The results revealed a significant index of moderated mediation \((a \times b = .50, SE = 0.16, 95\% CI = [.20, .80])\). The indirect effect through symbolic meaning was significant when the partner cooked soup in the past \((a \times b = .64, SE = .12, 95\% CI = .41, .88])\) but not when the partner bought soup \((a \times b = .14, SE = .11, 95\% CI = [-.06, .35])\).

Functional goal. We do not observe differences between conditions in terms of whether the soup satisfied the functional goal of caregiving. Participants who cooked soup reported that it would satisfy their partner’s hunger to the same extent as did those who bought soup \((M_{high\_effort} = 6.00, SD = 1.22 \text{ vs. } M_{low\_effort} = 5.97, SD = 1.23; F(1, 598) = .10, p = .751, \eta^2 < .001)\).

Quality of care. Participants thought that home-cooked soup would taste better \((M_{high\_effort} = 5.97, SD = 1.14 \text{ vs. } M_{low\_effort} = 5.43, SD = 1.19; F(1, 598) = 32.70, p < .001, \eta^2 = .05)\) and be more nutritious \((M_{high\_effort} = 5.96, SD = 1.17 \text{ vs. } M_{low\_effort} = 5.19, SD = 1.24; F(1, 598) = 61.73, p < .001, \eta^2 = .09)\) than store-bought soup. However, the results reported above do not change when controlling for quality of care: for example, the interaction of self and partner effort on self-perceptions remained significant \((F(1, 597) = 10.55, p = .001, \eta^2 = .02; \text{ see all robustness checks in Appendix D})\).

Discussion

Study 6 shows that, when the recipient of care sets a relationship norm that effort is not expected, effort-reducing products have a smaller impact on caregiver self-perceptions. That is, in situations when the recipient has signaled that effort does not carry as much symbolic
currency in the relationship, consumers do not feel as bad about themselves when using products that simplify caregiving. Given that effort-reducing products do have benefits even in relationships where effort is still part of how people show they love each other, we end by examining whether marketers can mitigate the negative self-evaluations that arise when consumers use them to take care of close others.

**STUDY 7: REFRAMING INTERVENTION**

The goal of this last study is to test an intervention to soften the negative self-evaluations that arise when consumers use effort-reducing products to take care of close others. We suggest that highlighting the effort that caregivers put into caring, as opposed to highlighting how the product makes caregiving less effortful, is a strategy that marketers could use to promote usage of effort-reducing products. Additionally, in this last study, we framed the same product as requiring more versus less effort from the caregiver and thus hold constant the quality of care.

**Method**

*Participants.* Six hundred and one participants recruited from MTurk completed an online study for monetary compensation (48% male; $M_{age} = 40.53$ years, $SD = 12.55$).

*Procedure.* Participants imagined they had to prepare dinner for their family every day, so they subscribed to a pre-planned meal service, through which they would receive a box with the ingredients and recipes to cook the meals. Half of the participants saw an ad with the tagline “An easy-to-prepare, tasty route to a well-fed family” and read that “this service requires very little of your effort and time when taking care of your family because the company sends you the ingredients and recipes and you only have to cook the meals” (low effort condition). The other
half saw an ad with the tagline “A tasty route to a well-fed family” and read that “this service requires a lot of your effort and time when taking care of your family because the company only sends you the ingredients and recipes but you still have to cook the meals” (high effort condition).

After reviewing the information about the meal service, participants answered the same caregiver self-perceptions scale used in previous studies ($\alpha = .95$). On the next page, they answered four questions presented in random order: “How tasty do you think these meals are?” “How nutritious do you think these meals are?” “How expensive do you think this meal delivery is?” “How would you describe the task of cooking meals for your family using this meal service?” The first three items were measured on scales from “1 = Not at all” to “7 = Very much” and the last item was measured on a scale from “1 = Definitely effortless” to “7 = Definitely effortful”.

Results and Discussion

*Perceptions of effort.* As intended, participants in the high effort condition indicated that their task of preparing dinner for their family using this meal service would require more effort than participants in the low effort condition ($M_{\text{high effort}} = 5.09, SD = 1.41$ vs. $M_{\text{low effort}} = 3.95, SD = 1.38$; $t(599) = 9.99, p < .001, d = .82$).

*Caregivers’ self-perceptions.* Participants in the high effort condition reported they would feel like better caregivers if they used this meal service than those in the low effort condition ($M_{\text{high effort}} = 5.51, SD = 1.26$ vs. $M_{\text{low effort}} = 5.29, SD = 1.32$; $t(599) = 2.11, p = .035, d = .17$), suggesting that marketers can mitigate the negative feelings consumers have about using effort-reducing
products by acknowledging the effort that caregivers invest into taking care of others rather than focusing on how such products reduce required effort.

Quality of care. Participants in both conditions perceived these meals to be equally tasty ($M_{high\text{ effort}} = 5.45, SD = 1.12$ vs. $M_{low\text{ effort}} = 5.42, SD = 1.04$; $t(599) = 0.29, p = .771, d = .03$) and nutritious ($M_{high\text{ effort}} = 5.54, SD = 1.02$ vs. $M_{low\text{ effort}} = 5.54, SD = 1.03$; $t(599) = .02, p = .988, d < .001$) and the effect of effort on caregivers’ self-perceptions held when controlling for how tasty and how nutritious the meals were perceived to be ($F(1, 597) = 5.52, p = .019, \eta^2 = .01$).

Expensiveness. Participants in the high effort condition thought the meal service was more expensive than those in the low effort condition ($M_{high\text{ effort}} = 5.75, SD = 1.14$ vs. $M_{low\text{ effort}} = 5.54, SD = 1.14$; $t(599) = 2.37, p = .018, d = .18$); however, the effect of effort on caregivers’ self-perceptions held when controlling for cost perceptions ($F(1, 598) = 5.11, p = .024, \eta^2 = .01$).

GENERAL DISCUSSION
Consumers feel like worse caregivers when they use effort-reducing products that simplify their tasks when taking care of close others. These negative effects stem from the symbolic meaning of effort in caregiving, rather than from effort having greater functional ability to provide care or from perceptions that effortful caregiving leads to higher quality of care: choosing easier routes to caring for loved ones makes consumers feel that they are doing a worse job of demonstrating that they deeply care about the close others they are caring for.

The finding that consumers feel worse about themselves when they use a product that simplifies caregiving because they believe their gestures lack symbolic meaning, even when those gestures fulfill their functional purpose is consistent with past work in other domains, like gift-giving (e.g., Flynn and Adams 2009; Zhang and Epley 2012) and taboo trade-offs (e.g.,
McGraw and Tetlock 2005; Tetlock 2003), that have shown that consumers think it is important—even morally important—not to take shortcuts on behalf of those they love. However, even though qualitative work on outsourcing parenting tasks has also suggested similar hesitations (Epp and Velagaleti 2014), recent experimental research indicates that outsourcing household tasks—by paying for housekeeping or yardwork, for example—can make consumers happier and improve their relationship satisfaction (Whillans et al. 2017; Whillans et al. 2018). How do we reconcile the negative emotional consequences that we demonstrate here with the emotional benefits of outsourcing? Notably, Whillans et al. (2017, 2018) studied the outsourcing of disliked tasks that are more indirect forms of caregiving (e.g., doing laundry, mowing the lawn), rather than the direct ministrations that we examined here (e.g., taking care of sick partners, making elderly relatives feel cared for). We suspect that taking shortcuts on indirect caregiving tasks would be less likely to prompt negative reactions in caregivers because such tasks are weaker symbolic signals in the first place.

Theoretical Implications

With respect to theory, we contribute to the literature on effort valuation in several ways. First, we show that investing effort plays a critical role when providing direct care to close others: the amount of effort that consumers exert in a caregiving task shapes their self-perceptions as caregivers, even when using effort-reducing products allows consumers to provide equally high-quality care to the recipient. By focusing on the interpersonal and understudied context of caregiving, we demonstrate that the effect of effort is unique to situations involving caring for close others and is less applicable when caring for oneself, strangers, or more distant others. And whereas prior work has shown that effort affects consumers’ evaluation of products
(c.f., Kruger et al. 2004; Leung et al. 2018), we show that even when controlling for quality of care, consumers believe that effort makes caregiving symbolically meaningful. Finally, we also contribute to the literature on how spending different resources reflects on the self. Whereas recent work has focused on understanding the differences between time and money (c.f., Mogilner and Aaker 2009; Reed et al. 2007; Whillans, Weidman, and Dunn 2016), effort as a psychologically distinct resource has been less studied. And even though effort and time are often correlated, by separating them in some of our studies, we demonstrate that investing effort in caregiving is uniquely perceived as an active labor of love.

We also contribute to the literature on close relationships and join the growing call for research on consumer decision-making involving close others (Cavanaugh 2016; Gorlin and Dhar 2012; Liu et al. 2019; Simpson, Griskevicius, and Rothman 2012). We answer this call by examining how consumers balance two types of goals they have when providing direct care to close others: not only functional goals (like providing care to the recipient) but also symbolic goals (like showing they love and care about the recipient). Future research could examine the interpersonal consequences of exerting effort in caregiving tasks. For example, how do recipients weigh effort versus quality? And what happens when caregivers and recipients disagree on whether effort signals love? Similarly, future research could also explore the long-term consequences of exerting effort in caregiving tasks using longitudinal methods. Whereas all the studies presented in this investigation correspond to one-shot opportunities, caregivers are often responsible for doing a series of tasks for the same recipients over time. For example, do caregivers balance the amount of effort they exert in a relationship? Does exerting effort in one task license the caregiver to go with the effort-reducing product in a subsequent task?
Marketing Implications

This work also has important marketing implications for developing and communicating about products that simplify caregiving. An important question for marketers is whether there are ways to make effort-reducing products to take care of loved ones more appealing, so that consumers do not avoid them for fear of feeling like bad caregivers. One solution could be to modify how effort-reducing products are advertised; as Study 7 demonstrates, reminding consumers that products save effort in caregiving situations can backfire. Future research could also explore other marketing strategies such as highlighting the long-term well-being benefits of using effort-reducing products or the fact that these products can help consumers juggle multiple caregiving responsibilities they have. After all, it is not just marketers who would benefit from greater sales of effort-reducing products—the consumers who use them would, as well.

Conclusion

Although many people often find effort-reducing products to be appealing, we demonstrate a notable exception: when those products are intended to be used to care for and show love to others. Using effort-reducing products for such purposes leads caregivers to feel like they are doing a worse job, even when the objective outcome of their caregiving is equivalent to that of using more effortful processes. Hence, marketers should place a high priority on giving consumers ways to care for their loved ones that make their lives easier but also help them sleep more soundly, knowing the love they put into their caregiving truly shows.
Shared Time Scarcity and the Pursuit of Extraordinary Experiences

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Abstract
We document a relationship maintenance strategy that individuals use when they perceive their time with a partner as scarce (versus abundant): choosing to share extraordinary experiences (i.e., those characterized by uniqueness and superiority; Pilot Study: N = 57). We first test this notion in a social media experiment (Study 1: N = 35,848 ad impressions). We then demonstrate that prioritizing extraordinary experiences is a relationship maintenance strategy: when facing shared time scarcity, individuals have a desire to be remembered by their partner as a way of sustaining the focal relationship (Study 2: N = 393). This leads them to prioritize extraordinariness over other attributes like quantity (Study 3: N = 100) or convenience (Study 4: N = 799), which occurs only when individuals have a strong relationship maintenance goal (Study 4). Taken together, this work advances our understanding of the antecedents of experiential choices in close relationships.
INTRODUCTION

While being socially connected is a strong predictor of a happy and meaningful life (Baumeister and Leary 1995), shared time with loved ones is becoming increasingly scarce. For instance, a study found that American families spend only 37 minutes of quality time together per day, and the average family has only seven days a year to go on vacation (Paul 2018). Recent estimates indicate that almost four million married Americans reported living apart from their spouses (US Census Bureau 2018), thereby invariably becoming restricted in their ability to see each other frequently (Stafford and Merolla 2007). And the number of dual-career households is on the rise (Pew Research 2016), increasing the likelihood of conflicting work schedules that prevent partners from seeing each other.

Personal relationships satisfy fundamental needs such as emotional closeness, social support, and security (Hazan and Shaver 1987). Although relationships between partners and friends vary in their levels of interdependence and commitment (Rusbult and Van Lange 2003), the more interdependent a relationship becomes, the more frequent and long-lasting the impact the partners can have on each other (Berscheid, Snyder, and Omoto 1989). However, the very interdependence that confers benefits to relationships may be threatened when individuals feel they have limited time with their partners.

Here, we examine how perceptions of shared time in close relationships impacts preferences for shared experiences. We demonstrate that when individuals perceive that they have limited time with a relationship partner, they will prioritize sharing extraordinary experiences over other factors such as convenience or quantity as a way of sustaining the focal relationship.
THEORETICAL DEVELOPMENT

Time is an important resource tied to outcomes such as happiness, life meaning, and social connection (Rudd, Catapano, and Aaker 2019). Like money or other tangible objects, people can perceive time to be abundant or scarce, and these perceptions are malleable (e.g., Etkin 2016). Such perceptions of resource scarcity—“sensing or observing a discrepancy between one’s current level of resources and a higher, more desirable reference point” (Cannon, Goldsmith, and Roux 2019, p. 105)—can encourage the adoption of strategies to deal with this shortage, such as engaging in activities that would afford added time (Etkin, Evangelidis, and Aaker 2015) and using their time more efficiently (Kurtz 2008; Shu and Gneezy 2010). But if individuals are unable to objectively increase the amount of resource they have on hand, they will maximize the focal resource by engaging in efficiency-seeking behaviors (Fernbach, Kan, and Lynch Jr. 2015)—such as focusing on pressing needs (Shah, Shafir, and Mullainathan 2015).

Much of this research has examined the role of resource scarcity when it is experienced alone (e.g., Perlow 1999) or in terms of money (e.g., Sharma and Alter 2012). We deviate from prior research by focusing on a specific type of resource—shared time (i.e., the perceived amount of time one has with a relationship partner)—and investigate how perceiving it as scarce influences choices for shared experiences. While there are different ways that individuals can deal with managing time scarcity (e.g., prioritizing a more convenient option), we argue that when the scarce resource is that of shared time, individuals will prioritize the extraordinariness of a shared activity. Our predictions hinge on the notion that shared time scarcity will activate relationship maintenance goals.

Why might this be? Time, compared to money, is tied to social motivations. For instance, Mogilner (2010) showed that when people are primed to think about time (versus money), they
spend more time socializing. Relatedly, when people become aware of their remaining time (e.g., as a result of aging), they prioritize relationships over professional ambitions (Loewenstein 1999) and prefer relationships that are more likely to succeed (Fredrickson and Carstensen 1990). Taking stock of these findings, we suggest that when people perceive their time with a relationship partner to be scarce, they will engage in behaviors to sustain the focal relationship’s well-being.

Prior work has shown that people in close relationships rely on both cognitive and behavioral strategies to maintain relationships. Cognitively, people construct positive narratives about one’s partner to dampen feelings of doubt (Murray and Holmes 1993), devalue alternative partners (Johnson and Rusbult 1989), and represent oneself as part of a relationship (Agnew, Van Lange, Rusbult and Langston 1998). They also shift their behaviors to affect how their partners view the relationship—by, for instance, being more accommodating (Rusbult et al. 1991), sacrificing (Van Lange et al. 1997), and forgiving (Finkel, Rusbult, Kumashiro, and Hannon 2002).

We extend this work by suggesting that prioritizing extraordinary experiences is another form of a behavioral relationship maintenance strategy. People may believe that sharing extraordinary experiences, sometimes described as “going beyond the realm of everyday life” (Bhattacharjee and Mogilner 2014, p. 2), will help sustain the well-being of one’s relationship by helping their partners remember the relationship. In fact, extraordinary experiences are more memorable (Zhang et al. 2014) and people treat special memories as assets they should strategically protect (Zauberman, Ratner, and Kim 2008). Furthermore, unusual or novel experiences, attributes commonly associated with extraordinary experiences, are perceived as
more exciting (Aron et al. 2000) and productive (Keinan and Kivetz 2011). To summarize, we predict:

**H1:** When consumers perceive their time with a relationship partner as scarce, they will prioritize the extraordinariness of the shared experience over other factors such as convenience and quantity.

**H2:** This effect is driven by their belief that extraordinary experiences will increase the likelihood of being remembered by their partners.

**H3:** This effect will happen only when individuals have a strong (vs. weak) goal of maintaining the relationship.

**THE PRESENT RESEARCH**

We test these predictions in five studies. Because a wide variety of definitions of extraordinary experiences have been used in the existing literature, we begin by identifying the representative features of extraordinary experiences using an inductive approach (Pilot Study). Four studies then assess the causal link between shared time scarcity and preferences for extraordinary experiences.

Based on prior research showing that perceptions of resource scarcity are malleable, we operationalize shared time scarcity both in a subjective way (i.e., varying the perceptions of shared time that is available while holding the amount of time constant; Studies 1-2) and an objective one (i.e., varying the actual amount of time people have to spend with relationship partners; Studies 3-4). We also operationalize extraordinary experiences by broadly using the term “extraordinary” (Study 1) and employing more specific features derived from Pilot Study in the rest of the studies.
PILOT STUDY

To identify and validate the features that best represent the concept of extraordinary experiences, we employed the prototype methodology, a frequently used means of defining a concept (e.g., Fehr 1988). Participants generated a list of features they associate with the concept of extraordinary experiences. We expected that some characteristics of extraordinary experiences would be readily available in the minds of our participants, whereas others would be less likely to come to mind.

Method

Participants. Fifty-seven participants recruited from an online university pool in the mid-Atlantic United States completed this study (16% male; \( M_{\text{age}} = 24.05 \) years, \( SD = 8.33 \)). This population included both community members and university students. Before collecting this data, we preregistered this qualitative study on AsPredicted.org (#55482), where we decided we would target 50 participants.

Procedure. To elicit the features of extraordinary experiences, we adapted the instructions of Fehr (1988). Participants first read the following: “An extraordinary experience is a member of a large class of global concepts that researchers have found useful in characterizing certain experiences. This is a simple study to find out the characteristics and attributes of this concept.” Following Fehr (1988), we provided participants with a list of potential features of the concepts of extraversion and terror, as examples.

Participants then read the following: “When thinking about what makes an experience extraordinary, you might ask yourself: What manifestations are there of them? What thoughts do
you have about them? It might help to imagine you’re explaining the concept ‘extraordinary experience’ to a foreigner or to someone who has never experienced it. So include the obvious. Tell us how it comes about and what happens after. But emphasize a description of how one feels and acts.” We then asked participants to list as many features as they could think of to describe the concept of “extraordinary experience,” giving them space to include up to 20 attributes. On average, participants spent 4 minutes ($SD = 2.40$ minutes) working on this task and listed 11.65 attributes. On the next page, participants reported their gender and age.

Once the survey was closed, a research assistant blind to the research questions coded all responses using a procedure in which identical and highly synonymous responses were combined. A second research assistant then looked over the work, and the two assistants resolved any disagreements through discussion. Intercoder agreement was at 75%.

Results

Participants listed a total of 664 characteristics. The research assistants classified them into 32 features while combining identical and highly synonymous responses. As can be seen in Appendix E, participants associated the construct of “extraordinary experiences” with many different features suggesting the construct is multi-dimensional. At the same time, there were two features that participants seemed to agree as the most representative features of extraordinary experiences: the two most frequently listed features were “Superior” (16%) and “Unique” (15%). Each of these features also was highly related to other identified features, such as “Invaluable” (5%) and “Positive” (2%) for the former, and “Unexpected” (6%) and “Unbelievable” (3%) for the latter.
Based on this data, we operationalize extraordinariness in the following ways. First, recognizing its multi-dimensional nature and the study’s suggestion that people have an intuitive, shared understanding of extraordinariness, we simply use the term “extraordinary” to assess people’s preferences in one study (Study 1). In the rest of the studies (Studies 2-4), we operationalize extraordinariness by varying one or two of the two most frequently listed features: (1) uniqueness (i.e., the perception that the experience is one of its kind) and (2) superiority (i.e., the perception that the quality of the experience being shared transcends other alternatives to operationalize extraordinariness.

**STUDY 1**

To test whether evoking perceptions of shared time scarcity leads to preferring extraordinary experiences, we conducted a randomized control trial on a social media platform, where we ran two different ad campaigns for a product that was described as extraordinary. We predicted that the campaign evoking shared time scarcity would be more likely to generate greater interest (assessed by click-through rates) in a product described as extraordinary compared to a control campaign.

**Method**

*Participants.* We ran an experiment on a social media platform for 10 days (from May 30, 2019 through June 10, 2019). Before collecting the data, we preregistered this study on AsPredicted.org (#24194), where we decided we would run the experiment for 10 days or until we reached 60,000 individuals (whichever condition was met first). The resulting sample size was large enough to detect a very small effect (\( \omega = .02 \)) with 90% statistical power (at \( \alpha = .05 \)).
Procedure. The study was a two-condition, between-subjects design: abundant versus scarce shared time. The experiment ran over the course of 10 days, targeting registered users over 18 years of age residing in the Boston area. We created two types of ads: those in the abundant condition read “Summer just began so you will have a lot of time to hang out with your loved ones! Check out these extraordinary experiences in Boston,” while those in the scarce condition read: “Summer is so short so you won’t have that much time to hang out with your loved ones! Check out these extraordinary experiences in Boston.” Since these two ad campaigns were running during the same time period, we were effectively holding the objective amount of time constant, while merely manipulating one’s subjective sense of time (i.e., perceived shared time scarcity). Both ads featured a panoramic photograph of the city and advertised a blog post we created for this experiment called “Top Five Extraordinary Experiences in Boston” (see ads in Appendix F).

To verify that the scarce ad evoked more shared time scarcity than the abundant ad, we showed one of these two ads to a sample of 401 US participants recruited via Amazon Mechanical Turk (52% male; \( M_{\text{age}} = 39.18 \) years, \( SD = 12.10 \); 89% Facebook users) and asked them to indicate to what extent they would feel their time with loved ones is scarce. Indeed, participants who saw the scarce ad reported they would perceive their time with loved ones as more scarce (\( M = 4.51, SD = 1.68 \)) than those who saw the abundant ad (\( M = 3.20, SD = 1.64 \); \( t(399) = 7.85, p < .001, d = .79, 95\% \text{ CI} = [.59, .99] \)).

The number of participants who clicked on this link to read the blog post served as our dependent measure in this field experiment. To ensure that users were not exposed to both ads, we used the platform’s A/B testing feature allowing us to specify the variable of interest (ad type in our case). Then, the platform divided our budget equally and randomly split exposure of the
specified population between each ad version. The platform highlights that this A/B testing feature ensures that audiences will be evenly split, statistically comparable, and not overlapping. At the end of the experiment, the social networking website sent us a report including total clicks, reaches (i.e., total number of people who saw each ad), and impressions (i.e., the number of times each ad was displayed); we did not obtain any individual-level data.

Results

Our ad reached 25,148 users and had a total of 35,848 impressions; Table 2.1 displays ad performance by condition. Critically, a chi-square test comparing the number of clicks as a proportion of the number of reaches revealed that a greater percentage of users clicked on the ad when it evoked shared time scarcity (8.85%) than when it did not (7.50%; $\chi^2(1) = 15.26, p < .001, \phi = 0.02$). Similarly, a chi-square test comparing the number of clicks as a proportion of the number of impressions revealed that a greater percentage of users clicked on the ad when it evoked shared time scarcity (6.04%) than when it did not (5.40%; $\chi^2(1) = 6.79, p = .009, \phi = .01$).

Table 2.1
Ad Performance by Condition in Study 1

<table>
<thead>
<tr>
<th>Ad Type</th>
<th>Clicks</th>
<th>Reaches</th>
<th>Impressions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abundant</td>
<td>960</td>
<td>12,804</td>
<td>17,772</td>
</tr>
<tr>
<td>Scarce</td>
<td>1,092</td>
<td>12,344</td>
<td>18,076</td>
</tr>
</tbody>
</table>

STUDY 2
Study 1 provided preliminary evidence that evoking shared time scarcity leads individuals to prefer sharing extraordinary experiences. Study 2 replicated this in the lab by manipulating the perception of shared time available through a writing task. We also sought to establish the mechanism by exploring whether choosing extraordinary experiences is a behavioral relationship maintenance strategy deployed to influence how one’s partner thinks about the relationship rather than to influence how oneself think about the relationship.

Method

Participants. We used Prolific Academic’s predetermined screeners to recruit 400 participants currently in a romantic relationship who reside in the United States. At the beginning of the study, participants were asked to validate their relationships status; those who said were not in a romantic relationship \((n = 9)\) were directed to take a different study leaving us with a sample of 393 participants for this study (46% male; \(M_{\text{age}} = 35.35\) years, \(SD = 11.50\)). To determine the sample size for this study, we assumed a Cohen’s \(d\) of 0.30 for the effect of shared time scarcity on preference for extraordinary experiences and 85% of statistical power to detect this effect (at alpha = 0.05 (two-sided) level). This study was preregistered on AsPredicted.org (#47141).

Procedure. The study was a two-condition, between-subjects design. We used the COVID-19 context to frame shared time between partners as abundant or scarce. Specifically, those in the abundant [scarce] condition read:

“The COVID-19 pandemic has reshaped our personal relationships in unprecedented ways, forcing us to live closer together with some people and further apart from others. And
given the many changes that have come with the pandemic, people now have more [less] time to spend with their romantic partner. Below please write about the ways in which you perceive the shared time with your partner as abundant [scarce] these days.”

After the writing task, participants read that they were considering a variety of activities for an upcoming date with their partner, and indicated the extent to which they thought it was important to select an extraordinary experience for this upcoming date (i.e., an experience that is special and unusual) on a 7-point scale (1 = Not at all; 7 = To a great extent). On the next page, we assessed relationship maintenance motivations by asking participants to indicate to what extent they agreed with two statements: (1) “When my partner and I are not together, it is critical for the success of our relationship that I think about my partner frequently” (“self-focused”) and (2) “When my partner and I are not together, it is critical for the success of our relationship that my partner thinks about me frequently” (“partner-focused”); response options were presented on 7-point scales (1 = Not at all; 7 = Very much). Finally, participants indicated the extent to which they felt their time with their partner was scarce (1 = Not at all; 7 = Very much) and answered six demographic questions (gender, age, income, cohabitating status, relationship status, and relationship length).

Results

Shared time. As intended, participants in the scarce condition felt their time with their partner was more scarce ($M = 3.76, SD = 1.91$) than those in the abundant condition ($M = 3.05, SD = 1.97$; $t(391) = 3.63, p < .001, d = .37, 95\% CI = [.17, .57]$).
Preference for extraordinary experiences. Importantly, participants in the scarce condition indicated that it would be more important to select an extraordinary experience for their upcoming date ($M = 4.70, SD = 1.70$) than those in abundant condition ($M = 4.35, SD = 1.72$; $t(391) = 2.08, p = .038, d = .20$, 95% CI = [.01, .40]; see Figure 2.1).

![Figure 2.1](#)

Results from Study 2

Self-focused relationship maintenance motivation. Participants in the scarce condition indicated that it was critical for the success of their relationship that they thought about their partner frequently when they were not together ($M = 4.44, SD = 1.74$) more than did those in the abundant condition ($M = 3.85, SD = 1.71$; $t(391) = 3.42, p = .001, d = .34$, 95% CI = [.14, .54]).
Partner-focused relationship maintenance motivation. Similarly, participants in the scarce condition indicated that it was critical for the success of their relationship that their partner thought about them frequently when they were not together ($M = 4.31$, $SD = 1.77$) more than did those in the abundant condition ($M = 3.72$, $SD = 1.65$; $t(391) = 3.42$, $p = .001$, $d = .34$, 95% CI = [.15, .54]).

Mediation. The effect of shared time on the preference for extraordinary experiences was mediated by the partner-focused relationship maintenance motivation but not by the self-focused one. A 5,000 sample bootstrap analysis using PROCESS Model 4 (Hayes 2017) entering both relationship maintenance motivation items as parallel mediators revealed a significant indirect effect through the “partner-focused” maintenance motivation item ($ab = .14$, $SE = .08$, 95% CI$_{Boot}$ [.02, .32]) but not through the “self-focused” maintenance motivation item ($ab = .05$, $SE = .06$, 95% CI$_{Boot}$ [-.07, .17]). In other words, the link between shared time scarcity and preference for extraordinary experiences was driven by the extent to which individuals were motivated to be remembered by their partner.

Robustness check. While we did not preregister this last analysis, we also asked two research assistants blind to our research question to review all open-ended responses and identify poor-quality responses (i.e., responses that did not include any reference to shared time). Inter-coder agreement was at 80% and disagreements were resolved through discussion. This coding revealed that 37 participants did not do the writing task properly. The results reported above hold when excluding these responses; for example, the effect of shared time on preference for extraordinary experiences remained significant ($t(354) = 2.09$, $p = .038$, $d = .22$, 95% CI = [.02, .43]).
STUDY 3

As a more robust demonstration of our account, Study 3 examined whether individuals prioritize the extraordinariness of the experience over other factors that may have been appealing in other circumstances, such as the quantity of a good being consumed; we used a consequential dependent measure and also induced close relationships in the lab. We predicted that those who felt their time with their partner was scarce (compared to those who did not) would care less about quantity and thus would choose the extraordinary (versus the ordinary) option.

Method

Participants. One hundred and eleven participants were recruited from a university pool and came to the lab to participate in a session of unrelated studies; this study was conducted at a university in the Northeastern United States. The sample size was determined by the number of students participating in a bundle of unrelated studies in the behavioral lab over the course of one week (October 29 through November 5, 2018).

Our study involved participants completing a task in pairs. In some sessions, we had an odd number of participants: in such cases, those without partners were instructed to interact with one of our research assistants. However, because participants were aware that they were interacting with a research assistant, we predetermined that we would exclude these participants from our final analyses (n = 11). Thus, our valid sample size was 100 participants (31% male; \( M_{\text{age}} = 21.55 \) years, \( SD = 5.77 \)). A sensitivity analysis revealed that this sample size was large enough to detect a small effect (\( w = .28 \)) with 80% statistical power (at \( \alpha = .05 \)).

Procedure. The study was a two-condition, between-subjects design: abundant versus scarce shared time. First, all participants began by answering a series of demographic questions:
gender, age, income, student status, and relationship status. Then they were randomly paired with another participant and engaged in the relationship closeness induction task together (Sedikides, Campbell, Reader, and Elliot 1999). After the interaction task, participants answered questions on a computer screen reporting the number of questions they covered from each list, their thoughts about the interaction, and their feelings toward their partner (this last sub-section included questions about liking, similarity, closeness, and friendship intent with their new partner on 9-point scales).

Critically, participants were then informed that they would have two more interactions. Those in the abundant condition were informed that both of these interactions would be with the same partner with whom they had just interacted, and therefore they would have “plenty of time” to interact with their partner. Those in the scarce condition, on the other hand, were informed that only one of these interactions would be with the same partner they had just interacted with, and thus that they would have “very little time” to interact with their partner.

Then, all participants read that had to select a chocolate to share with their partner during the next interaction; in other words, the choice they made would be implemented and impact both themselves and their partner. Specifically, they made a choice between sharing one gourmet chocolate (which we intended to serve as the extraordinary option) and two regular chocolates (which we intended to serve as the ordinary experience) with their partner. These options were described as follows: “two pieces of regular chocolate (6 grams per chocolate): standard, made in Brazil, mass produced by a large-scale company who uses normal cacao beans,” and “one piece of gourmet chocolate (6 grams): unique, made in Switzerland, handmade by small scale artisans (chocolatiers) who use premium origin beans.” Thus, we operationalized extraordinariness based on the two dimensions that stood out in our Pilot Study: uniqueness and superiority. By creating
a trade-off between quantity and extraordinariness, we could assess whether participants were more likely to prioritize an extraordinary experience when they were facing shared time scarcity with their partner.

After making this choice, all participants rated the extent to which they thought their time with their partner during their final interaction would be scarce (1 = Not at all; 7 = Very much), and also which option they deemed as more extraordinary (1 = Consuming regular chocolate; 7 = Consuming gourmet chocolate). We also asked participants to indicate the extent to which they like chocolate in general as a control variable. Since we were only interested in participants’ chocolate choice, we did not have participants interact with the same partner one more time after they responded to the aforementioned questions. Instead, all participants received both options at the end of the session (i.e., two pieces of regular chocolate and one piece of gourmet chocolate).

Results

**Closeness induction task.** A one-sample t-test revealed that the closeness induction task was successful at creating relationships in the lab: the average rating of the composite measure of liking, closeness, similarity, and friendship intent (α = 0.75) was significantly higher than the midpoint of the scale (M = 6.22, SD = 1.28; t(99) = 9.50, p < .001), and there was no difference between our two conditions (M_{scarc} = 6.20, SD = 1.17 vs. M_{abund} = 6.23, SD = 1.38 vs.; t(98) = −0.12, p = .907, d = −.02, 95% CI = [−.42, .37]).

**Extraordinariness.** Also as intended, participants deemed the option of consuming gourmet chocolate as a more extraordinary experience than the option of consuming regular chocolate. The mean rating for the question on which option they deemed as more extraordinary was significantly higher than the midpoint of the scale (M = 5.82, SD = 1.16; t(99) = 15.72, p <
.001), and there was no difference between conditions ($M_{\text{scarce}} = 6.00, SD = 1.12$ vs. $M_{\text{abundant}} = 5.67, SD = 1.18$; $t(98) = 1.44, p = .152, d = .29, 95\% \text{ CI} = [-.11, .68]$).

**Shared time.** As intended, those in the scarce condition reported their time with their partner was more scarce ($M = 4.70, SD = 0.96$) than did those in the abundant condition ($M = 3.19, SD = 1.38$; $t(98) = 6.26, p < .001, d = 1.25, 95\% \text{ CI} = [.82, 1.68]$).

**Choice of chocolate.** Critically, the percentage of participants choosing the more extraordinary option (i.e., sharing one gourmet chocolate rather than sharing two regular chocolates) was higher in the scarce condition (80%) than in the abundant condition (63%) though we could reject the null hypothesis only with 90% confidence ($\chi^2(1) = 3.68, p = .055, \phi = .19, 95\% \text{ CI}_{\text{Boot}} = [.00, .38]$). These results held when controlling for dyad assignment ($b = .92, SE = .47, \text{ Wald} = 3.81, p = .051, \text{ Exp}(B) = 2.51$).

**STUDY 4**

Study 4 had three goals. First, following Study 3’s approach, we asked participants to make another trade-off decision: an experience that is extraordinary versus convenient. Second, as a more conservative test of our account, we operationalized extraordinariness by manipulating uniqueness while holding quality constant. Third, we further tested the notion that selecting an extraordinary experience when shared time is scarce is a relationship maintenance strategy, by investigating whether individuals no longer prioritize extraordinary experiences when they have a weak (versus strong) relationship goal.

**Method**
Participants. Seven hundred and ninety-nine participants currently living in the United States were recruited from Amazon’s Mechanical Turk platform and completed a short online study in exchange for monetary compensation (47% male; $M_{age} = 40.77$ years, $SD = 13.10$). We determined the sample size based on a pilot study with a similar design to provide 80% statistical power to detect a small effect of $f = 0.10$ for the interaction between shared time and relationship goal. This study was preregistered on AsPredicted.org (#55725).

Procedure. The study was a 2(shared time: abundant vs. scarce) x 2(relationship goal: weak vs. strong) between-subjects design. First, participants imagined that they had a work colleague who lives in another city but spent the last two weeks in town working with them. Then, participants in the strong [weak] relationship goal condition read and wrote about how during this time, they did [vs. did not] connect strongly with this colleague so they really cared [vs. did not care] about maintaining a relationship with them in the future.

On the next page, participants read their colleague would be in town for several more months (shared time abundant condition) or for just one more day (shared time scarce condition). Then, participants were asked to choose between two restaurants where they would have dinner with their colleague that night. The two restaurants had similar price levels and food quality, but varied in two aspects: convenience and uniqueness. One restaurant offered a unique experience but was not very convenient because it was far from work, while the other restaurant was convenient because it was close to work but did not offer a unique experience (see restaurant descriptions in Appendix G). The choice was presented on a 100-slider scale with end-points “definitely [name of convenient restaurant]” to “definitely [name of unique restaurant].”
Then, we administered four reading check questions asking participants to identify which restaurant offered a more unique experience, was more convenient for them, was more expensive, and offered higher quality food; these four questions were presented on 7-point Likert scales with endpoints “definitely [name of convenient restaurant]” and “definitely [name of unique restaurant].” Finally, participants indicated the extent to which they felt their time with their partner was scarce (1 = Not at all; 7 = Very much), indicated the extent to which they had the goal of maintaining their relationship (1 = Not at all; 7 = Very much), and answered three demographic questions (gender, age, and income).

Results

Shared time. As intended, participants in the shared time scarce condition felt their time with their partner was more scarce (\( M = 4.79, SD = 1.96 \)) than those in the shared time abundant condition (\( M = 3.32, SD = 1.75 \); \( t(797) = 11.13, p < .001, d = .79, 95\% CI = [.65, .93] \)).

Relationship goal. As intended, participants in the strong relationship goal condition reported they had a stronger goal of maintaining the relationship with this colleague (\( M = 6.27, SD = 0.87 \)) than did those in the weak relationship goal condition (\( M = 2.13, SD = 1.42 \); \( t(797) = 49.54, p < .001, d = 3.50, 95\% CI = [3.28, 3.72] \)).

Restaurant preference. As predicted, relationship goal moderated the effect of shared time on choice of restaurant (\( F(1, 795) = 6.30, p = .012, n_p^2 = .01 \); see Figure 2.2). In the strong relationship goal condition, participants in the shared time scarce condition preferred the unique restaurant (\( M = 56.12, SD = 37.43 \)) more than participants in the shared time abundant condition (\( M = 48.21, SD = 38.37 \); \( F(1, 795) = 4.71, p = .030, n_p^2 = .01 \)). In contrast, in the weak relationship goal condition, there was no difference in participants’ preference for the unique
restaurant whether they were in the shared time scarce condition ($M = 23.46, SD = 33.88$) or in the shared time abundant condition ($M = 28.39, SD = 34.82; F(1, 795) = 1.88, p = .171, n_p^2 < .01$). The interaction between shared time and relationship goal remained significant when controlling for perceived expensiveness and food quality ($F(1, 793) = 5.83, p = .016, n_p^2 = .01$).

**GENERAL DISCUSSION**

We show that when individuals perceive their time with a relationship partner as scarce, they place increased weight on sharing extraordinary experiences, activities characterized by
their uniqueness and superiority (Pilot Study). This effect persists even when merely evoking the perception that shared time is scarce (Studies 1–2) and when individuals make tradeoffs between attributes (Studies 3–4). This effect is driven by the belief that their partners will remember them more upon sharing extraordinary experiences (Study 2) and only persists in the presence of a strong relationship maintenance goal (Study 4).

While prior work on efficiency-seeking behaviors has shown that individuals will allocate a scarce resource by focusing on pressing needs (Shah et al. 2015), we contribute to the literature by examining how such behaviors will actually manifest in the context of close relationships. Our work suggests that a different underlying psychology is at play when the scarce resource is that of shared time with a partner, pointing to the possibility that individuals prioritize options that they believe will be symbolically meaningful (Carstensen, Isaacowitz, and Charles 1999; Lang and Carstensen 2002).

We also advance the current understanding of close relationships by documenting the prioritization of sharing extraordinary activities as a relationship maintenance strategy. As demonstrated in Study 2, people choose extraordinary experiences to influence the extent to which their partner thinks about the relationship. This strategy differs from existing work on cognitive relationship maintenance strategies that have been self-focused (e.g., constructing a positive narrative). By showing how individuals rely on consumption choices to maintain relationship well-being, we also contribute to a small albeit growing literature on choices made for others (e.g., Liu, Dallas, and Fitzsimons 2019).

Our research offers several avenues for future research. Future research could examine whether our effects hold when individuals decide together what to do when their shared time is limited: if partners have the opportunity to discuss and evaluate alternatives together, they might
realize that they do not need to rely on memorability to maximize their shared time together. Relatedly, future work could investigate whether individuals opt for shared extraordinary experiences because they infer that such endeavors are what their partners want. If this were true, individuals may become less happy than they would have been had they chosen ordinary experiences, suggesting that the effects we document may result in suboptimal choices.

It would also be important to document how choices made under shared time scarcity influence relationship well-being. Sharing an experience with others, especially with psychologically proximate individuals, can amplify the experience (Boothby et al. 2016). At the same time, relationship partners, especially those who do not see each other often, may be better off prioritizing experiences that allow them to focus on each other (e.g., conversations) rather than those that direct their focus to attributes of the experiences themselves (Min, Liu, and Kim 2018).

As our introductory examples attest, shared time with loved ones is becoming increasingly scarce. Our findings demonstrate how individuals may cope when facing limited time with their loved ones: by prioritizing extraordinary experiences. By doing so, we highlight the important role of shared time scarcity in further understanding the antecedents of experiential choices in close relationships.
Sacrificing Enjoyment for the Sake of the Relationship

Ximena Garcia-Rada
Michael I. Norton
Rebecca K. Ratner

Abstract

We examine trade-offs that consumers in close relationships make between two often-conflicting aspects of consumption utility: the objective quality of a service and the subjective experience of sharing the activity with a close other. A combination of archival data, laboratory experiments, and surveys document a preference for togetherness over experience quality; in the context of close relationships, consumers are often willing to sacrifice enjoyment for the sake of the relationship. This tendency is increased in the presence of two interrelated interpersonal factors: one more global—relational concerns (what will this decision signal to my partner about our relationship?)—and one more local—perceived opportunity for interaction during the activity (will we even be able to communicate during the experience?). Our work extends previous research on joint consumption by documenting a novel driver of consumer decision-making in the context of close, personal relationships: a preference for togetherness.
INTRODUCTION

Consumers are often faced with decisions in which they can either prioritize being together with relationship partners or having experiences that are a priori of higher quality. When seeing a movie, for example, couples choose whether to sit together and crane their necks in seats right underneath the screen or take two non-adjacent seats available in more optimal rows. When in transit, friends choose whether to remaining standing together on the subway or take two seats far apart. When selecting a course, students choose whether to sign up for a class that their friends are taking or one with a highly-rated instructor.

Why might consumers choose togetherness over experience quality? Certainly, there are often benefits to being with a companion, such as when others’ positive reactions to an experience are congruent with one’s own (Raghunathan and Corfman 2006) or when others amplify the intensity of a positive experience (Boothby, Clark, and Bargh 2014; Boothby, Smith, Clark, and Bargh 2016). In this work, we focus on common choices that consumers make involving conflict between two dimensions that impact consumption utility: experience quality (i.e., the objective quality of the service) and togetherness (i.e., the subjective experience of sharing the experience with a relationship partner). We hypothesize that in the context of close relationships, people will sacrifice experience quality for togetherness because of two interpersonal factors: perceived opportunity for interaction during the experience and relational concerns. We extend prior work exploring people’s general tendency to engage in sacrifice for their partner (e.g., by taking a less optimal job; Righetti and Impett 2017; Van Lange et al. 1997) to the consumption domain, assessing the drivers of consumer choices for shared experiences involving close others.
A pilot study and four experiments examine people’s choices to prioritize togetherness even when this means having an a priori less-preferred experience. First, a pilot study using online reviews from visitors who attended an interactive play designed to be experienced alone demonstrates that people continue to prioritize togetherness—decisions with negative implications for their overall enjoyment. Study 1 then generalizes the investigation to many common contexts, assessing whether choices to be together occur when consumers perceive there is more opportunity for interaction during the experience. Study 2 directly manipulates opportunity for interaction during the experience and examines, in an exploratory manner, the role of relational concerns compared to other possible mechanisms. Study 3 more formally tests relational concerns as the underlying mechanism while examining relationship closeness as a moderator; our account suggests that relational concerns should be heightened when making decisions involving close (vs. distant) others, leading to greater sacrifice of enjoyment in the service of togetherness. Finally, Study 4 addresses the alternative explanation that consumers prioritize togetherness over experience quality only because sharing the activity with a relationship partner actually leads to greater overall enjoyment.

THEORETICAL FRAMEWORK

We examine situations when consumers in close relationships evaluate two often-conflicting dimensions of consumption utility: the objective quality of a service (i.e., experience quality) and the subjective experience of sharing the activity with a close other (i.e., togetherness). Though consumers can sometimes maximize these two dimensions, they often encounter situations in which they have to sacrifice one dimension for the other. Indeed, a brief survey revealed that 89% of participants indicated facing a situation in the past when these two
dimensions were in conflict \((N = 101\) MTurkers; 41\% male; \(M_{\text{age}} = 37.24\) years; \(SD = 10.76\)).

These decisions involved close others such as romantic partners (44\%), friends (34\%), family members (20\%) and activities described ranged from concerts, sports events, movies at the theatre, rides in amusement parks, to choosing seats for a flight or a train ride.

In some situations, it might seem reasonable to choose togetherness over experience quality. For example, sharing an experience with a companion can have immediate emotional benefits such as intensifying emotions (Shteynberg et al. 2014; Shteynberg 2015), enriching retrospective evaluations (Ramanathan and McGill 2007), increasing enjoyment (Raghunathan and Corfman 2006), and even amplifying the intensity of positive experiences (Boothby, Clark, and Bargh 2014). In addition, sharing an experience with others can satisfy social needs like need to belong (Baumeister and Leary 1995), social connectedness (McFerran and Argo 2014), and avoiding negative inferences from others (Ratner and Hamilton 2015). This stream of work suggests that consumers have a preference for togetherness, and that this preference should be heightened when they perceive there is more opportunity for interaction during the experience.

More formally, we propose:

**H1**: Consumers prioritize togetherness over experience quality especially when they perceive there is more (vs. less) opportunity for interaction during the experience.

Sharing experiences with others can also have downstream relational consequences. For example, involvement of others during experiences is a key factor that explains why experiential purchases make consumers happier compared to material purchases (Caprariello and Reis 2013). In the context of romantic relationships, engaging in novel and arousing experiences is positively related to relationship quality (Aron et al. 2000) as well as engaging in relationship rituals over
time (Garcia-Rada, Sezer, and Norton 2019). Yet, most of this prior research has examined relational outcomes as consequences of shared experiences rather than viewing them as potential drivers of consumer choices. Given the importance of relationships for consumer well-being, we propose that consumers will over-focus on the togetherness dimension when evaluating choices that involve trading off togetherness for experience quality.

We build on work on relationship maintenance proposing that specific actions can help individuals avoid, reduce, or eliminate the negative impact of relationship threats (Rusbult 1980). For example, willingness to sacrifice is a behavioral maintenance mechanism where individuals forgo their own self-interest and instead make choices for their partner or the relationship (Righetti and Impett 2017; Van Lange et. al. 1997). We suggest that when consumers make choice for shared experiences, they will choose togetherness over experience quality to avoid a negative outcome that hurts the relationship. More formally, we propose:

**H2:** Consumers prioritize togetherness over experience quality due to concerns about consequences for their relationships with close others.

Finally, and relatedly, we suggest that relationship closeness—which heightens relational concerns—moderates consumers’ preferences for togetherness over experience quality. Closeness is a construct that has behavioral, cognitive, and emotional consequences; for example, individuals perceive themselves as including resources, perspectives, and characteristics of close others (Aron and Aron 1986). Similarly, close relationships are highly interdependent as characterized by everyday activities that become linked over time (Berscheid, Snyder, and Omoto 1989). But while being socially connected to close partners has great benefits for consumers’ own physical and mental health, close relationships can also have downstream
negative consequences: for example, they can satiate the motivation to connect with others and impair social relationships (Waytz and Epley 2012). Similarly, close partners often try to coordinate their actions at three different levels of interdependence: life tasks, personal preferences, and relationship goals (Berscheid et al. 1989). And the potential consequences of decisions are greater and more impactful for those in more interdependent and close relationships (Rusbult and Van Lange 2003). We propose that when making choices of shared experiences, relationship closeness also has potentially negative downstream consequences because it leads consumers to forgo experiences that are a priori of higher quality because of relational concerns. More formally, we propose:

**H3:** Consumers are more likely to prioritize togetherness over experience quality when making choices that involve close (vs. distant) others, due to increased relational concerns.

**THE PRESENT RESEARCH**

To summarize, we predict that consumers will prioritize togetherness over experience quality and that this link is explained by two interpersonal factors: one more local—whether or not they will be able to interact with their partner during an experience—and one more global—concerns about how such choices might impact the overall relationship. Specifically, we predict that consumers will choose a shared experience over an experience that is a priori of higher quality when (a) they perceive there is more (vs. less) opportunity for interaction during the experience, (b) they care about maintaining the relationship, and (c) the other person involved is a close (vs. distant) partner. We test these predictions in five studies.
PILOT STUDY

The creators of the play *Sleep No More* encourage all patrons to experience the play alone in order to be immersed in the performance; the review on Playbill noted: “This is an individual experience…there’s no talking inside.” This play offers an initial test of our hypothesis that people overweight togetherness even in a context designed to be higher quality when experienced alone, with interaction specifically discouraged.

Method

We web scraped TripAdvisor reviews submitted by individuals who attended the show between 2014-2017. All reviews selected were written in English and had been submitted by June 2017. The initial dataset included 826 reviews; for each observation, we obtained the date of the review, the title, the text, the rating (number of stars), and the traveler type. Using the traveler type variable, we identified patrons who visited the play with others \( (n = 754) \) or alone \( (n = 72) \). Two coders read the reviews from people who had attended the play with others and, where possible \( (n = 240) \), identified whether patrons chose to experience the play apart from their companion(s) or to remain together. Inter-coder reliability was 77% and disagreements were resolved through discussion between the two coders. At the end, the valid dataset for this pilot study included 312 reviews distributed across three groups (alone: \( n = 72 \), shared with companion: \( n = 45 \); apart from companion: \( n = 195 \)).

Results

*Choice.* Despite the clear recommendation by the playwright and the fact that the play was specifically designed to be experienced alone, almost 20% of those patrons who indicated
via traveler type that they had visited the play with others and whose reviews were coded chose
to experience the play together. For example, one patron noted that “our goal was to experience
this event together, even though we had heard that you should split up to really enjoy the
experience.”

**Enjoyment of the experience.** Moreover, with the caveat that these decisions were self-
selected, it appears they were not optimal: People who stayed with their companion rated the
experience lower ($M = 3.44, SD = 1.42$) than those who went through the experience apart from
their companion ($M = 4.50, SD = 1.00$) and those who visited the play alone ($M = 4.42, SD =
1.11; F(2, 309) = 17.32, p < .001, \eta^2_p = .10$). Ratings from individuals who stayed with their
companion were significantly lower than those who experienced the play alone or apart from
their companion ($ps < .001$) while the difference between the latter two groups was not
significant ($p > .250$).

Discussion

These results offer initial evidence that people prioritize togetherness even for
experiences optimized for aloneness, and that these decisions have implications for overall
enjoyment. Of course, these data suffer from several limitations, including the fact that people
self-selected into being alone or together as well as whether they chose to write reviews and
disclose the manner in which they experienced the play. As a result, Studies 1-4 involve
experimental methodology.

**STUDY 1**
Study 1 has three primary goals. First, it provides a more controlled version of the Pilot Study by examining whether people will choose an a priori higher quality experience when this means forgoing togetherness. Second, we include a wide variety of experiences in order to examine the generalizability of people’s choices to prioritize togetherness over the quality of experiences. Finally, we directly test H1 assessing whether choosing togetherness is related to people’s beliefs about interactions with close others during experiences.

Method

Participants. Two hundred and one MTurkers currently living in the United States (62% male; \(M_{age} = 35.52 \text{ years, } SD = 10.12\)) completed an online study in exchange for monetary compensation. We determined a priori that we would recruit 200 participants and data were not analyzed until collection had been completed.

Procedure. The study was a fully within-subjects design. All participants answered a questionnaire with three sections: (1) they made choices for 10 different experiences, (2) they rated those same 10 experiences in terms of opportunity for interaction, and (3) they answered standard demographics; the order of the first two sections was counterbalanced. In the choice section, participants imagined 10 different situations presented on different pages and in random order, and for each situation, they made a choice between two alternatives: an experience that was a priori of higher quality but apart from their partner (high quality-apart option) and a shared experience of lower quality (low quality-together option). We manipulated quality of these experiences by either varying the level of comfort (e.g., seats for a flight), the location of seats (e.g., front row vs. last row seats for concert), or the presence of enhanced features (e.g., basic vs. premium spa session; see all experiences in Appendix H). In the interaction section,
participants rated the degree to which they would be able to interact with their partner during these 10 experiences on 5-point scales (1 = No interaction; 5 = A great deal of interaction). Finally, participants reported their gender, age, income, and relationship status.

Results

The proportion of participants who chose the low quality-together experience ranged from 51% (flight) to 89% (dinner at restaurant; see Figure 3.1). In other words, even for experiences where participants stated that the opportunity for interaction was low, we observed at least half of participants chose togetherness; indeed, even for the experience rated the lowest in terms of opportunity for interaction—an academic lecture—65% of participants chose togetherness and forgo a higher quality lecture.

Figure 3.1
Results from Study 1

Note. Grey bars represent the proportion of participants who chose the low quality-together option; the dotted line represents mean ratings of opportunity for interaction for each experience.
At the same time, and consistent with H1, a generalized linear mixed effects model entering subject id and experience as random-effect predictors revealed that opportunity for interaction predicted choice ($b = .49, SE = .06, p < .001$). This effect held when we conducted another model including the interaction between experience and opportunity for interaction as a random effect predictor, and when we modeled experience as a fixed effect ($ps < .001$). Finally, results reported above held when controlling for standard demographics. We observe an effect of age on choice: older individuals chose fewer low quality-together experiences, though the effect of opportunity for interaction on choice remained significant. No other effects of demographic variables emerged.

Discussion

Study 1 demonstrates that a majority of participants across all scenarios chose the a priori lower quality experience to be together with their partner, even for experiences during which participants anticipated the least opportunity for interaction. At the same time, and as predicted, our results indicate that choosing to be together is related to people’s predictions about interactions with their partner during the experience. In Study 2, we hold constant the experience type and manipulate opportunity for interaction to provide a causal test of H1.

STUDY 2

Study 2 manipulates opportunity for interaction in an experiment involving between-subjects design and tests in an exploratory manner several alternative mechanisms that could explain choices that consumers make trading togetherness for experience quality.
Method

Participants. Two hundred and ninety-nine participants recruited through Amazon Mechanical Turk completed a short online study in exchange for monetary compensation (57% male; $M_{age} = 38.68$ years, $SD = 11.04$).

Procedure. The study was a two-condition, between-subjects design: low versus high opportunity for interaction. Participants were asked to imagine a situation in which they were attending a bread baking class with their romantic partner. Participants reviewed the brochure of the class, which included our experimental manipulation: half of the participants read that the class involved individual exercises so opportunity for interaction with their partner would be very limited and the other half read that the class involved dyad exercises so opportunity for interaction with their partner would be ample (see study materials in Appendix I). Participants were asked to choose the seats for themselves and their romantic partner. They read that because the event was sold out, they had to make a choice between two non-adjacent seats in the first row where they both could view and hear the instructor properly (high quality-apart option) and two adjacent seats in the last row where they could not view or hear the instructor properly (low quality-together option).

After selecting the seats, participants indicated to what extent seven different factors impacted their choice of seats (1 = had no impact on my choice; 7 = had a great impact on my choice). The factors were: (1) non-social aspects of the experience (i.e., content of the class), (2) social aspects of the experience (i.e., interaction with their partner during the class), (3) partner’s perceptions (i.e., what their partner would think about their choice), (4) observers’ perceptions (i.e., what other people would think about their choice), (5) self perceptions (i.e., what they would think about their choice), (6) relationship impact (i.e., the extent to which their choice
would bring them and their partner closer or apart), and (7) post experience conversation (i.e., the extent to which they and their partner would talk about the experience after).

Next, participants indicated how much they would enjoy the overall experience with both sitting alternatives and answered a manipulation check reporting the level of interaction during the class; these measures were also presented on 7-point scales (1 = Not at all; 7 = very much). Finally, participants answered standard demographics (gender, age, income, relationship status, and baking interest).

Results

*Opportunity for interaction.* As intended, participants in the high opportunity for interaction condition reported they would have more opportunity to interact with their partner during the class ($M = 5.71, SD = 1.60$) than participants in the low opportunity for interaction condition ($M = 2.82, SD = 1.71, t(297) = -15.08, p < .001$).

*Choice.* More participants chose the two adjacent seats in the last row of the class when they read they would have ample opportunity for interaction with their partner (61%) compared to those who read they would have limited opportunity for interaction during the class (47%; $\chi^2(1) = 5.75, p = .017$) supporting the idea that consumers prioritize togetherness over experience quality when they perceive there is more (vs. less) opportunity for interaction during the experience.

*Motivations.* Finally, we assessed how choice correlated with the different motivation ratings. Results presented in Table 3.1 demonstrate that relationship impact was the factor that most strongly correlated with choice of seats.
Table 3.1
Results from Study 2

<table>
<thead>
<tr>
<th></th>
<th>Choice of seats</th>
<th>Social aspects of the experience</th>
<th>Non-social aspects of the experience</th>
<th>Partner's perceptions</th>
<th>Observers' perceptions</th>
<th>Self perceptions</th>
<th>Relationship impact</th>
<th>Post experience conversation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choice of seats</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social aspects of the experience</td>
<td>.509***</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-social aspects of the experience</td>
<td>- .624***</td>
<td>-.435***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partner's perceptions</td>
<td>.319***</td>
<td>.429***</td>
<td>-.126*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observers' perceptions</td>
<td>-.029</td>
<td>.115*</td>
<td>.102</td>
<td>.180**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self perceptions</td>
<td>.063</td>
<td>.178**</td>
<td>.017</td>
<td>.404***</td>
<td>.255***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationship impact</td>
<td>.559***</td>
<td>.675***</td>
<td>-.446***</td>
<td>.455***</td>
<td>.010</td>
<td>.171**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post experience conversation</td>
<td>.071</td>
<td>.177**</td>
<td>.045</td>
<td>.323***</td>
<td>.080</td>
<td>.270**</td>
<td>.171**</td>
<td></td>
</tr>
</tbody>
</table>

Note. Pearson bivariate correlation coefficients; \( p < .05, ** p < .01, *** p < .001 \) (2-tailed). Dependent variable: choice of seats (1 = two adjacent seats in the last row)

Discussion

Study 2 further supports our account that when consumers perceive there is more opportunity for interaction during the experience, they will prioritize togetherness over experience quality. Importantly, this choice is positively associated with relational concerns more than with other factors like inferences from observers or recipients for example. Next, Study 3 more formally explores relational concerns as the underlying mechanism via mediation while testing a moderator to this effect: relationship closeness.

STUDY 3

Next, we examine H2 and H3, assessing the causal effect of relationship closeness on choices that consumers made for shared experiences. We hypothesize that when consumers make
decisions with regard to a closer relationship partner, relational concerns are more salient and hence they will prioritize togetherness over experience quality.

Method

*Participants.* Three hundred participants recruited through Amazon Mechanical Turk completed a short online study in exchange for monetary compensation (52% male; $M_{age} = 36.55$ years, $SD = 11.25$).

*Procedure.* The study was a two-condition, between-subjects design: close versus distant relationship partner. Participants were first asked to think of a friend who they felt very close to (close condition) or not very close to (distant condition) and wrote their friend’s initials. On the next page, participants read they were taking a flight with this specific friend and were in charge of completing the web check-in for both. Because the plane was full, they only had two sitting alternatives: two adjacent seats in the last row of the plane and two non-adjacent seats in the economy comfort section (see study materials in Appendix J).

Immediately below, participants answered two questions: relational concerns and choice of seats, presented in random order. For the former, participants indicated the extent to which they cared about (a) showing their friend that their relationship was important to them, (b) their friend’s feelings, and (c) fostering their relationship with their friend; these three questions were presented in random order and on 7-point scales (1 = Not at all; 7 = Extremely); the average of these three scores served as our relational concerns item ($\alpha = .94$). For the latter, participants selected one of the two sitting alternatives for the flight with their friend.

On the next page, participants answered follow-up measures about the scenario: for each sitting alternative, they indicated the extent to which their friend would think that they feel
emotionally close to them if they chose that options; they also indicated the extent to which they thought it was a social norm (i.e., expected by others) to sit with their friend during a flight; all items were presented on 7-point scales (1 = Not at all; 7 = Very much). Finally, participants reported how close they felt to their friend by selecting one of the seven self-other Venn Diagrams (Aron, Aron, and Smollan 1992) and answered standard demographics (gender, age, income).

Results

Closeness. As intended, participants who thought of a close friend reported feeling closer to this person ($M = 5.01$, $SD = 1.58$) than participants who thought of a distant friend ($M = 2.49$, $SD = 1.28$, $t(282.22) = -15.17$, $p < .001$).

Choice. More participants chose the two adjacent seats in the last row of the plane when traveling with a close friend (51%) compared to those traveling with a distant friend (30%; $\chi^2(1) = 13.82$, $p < .001$) supporting the idea that consumers prioritize togetherness over experience quality especially when they feel close to their partner.

Relational concerns. Participants cared more about fostering the relationship with a close friend ($M = 5.80$, $SD = 1.32$) than a relationship with distant friend ($M = 4.29$, $SD = 1.40$, $t(298) = -9.62$, $p < .001$). Most importantly, the effect of relationship closeness on choice was mediated by relational concerns. We tested this indirect effect using model 4 in the PROCESS MACRO (Hayes 2017) with 5,000 bootstrapped samples. When we enter relational concerns into the model, the impact of relationship closeness on choice is reduced from $b = .89$, $SE = .24$, $Wald = 13.57$, $p < .001$, $Exp(B) = 2.43$ to $b = -.04$, $SE = .30$, $Wald = .18$, $p = .894$, $Exp(B) = .96$. More
importantly, we find a significant indirect effect of closeness on choice through relational concerns, $a \times b = 1.05, SE = .21, 95\% \text{ CI}_{\text{Boot}} [.70, 1.51]$.

**Closeness inferences.** Participants indicated that choosing the low quality-together experience would send a stronger signal to the recipient that they felt emotionally close to them ($M = 5.80, SD = 1.50$) than choosing the high quality-apart experience ($M = 3.76, SD = 1.68$, $t(299) = 10.13, p < .001$). A $2 \times 2$ mixed ANOVA revealed a within-subjects effect of experience chosen ($F(1, 298) = 102.19, p < .001$) and a between-subjects effect of closeness ($F(1, 298) = 62.79, p < .001$); the interaction was not significant ($F(1, 298) = 0.18, p = .670$).

We then conducted a serial mediation entering relational concerns as the first mediator of the relationship between closeness and choice and the difference between the two closeness inference ratings as the second mediator (i.e., this score represented the additional signal of closeness that choosing the inferior-together experience would send to the recipient). We tested this indirect effect using model 6 in the PROCESS MACRO (Hayes 2017) with 5,000 bootstrapped samples: the total indirect effect was significant ($a \times b = .96, SE = .24, 95\% \text{ CI}_{\text{Boot}} [.56, 1.51]$) and two of the three paths were significant (relational concerns as single mediator: $a \times b = 1.00, SE = .22, 95\% \text{ CI}_{\text{Boot}} [.64, 1.48]$; serial path with both mediators: $a \times b = .14, SE = .06, 95\% \text{ CI}_{\text{Boot}} [.04, .28]$).

**Social norms.** Participants reported that sitting with their friend would be more expected by others when traveling with a close friend ($M = 5.63, SD = 1.45$) as opposed to a distant friend ($M = 5.32, SD = 1.44$) though this difference was marginally significant ($t(298) = -1.84, p = .067$). Most important, the effect of closeness on choice holds when adding social norms to the model ($b = .82, SE = .26, \text{ Wald} = 10.28, p < .001, \text{ Exp}(B) = 2.27$).
Discussion

Study 3 shows that individuals are more likely to prioritize togetherness over experience quality when they are closer to the relationship partner, due to the signals they believe their choice would send about the relationship.

STUDY 4

To examine the alternative explanation that people choose togetherness over experience quality because sharing the activity with a relationship partner actually leads to greater overall enjoyment, in the last study, participants in a laboratory experiment were randomly assigned to watch a 2-star (low quality) video together with their romantic partner or a 4-star (high quality) video apart from their romantic partner. All participants were ask to predict their enjoyment before the experience and rate their actual enjoyment immediately after. We predicted that people would overestimate the benefits of togetherness for the quality of their overall experience

Method

Participants. One hundred and one romantic dyads (47% male; \( M_{age} = 30.69 \) years, \( SD = 8.62 \)) came to the behavioral laboratory of a university in the Northeast of the United States. Because the predicted effect had not been previously demonstrated, we determined a priori that we would recruit 100 couples. This study was conducted from October 2017 through May 2018 and data were not analyzed until collection had been completed.

Procedure. Romantic dyads were recruited to participate in a session that involved two unrelated studies. The research was advertised as a study for working couples and interested participants received a link to take an eligibility survey. If they qualified, a research assistant
contacted one partner to schedule an appointment to come to the lab with their partner. When romantic dyads arrived at the lab, they first participated in an unrelated study conducted by another research team; this study lasted approximately 1 hour.

Dyads then participated in a second study that involved watching a video and answering survey questions. Dyads were randomly assigned to one of two experiences: watching a 2-star video in the same room (low quality-together experience) or watching the same 4-star video in different rooms (high quality-apart experience). These videos were used in previous research by Cooney, Gilbert, and Wilson (2014), who identified one video that received 2-stars (a low budget animation) and another video that received 4-stars (a magician performing tricks); the two videos were roughly the same length (9-10 minutes). Between-subjects, we counterbalanced whether participants received information about the alternative experience: half of the dyads only received information about their assigned experience, and the other half received information about both experiences. (We wanted some participants to be aware of the alternative experience as is sometimes the case when people choose experiences; we observed no effect of evaluation mode on experience ratings and do not discuss this variable further.)

Before completing the experience, dyads were seated in individual cubicles in different rows so that they could not communicate with their partner while answering questions on a computer. Dyads read information about the experience they would have (same room vs. different rooms) and the video they would watch (description of the video and rating presented as number of stars; see movie descriptions in Appendix K). Participants answered five questions that were presented on the same page and in random order. Two questions assessed their general emotional state (“How happy are you now?,” “How do you feel now?”) and three questions assessed their affective forecasts (“How much do you think you will enjoy the video itself?”)
“How much do you think you will enjoy this next experience overall?,” “How satisfied do you think you will be with the next 10 minutes of this session?”); all measures were presented on 7-point scales with endpoints labeled as “1 = Not at all” to “7 = Extremely”, with the exception of the item *how do you feel now* that had different endpoints (1 = Not very good to 7 = Very good).

After completing the first questionnaire, dyads were taken to another area of the laboratory with small rooms. Depending on condition, both partners were taken either to the same room to watch the 2-star video or to two separate rooms to watch the 4-star video. The rooms were set up with a large computer screen at the front of the room. One or two chairs next to each other faced the screen, depending on whether participants were assigned to watch the movie alone or with their partner. Overhead lights were turned off while the participants watched the video.

After watching the video, participants returned to their same cubicle (i.e., again not next to their partner) and answered questions about the experience. We used the same five measures from the pre-experience questionnaire: participants were asked how happy they were now, how they felt now, how much they had enjoyed the video, how much they had enjoyed the experience overall, and how satisfied they were with this part of the session. Then, participants answered a series of relationship quality measures (gratitude, closeness, satisfaction, commitment, and investment), relationship characteristics (whether they were married, how long they had been together and living together, and their number of children), and standard demographics (gender, age, and income). No effects of these relationship variables or individual demographics emerged and so will not be discussed further.

Results
To assess the effect of experience type on pre-experience and post-experience ratings, we conducted five mixed effects models with clustered standard errors to control for data dependency. Each model had experience type as a between-subjects predictor (high quality-apart vs. low quality-together), time as a within-subjects predictor (pre-experience vs. post-experience ratings for a specific measure), and their interaction term. Consistent with our theorizing that people overestimate how much their partner will positively affect their own enjoyment, all five models revealed a significant interaction between time and experience type (Table 3.2).

Table 3.2
Results in Study 4

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Happiness</th>
<th>Mood</th>
<th>Video Enjoyment</th>
<th>Experience Enjoyment</th>
<th>Satisfaction with Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>5.16 ***</td>
<td>5.30 ***</td>
<td>3.22 ***</td>
<td>4.04 ***</td>
<td>4.09 ***</td>
</tr>
<tr>
<td></td>
<td>(0.13)</td>
<td>(0.14)</td>
<td>(0.15)</td>
<td>(0.14)</td>
<td>(0.16)</td>
</tr>
<tr>
<td>Experience</td>
<td>0.08</td>
<td>0.00</td>
<td>1.37 ***</td>
<td>0.60 **</td>
<td>0.58 *</td>
</tr>
<tr>
<td></td>
<td>(0.169)</td>
<td>(0.20)</td>
<td>(0.21)</td>
<td>(0.20)</td>
<td>(0.23)</td>
</tr>
<tr>
<td>Time</td>
<td>-0.41 **</td>
<td>-0.58 ***</td>
<td>0.12</td>
<td>0.36 *</td>
<td>-0.04</td>
</tr>
<tr>
<td></td>
<td>(0.14)</td>
<td>(0.16)</td>
<td>(0.16)</td>
<td>(0.14)</td>
<td>(0.16)</td>
</tr>
<tr>
<td>Interaction</td>
<td>0.95 ***</td>
<td>1.17 ***</td>
<td>1.10 ***</td>
<td>0.62 **</td>
<td>0.96 ***</td>
</tr>
<tr>
<td></td>
<td>(0.20)</td>
<td>(0.23)</td>
<td>(0.23)</td>
<td>(0.21)</td>
<td>(0.23)</td>
</tr>
</tbody>
</table>

Significance levels: * $p < .05$, ** $p < .01$, *** $p < .001$. Clustered Standard Errors in Parentheses. Baseline groups: experience = low quality-together, time = pre-experience ratings.

As shown in Figure 3.2, participants who had the higher quality-apart experience were happier and felt better after the experience than they had before it ($ps < .001$), whereas participants who had the low quality-together experience felt less happy and felt worse after the experience than they had before it ($ps < .05$). Moreover, participants who had the high quality-apart experience underestimated how much they would enjoy the video and the experience overall, and underestimated how satisfied they would be with this study; the three simple effects for pre versus post comparisons within the high quality-apart condition were significant (all $ps <$
Predictions for participants who had the low quality-together experience were more accurate: they underestimated how much they would enjoy the experience ($p = .013$), though not how much they would enjoy the video or how satisfied they would be with the experience overall ($ps > .250$).

**Figure 3.2**
Results from Study 4

![Graph showing results from Study 4](image)

Note. Mean ratings of five attributes before and after the experience in both conditions. Error bars represent ±1 SEM. * $p < .05$, ** $p < .01$, *** $p < .001$.

**Discussion**

The results of Study 4 revealed that people thought they would enjoy an a priori higher quality experience apart from their partner, and in fact, they enjoyed it even more than they thought they would, suggesting that being together does not fully compensate for having an a priori lower quality experience, in real-time emotional reactions. Therefore, this study addresses the alternative explanation that people choose togetherness *only* because being with a partner leads to having a more enjoyable experience.

**GENERAL DISCUSSION**
Consumers often make choices about whether to be together with a partner or to have an experience that is a priori of higher quality. Five studies document that consumers make this tradeoff especially when relational concerns—the signal they fear their choice might send to their relationship partner involved—are heightened, such as in closer rather than more distant relationships. In addition to this global concern about the overall relationship, our results suggest a local driver of the preference for togetherness: people are more likely to choose to be together if they believe the experience affords greater opportunity for interaction with their partner. Of course, making such choices is likely wise for experience with a high level of interaction; spending quality time with a partner is important for relationships to flourish (Dindia and Baxter 1987) and making sense of the world together is important for maintaining close relationships (Rossignac-Milon & Higgins, 2018). However, our results across studies suggest that people can over-apply their preference for togetherness—choosing to ignore specific advice to experience a play solo in the Pilot Study, and choosing lower quality experiences even when they are aware that opportunity for interaction is highly restricted (as with the baking class in Study 2).

We note that our account centering on the role of interaction in experience enjoyment focuses specifically on the role of interaction during experiences; of course, post-experience interactions—such as discussing a movie or lecture afterwards—offer additional opportunities for people to derive enjoyment from social aspects of experiences (e.g., Kumar and Gilovich 2015). However, in the common situations that we explore (from flights to movies), both people will experience the event—they just may not sit together while doing so. As a result, the pleasure of post-interaction reflection can still be enjoyed when forgoing togetherness during the experience, but people may have less sore backs (from better seats on the plane) and necks (from craning to see the movie screen).
An implication of our research is that when considering spending time with a relationship partner, people might put too much emphasis on merely being together with a partner, and not enough on the nature of the activity itself. Our results also suggest the possibility of an even more problematic tendency for marketers and businesses: in some cases, consumers may overweight togetherness to such an extent that they may forgo valuable experiences entirely—skipping highly-rated experiences simply because they cannot sit together. Indeed, an online study (\(N = 301\) MTurkers; 47% male; \(M_{\text{age}} = 35.60\) years, \(SD = 10.95\)) supported this idea. Participants received information about an outstanding comedy show and were asked to imagine they could attend alone, with their partner and sit together, or with their partner but sit apart (because they could not find two adjacent seats). When given the possibility to sit next to their partner, 96% of participants said they would attend the show; however, when they could not sit next to their partner, only 26% report they would attend the show compared to 78% who said they would attend the show when imagining they were going alone (\(\chi^2(2) = 121.47, p < .001\)). These results suggest that our research has important marketing implications given that consumers might forgo experiences when they cannot be physically close to their relationship partners.

Finally, this work also makes theoretical contributions to the growing body of research examining interpersonal consumption, especially in the context of close relationships (e.g., Cavanaugh 2016; Liu et al., 2019). By proposing that consumption utility of shared experiences involves two dimensions (experience quality and togetherness), this work highlights the importance of understanding relational concerns and answers the recent call to study the “social customer journey” (Hamilton, Ferraro, Haws, and Mukhopadhyay 2021).
Conclusion and Future Direction

My dissertation investigates decisions that consumers make in the context of close, personal relationships. From a theoretical perspective, this dissertation builds on prior work examining relationship closeness and maintenance strategies and answers the growing call from marketing scholars to integrate social others in decision-making and consumption processes. From a managerial perspective, this dissertation answers the critical question of how consumers engage with products and experiences to foster their relationships with partners, families, and close friends. Thus, my research informs how marketers can craft more effective advertising appeals and design more attractive products with this knowledge in mind.

I am currently identifying other important decision-making processes in close relationships. For example, in one project (work in progress with Grant Donnelly, Jenny Olson, Hristina Nikolova, and Michael I. Norton, and supported by ING’s Think Forward Initiative), I am interested in helping couples to have more productive conversations about finances. Two diary studies revealed that partners underestimate the interpersonal benefits of financial conversations. Yet, correlational evidence demonstrates that financial communication is positively associated with couples’ relationship and financial well-being; this suggests that couples might be missing out on having these conversations because of erroneous perceptions.

I am also interested in writing a conceptual paper on how relationship partners create a sense of who they are as a couple through consumption. Building on recent work on shared reality (Rossignac-Milon and Higgins 2018) and couple identity clarity (Emery et al. 2020), I propose that couples have a desire to build a shared experiential CV by engaging in meaningful activities together, and that doing so fulfills a relational goal (i.e., fostering their relationship) and an epistemic goal (i.e., making sense of the world together).
APPENDIX A
STUDY 1B (ESSAY 1): STUDY MATERIALS

PREMADE POSTCARD

HANDMADE POSTCARD

Grandparents like you...
...are precious and few.

You're in my thoughts.
APPENDIX B
STUDIES 5A AND 5C (ESSAY 1): STUDY MATERIALS

OPTION 1: COOKIE MIX
Let us give you what you need so that you can make cookies from scratch! Our expert pastry chefs developed this mix so you can start baking at home.

This product includes mixes to make three different kinds of cookies selected from Le Marais' collection of gourmet recipes, which includes snickerdoodles, rainbow sprinkle cookies, quadraple chocolate cookies, oatmeal raisin cookies, vanilla sugar cookies, and more. Each bag makes 10-12 large cookies.

Here are the baking steps to make cookies from scratch:
1. Preheat oven to 350 degrees F.
2. Cream 3/4 cup of softened unsalted butter in a bowl and blend in 3 eggs.
3. Add one cookie mix to the bowl and stir into the eggs and butter.
4. Scoop dough onto cookie sheets.
5. Bake for 10-12 minutes.

OPTION 2: READY-TO-FINISH COOKIES
Let us do the work for you! Our expert pastry chefs made frozen cookie dough for you—all you have to do is place the cookie dough in the oven for 10-25 minutes at 375 degrees F. One easy step!

This product includes portions of frozen dough to make three different kinds of cookies selected from Le Marais' collection of gourmet recipes, which includes snickerdoodles, rainbow sprinkle cookies, quadraple chocolate cookies, oatmeal raisin cookies, vanilla sugar cookies, and more. Each portion makes 10-12 large cookies.
First, you will choose the FRONT of the postcard and we have two options.

Now, it is time to choose the BACK of the postcard and we have two options.
APPENDIX D
STUDY 6 (ESSAY 1): ROBUSTNESS CHECK ANALYSES

Participants thought that home-cooked soup would taste better ($M_{self\text{-}high\text{ effort}} = 5.97, SD = 1.14$ vs. $M_{self\text{-}low\text{ effort}} = 5.43, SD = 1.19; F(1, 598) = 32.70, p < .001, \eta^2 = .05$) and be more nutritious ($M_{self\text{-}high\text{ effort}} = 5.96, SD = 1.17$ vs. $M_{self\text{-}low\text{ effort}} = 5.19, SD = 1.24; F(1, 598) = 61.73, p < .001, \eta^2 = .09$) than store-bought soup. However, the key results reported in the manuscript do not change when controlling for quality of care (composite of taste and nutrition: $r = 0.69, p < .001$). The table below includes these robustness checks controlling for quality of care: all results correspond to 2 x 2 ANCOVA entering caregiver’s effort and partner’s effort as predictors of self-perceptions and quality of care as a covariate.

<table>
<thead>
<tr>
<th>Model #1</th>
<th>Dependent measure</th>
<th>Main effect of self effort</th>
<th>Main effect of partner’s effort</th>
<th>Interaction self x partner effort</th>
<th>Quality of care as covariate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model #1</td>
<td>Self-perceptions</td>
<td>$p = .007$</td>
<td>$p &lt; .001$</td>
<td>$p = .001$</td>
<td>$p &lt; .001$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$\eta^2 = .01$</td>
<td>$\eta^2 = .02$</td>
<td>$\eta^2 = .02$</td>
<td>$\eta^2 = .36$</td>
</tr>
<tr>
<td>Model #2</td>
<td>Symbolic goal</td>
<td>$p = .144$</td>
<td>$p = .020$</td>
<td>$p = .003$</td>
<td>$p &lt; .001$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$\eta^2 &lt; .01$</td>
<td>$\eta^2 = .01$</td>
<td>$\eta^2 = .02$</td>
<td>$\eta^2 = .24$</td>
</tr>
<tr>
<td>Model #3</td>
<td>Functional goal</td>
<td>$p &lt; .001$</td>
<td>$p = .001$</td>
<td>$p = .644$</td>
<td>$p &lt; .001$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$\eta^2 = .03$</td>
<td>$\eta^2 = .02$</td>
<td>$\eta^2 &lt; .01$</td>
<td>$\eta^2 = .27$</td>
</tr>
</tbody>
</table>

Finally, the moderated mediation index remained significant when adding quality of care as a covariate in the model: $a \times b = .34, SE = .12, 95\% CI_{boot} = [.12, .58])$. The indirect effect through symbolic meaning was significant when the partner had exerted effort in a past caregiving situation ($a \times b = .26, SE = .09, 95\% CI_{boot} = [.09, .43]$) but not when the partner had used an effort-reducing product in the past ($a \times b = -.08, SE = .08, 95\% CI_{boot} = [-.25, .07])$. 

99
APPENDIX E
PILOT STUDY (ESSAY 2): FEATURES OF AN EXTRAORDINARY EXPERIENCE

<table>
<thead>
<tr>
<th>Feature</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Superior</td>
<td>15.96%</td>
</tr>
<tr>
<td>Unique</td>
<td>14.64%</td>
</tr>
<tr>
<td>Exciting</td>
<td>9.37%</td>
</tr>
<tr>
<td>Happiness</td>
<td>8.35%</td>
</tr>
<tr>
<td>Memorable</td>
<td>7.76%</td>
</tr>
<tr>
<td>Unexpected</td>
<td>6.44%</td>
</tr>
<tr>
<td>Deep meaning</td>
<td>6.44%</td>
</tr>
<tr>
<td>Invaluable</td>
<td>5.42%</td>
</tr>
<tr>
<td>Story-worthy</td>
<td>2.93%</td>
</tr>
<tr>
<td>Ethereal</td>
<td>2.78%</td>
</tr>
<tr>
<td>Unbelievable</td>
<td>2.64%</td>
</tr>
<tr>
<td>Emotional</td>
<td>2.34%</td>
</tr>
<tr>
<td>Positive</td>
<td>1.90%</td>
</tr>
<tr>
<td>Engaging</td>
<td>1.76%</td>
</tr>
<tr>
<td>Liberating</td>
<td>1.46%</td>
</tr>
<tr>
<td>Relaxed</td>
<td>1.32%</td>
</tr>
<tr>
<td>Negative</td>
<td>1.17%</td>
</tr>
<tr>
<td>Sensory</td>
<td>1.02%</td>
</tr>
<tr>
<td>Group</td>
<td>0.88%</td>
</tr>
<tr>
<td>Intense</td>
<td>0.88%</td>
</tr>
<tr>
<td>Universal</td>
<td>0.73%</td>
</tr>
<tr>
<td>Love</td>
<td>0.73%</td>
</tr>
<tr>
<td>Short in time</td>
<td>0.44%</td>
</tr>
<tr>
<td>Long in time</td>
<td>0.44%</td>
</tr>
<tr>
<td>Planned</td>
<td>0.44%</td>
</tr>
<tr>
<td>Exclusive</td>
<td>0.44%</td>
</tr>
<tr>
<td>Travel</td>
<td>0.44%</td>
</tr>
<tr>
<td>Difficult</td>
<td>0.29%</td>
</tr>
<tr>
<td>Alone</td>
<td>0.15%</td>
</tr>
<tr>
<td>Expensive</td>
<td>0.15%</td>
</tr>
<tr>
<td>Colorful</td>
<td>0.15%</td>
</tr>
<tr>
<td>Youthful</td>
<td>0.15%</td>
</tr>
</tbody>
</table>
APPENDIX F
STUDY 1 (ESSAY 2): STUDY MATERIALS
APPENDIX G
STUDY 4 (ESSAY 2): STUDY MATERIALS

Grafton House

Price level: $$
Quality of the food: 4.2/5

Driving distance from your current location:
4.1 miles (8 minutes)

How unique is the experience?
1 = not at all to 5 = extremely

Russell’s Place

Price level: $$
Quality of the food: 4.2/5

Driving distance from your current location:
28.9 miles (46 minutes)

How unique is the experience?
1 = not at all to 5 = extremely
## APPENDIX H
STUDY 1 (ESSAY 3): STUDY MATERIALS

<table>
<thead>
<tr>
<th>Activity</th>
<th>High quality-apart option</th>
<th>Low quality-together option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flight</td>
<td>Two non-adjacent and comfortable seats in the economy-comfort section of the plane</td>
<td>Two adjacent and uncomfortable seats in the last row of the plane</td>
</tr>
<tr>
<td>Movie at the theater</td>
<td>Two non-adjacent seats that are perfect distance from the screen</td>
<td>Two adjacent seats that are too close to the screen</td>
</tr>
<tr>
<td>Spa session</td>
<td>You both get a premium massage while being in different rooms</td>
<td>You both get a basic massage while being in the same room</td>
</tr>
<tr>
<td>Subway ride</td>
<td>To sit in two non-adjacent seats</td>
<td>To stand right next to each other</td>
</tr>
<tr>
<td>Cooking class</td>
<td>Two non-adjacent seats close to the instructor</td>
<td>Two adjacent seats very far from the instructor</td>
</tr>
<tr>
<td>Academic lecture</td>
<td>Two non-adjacent seats that are perfect distance from lecturer</td>
<td>Two adjacent seats that are very far from the lecturer</td>
</tr>
<tr>
<td>Concert</td>
<td>Two non-adjacent seats in the front row of the venue</td>
<td>Two adjacent seats in the last row of the venue</td>
</tr>
<tr>
<td>Video game at arcade</td>
<td>To play a top-rated video game apart at different consoles</td>
<td>To play a lower-rated video game together in the same console</td>
</tr>
<tr>
<td>Dinner at restaurant</td>
<td>Two non-adjacent seats in an area where you could order from the premium menu</td>
<td>Two adjacent seats in an area where you could order from the basic menu</td>
</tr>
<tr>
<td>Museum visit</td>
<td>Two tickets to tour the museum's special exhibits while being in different groups</td>
<td>Two tickets to tour the museum's standard exhibits while being in the same group</td>
</tr>
</tbody>
</table>
APPENDIX I
STUDY 2 (ESSAY 3): STUDY MATERIALS

Low opportunity for interaction condition

Artisan Bread Baking Class

Master the science and craft of bread baking! From mixing to fermenting, shaping, proofing and baking, you’ll learn about an incredible number of bread styles.

The class involves individual exercises and a one-on-one short session with a baking professional so opportunity for interaction with a partner is very limited.

Class details:
• Duration: 4 hours (from 5:00 to 9:00pm)
• Rating from previous customers: 4.7/5 (68 reviews)

High opportunity for interaction condition

Artisan Bread Baking Class

Master the science and craft of bread baking! From mixing to fermenting, shaping, proofing and baking, you’ll learn about an incredible number of bread styles.

The class involves dyad exercises and a two-on-one short session with a baking professional so opportunity for interaction with a partner is very ample.

Class details:
• Duration: 4 hours (from 5:00 to 9:00pm)
• Rating from previous customers: 4.7/5 (68 reviews)
Choice question
You only have two options: Two non-adjacent seats in the first row where you can see and hear the instructor properly (blue seats in map below) or Two adjacent seats in the last row where you can't see and hear the instructor properly (red seats in map below).
APPENDIX J
STUDY 3 (ESSAY 3): STUDY MATERIALS

You are in charge of completing the web check-in for both of you and when you go to the airline's website, you see that the plane is almost full and there are only two seating options, which are presented in the map below: you could choose the blue seats OR the red seats.

Two non-adjacent seats in the economy comfort section

Two adjacent seats in the last row of the plane

This means that if you choose the blue seats, you will have a comfortable flight but you will not sit next to your friend and if you choose the red seats, you will have an uncomfortable flight but you will sit next to your friend. Note that on this flight all of the seats are the same price and you cannot change seats once you board the plane.
APPENDIX K
STUDY 4 (ESSAY 3): STUDY MATERIALS

Description: Magician performing tricks
Average rating: ★★★★★

Description: Low budget animation
Average rating: ★★★★★
References


