

Whillans, A. V., Dunn, E. W., & Norton, M. I. (2018). Overcoming barriers to time-saving: reminders of future busyness encourage consumers to buy time. *Social Influence*, 13(2), 117-124.

Word Count: 2162

Abstract

Spending money on time saving purchases improves happiness. Yet, people often fail to spend their money in this way. Because most people believe that the future will be less busy than the present, they may underweight the value of these purchases. We examine the impact of debiasing this previously unexplored barrier of consumer decisions to "buy time" in a field experiment with a US-based sharing economy company ($N=78,726$). Prompting people to think that they will be as busy in the future as they are today increased the likelihood that customers would both open the email and click a link to purchase various services. In sum, making the future feel as busy as the present encourages individuals to buy future time.

Keywords: Well-being, time-saving purchases, future time-slack, opportunity cost neglect

In 2011, *Time Magazine* rated the sharing economy as one of the top 10 ideas that would change the world. Today, the possibility of outsourcing just about anything from grocery shopping to dog walking is only a few clicks away. Companies such as *Angie's List* and *TaskRabbit* enable customers to outsource nearly any task by connecting people who need tasks done with people who have time to do them. As a result, sharing economy companies are poised to make outsourcing easy and affordable for a broad range of the population.

Despite the growing affordability of the various services offered by the sharing economy, research suggests that only a small minority of people spend money to delegate their disliked tasks to others. For example, across six studies with over four-thousand adults living in the US, Canada, Denmark, and the Netherlands, only 17% of respondents spent money to buy themselves time by delegating disliked tasks to others (Whillans, Dunn, Smeets, Bekkers & Norton, 2017).

These low base rates of making time-saving purchases occur despite the fact that spending money on time-saving purchases promotes happiness: Respondents who reported spending money to delegate their disliked tasks to others reported higher levels of life satisfaction, greater meaning in life, and greater social connection (Whillans et al., 2017). Furthermore, these findings held controlling for demographic variables such as income, age, marital status, and the number of children people had living at home. Finally, in an experimental study, participants reported greater end-of-day happiness after spending \$40 on a time-saving purchase vs. \$40 on a material purchase for themselves. Thus, spending money on time-saving services causally promotes happiness; yet, people often fail to spend money in this way.

Indeed, when given the choice between buying time and buying material possessions, people prefer the latter: for example, although 37.2% of the 207 companies that we recently surveyed allow employees to redeem rewards for sharing economy services, only 3.2% of

employees redeemed their reward points for time-saving services, whereas 67.0% of employees redeemed their reward points for material items, such as books from *Amazon*. (A further 16.5% of employees redeemed their reward points for experiences, and 13.3% of employees donate their reward points to charity; Whillans, 2017). These data suggest that there are psychological barriers that prevent people from recognizing the benefits of spending money to buy time, such as by purchasing the time-saving services offered by sharing economy companies.

Moreover, removing barriers to making time-saving purchases could offer benefits not only to customers, but also to managers and organizations. In the US, an increasing number of employees report feeling overwhelmed, overworked, and so exhausted that they are prone to making mistakes and doing lower quality work (e.g., Bond, Galinsky & Swanberg, 1997). Organizations that encourage greater employee uptake of time-saving rewards – higher than the 3.2% reported above – may therefore improve the lives of their employees. Initial evidence for this idea comes from a pilot “time-banking” program at Stanford University: when doctors were rewarded with vouchers for time-saving services – such as meal delivery and housecleaning – they reported improved work-life balance and were less likely to quit their jobs (Fassiotto, 2016).

We propose that one critical barrier to consumer decisions to make time-saving purchases is that many services require people to plan ahead; and, because the future often feels free of time commitments, consumers in the present feel little need to commit to future time-saving services. When considering the purchase of such services—such as hiring a housecleaner or hiring someone to wrap and mail holiday gifts—people must recognize that they will require help completing these tasks in future and must schedule these services according to projected needs. Unfortunately, people are poor at estimating how busy they will be in the future: most people believe that they will have more time in the future than they do in the present (e.g.,

Zauberman & Lynch, 2005; Zauberman et al., 2009). Consequently, it is possible that people do not prioritize buying time in part because they believe that they will have more time tomorrow than they do today. Following from this logic, people might be more likely to use a sharing economy service when prompted to see their future as more similar to the (busy) present.

To test this hypothesis, we conducted a naturalistic field experiment with a large-scale US company that allows consumers to save time by outsourcing a wide range of errands and tasks. We examined whether an email that reminded people about the specific amount of time that they could save on the same day of the following week would increase the number of customers who opened the email and the number of customers who visited the company's website.

We chose this manipulation based on recent research suggesting that reminding people about a specific day exactly one week in the future can make the future feel more similar to the present (Tu & Soman, 2014). Thus, to the extent that people underestimate how busy the future will be as compared to the present moment, making the future feel more similar to the busy present should encourage consumers to buy time. We compared this email to two other emails already in use by our company partner. These two emails reminded consumers that using the service could save them time, either in general or to spend with their friends and family. We predicted that reminding people that the future would be as busy as the present would increase customer interest in the company's services as compared to these two time-saving emails.

We follow the reporting standards proposed by Simmons, Nelson, and Simonsohn (2011): we report all conditions, exclusions, and every measure taken.

Study

Methods

Procedure. We collaborated with the company to randomly send one of three emails to

$N=78,726$ customers at 10am on Thursday, November 6, 2014. The company provided us with email open-rates and click-through rates (the number of people who clicked the email link to visit the company's website)

Emails. In the *future time* condition, customers were sent an email that reminded them about the specific amount of time that they would save on the day exactly one week from the day that they received the email (“Imagine what you could accomplish next Thursday with 2 more hours of free time”). In the *general time* condition, the email reminded customers that using the company would generally save them time (“Imagine what you could accomplish with more free time”), while in the *specific time* condition, the email reminded customers that using the company would save them time that they could spend with their friends and family (“Would you rather enjoy the company of your friends and family, or scrub the toilet bowl?”). We included these latter two conditions to isolate the effect of the *future-time* condition beyond any potential effects of time or opportunity cost reminders (e.g., Frederick et al., 2009; Mogilner, 2010; Whillans & Dunn, 2015). See Appendix A for email messages.

Results

Open-Rates

Consistent with our prediction, the *future time* email – reminding customers about the specific amount of time that they could save one week in the future – led to significantly higher open-rates (26.96%) than the *general time* email (20.60%), $Z = 25.75$, $p < 0.001$, and the *specific time* email (19.62%), $Z = 37.77$, $p < 0.001$. The latter two conditions – reminding customers that they could save time generally or to spend with friends and family – were equally effective, $Z = 0.10$, $p = 0.920$.

Click-through Rates

Also consistent with our hypothesis, the *future time* email led to significantly higher click-through rates (3.26%) as compared to the *general time* email (0.77%), $Z = 20.51, p < .001$, and the *specific time* email, (0.74%), $Z = 20.53, p < 0.001$. The latter two conditions were equally effective at encouraging customers to visit the company's webpage, $Z = 1.02, p = 0.308$.

Conversion Rates

We also looked at the conversion rate—the click-through rate contingent on customers opening the email. In this analysis, we once again found evidence that the *future time* email led to significantly higher conversion rates (9.48%) as compared to the *general time* email (3.18%), $Z = 14.42, p < 0.001$, and the *specific time* email (3.26%), $Z = 14.79, p < 0.001$. The latter two conditions had an equivalent effect on the conversion rate, $Z = 0.75, p = 0.453$.

Message Frames

Because we partnered with a large US-based sharing economy company to run this experiment, we partially relied on messages that were already use by the company, thus maximizing external validity. Yet, it is possible that these messages could have differed in critical ways that might explain our results. To rule out this possibility, we ran a study to ensure that the control and experimental messages did not differ. Using a separate sample of participants recruited from Amazon's Mechanical Turk ($N=293$, 53% female), we tested the ads for differences in basic characteristics, including how positive and negative the ads were (Lang & Yegiyan, 2008), how easy the ads were to process (Lee & Aaker, 2004; White & Peloza, 2009), and how involved and attentive participants felt when reading the ads (Wheeler, Petty & Bizer, 2005; see also Whillans & Dunn, 2018). Based on previous research (Whillans et al., 2017), we examined whether there were differences in how useful, helpful, or fun participants perceived the service to be depending on what ad they viewed. To ensure that there were no order effects, we

randomized the presentation order of the message characteristic questions. As evidenced in Table 1, the ads did not differ on characteristics (such as positivity, fluency, clarity, task-usefulness, or task status) that could have accounted for our results.

General Discussion

Reminding customers about the time that they could save one week in the future encouraged them to open an email from and visit a company's webpage to consider making time-saving purchases. The click-through rate increase was substantive—the experimental condition increased click-through rates from less than 1%, a rate that is typically considered below industry standards, to over 3%, a rate that is typically considered above industry standard (e.g., Adwords, 2016). The conversion rate increase was also substantive—the experimental condition increased conversion rates from 3% to nearly 10%, which is also considered above industry standard (Adwords, 2016). These results provide evidence that people fail to use sharing economy services in part because they underestimate how busy they will be in the future: if people were spontaneously considering how busy they would be in the future, it is unlikely that this relatively subtle message framing strategy would have impacted customers' intentions.

Interestingly, we found no difference between our control conditions. Messages that reminded participants that these purchases could save time and messages that reminded participants that these purchases could save time that they could then spend with friends and family were equally effective. A potential explanation for these results is differences in choice across conditions. For some individuals, spending time with family and friends might feel like a time *constraint* as opposed to a *windfall*. For example, for some consumers, spending time with friends and family is what they would have chosen to do anyways, other consumers might have preferred to spend time on different activities, such as working; therefore, when we examined the

overall effect, the messages may not have appeared to significantly differ. Future research should further explore when and for whom friends/family reminders encourage time-saving purchases.

An obvious implication of this work is that providing customers with the chance to purchase on-demand services could promote greater engagement with time-saving purchases. Indeed, this research suggests that, as compared to other types or products or services, services that offer the opportunity to save time may uniquely benefit from being immediately available. It is thus perhaps not surprising that many of the biggest success stories of the sharing economy are those that require little to no planning – including Uber and Lyft, in which arranging for a car service (rather than taking more time to walk or to use public transportation) necessitates only minutes of pre-planning.

Research suggests that people often experience a sense of “time famine” – people have too much to do with too little time in which to do it – leading them to spend less on happiness-inducing activities such as spending time with loved ones and helping other people (e.g., Mogilner, Chance, & Norton, 2012; Perlow, 1999). Yet, research suggests that this experience has a limited time horizon: even when people are experiencing time famine today, they continue to believe that time in the future will be abundant (Zauberman & Lynch, 2005).

When considering buying time-saving services, customers often have to make decisions about the future, such as by guessing how much time they will have on Sunday to clean the house after taking the kids to soccer practice *and* cooking dinner. By helping people recognize that they will be as busy as tomorrow as they are today, we can encourage them to spend money to have more – and potentially more enjoyable – time.

Table 1. Pilot test confirming that the three messages did not differ in ways that could explain the results

	Future Time Condition	General Time Condition	Specific Time Condition	Statistics
Message Positivity	5.69 (1.21)	5.56 (1.17)	5.66 (1.21)	$F(1, 291)=0.31, p=0.733$
Message Negativity	2.10 (1.63)	1.80 (1.25)	1.99 (1.34)	$F(1, 291)=1.10, p=0.333$
Message Easy to Understand	5.79 (1.38)	5.76 (1.53)	5.84 (1.50)	$F(1, 291)=0.07, p=0.931$
Message Easy to Comprehend	5.70 (1.47)	5.90 (1.33)	5.91 (1.39)	$F(1, 291)=0.65, p=0.526$
Message Made Me Feel Involved	5.68 (1.53)	5.77 (1.44)	5.77 (1.42)	$F(1,291)=1.31, p=0.301$
Paid a lot or a little attention when reading	6.09 (1.28)	6.33 (1.15)	6.22 (1.25)	$F(1, 291)=0.94, p=0.392$
Service featured was high in social status	3.58 (1.47)	3.65 (1.50)	3.68 (1.48)	$F(1, 291)=0.11, p=0.896$
Service featured was fun	3.73 (1.56)	3.93 (1.45)	3.80 (1.61)	$F(1, 291)=0.40, p=0.674$
Service featured was helpful	2.42 (1.29)	2.45 (1.15)	2.57 (1.40)	$F(1, 291)=0.35, p=0.705$

Note. All items are ranked on a scale from 1=*Not At All*, 7=*Extremely*. To match the design of our field experiment, we collected limited our data collection to people who reported that they had previously spent money on time-saving purchases and we ran the study on a Thursday. When applying the Bonferroni correction for multiple comparisons, the conditions do not differ from one another (updated p-value p-value 0.0056).

References

- Bond, J. T., Galinsky, E., & Swanberg, J. E. (1997). *The National Study of the Changing Workforce, 1997. No. 2*. Families and Work Institute, 330 Seventh Avenue, New York, NY 10001.
- Fassiotta, M. (2016). Academic biomedical career customization. *Conference Paper presented at the 2016 International Conference on Physician Health*.
- Frederick, S., Novemsky, N., Wang, J., Dhar, R., & Nowlis, S. (2009). Opportunity cost neglect. *Journal of Consumer Research, 36*(4), 553-561.
- Lang, A., & Yeghyan, N. S. (2008). Understanding the interactive effects of emotional appeal and claim strength in health messages. *Journal of Broadcasting & Electronic Media, 52*(3), 432-447.
- Lee, A. Y., & Aaker, J. L. (2004). Bringing the frame into focus: the influence of regulatory fit on processing fluency and persuasion. *Journal of Personality and Social Psychology, 86*(2), 205.
- Mogilner, C. (2010). The pursuit of happiness time, money, and social connection. *Psychological Science, 21*(9), 1348-1354.
- Mogilner, C., Chance, Z., & Norton, M.I. (2012). Giving time gives you time. *Psychological Science, 23*, 1233-1238.
- Perlow, L. (1999). The time famine: Towards a sociology of work time. *Administrative Science Quarterly, 44*, 57-81.
- Simmons, J. P., Nelson, L. D., & Simonsohn, U. (2011). False-positive psychology: Undisclosed flexibility in data collection and analysis allows presenting anything as significant. *Psychological Science, 22*(11), 1359-1366.

- Tu, Y., & Soman, D. (2014). The categorization of time and its impact on task initiation. *Journal of Consumer Research*, 41(3), 810-822.
- Wheeler, S. C., Petty, R. E., & Bizer, G. Y. (2005). Self-schema matching and attitude change: Situational and dispositional determinants of message elaboration. *Journal of Consumer Research*, 31(4), 787-797.
- Whillans, A. (2017). *Exchanging cents for seconds: the happiness benefits of choosing time over money* (Doctoral dissertation, University of British Columbia).
- Whillans, A. V., Dunn, E. W., Smeets, P., Bekkers, R., & Norton, M. I. (2017). Buying time promotes happiness. *Proceedings of the National Academy of Sciences*, 201706541.
- Whillans, A.V., & Dunn, E.W. (2015). Thinking about time as money decreases environmental behavior. *Organizational Behavior and Human Decision Processes*, 127, 44-52.
- Whillans, A.V. & Dunn, E.W. (2018). Guilt Undermines Consumer Willingness To Buy Time. *Harvard Business School Working Paper*, No. 18-057.
- White, K., & Peloza, J. (2009). Self-benefit versus other-benefit marketing appeals: Their effectiveness in generating charitable support. *Journal of Marketing*, 73(4), 109-124.
- Zauberman, G., & Lynch Jr, J. G. (2005). Resource slack and propensity to discount delayed investments of time v. money. *Journal of Experimental Psychology: General*, 134(1), 23.
- Zauberman, G., Kim, B. K., Malkoc, S. A., & Bettman, J. R. (2009). Discounting time and time discounting: Subjective time perception and intertemporal preferences. *Journal of Marketing Research*, 46(4), 543-556.

Figure 1. The experimental condition significantly increased email open rates (26.96%) as compared to two “time-saving” control conditions.

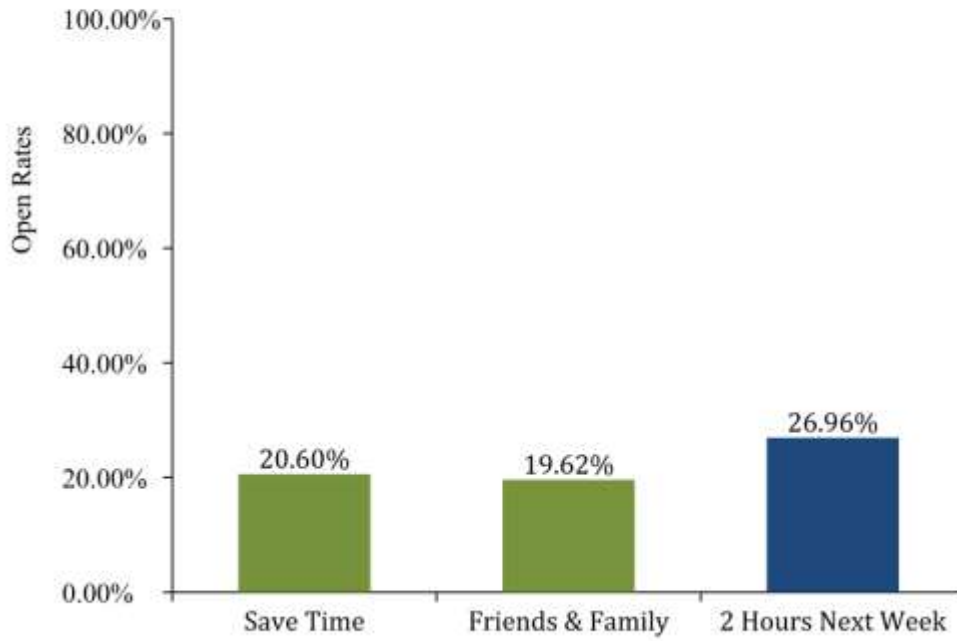
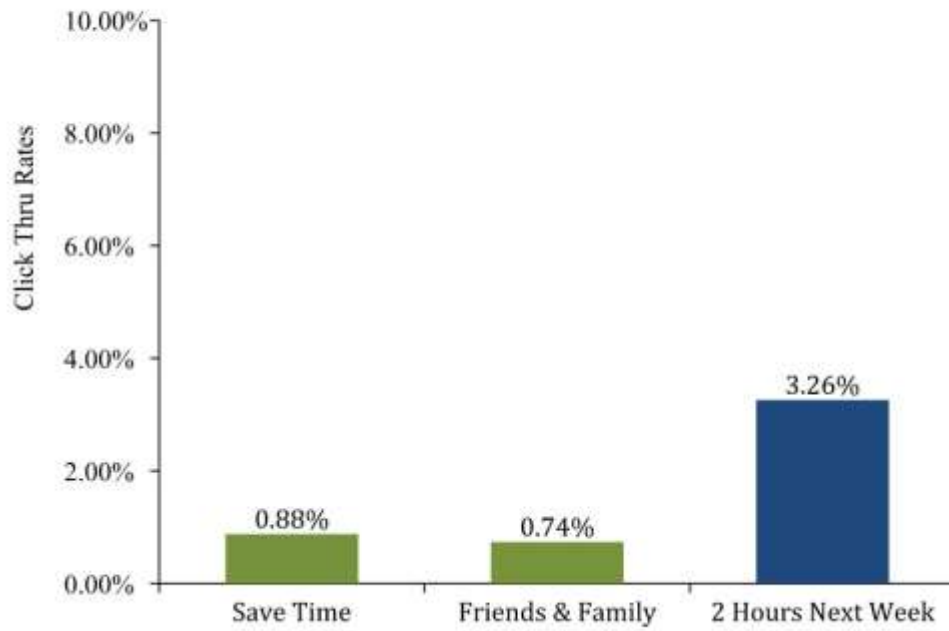


Figure 2. The experimental condition significantly increased click-through rates (4.0%) as compared to two “time-saving” control conditions.



Note. To maintain company confidentiality, we only present the text participants viewed in each condition.

Future time condition

Subject Line:

Want 2 hours of free time next Thursday?

Body of Email: Hi (their name),

Imagine what you could accomplish next Thursday with 2 more hours of free time.

Give yourself the gift of time next Thursday and let (our company) clear out your clutter, clean your bathrooms, and clean up your backyard.

Hyperlink to Website: Save Time Now

General time condition

Subject Line:

Want more free time?

Body of Email: Hi (their name),

Give yourself the gift of time and let (our company) clear out your clutter, clean your bathrooms, and clean up your backyard.

Hyperlink to Website: Save Time Now

Specific time condition

Subject Line:

Want more time with friends and family?

Body of email: Hi (their name),

Would you rather enjoy the company of your friends and family, or scrub the toilet bowl?

Buy yourself happier time, and let (our company) clear out your clutter, clean your bathrooms, and clean up your backyard.

Hyperlink to Website: Find Happier Time Now