



Time, Money, and Subjective Well-Being

By Cassie Mogilner, Anderson School of Management at UCLA; Ashley Whillans, Harvard Business School; Michael I. Norton, Harvard Business School

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Abstract:

Time and money are scarce and precious resources: people experience stress about having insufficient time, and worry about having insufficient money. This chapter reviews research showing that the ways in which people spend their time and money, the tradeoffs that people make between having more time or having more money, and the extent to which people focus on each resource can have a significant impact on happiness. Considering subjective well-being (or “happiness”) as a combination of high positive affect, low negative affect, and high feelings of life satisfaction, we explore when, how, and why time and money impact peoples’ anticipated, momentary, and lasting happiness.

Keywords: Time, Money, Trade-offs, Happiness, Subjective well-being

Time and money are both precious resources that matter for happiness. Many people feel temporally and financially constrained in their day-to-day lives (Goodin, Rice, Bittman, & Saunders, 2005; Perlow, 1999; Rheault, 2011), wishing that they had more time and more money (Hershfield, Mogilner, & Barnea, 2016). Having more money is associated with experiencing greater daily happiness up to approximately \$75,000 of household income per year, with additional gains in life satisfaction beyond that amount (Kahneman & Deaton, 2010). Having more spare time is also associated with greater happiness and life satisfaction, even after controlling for income, and even amongst people who say they like being busy (Kasser & Sheldon, 2009).

Beyond the absolute amount of free time and money they have (Kahneman & Deaton, 2010; Kasser & Ryan, 1993; Kasser & Sheldon, 2009), the extent to which people value each resource and the ways people spend their discretionary time and money can significantly impact their well-being. For example, recent findings show that even after controlling for the amount of time and money people have available, those who value time over money report greater happiness (Hershfield et al., 2016; Whillans, Weidman, & Dunn, 2016).

Still, there are many related open questions pertaining to the relationships between time, money, and happiness—such as when and how valuing time over money impact happiness, as well as the meaning that each resource assumes in people’s daily experiences and their lives more broadly. For instance, research suggests that inexpensive, everyday pleasures, such as drinking a cold beer on a warm day, may predict happiness beyond major life events, such as winning the lottery or starting a new job (Gilbert, 2006). It has been similarly argued that the key to unlocking long-lasting changes in happiness involves spending time on activities that do not require a lot of money, but do provide small frequent boosts in mood, such as exercise and religious practice (Mochon, Norton, & Ariely, 2008). More specifically, the extent to which people prioritize time versus money within each day or in their broader life decisions might have important yet differential effects for subjective well-being. Similarly, the happiness that follows from decisions about how to spend each resource may depend on when happiness is measured.

Using a definition of subjective well-being (i.e., “happiness”) as a combination of high positive affect (i.e., feeling happy in the moment), low negative affect (i.e., not feeling sad in the moment), and high life satisfaction (i.e., evaluating one’s overall life as positive; Diener, 1994; Diener et al., 2017; Diener & Lucas, 1999; Sheldon, 2013), this chapter will explore when, how, and why time and money impact people’s momentary and lasting happiness.

Some Differences between Time and Money

Benjamin Franklin encouraged people to equate time and money in his adage, “Time is money.” Yet, mounting research shows that people think about time and money in vastly different ways. Moreover, the ways that people think about these resources can have significant implications for how people behave, with consequences for their daily and overall happiness.

In particular, money has a readily exchangeable market and can be saved and borrowed across time periods, which is not true of time. Whereas a loss of \$100 today has the potential of being earned back tomorrow, a lost hour cannot be recuperated, and the 24 hours comprising each day renews every morning. Because money is more fungible than time (Leclerc, Schmitt, & Dube, 1995; Soster, Monga, & Bearden, 2010; Zauberman & Lynch, 2005), people are more prone to carefully plan their temporal expenditures than their financial ones (particularly for the short run; Lynch, Netemeyer, Spiller, & Zammit, 2009), and are more averse to the risk of losing or wasting their time than their money (Leclerc et al., 1995). For instance, people are less likely to select the chance of waiting 90

minutes over waiting 60 minutes for sure than they are to select the chance of losing \$15 over losing \$10 for sure (Leclerc et al., 1995).

It is also harder to account for expenditures of time than money (Saini & Monga, 2008). Because time is more ambiguous than money, people pay less attention to sunk costs involving time than money (Soman, 2001; Soster et al., 2010), and people can more easily rationalize poor or excessive investments of time than of money (Okada, 2005; Okada & Hoch, 2004). As a result, people prefer to invest time rather than money to acquire hedonic goods (Okada, 2005). Similarly, people have greater difficulty predicting future temporal obligations than monetary ones, which makes people more prone to overcommit their future time than their future money (Zauberman & Lynch, 2005).

While these attributes differentiate time and money as resources, time and money also differ in their perceived connection to people's self-concepts. People view their temporal expenditures as more reflective of who they are as a person than they do their monetary expenditures (Gino & Mogilner, 2014; Mogilner & Aaker, 2009). Consequently, people view donations of time as more moral and self-expressive than donations of money (Reed, Aquino, & Levy, 2007), and people often prefer to make donations of time versus money, even when these donations are less effective (Olivola & Shafir, 2013). People also like products more when they think about the time they have spent with that product versus the money they have spent (Mogilner & Aaker, 2009).

Not only are people's experiences more critical to their personal narrative than material goods (Carter & Gilovich, 2012), but the ways people spend their time literally sum up to the days and the life they live (Mogilner, Hershfield, & Aaker, 2017). So, even though people can buy goods to express aspects of their identity (Belk, 1988; Richins & Dawson, 1992), expenditures of money do not constitute people's lives in the same way that expenditures of time do. People who prioritize the accumulation of material goods (materialism) thus typically report lower subjective well-being (Belk, 1985; Kasser & Ryan, 1993, 1996; Richins, 1994; Richins & Dawson, 1992; Van Boven, 2005).

Focusing on Time versus Money

Partly because of these differences between time and money, the extent to which each resource is salient can influence behaviors that have implications for subjective well-being. For example, the extent to which people are focused on time versus money influences moral behavior. In the context of charitable giving, those led to consider giving time (vs. money) give more time *and* more money, because they imagine the happiness they would feel from engaging with the cause (Liu & Aaker, 2008). Being primed with time (vs. money) also reduces people's tendencies to cheat in games that award money or pride (Gino & Mogilner, 2014). Investigations into the effects of focusing on money confirm its deleterious influence on ethicality. Situational reminders of money (and wealth) lead to unethical behavior, particularly when the decision to act unethically has personal benefits (Dubois, Rucker, & Galinsky, 2015;

Gino & Pierce, 2009; Kouchaki, Smith-Crowe, Brief, & Sousa, 2013; Miller, Kahle, & Hastings, 2015).

Though ethicality has consequences for subjective well-being (Borgonovi, 2008; Steger, Kashdan, & Oishi, 2008), focusing on time versus money also impacts subjective well-being by motivating behaviors that are directly linked to happiness. Namely, when time (vs. money) is made salient, people become motivated to socialize more and to work less (Mogilner, 2010)—activities that are often tied to immediate happiness and unhappiness, respectively (Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004). Furthermore, people who are chronically focused on time rather than money (measured by their likelihood to choose time over money) report feeling happier and more satisfied with life (Hershfield et al., 2016; Whillans et al., 2016). Time-focused individuals exhibit greater social inclinations, preferring to spend their time and money with or on others rather than on themselves (Hershfield et al., 2016; Whillans & Dunn, 2017).

The vast literature on the consequences of money salience similarly reveals anti-social, yet productive, effects of focusing on money. Though not every finding involving money primes has been replicated (Caruso, Shapira, & Landy, 2017; Caruso, Vohs, Baxter, & Waytz, 2013; Rohrer, Pashler, & Harris, 2015), a review of over 150 studies supports two robust categories of effects (Vohs, 2015): compared to neutral primes, reminders of money make people less interpersonally attuned they become unhelpful, stingy, and disinterested in social interaction (Gasiorowska, Zaleskiewicz, & Wygrab, 2012; Vohs, Mead, & Goode, 2006, 2008). On the other hand, reminders of money do motivate people to work—they exert more effort on challenging tasks, work longer, demonstrate better performance, and feel more efficacious (Vohs et al., 2006, 2008).

When people are led to equate time and money by putting a price on their time (by calculating their hourly earnings or receiving hourly vs. salary pay), their behavior changes. They become less willing to spend their time on uncompensated activities, such as volunteering and engaging in pro-environmental behavior (DeVoe & Pfeffer, 2007, 2011; Whillans & Dunn, 2015), they experience greater feelings of psychological and physiological stress (Pfeffer & Carney, 2017), and there is some debated evidence to suggest they become more impatient and less likely to slow down and enjoy leisure activities, such as listening to music (DeVoe & House, 2012; cf. Connors, Khamitov, Moroz, Campbell, & Henderson, 2016).

The vast money priming literature allows the meaning of money to emerge through the conglomeration of findings. The sparser literature on priming time leaves the various meanings of time yet to be fully explored or understood. Future research is needed to identify when and why reminders of time influence behavior and emotional well-being. What features of time reminders lead people to think about their daily schedule (which might be associated with the stress of immediate time pressures) versus their time on Earth (which might motivate more meaningful pursuits; Mogilner et al., 2017)? Thinking about the hours or days that remain before a task is due would likely have different emotional consequences than thinking about the years remaining in one's life. Also, time might

mean different things to different people—perhaps varying by culture, geography, or employment. More than money, time is a rich construct that would benefit from further investigation and understanding.

When People Focus on Time versus Money

While the priming findings highlight how people's focus on time or money is subject to situational influence, the extent to which people are focused on time or money also varies by individual (Hershfield et al., 2016; Whillans et al., 2016) and more stable circumstances—such as how much of the resource people have. Having less of a resource, whether it be time or money, makes people focus on it more (Shah, Mullainathan, & Shafir, 2012; Shah, Shafir, & Mullainathan, 2015; Spiller, 2011). Consistent with this theory of scarcity, having less actual or perceived time (or money) increases people's likelihood to choose that resource over the other (Hershfield et al., 2016; Whillans et al., 2016). One study found low income Americans to exhibit similar behavioral intentions as those primed with money, which suggests that money is already highly salient among people who are financially constrained (Mogilner, 2010).

However, in the case of money, abundance also seems to increase its salience. Not only is money more valued (showing a stronger relation to subjective well-being) in richer nations (Tay, Morrison, & Diener, 2014), but very wealthy individuals exhibit similar behaviors as those exposed to reminders of money: savoring simple pleasures less (Quoidbach, Dunn, Petrides, & Mikolajczak, 2010), deriving less meaning from taking care of their children (Kushlev, Dunn, & Ashton-James, 2012), and being less altruistic (Miller et al., 2015).

Though both scarcity and abundance increase people's focus on money, only scarcity draws people's attention to time and its ultimate value. That said, the psychological and behavioral consequences of time scarcity depend on whether time is construed more concretely (e.g., in terms of day-to-day scheduling) or abstractly (e.g., in terms of one's time to be alive; Trope & Liberman, 2010).

The feeling of being pressed for time in people's day-to-day lives (Goodin et al., 2005; Robinson & Godbey, 2010) has been described as a "time famine" (Perlow, 1999). It plagues people of both high and low income (Hamermesh & Lee, 2007), and is particularly acute among working parents (Gimenez-Nadal & Sevilla-Sanz, 2011; Goodin et al., 2005; Strazdins et al., 2011; Sullivan & Gershuny, 2001). Not only does this form of time scarcity produce feelings of stress (Carroll, 2008; Roxburgh, 2004; Strazdins, Welsh, Korda, Broom, & Paolucci, 2016), it also elicits behaviors that undermine subjective well-being. People who feel time-constrained become less helpful, less active, and less physically healthy (Banwell, Hinde, Dixon, & Sibthorpe, 2005; Darley & Batson, 1973; Jabs et al., 2007; Mogilner, Chance, & Norton, 2012; Strazdins et al., 2011).

In contrast, awareness that one's overall time in life is limited improves subjective well-being by encouraging

people to find greater enjoyment in life's ordinary pleasures and close relationships (Bhattacharjee & Mogilner, 2014; Carstensen, Isaacowitz, & Charles, 1999; Cozzolino, Sheldon, Schachtman, & Meyers, 2009; Cozzolino, Staples, Meyers, & Samboceti, 2004; Kurtz, 2008; Mogilner, Aaker, & Kamvar, 2012; Mogilner, Kamvar, & Aaker, 2011). For instance, when people perceive their future time as more limited (which tends to happen with age; Carstensen et al., 1999), they derive greater happiness from ordinary experiences, such as eating a piece of chocolate, basking in a sunny morning, or receiving a text from a friend (Bhattacharjee & Mogilner, 2014). Additionally, the salience of limited time left in life leads people to feel greater happiness from feeling calm than from feeling excited (Mogilner et al., 2011), to pursue emotionally relevant goals (Fung & Carstensen, 2006), to behave more generously (Cozzolino et al., 2004), and to prioritize close interpersonal connections (Carstensen et al., 1999). It is in realizing that one's time in life is limited that people become more deliberate in how they spend their time and extract greater happiness from those activities.

Happier Ways to Spend Time

Though happiness is partly influenced by inherited temperament (Lykken & Tellegen, 1996; Nes & Røysamb, 2015) and circumstances (Fujita & Diener, 2005; Lucas, 2007), the way people choose to spend their time within and across days is also a substantial determinant of happiness (Lyubomirsky, Sheldon, & Schkade, 2005).

To promote daily happiness, people should consider spending more time engaging in activities that elicit positive vs. negative mood (e.g., Krueger, Kahneman, Schkade, Schwarz, & Stone, 2009). To identify what activities promote positive (and negative) mood, researchers have conducted studies using the Day Reconstruction Methodology (DRM). In DRM studies, respondents are asked to reconstruct the activities filling their last 24 hours, episode by episode. Respondents are then asked to report their mood during each episode. Through these studies, researchers have found initial evidence that, on average, people feel more positive emotion when they are engaged in leisure activities, such as exercising and socializing, than when they are engaged in commuting, work, and housework (e.g., Kahneman, Krueger, Schkade, Schwarz & Stone, 2004, 2006). Yet, it is worth noting that in one of the seminal DRM studies on this topic (Kahneman et al., 2006), some respondents reported feeling happier at work (vs. leisure or other activities), suggesting there are individual differences in which time-use activities promote happiness.

Using more sophisticated data collection methods, such as experience sampling and mobile sensing, researchers have further expanded on these DRM findings by exploring what kind of leisure activities people should engage in to reap the greatest happiness. In experience sampling studies, respondents are asked to report how they feel "right now" during randomly selected episodes throughout the day (Csikszentmihalyi & Hunter, 2003; Csikszentmihalyi & Larson, 2014; Hektner, Schmidt, & Csikszentmihalyi, 2007; Napa Scollon, Prieto, & Diener, 2009). In mobile sensing studies, cell phone technology stealthily records participants' activities. Meanwhile,

participants respond to messages throughout the day indicating their current mood (Berke, Choudhury, Ali, & Rabbi, 2011; Killingsworth & Gilbert, 2010; Lane et al., 2010; Lathia, Sandstrom, Mascolo, & Rentfrow, 2017; Ma, Xu, Bai, Sun, & Zhu, 2012; Maisonneuve, Stevens, Niessen, & Steels, 2009; Rabbi, Ali, Choudhury, & Berke, 2011).

These state-of-the-art methodologies suggest that more active forms of leisure, such as exercising and volunteering, are linked to greater daily positive mood compared to more passive forms of leisure, such as watching TV, relaxing, and napping (Lathia et al., 2017; see also: Smeets, Whillans, Bekkers, & Norton, 2017; Richards et al., 2015; Wang et al., 2012). For example, new research using a mobile app that measures activity level through smart phones shows that people feel happier when they have been moving in the past 25 minutes than when they have been sitting or lying down, regardless of the activity they were engaging in (Lathia et al., 2017). Most participants' movement involved gentle walking, light jogging, and casual cycling, suggesting that even minimal physical exertion can enhance daily mood.

Cultivate social connection. Another time-use activity that can promote happiness is spending time with others: Time spent connecting with others tends to be the happiest part of most people's day (Kahneman et al., 2004; Mogilner, 2010), and experiences that are shared produce greater happiness than those experienced alone (Caprariello & Reis, 2013). High quality social relationships are essential for mental and physical health (Diener & Seligman, 2002). Meta-analyses suggest that the health benefits of social connection are comparable to those of exercising regularly and not smoking (Holt-Lunstad, Smith, Baker, Harris, & Stephenson, 2015; Holt-Lunstad, Smith, & Layton, 2010). Even fleeting social interactions, such as chatting with one's Starbucks barista or a fellow commuter on a bus, can make people feel connected and therefore bolster happiness (Epley & Schroeder, 2014; Sandstrom & Dunn, 2013).

Help others. Spending time helping others is another activity that can enhance mood and physical health (Dunn, Aknin, & Norton, 2008; Gimenez-Nadal & Molina, 2015; Liu & Aaker, 2008; Weinstein & Ryan, 2010; Whillans et al., 2016, cf. Whillans, Dunn, Smeets, Bekkers & Norton, 2017). One way that helping others can promote subjective well-being is by reducing the stress associated with feeling time-constrained. Study participants who spent time helping someone else (vs. who spent time on themselves) reported feeling like they had more time, in part because it made them realize all they could accomplish with their time (Mogilner et al., 2012).

Be active. As already discussed, engaging in active leisure activities seems to reliably promote happiness (Lathia et al., 2017). Consistent with these findings, people also report greater happiness when they are busy, especially when they can justify their busyness (Hsee, Yang, & Wang, 2010). In North America, busyness is now a status symbol (Bellezza, Paharia, & Keinan, 2016). Idleness, on the other hand, is extremely upsetting. People would rather shock themselves than be left alone with their own thoughts (Wilson et al., 2014). These findings might help to

explain why people who are unemployed (despite their abundance of free-time) report lower levels of daily happiness than those who are employed (Young & Lim, 2014). Notably however, once busyness transforms into feelings of time stress, people experience lower positive mood and life satisfaction—and this effect holds even among people with a stated preference to be busy (Kasser & Sheldon, 2009).

Increase variety. Across the activities that fill people’s lives, greater variety increases excitement and engagement (Etkin & Mogilner, 2016), which helps to offset the threat of hedonic adaptation (Lyubomirsky et al., 2005). Notably, however, though filling one’s day or week with highly varied activities increases happiness, fitting highly varied activities into shorter time periods (e.g., an hour) reduces happiness by making people feel like they have accomplished less (Etkin & Mogilner, 2016). These findings provide initial evidence that multitasking can undermine feelings of productivity and happiness.

Variety across emotional experiences can also have benefits for overall subjective well-being. “Emodiversity”—the variety and relative abundance of the emotions that people typically experience—predicts decreased depression and doctor’s visits, over and above mean levels of positive and negative emotion (Quoidbach et al., 2014). Other research has shown that experiencing moderate variability in one’s emotional experiences (vs. too much or too little variability) positively predicts happiness and is associated with improved physical health (e.g., Human et al., 2015; Kashdan & Rottenberg, 2010). Too much variability in positive emotion predicts lower life satisfaction and greater depression (Gruber, Kogan, Quoidbach, & Mauss, 2013).

Relatedly, current research suggests that spending too much time engaging in social activity can undermine well-being (Kushlev, Diener, Heintzelman & Oishi, 2017). In light of this possibility that over-investing in “positive” time-use pursuits can come at a cost to well-being, more research is needed to understand individual differences and social/cultural factors that determine people’s happiness from working versus leisure, as well as the optimal amount of time that people should spend at work versus engaging in social and leisure activities.

Savoring Time Spent

In addition to what people spend their time doing, the extent to which people are mentally engaged in those activities can influence resulting happiness (Nakamura & Csikszentmihalyi, 2009). This speaks to the importance of savoring daily experiences. One strategy for savoring daily experiences is turning them into rituals. For example, study participants rated a chocolate as more flavorful and worth savoring when they had completed a ritual prior to consumption (e.g., by unwrapping the chocolate in a specific way; Vohs, Wang, Gino, & Norton, 2013). Also, engaging in the creation of products can make the experience of those products more satisfying—an observation called “the IKEA effect” (Norton, Mochon, & Ariely, 2012).

Another strategy to help people savor experiences includes taking photos of the experience. Taking photos

enhances enjoyment of positive experiences by increasing people's engagement with the experience (Diehl, Zauberma, & Barasch, 2016). Notably, however, taking photos with the intent of posting them on social media pulls people out of the experience and reduces enjoyment of the experience (Barasch, Zauberma, & Diehl, 2017). Photos taken during such events as concerts and nights out with friends facilitate rediscovery of previously experienced events, which enhances positive mood (Zhang, Kim, Brooks, Gino, & Norton, 2014).

When people are aware their time is running out, they are more likely to savor whatever time they spend. For instance, people imagining it is their last month in their current city derive greater enjoyment from their day-to-day experiences (Layous, Kurtz, Chancellor, & Lyubomirsky, 2017); college students focused on the imminence of graduation engage more in their typical college-related activities and experience greater happiness from them (Kurtz, 2008); and people who temporarily give up something pleasurable derive greater pleasure from it the next time it is consumed (Quoidbach & Dunn, 2013). While extraordinary experiences produce high levels of happiness regardless of the amount of time left in life, ordinary experiences produce high levels of happiness among older people and younger people who perceive their future as limited (Bhattacharjee & Mogilner, 2014). Realizing the preciousness of time encourages people to extract greater happiness from even the most mundane activities.

Extracting Meaning from Time

Thus far, we have reviewed findings identifying ways to spend time that promote positive mood and immediate feelings of happiness. Yet, a more lasting sense of purpose and meaning in life is also an important factor in subjective well-being (Catapano, Quoidbach, Mogilner, & Aaker, 2017; Diener et al., 2010; Ryan & Deci, 2001). Therefore, in addition to understanding how people should spend their time to maximize their daily mood, it is also important to clarify what activities help to maximize a sense of meaning.

Time-use activities that are rated as low in positive affect (e.g., working or spending time with young children; Kahneman et al., 2004) can be rated high in meaning (Nelson, Kushlev, English, Dunn, Lyubomirsky, 2013; White & Dolan, 2009). These "objectively unpleasant" daily activities can indirectly contribute to greater well-being by enhancing meaning in life (White & Dolan, 2009). People presumably spend their time to satisfy various components of well-being. For instance, they may watch TV seeking pleasure, but they may volunteer at a food bank to feel a greater sense of meaning. To advise people how they should spend their time to maximize subjective well-being, it is therefore important to understand *why* people are engaging in a given task, in addition to *what* people are doing and how they feel while doing it.

Collectively, these findings highlight important areas for future research. More research is needed to understand how best to spend time to maximize daily happiness, as well as life satisfaction. Since moment-to-moment happiness does not simply sum up to one's memory of the experience or one's overall evaluation of the experience

(e.g., Diener, Wirtz, & Oishi, 2001; Fredrickson & Kahneman, 1993; Wirtz, Kruger, Scollon, & Diener, 2003), an important question then becomes which source of well-being should be optimized to translate into greater well-being each day and over the course of people's lives (Mogilner & Norton, 2017). Relatedly, more research is needed to understand *when* it is best to prioritize one form of well-being over another. For example, research on psychological flexibility suggests that changing one's goals to meet the needs of the current situation will likely produce the best results (Kashdan & Rottenberg, 2010).

Happier Ways to Spend Money

One way to change how people spend their time is to change how they spend their money. The products and services that people purchase (or not) are essentially purchases of time: buying a television is buying time watching TV, paying for housecleaning is buying several hours of free time, and saving for retirement is buying improved future time. Therefore, research identifying what uses of money “pay off” in the most happiness focuses on ways to spend money—such that people spend their time in happier ways (Dunn & Norton, 2013). More specifically, mounting research suggests that the material purchases people make for themselves—from cars to houses to gadgets—often fail to pay off in increased happiness (Dunn & Norton, 2013; Van Boven & Gilovich, 2003). Yet, spending money on others (instead of on the self) and buying experiences (the opposite of tangible possessions) can promote happiness. Finally, a third area of research explores the benefits of using money to directly buy more free time.

One caveat to note is that people who lack discretionary money and are struggling to make ends meet will not often confront decisions for whether and how to spend their money to maximize happiness. Still, many people do have some discretionary income, which makes these insights relevant for a significant portion of the population. Indeed, a large proportion of people living in developed countries have non-trivial discretionary income (OECD Economic Survey of Canada and the United States, 2016), with the average North American household taking home approximately \$30,000 of discretionary income each year (Statistics Canada, 2016; US Census Bureau, 2015).

Spend on others. Dunn, Aknin, and Norton (2008) conducted a simple experiment designed to test whether spending on the self or spending on others leads to greater happiness. On a university campus in Canada, people were given either \$5 or \$20 and instructed to either spend it on themselves or on others by the end of the day. When contacted that night, those assigned to spend on others were happier than those assigned to spend on themselves, regardless of the amount. The happiness from prosocial spending is not limited to wealthier countries: Large-scale survey data assessing the link between charitable giving and well-being in 136 countries reveals a directionally positive link in 120 of the 136 countries, and a significant correlation in a majority of the sampled countries (Aknin et al., 2013).

In general, prosocial behavior is most apt to positively influence personal well-being when the behavior

satisfies at least one of three basic needs: relatedness, competence, and autonomy (Weinstein & Ryan, 2010; see also Dunn, Aknin, & Norton, 2014). Perhaps not surprisingly, then, prosocial spending produces more happiness when the giving is conducted face-to-face (e.g., when people buy a friend a coffee at Starbucks and accompany them there; Aknin, Dunn, Sandstrom, & Norton, 2013) and when people spend on strong ties (such as family) rather than weak ties (such as acquaintances; Aknin, Sandstrom, Dunn, & Norton, 2011). In addition, perceiving the prosocial impact—such that people feel their giving is making a difference in the lives of others—heightens the happiness gained from prosocial spending in both their personal lives (Aknin, Dunn, Whillans, Grant, & Norton, 2013) and their professional lives (Grant & Sonnentag, 2010).

Buy experiences. An impressive body of research suggests that when spending on the self, it is better to buy experiences than material possessions to maximize subjective well-being (see Gilovich & Kumar, 2015 for a review). In a seminal paper, Van Boven and Gilovich (2003) defined an experiential purchase as “an event or series of events that one lives through” and a material purchase as “a tangible object that is kept in one’s possession.” In the associated series of studies, people who recalled experiential purchases were happier and felt that their money was better spent than those who recalled material purchases.

There are several reasons for the greater happiness from experiential purchases than material ones. For one, people are slower to hedonically adapt to experiences than possessions. In one study, the happiness of participants who purchased experiences decreased more slowly over the ensuing days and weeks than the happiness of people who had purchased material goods (Nicolao, Irwin, & Goodman, 2009). In another study, happiness with experiential purchases even increased over time (Carter & Gilovich, 2010). Another reason for the greater happiness from experiential purchases is that experiences tend to be more emotionally acute and socially connecting than material goods (Chan & Mogilner, 2017). Recipients of experiential gifts therefore feel more connected to their gift-giver than do recipients of material gifts (Chan & Mogilner, 2017). Moreover, whereas material purchases are more likely to be consumed alone, experiential purchases are more likely to be enjoyed with others (Caprariello & Reis, 2013), and the associated feelings of relatedness are at least partly responsible for the ensuing happiness (Howell & Hill, 2009). Furthermore, experiential purchases are more tightly tied to people’s sense of identity, creating happy memories that give people a sense of “who they are” (Carter & Gilovich, 2012). This is yet another reason why people go to great lengths to collect (Keinan & Kivetz, 2011) and protect (Zauberman, Ratner, & Kim, 2009) memories of experiences, and why people find rediscovering those memories so pleasurable (Zhang et al., 2014).

It is worth pointing out that experiential purchases do not always enhance happiness more than material purchases. For example, while experiential purchases produce more intense feelings of happiness (Chan & Mogilner, 2017), material purchases produce more frequent feelings of happiness (Weidman & Dunn, 2016). More research is needed to identify exactly when material versus experiential purchases are more effective at increasing subjective

well-being—particularly when looking to maximize happiness in the moment, rather than anticipated or retrospective happiness. More research is also needed to understand whether some material purchases—such as a new car or a home with a view—can promote lasting happiness by helping facilitate positive daily experiences.

Buy time. An emerging body of research has explored the benefits of using money to buy more free time. Whillans et al. (2017) document three primary findings. First, people are surprisingly unlikely to report using money to buy time (e.g., paying to delegate common household chores like cleaning, shopping, and cooking), which suggests that buying time is not a common use of money. Second, large-scale surveys of countries ranging from the United States to Denmark to the Netherlands involving both representative samples as well as samples of millionaires demonstrate that buying time is correlated with well-being. Third, an experiment in which people were given \$40 and asked to make a time-saving purchase versus buy a material good showed that buying time led to greater happiness, and these results were driven by the buffering role that buying time played in alleviating time stress. Across studies, the least wealthy participants benefitted the most from spending money on time-saving purchases. These results suggest that people who are pressed for money might also be more likely to be pressed for time, potentially because they must commute farther to work or are single parents. More research is needed to further understand when and why buying time produces greater levels of well-being.

This review of findings identifies an exploration into the correct balance in spending across the multitude of domains as one clear avenue for future research. Taking just the four spending categories reviewed here, research suggests that while material purchases typically do not pay off in happiness, prosocial spending, experiential purchases, and buying time do. Yet, people clearly must make some material purchases (e.g., they need clothing). So the question remains: What percentage of spending should be allocated across these categories? Second, the research reviewed offers several mediators of the money-happiness link, but which is most important? And even if we assume, for instance, that relatedness is most critical, what spending category best increases feelings of relatedness? Is it spending directly on an experience with someone else, or giving to charity, or even buying time to free up more time to spend with family and friends? More research is needed to compare the relative benefits of different methods for using money to buy happiness. More research is also needed to understand *who* stands to benefit most from spending money in each category. Recent research suggests that personality can moderate the benefits of spending on others and on material purchases (Matz, Gladstone & Stillwell, 2016). Thus, future research should seek to understand how both personality factors and available income interacts to predict the benefits of various spending choices.

Conclusion

This chapter reviews how thinking about and spending time and money shapes subjective well-being. Notably, many of the effects depend on the temporal context of subjective well-being—is happiness being optimized

in the moment or when remembering the past or anticipating the future? Going forward, researchers should more precisely delineate the role of time and money in day-to-day feelings of happiness, forward- and backward-looking feelings of happiness, as well as assessments of living a happy life overall. Researchers should also increase the representativeness and generalizability of the time-use and happiness findings reported in this chapter by conducting research among non-Western samples and respondents from both lower and higher income brackets (Henrich, Heine & Norenzayan, 2010).

Also, though we focused on individuals' happiness as the unit of analysis, future research should consider the implications of time and money for the happiness of relationship pairs, families, organizations, and societies. For example, how do various means of managing, sharing, and giving time and money impact relationship satisfaction? Findings in the relationship literature on shared novel experiences (Aron, Norman, Aron, McKenna & Heyman, 2000), expressions of gratitude (Algoe, Gable, & Maisel, 2010), and rituals (Sezer, Norton, Gino, & Vohs, 2016) highlight this as a ripe area for research. From an organizational perspective, companies might similarly consider how compensating employees with time (e.g., vacations, sabbaticals, flex hours) versus money (e.g., salary, 401k options) translates into job satisfaction.

Time and money are arguably life's most precious resources. Continuing to understand how people spend, think about, and value their time and money will help to answer the broader and more fundamental question of how to maximize individual and societal well-being.

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