

**Making Time Matter:  
A Review of Research on Time and Meaning**

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### Abstract

In this conceptual paper, we review three decades of research on time and meaning in consumer research and psychology to identify key themes that have emerged, build frameworks that integrate past research, and reveal areas of potential for future empirical exploration. We begin by carving out a conceptual understanding of meaning in life and identifying time as a key lens through which the pursuit of meaning can be viewed. We then review extant research on how to spend and construe time in ways that enhance meaning, relying on two frameworks—one anchored in three dimensions of meaning (purpose, mattering, and comprehension) and the other in three levels of time (momentary, day-to-day, and lifetime). We conclude by outlining several directions for future research focused on deepening our understanding of how consumers can think about and use their time in ways that boost their sense of meaning in life.

*“Knowledge of the impermanence of our existence reassures us that how we live does make a difference. Because our allotted time for living is finite, we must make the most of each day.”*

— Kilroy J. Oldster

### **Introduction**

Meaningfulness is a profoundly important part of human life—people seek meaning, they covet meaning, they admire (or envy) others who they believe lead meaningful lives, and they despair when they feel that their own lives lack meaning. But, despite the critical motivating role that meaningfulness plays in people’s lives, the concept of meaning and how to attain it are often perceived as obscure. To address this lack of clarity and advance our understanding of meaning in the literature, we focus this review on the indissoluble relationship between time and meaning. Indeed, what is life but little pieces of time strung together? And thus what is the pursuit of meaning in life, but the pursuit of spending and construing one’s time in more meaningful ways?

This topic is both theoretically important and timely, as much of consumer research has focused on understanding the choices and consumption of material purchases, often motivated implicitly or explicitly by the pursuit of enjoyment, pleasure, or happiness (for a review of hedonic consumption, see Alba & Williams, 2013; Hirschman & Holbrook, 1982). However, the hedonic motivation of consumer choice and behavior is not the only one. For instance, parents opt to spend time and resources on their children, although child rearing has been associated with lowered levels of happiness (McGregor & Little, 1998). People choose to work, even though it often detracts from happiness (Choi, Catapano, & Choi, 2017). And people choose to volunteer and to support charitable causes, even when the contribution process is expected to be effortful and painful rather than easy and enjoyable (Olivola & Shafir, 2013). Thus, to date, much of consumer research cannot fully explain these contexts where people choose outcomes that are

suboptimal for their own personal happiness, even referring to these choices as irrational.

However, as seen through the lens of an often related, but distinct, motivating force—the pursuit of meaning—these decisions and behaviors are more understandable.

Given that the consumer psychology literature has made great strides toward providing consumers, marketers, and managers with an understanding of hedonic pursuits and how to attain happiness, but has offered markedly less guidance regarding the pursuit of meaningfulness in life, the primary goal of this conceptual review is to address this disparity and shed light on when, how, and why consumers find meaning. Gathering findings in the fields of consumer research and psychology that provide insight into meaningfulness and the treatment and consumption of time (Gino & Mogilner, 2014; Hershfield, Mogilner, & Barnea, 2016; Liu & Aaker, 2008; Mogilner, 2010; Mogilner & Aaker, 2009), this review integrates and structures extant research into two tripartite frameworks, anchored in three established dimensions of meaning (purpose, mattering, and comprehension) and in three levels of time (momentary, day-to-day, and lifetime). By investigating contexts in which individuals are guided by meaning and focusing the review on the important role that one of our principal resources—time—plays in determining our sense of meaning (i.e., investigating how we can construe and spend time so as to enhance meaning), we hope to not only help fill this gap in the literature but also reveal areas of potential for future research on both time and meaning.

## **Understanding Time and Meaning**

### **Time as a Resource**

Time is a precious commodity. On one hand, time is endless and pervasive, constantly flowing and serving as the medium in which all of the moments that comprise every life occur. Time thus helps create each person's individual history or narrative, making it inherently

connected to meaningfulness. Indeed, a meaningless world is “a world without history, a world that is in this significant sense devoid of time” (Taylor, 1987, p. 679). Moreover, time, and the way one chooses to use it, reflects one’s personal identity, augments social connections, and has been linked to well-being (Aaker, Rudd, & Mogilner, 2011; Gino & Mogilner, 2014; Hershfield et al., 2016; Liu & Aaker, 2008; Mogilner, 2010; Mogilner & Aaker, 2009). In contrast, psychologists have found a relatively weak (or counterproductive) relationship between money, consumers’ other principal resource, and well-being (Diener & Biswas-Diener, 2002; Kahneman, Krueger, Schkade, Schwarz, & Stone, 2006). For instance, though money is not in and of itself detrimental to well-being (Aknin, Norton, & Dunn, 2009), reminders of money or focusing on money (vs. time) can encourage people to be unhelpful and unethical, and to adopt an isolationist orientation wherein one is disinterested in social interaction (Vohs, Mead, & Goode, 2006). The priming of money also boosts experiential avoidance tendencies and impairs one’s ability to savor everyday positive emotions and experiences (Kashdan & Breen, 2007; Quoidbach, Dunn, Petrides, & Mikolajczak, 2010). In short, time is laden with great personal meaning and inherently central to consumers’ lives (especially compared to money; Mogilner & Aaker, 2009).

Time, on the other hand, is also a constraint. Whereas many resources (e.g., money or energy) can be replenished, time cannot. No person (regardless of wealth, status, intelligence, or effort) can accrue more than 24 hours in a day, live forever, or regain time that has been spent (Leclerc, Schmitt & Dube, 1995). Moreover, consumers’ subjective perceptions of time often reflect a sense of time poverty or time famine (Perlow, 1999). For instance, in a recent nationwide poll, nearly half of Americans reported that they do not have enough time to do what they want to do (Newport, 2017). Further, approximately two thirds of Americans state that they always or sometimes feel rushed; half say that they almost never feel that they have time on their

hands (Robinson, 2013). This scarcity of objective and subjective time not only increases the value of time (Lynn, 1991), but highlights the tradeoffs that are characteristic of temporal resources—spending time doing one thing means one is foregoing the opportunity to spend time doing something else (Shah, Shafir, & Mullainathan, 2015; Spiller, 2011)—and underscores how important it is for consumers to be conscious about how they spend and construe their time. If consumers want to enhance meaning in life, they must learn how to make their finite time matter. Thus, in the present review, we focus specifically on extant research that illuminates how, when, and why time can be spent or construed in ways that augment the meaning in one's life.

### **Defining Meaningfulness**

The construct of meaningfulness has a long history in philosophy, which for thousands of years has recognized *eudaimonia*, the ancient Greek word for what behavioral scientists often see as informing meaningfulness. In contrast to *hedonia*, which is concerned with living a happy, enjoyable, pleasure-filled life, *eudaimonia* is concerned with living a full, deeply satisfying life and actualizing one's human potentials (Deci & Ryan, 2008; Huta & Waterman, 2014). *Hedonia* (happiness) and *eudaimonia* (meaningfulness) are thus considered two different approaches to well-being (i.e., optimal psychological experience and functioning; Deci & Ryan, 2008). Hence, at a basic level, 'meaning' generally refers to how meaningful people perceive their lives to be; people who regard their lives as meaningful are said to 'have meaning' (or experience 'meaningfulness'; Steger et al., 2008). Indeed, this subjective evaluation of the meaningfulness of one's life is how meaning has been traditionally assessed (Crumbaugh & Maholick, 1964; Kashdan, Biswas-Diener, & King, 2008; Mascaro & Rosen, 2006). In this review, we therefore use terms such as *meaningfulness*, *sense of meaning*, and *meaning in life* interchangeably.

Many scholars trace the inspiration for studying meaningfulness to Viktor Frankl (1959), who argued that the pursuit of meaning in life is a fundamental goal, conceptually distinct from the pursuit of happiness or need for pleasure, and that discovering it for one's self is in fact a primary human motive. However, importantly, meaning *in* life (a subjective judgement regarding how people feel about their lives) is conceptually distinct from the meaning *of* life, which refers to the broader existential purpose people attribute to the world or to human life more generally (Debats, Drost, & Hansen, 1995). Accordingly, psychological research on meaning in life seeks to address questions about what makes people experience meaning in their lives, rather than philosophical questions about why life exists (e.g., what is the point of life?).

Due to the relatively abstract nature of the meaningfulness construct and the variety of contexts in which it has been studied, numerous definitions have been promulgated in the literature. Whereas some definitions have focused specifically on life goals (McKnight & Kashdan, 2009; Ryff, 1989), feelings of significance (Crumbaugh & Maholick, 1964), or understanding (Heintzelman & King, 2014), other definitions are broader in scope. For instance, Steger (2012, p. 165) argued: "Meaning (in life) provides us with the sense that our lives matter, that they make sense, and that they are more than the sum of our seconds, days, and years." King, Hicks, Krull, and Del Gaiso (2006, p. 180) noted that "lives may be experienced as meaningful when they are felt to have a significance beyond the trivial or momentary, to have purpose, or to have a coherence that transcends chaos." Recently, George and Park (2017, p. 206) depicted meaning as "the extent to which one's life is experienced as making sense, as being directed and motivated by valued goals, and as mattering in the world."

Although this accumulation of varying conceptualizations of meaningfulness demonstrates the increasing interest in this construct among the social sciences, it also has

arguably hampered scholarly progress in building an understanding of this important construct by making it difficult to gain consensus on accurate measures and manipulations and to identify unique antecedents, correlates, and consequences of meaningfulness (George & Park, 2017; Heintzelman & King, 2014; Martela & Steger, 2016; Baumeister, 1991). Therefore, in recent years, there has been an impetus in the literature to provide conceptual clarity and ameliorate these concerns by identifying and validating the key dimensions of meaning in life. In particular, there is growing consensus that the experience of meaningfulness can be viewed as having three interrelated, but distinct, dimensions: purpose (i.e., sense of direction), mattering (i.e., significance), and comprehension (i.e., coherence; George & Park, 2017; Heintzelman & King, 2014; King et al., 2006; Martela & Steger, 2016). Indeed, these three facets are able to capture much of the variance seen in the aforementioned definitions of meaning in life.

*Purpose* refers to having a sense of direction, goals, or a mission in life (Martela & Steger, 2016; McKnight & Kashdan, 2009). This component of meaning is highly motivational in nature, and involves the feeling that one's journey across the lifespan is directed and associated with personal growth as opposed to being aimless (i.e., one has a clear sense of where one has been, where one is at, and where one is headed; Frankl, 1963; Martela & Steger, 2016; McKnight & Kashdan, 2009). *Mattering* reflects the feeling that one matters to the social world—that one's existence is of significance, importance, and value—and includes an emphasis on generativity, which involves making important contributions that will extend beyond one's personal existence (Ackerman, Zuroff, & Moskowitz, 2000; Becker, 1973; George & Park, 2017; King et al., 2006; Martela & Steger, 2016). *Comprehension*, at the most basic level, refers the perception that stimuli are predictable and conform to recognizable patterns (Heine, Proulx, & Vohs, 2006; Heintzelman & King, 2014). At a more elaborate level, comprehension refers to the

degree to which individuals perceive a sense of coherence, a feeling that life and the world has structure and order (vs. being uncertain, unpredictable, and fragmented), an understanding of one's place in the world, and the general feeling that life makes sense (Baumeister, 1991; George & Park, 2017; Martela & Steger, 2016; Steger, 2009).

### **Distinguishing Meaningfulness from Other Constructs**

In the past, ambiguity surrounding the definition of meaningfulness has posed difficulties for researchers seeking to distinguish it from other, related constructs. The recent tripartite view of meaning in life, however, provides both greater conceptual clarity and discriminant validity from other constructs. For instance, meaningfulness relates to *importance* (as viewing one's existence as important is a core part of mattering), but is not synonymous. Though one could argue that most meaningful things are perceived to be important (at least to some extent by the target person), not all important things are meaningful. For instance, a college course may be important to a student (e.g., because it is a graduation requirement), but not meaningful (e.g., the student may not see it as enhancing their purpose, mattering, or comprehension). Likewise, personal hygiene activities (e.g., brushing one's teeth) may be viewed as some of the most important activities in daily life, but not as the most meaningful (except, perhaps, by dentists).

Yet another construct related to, but distinct from, meaningfulness is *involvement*, which is commonly understood as the perceived personal relevance or interest evoked by a particular object or situation based on the individual consumer's needs, interests, and values (Zaichkowsky, 1985). Although meaningful things may often be experienced as involving, not all involving things are meaningful. For example, one of us sees herself as a 'tea person'—she loves drinking and learning about tea, and seeks out tea houses and tea-related products. However, although she finds tea interesting and personally-relevant to her needs, interests, and even values, it does not

give her a sense of purpose (e.g., it is not related to her goals or mission in life), a sense of mattering (e.g., it does not help her to leave a legacy or see her life as significant), or a sense of comprehension (e.g., it does not help her make sense of the world or understand her place in it). Thus, she finds tea and tea drinking involving, but not meaningful. In this light, involvement and importance can be viewed as potentially necessary, but not sufficient, conditions for meaning.

However, perhaps no construct has more often been conflated with meaningfulness than *happiness*. Though happiness and meaningfulness are both important features of a desirable life (Hicks, Schlegel, & King, 2010; Huta & Waterman, 2014; King et al., 2006; Ryan & Deci, 2001) and have substantial empirical overlap (Dwyer, Dunn, & Hershfield, 2017; Kashdan et al., 2008), they are comprised of different components and possess differing implications (Baumeister, Vohs, Aaker, & Garbinsky, 2013). Happiness has been defined as “an experiential state that contains a globally positive affective tone” (Baumeister et al., 2013, p. 505) and treated as a subjective judgment of how much one enjoys the life one leads (Veenhoven, 2012). In contrast to meaning (comprised of three components: purpose, mattering, and comprehension), happiness has been conceptualized as having two components (Veenhoven, 1994): hedonic level of affect (i.e., the degree to which pleasant affect outbalances unpleasant affect) and contentment (i.e., the degree to which one perceives one’s wants as having been met). Thus, unlike meaningfulness, happiness is seemingly rooted in having one’s needs and desires satisfied, including having a life abounding with positive affect and largely free from unpleasant affect (Baumeister et al., 2013).

This distinction between meaningfulness and happiness is underscored in two studies where individuals reported the degree to which they perceived their lives as having meaning and, separately, happiness (Baumeister et al., 2013). After removing the variance between perceptions of meaningfulness and happiness in life, the authors showed that meaningfulness was linked to

helping others and being a giver, whereas happiness was linked to self-interest and being a taker; meaningfulness was more stable and involved a greater integration of the past, present, and future, whereas happiness was more fleeting and largely present-oriented; and meaningfulness was associated with higher levels of worry, stress, and anxiety than happiness. These findings, among others (Baumeister, 1991; Baumeister & Vohs, 2002; Dwyer et al., 2017; Huta & Ryan, 2010), suggest that happiness and meaning may in fact differ in some ways and can be viewed as discrete constructs. Thus, although the two constructs may at times overlap or contribute to one another (with the degree of overlap depending on myriad factors, including wealth and age; Catapano, Quoidbach, Mogilner, & Aaker, 2018; Hicks, Trent, Davis, & King, 2012), the types of decisions made and the behaviors that ensue when consumers are guided by the pursuit of meaning (or eudaimonia), versus happiness (or hedonia), can also differ.

### **Benefits of Meaningfulness**

Given the multitude of emotional, cognitive, and physical benefits that arise from the presence of meaning in life, the dearth of research on the role of meaning in consumer behavior is particularly striking. From an emotional standpoint, individuals with higher meaning in life tend to exhibit more self-esteem (Ryff, 1989; Steger, Frazier, Oishi, & Kaler, 2006), self-acceptance (Ryff, 1989; Steger, Kashdan, Sullivan, & Lorentz, 2008), and self-actualization (Ebersole & Humphreys, 1991). In the emotionally-laden social sphere, people who see their lives as more meaningful are more appealing to others (Stillman, Lambert, Fincham, & Baumeister, 2011). Further, in their private emotional lives, these individuals are not only happier (Debats, van der Lubbe, & Wezeman, 1993; King et al., 2006) and profess greater life satisfaction and well-being (Bonebright, Clay, & Ankenmann, 2000; Steger et al., 2008), but they also experience greater feelings of elevation (Huta & Ryan, 2010).

Meaning has also been linked to cognitive benefits. For instance, individuals who report higher levels of meaning in life report an elevated sense of direction and self value (Heisel & Flett, 2006), as well as a greater sense of cohesiveness and order (Heintzelman & King, 2014). Meaning in life also impacts locus of control, fueling people's belief that their lives and futures are in their own hands (Phillips, 1980; Ryff, 1989). Further, meaning facilitates adaptation to changing environments and encourages people to rely on more adaptive coping strategies (Thompson, Coker, Krause & Henry, 2003), leading to better adjustment and engagement in many arenas, including work (Bonebright et al., 2000; Steger & Dik, 2009).

Finally, individuals who experience greater meaning in life report they feel physically healthier (Baumeister & Vohs, 2002; Ryff, 1989; Ryff & Singer, 1998; Wong & Fry, 1998). Notably, the physical benefits of meaning are reflected not only in these subjective judgments of health, but in more objective measures as well. Older adults with more meaningful lives, for example, experience slower cognitive decline (Boyle, Buchman, Barnes, & Bennett, 2010; Harlow, Newcomb, & Bentler, 1986), and people with higher levels of meaning report lower levels of negative functioning, including stress (Mascaro & Rosen, 2006), workaholism (Bonebright et al., 2000), and substance abuse (Harlow et al., 1986).

What happens, then, when individuals experience low levels of meaning in life? Those who report an absence of meaning in life are more likely to experience psychological disorders including post-traumatic stress disorder and depression (Debats et al., 1993; Mascaro & Rosen, 2008; Owens, Steger, Whitesell, & Herrera, 2009; Steger & Kashdan, 2009) and are more inclined toward suicidal thoughts (Heisel & Flett, 2004). Cognitively, older individuals with low levels of meaning are more likely to suffer from Alzheimer's disease than are their counterparts who experience greater meaning (Boyle et al., 2010). Physically, the absence of meaning has

been linked to premature mortality (Krause, 2009). In short, considering one's life as lacking meaning is associated with a multitude of negative consequences. However, despite the preponderance of empirical findings documenting the benefits of meaning, many questions remain unanswered, particularly with regard to understanding the sources of meaning in life, the manner in which individuals seek it, and the ways individuals might spend their time to enhance it. These questions are particularly important to address given the prevalence of time scarcity in the modern consumer landscape (Newport, 2017; Robinson, 2013; Robinson & Godbey, 1999).

### **How to Spend Time in Ways That Enhance Meaning**

Recent data collected by the Center for Disease Control suggests that nearly a quarter of Americans feel neutral or do not have a strong sense of what makes their lives meaningful (Kobau, Snizek, Zack, Lucas, & Burn, 2010). Thus, when consumers attempt to allocate their temporal resources in a manner that will bring them a sense of meaning, this lack of knowledge about what makes life meaningful may prove problematic and make the route to meaning in life unclear. In light of this issue, we review extant research—filtered through a meaning-based framework—to illuminate how consumers can spend time in ways that enhance meaning in life.

At a foundational level, meaning involves linking experiences and events across time and space (Baumeister, 1991). Indeed, Baumeister and Vohs (2002, p. 608) put forth that “the essence of meaning is connection.” Building on this idea, the following sections focus on how time can be spent so as to forge greater connections in ways that enhance the three dimensions of meaning in life: purpose, mattering, and comprehension (George & Park, 2017; Heintzelman & King, 2014; King et al., 2006; Martela & Steger, 2016). First, creating connections to the self across time (so as to create a clear picture of one's true self) facilitates a sense of purpose. Second, cultivating connections to other people contributes to a sense of mattering. And third,

connecting to the world elicits a sense of comprehension. Of note, though the three dimensions of meaning can overlap, we use them here as a frame to integrate and structure extant research in order to deepen our understanding of how consumers can use their time in meaningful ways.

### **A Sense of Purpose: Connecting to the Self**

One important antecedent of having a clear, motivating purpose in life (i.e., having a sense of direction, goals, or a mission in life) is a strong sense of one's true self (Schlegel, Hicks, Arndt, & King, 2009; Schlegel, Hicks, King, & Arndt, 2011; Wong, 2011). Thus, one way that individuals can allocate their time to facilitate a sense of purpose is by creating stronger connections between the self across different points in time, a process that generates a greater sense of clarity and confidence in one's identity. For instance, to strengthen connections between the present self and past self, individuals can protect their special memories (i.e., memories of self-defining events) by avoiding situations that might threaten their ability to remember them (e.g., by not repeating a special event, such as not vacationing at the same resort twice) or avoiding the creation of new memories that might interfere with any connection to their past selves (Zauberman, Ratner, & Kim, 2009). Research has also shown that consumers seek and covet sources of sentimental value (e.g., items commemorating a special event or time; Yang & Galak, 2015), which can serve to not only slow hedonic adaptation by enhancing their memory of past events, but also bolster meaning by connecting them to their past experiences.

With regard to choosing experiences for their future, consumers have been shown to collect new experiences for their 'experiential CV,' actively and strategically acquiring an ever-growing set of non-identical, memorable experiences and generating a sense of productivity (Keinan & Kivetz, 2010). Through this means of gradually checking off items on one's list of all of the unique people, places, and things one hopes to experience, individuals can better visualize

their life from a bird's-eye view and understand how their present self might relate to their desired, future self (Hershfield, Mogilner & Aaker, 2017). Further, this type of mindset can facilitate the prioritization of experiences that provide the most future meaning, even if those experiences are not pleasant (or even aversive or painful) in the moment, such as a memorable stay at a freezing cold ice hotel or eating an unappetizing dish (Keinan & Kivetz, 2010).

Another means that consumers can employ to forge greater connections to the self and enhance their sense of purpose is to choose experiences aligned with goals of personal growth, which refers to a sense of development over time that leads to greater self-knowledge and effectiveness (Ryff, 1989). One mechanism for monitoring personal growth is to reflect on one's past and future selves, a process that can increase the salience of how much change and growth one has experienced over time (Quoidbach, Gilbert, & Wilson, 2013). Moreover, making mental contrasts between one's current self and one's desired future self can also facilitate personal growth by enhancing problem solving (e.g., making the obstacles that need to be surmounted to achieve the desired future more easily imagined) and instigating continuous, positive behavior change (e.g., by energizing the individual and elucidating the actions they must take to become the desired future self; Oettingen et al., 2009; Oettingen & Schwörer, 2013). However, one potential downside of mental contrasting is that people can perceive they have changed a lot in the past while also predicting they will change relatively little in the future (i.e., they may think the present self is very close to the 'final version' of who they will be for the rest of their lives), which can lead them to overpay for future opportunities so as to indulge their current preferences (Quoidbach et al., 2013). These findings suggest that if consumers want to experience continual growth so as to enhance their purpose and, in turn, meaning in life, they may need to adjust their expectations of how much or little they will continue to change in the future.

Enhanced meaning in life through personal growth and purpose can also be achieved through goal-setting and, subsequently, goal accomplishment, particularly when the goals are important to the individual and create lasting value (Csikszentmihalyi, 2000; Kauppinen, 2012). Importantly, however, the way in which this value is most effectively realized differs across consumers and circumstances. For example, the goals held to be most important to consumers tend to shift across the lifespan (Carstensen, 2006). As people age, for instance, goals that are seen as most important and reflective of personal growth (i.e., the goals they see as the most self-defining) shift from goals that will prepare them for the future and are associated with excitement and unfamiliarity, to goals that are emotionally satisfying in the present and are associated with peacefulness and familiarity (Bhattacharjee & Mogilner, 2013; Carstensen, 2006). Thus, these findings suggest that to facilitate a greater sense of purpose, consumers may benefit either from being mindful of which goals are most valuable at a given moment in time, and avoiding basing future decisions on current perceptions of goal importance, or from increasing the weight one places on being able to adapt in one's daily and life plans so as to accommodate potential shifts in the meaningfulness of goals over time.

Adopting and making progress toward meaningful goals can also enhance one's perceived purpose in life, particularly during the transition to adulthood, by bestowing one with increased motivation and a sense of direction—factors that are critical for the promotion of personal growth and development (Bronk, 2013). For example, when the challenging efforts one has undertaken in the past lead to lasting achievement on an important goal, it increases the perceived success of future goal-setting and goal-seeking (Kauppinen, 2012). Yet, of note, the actions that facilitate such personal growth need not be grand in scope. Even small acts of self-control can enhance purpose by assisting the pursuit of important goals (Baumeister, 2002). For

students, everyday acts in pursuit of their desired career, such as selecting a relevant major or studying for a pertinent class, can augment the experience of purpose and meaning (Choi et al., 2017; Huta & Ryan, 2010). For older individuals, ordinary (vs. extraordinary) experiences can help them achieve the important goal of self-definition (Bhattacharjee & Mogilner, 2013). The pursuit of personal projects can also lead to meaning even, in some cases, when the original goals of a project are not achieved (McGregor & Little, 1998; Taylor 1987). This research suggests, then, that one route to meaning is to enhance one's sense of purpose through connecting the present self to the self at different points in time and pursuing personal growth.

### **A Sense of Mattering: Connecting to Others**

At some point in their lives, most individuals attempt to understand how their lives matter—the legacy they are leaving to the world and the lasting impact their life will have (Byock, 2002). One primary means of facilitating a sense of mattering is connecting to others (i.e., by having maintained strong relationships with others in the past and present, one can leave a lasting legacy for the future). Indeed, the link between strong social connections and mattering is underscored by research showing that the belief that others (e.g., close friends or family) will provide one with emotional support or assistance in the future if needed—a belief that reflects one's perception that one's life matters to these important others—is associated with a deeper sense of meaning over time (Krause, 2007).

There are many ways that individuals can connect to others to facilitate relationships that create mattering and meaning. Indeed, the quintessential example of creating a relationship that is likely to enhance mattering is parenthood. Though parenthood is not always associated with happiness (Baumeister, 1991; Evenson & Simon, 2005; McLanahan & Adams, 1987), many people choose to become parents anyway. One explanation for this is that having and taking care

of children is a not only a potential source of meaning on a momentary level, but also on a global level, as it involves leaving a legacy in the most literal sense (Nelson, Kushlev, & Lyubomirsky, 2014; Umberson & Gove, 1989).

Familial relationships, additionally, can serve as sources of meaning not only for parents, but for children as well, particularly once the children reach the age of young adult (Lambert, Stillman, Baumeister, Fincham, Hicks, & Graham, 2010). For instance, young adults report that their family is the single most important contributor to their sense of personal meaning, ranking it above 12 other likely sources of meaning (e.g. religious faith, self-acceptance), and young adults who feel close to and supported by their families experience greater meaning in life (Lambert et al., 2010). Relatedly, spending time with family members, including children, parents, siblings, and spouses, has been associated with greater experienced meaning (Choi et al., 2017). Moreover, when an individual takes care of an elderly family member, this can boost meaning for both (Phinney, 2006; Shim, Barroso, Gilliss, & Davis, 2013). Considered together, these studies suggest that connecting to family members can create a sense of mattering for both those who provide care (e.g., by helping them leave a legacy) and those who receive it (e.g., via the validation of their importance by another person).

Finding ways to better connect to individuals outside one's family can also lead to enhanced mattering and meaning. For instance, time spent on certain types of social interactions—such as time spent on helping others, cheering people up, and forgiving others—is considered especially meaningful (Huta & Ryan, 2010). However, cultivating the types of interactions that facilitate closeness can often be difficult. For example, people may be hesitant to engage in meaningful, deep conversations, rather than superficial small talk (Mehl, Holleran, Clark, & Vazire, 2010). This reluctance seems to be especially pervasive in the workplace, where

friendships generally progress through three transitions: co-worker-to-friend, friend-to-close-friend, and close-friend-to-almost-best-friend (Sias & Cahill, 1998). Since the communication between the individuals becomes more intimate, less cautious, and less superficial with each transition, failure to progress one's workplace relationships through these transitions helps to explain why meaning is often not found at work (Duchon & Plowman, 2005). In addition to potentially being uncomfortable or awkward, meaningful interactions may even be aversive or emotionally painful, such as when fighting or having hard conversations (Tov & Lee, 2016). Thus, to enhance meaning when connecting with others, relationships need not always be entirely positive, but may in fact involve some negativity or pain, as meaning can be generated when one engages with the challenging aspects of relationships.

Even connecting with distant others or strangers can contribute to a sense of mattering. For example, individuals who don't find meaning in other areas of their lives, such as their work, often turn to volunteering to fill this gap (Rodell, 2013), enabling them to connect with others who are beyond their inner circle and engender a sense of mattering. Moreover, when individuals are asked to volunteer their time, goals of personal well-being are activated, whereby they view charity as a way to increase their own well-being, as well as a way to help others (Liu & Aaker, 2008)—potentially by augmenting their sense of mattering in the world. For elderly individuals who lack close connections, such as family or romantic partners, volunteering can mitigate the negative effects that these absences would ordinarily have on their sense of mattering (Greenfield & Marks, 2004). And, in order to leave a positive legacy, individuals experiencing mortality salience turn their eye towards prosocial behaviors benefiting future generations (Wade-Benzoni, Tost, Hernandez, & Larrick, 2012). In sum, connecting with others can serve as a key source of mattering by increasing the extent to which people believe that others see their

lives as significant or valuable and believe that they have had an impact or made contributions that will last long after their lives have ended. This sense of mattering, then, can be bolstered by relationships with family, close friends, or even others outside of an individual's inner circle.

What happens, then, when individuals fail to connect to others? Social isolation, whether perceived or objective, is associated with lower well-being and meaning in life (Cacioppo & Patrick, 2008; Debats et al., 1995; Myers & Diener, 1995). For example, when social exclusion is manipulated experimentally (e.g., by ostracizing participants in a computerized ball-tossing game), the perception of life as meaningful is reduced (Stillman, et al., 2009). Social exclusion is also associated with increased emotional and physical pain or numbing (Bernstein & Claypool, 2012) and can lead to feeling that one is of less significance and value, which also undermines meaning (Stillman et al., 2009). Further, social exclusion can be a vicious self-perpetuating cycle, as isolated individuals subsequently eschew meaningful thought, emotion, and self-awareness as a response to their exclusion (Twenge, Catanese, & Baumeister, 2003). Together, these negative consequences highlight the importance of mattering and, in turn, meaning in life, through forging strong connections with others.

### **A Sense of Comprehension: Connecting to the World**

The comprehension dimension of meaning is commonly rooted in connection to something bigger than the self (Frankl, 1963). Thus, spending time on experiences that recognize the self as a smaller part of a much larger whole can enhance meaning by leading to a greater sense of one's life as coherent and by enhancing clarity about how one's life fits together with the broader world. For instance, spending time on and making sacrifices for causes that benefit the well-being of the planet or society at large can enhance one's sense of comprehension by creating a stronger connection between the self and the world. Indeed, one of the primary reasons

wealthy people, like Bill and Melinda Gates and Warren Buffett, engage in philanthropy and spend their time helping to found and manage charitable foundations, is because it enriches their life with fulfillment and meaning (Breeze & Lloyd, 2013). However, spending time in ways that benefit the planet or society (so as to enhance one's connection to the world) need not take such a grand form: These types of actions can be as small as reusing a towel to reduce water consumption (Goldstein, Cialdini, & Griskevicius, 2008) or using green products and volunteering for environmental causes (Zaval, Markowitz, & Weber, 2015).

Another way that consumers can achieve a sense of connectedness to the bigger picture is simply through the work they do on an everyday basis. For example, people who value meaning in life (a global-level construct) can find it via experiencing meaning in their careers (a domain-level construct; Baumeister, 1991; Steger & Dik, 2009). When individuals perceive their work as benefiting a greater good or understand how their time spent working is linked to a broader objective, and are recognized for their contributions to a whole, meaning is often found and motivation is increased (Ariely, Kamenica, & Prelec, 2008; Steger & Dik, 2009). Indeed, individuals in professions such as healthcare, education, and religious or social services are more likely to believe their work makes the world a better place, and thus report that their work is more meaningful than do those working in other fields (PayScale, 2018). However, even stressful or simple, repetitive work can be imbued with meaning when people perceive a connection between their daily activities and bigger-picture objectives, leading to downstream benefits (e.g., greater self-knowledge, increased confidence in dealing with stress, and a stronger link between labor supply and productivity; Ariely et al., 2008; Britt, Adler, & Bartone, 2001).

Certain emotions can also facilitate the sense that one is connected to the world. One example is awe, a positive emotion with two defining features (Keltner & Haidt, 2003). First,

awe involves perceptual vastness—the sense that one has encountered something immense in size, number, scope, complexity, ability, or social bearing. Second, awe prompts a need for accommodation, meaning experiences involving awe are difficult to grasp, and they provoke the sense that one’s existing knowledge and mental structures need to be updated or revised. Understanding these central features helps explain why a variety of circumstances, including exposure to nature, art, or music; the accomplishments of others; religion; and encountering powerful leaders, commonly elicit the feeling of awe (Keltner & Haidt, 2003; Rudd, Vohs, & Aaker, 2012; Shiota, Keltner, & Mossman, 2007). These features are also what enable awe to enhance comprehension via strengthening people’s perceived connection to the world. For instance, in eliciting a sense that one is in the presence of something vaster than the self, the experience of awe is able to enhance people’s humility (Stellar et al., 2018), increase their tendency to define themselves in universal versus individuated terms (e.g., *I am an inhabitant of the Earth* versus *I am one-of-a-kind*; Shiota et al., 2007), and heighten their belief that they are part of some greater entity or a greater whole (Piff, Dietze, Feinberg, Stancato, & Keltner, 2015). Thus, unlike more self-focused emotions (e.g., pride), awe makes people less focused on themselves and more connected to the world around them (Shiota et al., 2007). Moreover, in triggering a feeling of uncertainty and need for accommodation, awe also increases people’s openness to learning (Rudd, Hildebrand, & Vohs, in press) and motivates them to seek out order (e.g., by perceiving intentionality or patterns in randomness; Valdesolo & Graham, 2014)—key ingredients in the facilitation of comprehension and, in turn, meaning.

One awe-evoking factor that has, in its own right, become an effective means of creating a profound feeling of comprehension and meaning in life is time spent in nature. The experience of nature typically refers to encounters with the natural environment that involve direct, visceral

contact and can include activities as diverse as visiting gardens to hiking in wilderness areas (Hinds & Sparks, 2009). Of particular relevance to our review is that these experiences with nature can strengthen a special type of connection with the world: a sense of oneness with the natural world (O'Connor & Chamberlain, 1996). This connectedness with nature can serve as a source of meaning, especially for older adults and adults in midlife (O'Connor & Chamberlain, 1996; Reker & Woo, 2011). Indeed, connectedness with nature is a reliable correlate of meaning in life (Cervinka, Roderer, & Hefler, 2012; Nisbet, Zelenski, & Murphy, 2011), perhaps because key elements of comprehension (e.g., permanency, self-transcendence, stable patterns, order, and life fitting within a greater scheme) are commonly found in nature (Heintzelman, Trent, & King, 2013; Howell, Passmore, & Buro, 2013; Keltner & Haidt, 2003). Kellert (1993, p. 43) even argues that “much of the human search for a coherent and fulfilling existence is intimately dependent upon our relationship to nature.” Thus, to the extent that spending time in the natural environment provides people with a sense of comprehension and connectedness to the world, affiliating with nature can augment a sense of meaning in life.

### **How to Meaningfully Construe The Time You Are Given**

A long-standing body of research suggests that experiences are just as much about how they are construed, as they are about the actual content of the experience (Smith & Ellsworth, 1985). Thus, in addition to pursuing meaning in life by changing the way one spends one's time, one can also attain greater meaning in life by changing the way that one construes one's time. The most straightforward way is to adopt a meaning-seeking mindset (Frankl, 1963; Steger et al., 2008; Steger, Oishi, & Kesebir, 2011), which means that one consciously decides to engage in dynamic, active efforts to establish or augment one's understanding of the meaning in one's life (Steger, 2009). When individuals actively search for meaning, the salience of meaning-relevant

information increases, as does the importance of experiencing meaning in life (Steger et al., 2011). Thus, when individuals suffer from a lack of meaning and do not actively seek it, it can be particularly difficult for them to find meaning and move forward in life (Crumbaugh, 1977).

However, the mere search for meaning does not guarantee that one will attain the experience of meaning, and should the search prove unsuccessful, it can, in fact, lead to lower levels of meaning (Steger et al., 2008). Such meaning-seeking backfire effects are more likely to occur among individuals who are low in openness to experience, low in reward sensitivity (i.e., approach motivation), and high in punishment sensitivity (i.e., avoidance motivation; Steger et al., 2008). Individuals who are analytically (vs. dialectically) oriented may also be more likely to experience a meaning-seeking backfire because they have a greater tendency to view the search for meaning and its presence as opposed to one other, rather than harmonious (Steger, Kawabata, Shimai, & Otake, 2008). Thus, along with recommending the adoption of a mindset wherein one seeks meaning in an open-minded, approach-oriented manner and views the search for meaning and presence of meaning as united harmoniously (vs. mutually exclusive), we put forth three additional construal-centric strategies that may make consumers better able to derive meaning in the moment, throughout one's days, and from one's life journey.

### **Make the Most of the Current Moment**

Given that time is a limited resource (Leclerc et al., 1995; Perlow, 1999; Robinson, 2013), individuals who desire to increase their meaning in life could benefit from learning how to more effectively construe their time at a momentary level, such that they are able to squeeze more meaning out of each moment. First, over the years, researchers have explored various ways that people can better embrace and receive utility from the current moment, including flow (Csikszentmihalyi, 1990), mindfulness (Langer, 1989), and savoring (Bryant, 1989). Although

much of this research has focused on how these processes that alter momentary-level construal can impact happiness—such as Killingley and Gilbert’s (2010) large-scale smartphone app study that showed that what people were thinking, that is, whether they were present and engaging with the task on hand (vs. mind-wandering), was a better predictor of happiness than the specific activity that they were doing—these same processes have also been posited to impact meaning (Bryant & Veroff, 2007; Garland, Farb, Goldin, & Fredrickson, 2015; Haidt, 2010).

Flow, for instance, is a psychological state characterized as enjoyed absorption and generally occurs when one is completely immersed in a challenging activity that is closely matched to one’s abilities (Csikszentmihalyi, 1999; Nakamura & Csikszentmihalyi, 2003). Since the value of complete engrossment in the current moment is integral to certain meaningful experiences (Csikszentmihalyi, 1999), flow has often been viewed as a precursor to meaning. Over time, and as one’s knowledge, identity, and relationships become more intertwined with a flow-eliciting activity, both meaning and vital engagement can emerge from moments of flow (Haidt, 2010; Nakamura & Csikszentmihalyi, 2003). Other processes, such as mindfulness, savoring, and gratitude interventions, have also been thought to influence meaning, due primarily to their links to positive affect. For instance, mindfulness can promote meaning by evoking “a metacognitive state that transforms how one attends to experience, thereby promoting positive reappraisals that facilitate positive affect and adaptive behavior” (Garland et al., 2015; p. 295). Both savoring the present moment and being consciously grateful for small moments in life (e.g., counting one’s blessings), on the other hand, enhance meaning via prolonging and heightening positive emotional experiences (Bryant, 1989; Bryant & Veroff, 2007; Lyubomirsky, Dickerhoof, Boehm, & Sheldon, 2011; Sheldon & Lyubomirsky, 2006). Together, these findings

suggest that learning to construe time such that one can be fully engaged in and intensify or sustain the positive benefits of each moment is a valuable contributor to one's sense of meaning.

Second, the extent to which consumers fully embrace the current moment can be influenced by their construal of the depth of an experience. One factor that plays a role in the construal of depth is the amount of time an individual spends on an experience, as deep experiences are often seen as requiring a greater time investment than their shallower, less meaningful counterparts (Percival Carter & Williams, 2017). For example, in one study, participants reflected on products they had not consumed (but would like to) and that they expected to be either particularly meaningful or pleasurable, and then indicated the minimum amount of time someone could spend consuming the product and still benefit from the consumption. The results showed that the minimum time investment that consumers perceived as necessary to benefit from meaningful experiences was greater than the minimum time necessary to benefit from pleasurable experiences (Percival Carter & Williams, 2017).

Given that experiences are perceived as needing more time before they are construed as able to confer meaning, concentrating more consecutive moments on a single, potentially meaningful activity should be more likely to boost meaning, compared to alternating moments of time across many potentially meaningful activities. Consumers may also help ensure that they reach the perceived meaning-eliciting threshold of an activity by evoking factors that can distort perceptions of time, such that one is made to feel as though they have spent more time engaged in an activity than they actually have. For instance, intrinsic motivation (Conti, 2001), caffeine (Gruber & Block, 2003), and feelings of excitement (Campbell & Bryant, 2007) can increase the speed at which time is perceived to pass, whereas self-regulation (Vohs & Schmeichel, 2003)

and feelings of anxiety or fear (Campbell & Bryant, 2007; Sarason & Stoops, 1978; Stetson, Fiesta, & Eagleman, 2007) can slow the perceived passage of time.

Another path to creating a greater sense of depth in the moment is to focus on authenticity, which refers to “the unobstructed operation of one’s true, or core, self” (Kernis, 2003, p. 13). Importantly, prior research suggests that feeling authentic and connected to one’s true self (e.g., via a sense of concordance between one’s public self and one’s true self) is a key contributor to well-being (Harter, 1992; Kernis & Goldman, 2006; Schlegel et al., 2009; Sheldon, Ryan, Rawsthorne, & Ilardi, 1997). Moreover, it has been argued that feelings of authenticity and connection to one’s true self in the moment can help create meaning because they give legitimacy and value to one’s decisions, actions, and experiences (Schlegel et al., 2011). Consistent with this proposition, increasing the momentary accessibility of the true self (e.g., via priming procedures or asking people to think about who they believe they really are) leads to higher meaning in life (Schlegel et al., 2009; Schlegel et al., 2011). Moreover, when people perceive their current behaviors and goals as consistent with their true self, they are more satisfied with them and judge them as more meaningful (Debats et al., 1995; Krause, 2007). Together, these findings have important implications for how consumers can more effectively embrace the current moment, because they suggest that construing the present moment in terms of its authenticity (i.e., devoting greater conscious awareness to how the present experience or activity is in concordance with and connects to the true self) can deepen their experience and enable them to derive greater meaning from it.

### **Make the Most of Each Day**

How people construe their days and the events that comprise daily life are also important determinants of their sense of meaning in life. For example, prior research has shown that a

positive mood can predispose an individual to construe their day and life as more meaningful: The positive affect one experiences in a day is a consistent predictor of one's experience of meaning that day (even when controlling for the extent one was engaged in goal-related activities and thinking goal-relevant thoughts), and priming positive mood concepts can enhance perceived meaning in life (King et al., 2006). Thus, construing one's day through the rose-colored lenses of positive affect is one way consumers can come to experience greater meaningfulness.

If one's day is filled with positive events and experiences, this may be a relatively easy task. However, not all days are good days—consumers sometimes find themselves faced with threatening or negative experiences (many of which may be outside of their control), such as a health crisis, being fired, or the loss of a loved one. Moreover, although people often seek to avoid negative experiences and attain positive ones (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001), the meaningful directions that individuals choose to pursue in many cases come with negativity. Completing an Ironman Triathlon or engaging in active parenting, for instance, are deeply meaningful activities (Granskog, 1993; Umberson & Gove, 1989), but are both challenging and can evoke negative emotions. Working and studying are primary sources of meaning in life for many, but do not always correlate with happiness (Choi et al., 2017). In short, the pursuit of meaning often requires accepting a certain degree of negativity, and sometimes negative events and experiences will come one's way whether or not they are wished for. Thus, how individuals construe and cope with negativity can be a key contributor to their experience of meaning. And finding meaning amidst negativity can indeed be critical: Across myriad studies, those who searched for and found meaning in traumatic events ranging from sexual abuse to bereavement and strokes (Schwartzberg & Janoff-Bulman, 1991; Silver, Boon, & Stones, 1983;

Thompson, 1991) experienced less distress and were better off than those who searched for meaning and did not find it (Davis, Wortman, Lehman, & Silver, 2000).

How then, can individuals construe their bad days or negative experiences, so as to create greater meaning in their lives? Prior research suggests a number of meaning-boosting construal strategies. First, research has suggested that one can benefit from construing the negative event as having a specific cause (Silver et al., 1983; Taylor, 1983; Thompson, 1991). Although the true cause(s) for a negative event is often elusive (e.g., one may never truly know why they developed cancer; Taylor, 1983), those who come to construe the negative event as having a specific cause (i.e., those who have made a causal attribution for the negative event) tend to express a greater sense of meaning in life as well as other positive adjustment outcomes (e.g., less depression; Taylor, 1983; Thompson, 1991; Turnquist, Harvey, & Andersen, 1988). This is thought to occur because identifying a cause (perceived or real) can aid comprehension and reduce the likelihood that an individual will feel that their assumptions of a meaningful world are being challenged—it can help an individual make sense of the event, understand why the event occurred, and put the event in a meaningful context (Bulman & Wortman, 1977; Silver et al., 1983; Taylor, 1983; Thompson, 1991). These beneficial effects are particularly likely when one poses questions such as “Why do events like this happen?” rather than questions such as “Why did this happen to me as opposed to someone else?” Whereas answering the former question has been associated with positive consequences for well-being and meaning in life, the latter has been associated with negative consequences, likely because it reflects a concern with being unfairly treated and positions oneself as a helpless victim (Lowery, Jacobsen, & McCauley, 1987; Thompson, 1991).

Second, research suggests that one can benefit from construing negativity in such a way that one comes to see it in a more positive light. In other words, the extent to which an individual

can see the silver lining in misfortune or adversity and view a stressful or painful event as leading to desirable outcomes (in addition to undesirable ones) is an important determinant of the meaning generated from the negative event (Bulman & Wortman, 1977; Davis, Nolen-Hoeksema, & Larson, 1998; Taylor, 1983; Thompson, 1981). For instance, a benefit-finding construal for an accident victim may involve seeing the accident as a catalytic agent that has helped them to attain a new appreciation for life, led them to place more value on relationships, or caused them to change for the better and restructure their lives along more satisfying lines (Bulman & Wortman, 1977; Taylor, 1983). Construing a negative event as an opportunity for growth (vs. a loss), as an indicator that one is working toward something important (vs. an indicator that something is wrong), and as something one has benefited from enhances meaning because it helps one assign significance to the event for one's goals and preserves or restores the notion that one's life has purpose and value (Davis et al., 1998; McGonigal, 2015). Moreover, by finding positivity in negative experiences, individuals often become more resilient against ensuing negative emotions (McGonigal, 2015; Tugade & Fredrickson, 2004).

Third, research suggests that the extent to which one feels assured that one is not facing a negative experience that is beyond the limits of endurance is another important consideration for meaning (Lazarus, 1966; Thompson, 1981). When a person construes a negative experience as involving more harm and pain than the person wishes to withstand or believes can be endured, this can increase the intensity of negative emotions (e.g., anxiety) and provoke an individual to try to escape from the situation (Thompson, 1981). Although there may be times when escaping from a negative experience (if possible) is the best course of action, research suggests that adopting a strategy of avoiding or escaping all negativity is inconsistent with the pursuit of meaning in life. In fact, negative feelings such as stress, worry, and anxiety often go hand in

hand with meaning (Dwyer et al., 2017), and people with meaningful lives tend to worry more and have more stress than do people with less meaningful lives (Baumeister et al., 2013). The value of negative experiences as a contributor to meaning was recently underscored by Tov and Lee (2016), who asked participants to record their daily experiences, feelings, and perceptions of meaning. After controlling for the impact of emotions, they showed that arguing and other social conflicts predicted greater perceptions of meaning in life that day. Together, these findings indicate that avoiding negativity may prevent people from engaging in difficult, but meaningful, experiences. Thus, instead of avoiding or escaping from negativity, an alternative strategy for pursuing meaning in life is to alter how one construes a negative experience, such that one no longer sees it as potentially unendurable, but rather as within the limits of one's endurance.

Finally, consumers might also make the best of the bad days and enhance their sense of meaning by increasing the extent to which they construe the negative experience as part of a plan or as fitting into their conception of how the world works, as opposed to being a random event (Davis et al., 1998; Thompson, 1981). Viewing the negative experience as random can be a detriment to one's sense of meaning in life because the experience is then seen as posing a threat to one's sense of comprehension (e.g., by weakening the confidence one has in one's worldview and the belief that the world is structured, ordered, controllable, and understandable; Baumeister, 1991; George & Park, 2017; Martela & Steger, 2016; Steger, 2009). Prior research has suggested that construing the experience as spiritual in nature (e.g., part of God's will or a divine plan), as predictable (e.g., in the case of illness, as an end to a long battle), or somehow justified (e.g., as following from a freely chosen lifestyle) can all serve as methods of combating perceptions of randomness (Davis et al., 1998; Dull & Skokan, 1995; Thompson, 1981). Instead of attempting to construe the negative experience in a manner that makes it fit within one's existing worldview,

an alternative strategy for dealing with perceived randomness is to revise one's worldview (Davis et al., 1998; Janoff-Bulman, 1992). However, given that revising one's worldview is more arduous and potentially distressing, this tactic is likely to be tried only as a last resort (Janoff-Bulman, 1992).

### **Make the Most of Life's Journey**

Altering how one's time is construed at a broader, lifetime level is another route that consumers could take to enhance their meaning in life. One way is through the construction of life stories, or narrative identities, which entails representing life events in a narrative framework in order to create an internalized, integrative, and ever-developing story of the self (Adler, Lodi-Smith, Philippe, & Houle, 2016; Bauer, McAdams, & Pals, 2008; McAdams, 2001). These life stories help people make sense of their lives by serving a unifying function: They connect the present self to the past self, and facilitate anticipation of the future self (Adler et al., 2016; McAdams, 1985, 2001). They are a means through which one can bring a sense of order and structure to one's life and coherence to one's identity by organizing and bringing together diverse threads from one's experiences, thoughts, and feelings and connecting them to a central purpose (Bauer et al., 2008; McAdams, 1985, 2001). Thus, narrative identities go beyond mere description of one's life: They imbue one's life with meaning by boosting one's sense of comprehension and purpose.

Of importance, narrative identities are representational (i.e., they are not exact replicas of whatever events are being described; Sandelowski, 1991) and evolutionary (i.e., they can change with each telling, like a "continually evolving sketch book of memories and life experiences"; Gilbert, 2002, p. 225), meaning that they are malleable and highly dependent on how one chooses to construe one's life course and the events that comprise it. Further, certain narrative

themes—or ways of interpreting one’s life via narrative identities—are more conducive for generating meaning than others (McAdams, 2001).

One such theme is growth. Growth stories are personal life narratives that showcase, either in an overt or subtle manner, one’s development (Bauer & McAdams, 2004; Bauer et al., 2008). Growth in narratives can take many forms, several of which have been found to have close ties to meaning (Bauer et al., 2008; Bauer & McAdams, 2004, 2010). For instance, life stories that feature socioemotional growth (i.e., growth in how one feels and acts that emphasizes the importance of intrinsic values—such as concerns for improving personal traits, contributing to society or future generations, cultivating important relationships, or experiencing life more fully—versus extrinsic values—such as concerns for money, status, approval, or physical appearance) have been positively linked to eudaimonic well-being (Bauer & McAdams, 2004, 2010; Bauer et al., 2008). Similarly, life narratives that emphasize intellectual growth (i.e., growth in how one thinks, as brought about by learning, exploring, accommodating, coming to deeper understandings of the self and others, or integrating new and old perspectives on one’s life) have been associated with heightened meaning (Bauer & McAdams, 2004; King, 2001).

The themes of agency and communion have also been widely examined by research on narrative identities (Ackerman et al., 2000; McAdams, Hoffman, Mansfield, & Day, 1996). Life stories that contain agency themes emphasize concerns for things such as power, achievement, personal mastery, and independence; life stories that contain communion themes emphasize concerns for things such as love, intimacy, affiliation, and having a positive impact on others (Bauer & McAdams, 2010; Bauer et al., 2008). Importantly, these two themes have been found to differentially relate to meaning: Whereas communal themes generally correlate positively with eudaimonic well-being, agentic themes generally do not (Mansfield & McAdams, 1996;

McAdams, 1985). However, some studies have found evidence that agentic themes can enhance certain facets of eudaimonic well-being (e.g., ego development) when they overlap with intrinsic motives (e.g., impacting one's environment) as opposed to extrinsic motives (e.g., prestige; Bauer & McAdams, 2004, 2010). These findings suggest that greater meaning in life can be attained by narrating one's life events such that they are construed as facilitating communion (or, perhaps, intrinsically-motivated agency).

Affective themes (which pertain to the emotional quality or tone of a narrative; Adler et al., 2016) can also play an important role in the construction of meaning. Perhaps unsurprisingly, research has shown a link between the valence of a narrative's emotional tone and measures of psychological well-being, such that positive emotional tones are generally associated with positive well-being (McAdams, Reynolds, Lewis, Patten, & Bowman, 2001). However, two specific affective themes (both of which capture shifts in the emotional tone of narratives) add a level of nuance to this relationship: redemption and contamination.

Narratives with redemption themes describe a scene that starts emotionally negatively but is narrated as ending positively (i.e., the bad is redeemed or salvaged by a positive conclusion), whereas narratives with contamination themes feature a shift from an emotionally positive start to a negative end (i.e., the good is ruined or spoiled by a negative conclusion; McAdams, 2006; McAdams et al., 2001). Because all lives inevitably involve both negative and positive experiences, whether a narrative features a redemption (vs. contamination) theme largely depends on where the narrator decides to draw connections and construe divisions in the flow of time (Adler et al., 2016). And whether the narrator decides to construe a life story as redemptive (vs. contaminated) has important implications. For instance, themes of contamination are negatively correlated with well-being and themes of redemption are positively correlated with

well-being (even after controlling for the overall positivity and negativity of the life story; McAdams et al., 2001). Further, a greater density of redemption (vs. contamination) themes in one's life narrative is positively associated with generativity (i.e., a commitment to promoting the well-being of future generations; Adler, Kissel, & McAdams, 2006; McAdams et al., 2001). Indeed, some of the most popular forms of redemption narratives in American society are stories of upward social mobility, recovery, liberation, atonement, and self-actualization (Mansfield & McAdams, 1996; McAdams, 2006)—all of which generally follow a storyline in which a gifted or special protagonist is destined to improve or redeem the world and leave a lasting legacy for future generations, but must first learn from and overcome setbacks and threats to his or her deep convictions. Thus, seeing one's life story as having a redemption (vs. contamination) arc may enhance meaning by increasing one's sense of mattering.

Finally, increasing meaning in life can occur when individuals create a future-focused narrative. For instance, framing one's future with a journey metaphor (i.e., construing one's life as a journey) can contribute to meaning by reinforcing continuity between one's current identity and a possible future identity and giving a greater sense of purpose to one's life (Landau, 2018). However, all journeys (and stories) must eventually end, and thus another important part of crafting a life narrative is addressing or softening what is possibly the ultimate threat to personal meaning (Becker, 1973): death. Indeed, researchers have found that engaging in nostalgic revelry or reflection (Routledge, Arndt, Sedikides, & Wildschut, 2008) and construing reality in simple, unambiguous ways (Vess, Routledge, Landau, & Arndt, 2009) can help prevent reminders of mortality from undermining perceptions of meaning. Construing one's life as interdependent with (vs. independent from) the lives of others may also be an effective means of reducing death

anxiety and preserving a sense of meaning by extending the perceived significance of one's life beyond death (Orehek, Sasota, Kruglanski, Dechesne, & Ridgeway, 2014).

### **Future Directions**

Meaningfulness is a profoundly important part of human life. When people possess meaning in their lives, they flourish and thrive; when they lack meaning, they suffer. However, despite the critical role that meaningfulness plays in people's lives, consumer psychology has, to date, not systematically focused on the ways in which consumers can meaningfully spend and construe time. Indeed, whereas much research has focused on understanding consumer behavior from the perspective of hedonia or pleasure motives, significantly less work has focused on consumer behavior as motivated by pursuit of eudaimonia or meaning. In this review article, we presented an overview of extant research in which fascinating, yet often solitary, findings are integrated into two frameworks (see Figure 1)—one for how to spend time in ways that enhance meaning and one for how to construe time in ways that enhance meaning. Our aim was that, together, these frameworks would highlight the value of viewing the expenditure of time through the lens of building connections that enhance purpose, mattering, and comprehension and of adopting a broader, more elevated view of time that equally emphasizes the importance of how time is construed at the momentary, day-to-day, and lifetime level. In so doing, we hoped to provide deeper insight into the nature of meaning in life and help spark future research agendas.

One such area ripe for future research is longitudinal research on meaning. Such research is critical for advancing our understanding of the dynamic processes that constitute the generation of meaning, the interplay between meaningfulness and happiness, and the long-term outcomes that result from pursuing meaning in life. Does meaningfulness become more satisfying after a prolonged period of happiness (e.g., when and why might the pursuit of

pleasure leave people longing for meaning)? To what degree do decisions guided by meaningfulness versus happiness preclude each other over time, creating temporal trade-offs in which the need for one is sacrificed at the cost of the other? Or is it possible that, after removing their shared variance, experiences that boost meaning in life may boost happiness at a subsequent point in time (whereas experiences that increase happiness would not necessarily increase subsequent meaning in life)? How do temporal focus and time affluence influence tradeoffs between meaning and other goals in the long-run? What factors determine whether one chooses to prioritize the pursuit of meaning in life and what consequences arise throughout life as a result of following this eudaimonic pathway (vs. other well-being pathways)? These are just a few longitudinal questions worthy of future research.

Much also remains to be learned about whether and how a sense of meaning can be facilitated through interventions and behaviors. Indeed, more rigorous, experimental work in this area would be especially welcome. One fruitful line of research in this area is to more deeply explore both sides of the meaning-negativity coin: How can meaning be used to mitigate negative experiences, and how can negative experiences be leveraged to create greater meaning? For instance, one potential route whereby meaning can be used to alleviate the negativity associated with an experience is through counterfactual thinking. Indeed, Kray and colleagues (2010) found that reflecting on “what could have been” for key life experiences led to greater experienced meaning than directly reflecting on the meaning of the experience itself—an effect that was driven by fate perceptions (i.e., the idea that something was meant to be) and benefit-finding (i.e., the identification of positive consequences). Given that identifying the benefits (vs. costs) that have stemmed from negative experiences and seeing negative experiences as part of a plan (vs. a random event) can help people obtain a sense of comprehension from these events

(Bulman & Wortman, 1977; Davis et al., 1998; Taylor, 1983; Thompson, 1981), counterfactual thinking may be a particularly effective way of transforming a negative experience into a meaningful one. Relatedly, can reframing behaviors that are less enjoyable in the short-run as meaningful in the long-run mitigate the negativity experienced and encourage these behaviors? In addition, how can people be made to realize that negative memories will eventually decay, leading to less negative affect associated with them in the future (Aaker, Griffin, & Drolet, 2009), thereby encouraging engagement with negative experiences that often result in meaning?

On the opposite end of the valence spectrum, further research linking positivity and meaning is also necessary, especially research that identifies interventions and activities that boost both meaningfulness and happiness. For example, volunteering and giving to others is a likely candidate for boosting both happiness and meaning simultaneously. In addition, future research is necessary to understand whether the link between happiness and meaning differs not only based on specific activities, but also based on circumstances and individual characteristics (e.g., socioeconomic status, culture, personality factors). Moreover, because experiences often are small, fast, or easy to dismiss, greater study of interventions that help people extract meaning from positive experiences that are generally assumed to be ‘meaningless’ is warranted. More broadly, although some research has explored the relationship between meaning and happiness, little work has examined the relationship between meaning and other discrete positive emotions (e.g., pride or peacefulness).

Relatedly, future research agendas should also focus on advancing our understanding of why individuals make choices that are misaligned with meaning, and how to mitigate those choices. One possible way to allay these meaning-misaligned choices that warrants further research is pre-commitment (i.e., making a commitment in advance), which can help individuals

to do things that they know will benefit them in the long-run, but seem too difficult or require too much investment in the short-run. For example, being a parent is considered one of the most meaningful experiences a person can have, but is often associated with negative affect. However, because parenting generally requires pre-commitment, individuals are more likely to remain engaged through the difficult times and reap the rewards of their meaningful investment. Another possible strategy for helping people better see the meaning associated with a choice is to have them engage in expressive writing about the choice and its possible outcomes prior to making a decision. Indeed, prior research has shown that engaging in unconstrained, expressive writing (e.g., about one's deepest thoughts and feelings regarding an event or relationship) may bring meaningfulness into sharper relief (King, 2002; Lepore & Smyth, 2002).

Finally, we also still know very little about the marketing and consumer behavior consequences of boosting meaning in life. For instance, if a company elects to enhance their consumers' sense of meaning in life (and/or position their brands and products as able to provide meaningfulness), how might this influence factors such as willingness-to-pay, brand loyalty, product satisfaction, preferences for quality (vs. quantity), or brand forgiveness? How might this influence the impact that consumers have on each other (e.g., via word-of-mouth or gift-giving)? Future research that addresses questions such as these should hopefully lead to marketing decisions that can confer benefits to both companies and consumers.

### **Final Thoughts**

As can be seen from our review of research conducted over the last several decades, the extant literature on time and meaning has made much progress and generated valuable insights. However, as our highlighting of just some of the myriad promising directions for future research illustrates, vast uncharted territory still remains. We hope that our frameworks have offered a

fresh perspective on the relationship between time and meaning—one that will prove both beneficial for consumers and fruitful for researchers. If future research can reveal more about how, when, and why consumers find meaning in their expenditure and construal of time, then we will possess a much deeper understanding of what is truly at the heart of living what has often been termed “the good life” (King, 2001). Ultimately, we hope that by considering how consumers’ experiences and choices provide meaning in life, we may develop a stronger vision of the significance of consumer behavior and research.

### References

- Aaker, J. L., Drolet, A., & Griffin, D. (2008). Recalling mixed emotions. *Journal of Consumer Research, 35*, 268-278.
- Aaker, J. L., Rudd, M., & Mogilner, C. (2011). If money does not make you happy, consider time. *Journal of Consumer Psychology, 21*, 126-130.
- Ackerman, S., Zuroff, D. C., & Moskowitz, D. S. (2000). Generativity in midlife and young adults: Links to agency, communion, and subjective well-being. *The International Journal of Aging and Human Development, 50*, 17-41.
- Adler, J. M., Kissel, E. C., & McAdams, D. P. (2006). Emerging from the CAVE: Attributional style and the narrative study of identity in midlife adults. *Cognitive Therapy and Research, 30*, 39-51.
- Adler, J. M., Lodi-Smith, J., Philippe, F. L., & Houle, I. (2016). The incremental validity of narrative identity in predicting well-being: A review of the field and recommendations for the future. *Personality and Social Psychology Review, 20*, 142-175.
- Aknin, L. B., Norton, M. I., & Dunn, E. W. (2009). From wealth to well-being? Money matters, but less than people think. *Journal of Positive Psychology, 6*, 523-527.
- Alba, J. W., & Williams, E. F. (2013). Pleasure principles: A review of research on hedonic consumption. *Journal of Consumer Psychology, 23*, 2-18.
- Ariely, D., Kamenica, E., & Prelec, D. (2008). Man's search for meaning: The case of Legos. *Journal of Economic Behavior & Organization, 67*, 671-677.
- Bauer, J. J., & McAdams, D. P. (2004). Personal growth in adults' stories of life transitions. *Journal of Personality, 72*, 573-602.

- Bauer, J. J., & McAdams, D. P. (2010). Eudaimonic growth: Narrative growth goals predict increases in ego development and subjective well-being 3 years later. *Developmental Psychology, 46*, 761-772.
- Bauer, J. J., McAdams, D. P., & Pals, J. L. (2008). Narrative identity and eudaimonic well-being. *Journal of Happiness Studies, 9*, 81-104.
- Baumeister, R. F. (1991). *Meanings of life*. New York, NY: Guilford Press.
- Baumeister, R. F. (2002). Yielding to temptation: Self-control failure, impulsive purchasing, and consumer behavior. *Journal of Consumer Research, 28*, 670-676.
- Baumeister, R. F., Bratslavsky, E., Finkenauer, C., & Vohs, K. D. (2001). Bad is stronger than good. *Review of General Psychology, 5*, 323-370.
- Baumeister, R. F., & Vohs, K. D. (2002). The pursuit of meaningfulness in life. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 608–618). New York, NY: Oxford University Press.
- Baumeister, R. F., Vohs, K. D., Aaker, J. L., & Garbinsky, E. N. (2013). Some key differences between a happy life and a meaningful life. *The Journal of Positive Psychology, 8*, 505-516.
- Becker, E. (1973). *The denial of death*. New York, NY: Free Press.
- Bernstein, M. J., & Claypool, H. M. (2012). Social exclusion and pain sensitivity: Why exclusion sometimes hurts and sometimes numbs. *Personality and Social Psychology Bulletin, 38*, 185-196.
- Bhattacharjee, A., & Mogilner, C. (2013). Happiness from ordinary and extraordinary experiences. *Journal of Consumer Research, 41*, 1-17.

- Bonebright, C. A., Clay, D. L., & Ankenmann, R. D. (2000). The relationship of workaholism with work–life conflict, life satisfaction, and purpose in life. *Journal of Counseling Psychology, 47*, 469-477.
- Boyle, P. A., Buchman, A. S., Barnes, L. L., & Bennett, D. A. (2010). Effect of a purpose in life on risk of incident Alzheimer disease and mild cognitive impairment in community-dwelling older persons. *Archives of General Psychiatry, 67*, 304-310.
- Breeze, B., & Lloyd, T. (2013). *Richer lives: Why rich people give*. London, UK: Directory of Social Change.
- Britt, T. W., Adler, A. B., & Bartone, P. T. (2001). Deriving benefits from stressful events: The role of engagement in meaningful work and hardiness. *Journal of Occupational Health Psychology, 6*, 53-63.
- Bronk, K. C. (2013). *Purpose in life: A critical component of optimal youth development*. New York, NY: Springer.
- Bryant, F. B. (1989). A four-factor model of perceived control: Avoiding, coping, obtaining, and savoring. *Journal of Personality, 57*, 773-797.
- Bryant, F. B., & Veroff, J. (2017). *Savoring: A new model of positive experience*. New York, NY: Psychology Press.
- Bulman, R. J., & Wortman, C. B. (1977). Attributions of blame and coping in the “real world”: Severe accident victims react to their lot. *Journal of Personality and Social Psychology, 35*, 351-363.
- Byock, I. (2002). The meaning and value of death. *Journal of Palliative Medicine, 5*, 279-288.
- Cacioppo, J. T., & Patrick, W. (2008). *Loneliness: Human nature and the need for social connection*. New York, NY: Norton.

- Campbell, L. A., & Bryant, R. A. (2007). How time flies: A study of novice skydivers. *Behaviour Research and Therapy*, 45(6), 1389-1392.
- Carstensen, L. L. (2006). The influence of a sense of time on human development. *Science*, 312, 1913-1915.
- Catapano, R., Quoidbach, J., Mogilner, C., & Aaker, J. L. (2018). Wealth shapes the link between meaning and happiness. *Working Paper*.
- Cervinka, R., Roderer, K., & Hefler, E. (2012). Are nature lovers happy? On various indicators of well-being and connectedness with nature. *Journal of Health Psychology*, 17, 379-388.
- Choi, J., Catapano, R., & Choi, I. (2017). Taking stock of happiness and meaning in everyday life: An experience sampling approach. *Social Psychological and Personality Science*, 8, 641-651.
- Conti, R. (2001). Time flies: Investigating the connection between intrinsic motivation and the experience of time. *Journal of Personality*, 69, 1-26.
- Crumbaugh, J. C. (1977). The seeking of noetic goals test (SONG): A complementary scale to the purpose in life test (PIL). *Journal of Clinical Psychology*, 33, 900-907.
- Crumbaugh, J. C., & Maholick, L. T. (1964). An experimental study in existentialism: The psychometric approach to Frankl's concept of noogenic neurosis. *Journal of Clinical Psychology*, 20, 200-207.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York, NY: Harper Perennial.
- Csikszentmihalyi, M. (1999). If we are so rich, why aren't we happy? *American Psychologist*, 54, 821-827.
- Csikszentmihalyi, M. (2000). *Beyond boredom and anxiety*. San Francisco, CA: Jossey-Bass.

- Davis, C. G., Nolen-Hoeksema, S., & Larson, J. (1998). Making sense of loss and benefiting from the experience: Two construals of meaning. *Journal of Personality and Social Psychology, 75*, 561-574.
- Davis, C. G., Wortman, C. B., Lehman, D. R., & Silver, R.C. (2000). Searching for meaning in loss: Are clinical assumptions correct? *Death Studies, 24*, 497-540.
- Deci, E. L., & Ryan, R. M. (2008). Hedonia, eudaimonia, and well-being: An introduction. *Journal of Happiness Studies, 9*, 1-11.
- Debats, D. L., Drost, J., & Hansen, P. (1995). Experiences of meaning in life: A combined qualitative and quantitative approach. *British Journal of Psychology, 86*, 359-375.
- Debats, D. L., Van der Lubbe, P. M., & Wezeman, F. R. (1993). On the psychometric properties of the Life Regard Index (LRI): A measure of meaningful life: An evaluation in three independent samples based on the Dutch version. *Personality and Individual Differences, 14*, 337-345.
- Diener, E., & Biswas-Diener, R. (2002). Will money increase subjective well-being? *Social Indicators Research, 57*, 119-169.
- Duchon, D., & Plowman, D. A. (2005). Nurturing the spirit at work: Impact on work unit performance. *The Leadership Quarterly, 16*, 807-833.
- Dull, V. T., & Skokan, L. A. (1995). A cognitive model of religion's influence on health. *Journal of Social Issues, 51*, 49-64.
- Dwyer, R. J., Dunn, E. W., & Hershfield, H. E. (2017). Cousins or conjoined twins: How different are meaning and happiness in everyday life? *Comprehensive Results in Social Psychology, 2*, 199-215.

- Ebersole, P., & Humphreys, P. (1991). The short index of self-actualization and purpose in life. *Psychological Reports, 69*, 550.
- Evenson, R. J., & Simon, R. W. (2005). Clarifying the relationship between parenthood and depression. *Journal of Health and Social Behavior, 46*, 341-358.
- Frankl, V. E. (1963). *Man's search for meaning: An introduction to logotherapy*. New York, NY: Simon & Schuster.
- Garland, E. L., Farb, N. A., R. Goldin, P., & Fredrickson, B. L. (2015). Mindfulness broadens awareness and builds eudaimonic meaning: A process model of mindful positive emotion regulation. *Psychological Inquiry, 26*, 293-314.
- George, L. S., & Park, C. L. (2017). The multidimensional existential meaning scale: A tripartite approach to measuring meaning in life. *The Journal of Positive Psychology, 12*, 613-627.
- Gilbert, K. R. (2002). Taking a narrative approach to grief research: Finding meaning in stories. *Death Studies, 26*, 223-239.
- Gino, F., & Mogilner, C. (2014). Time, money, and morality. *Psychological Science, 25*, 414-421.
- Goldstein, N. J., Cialdini, R. B., & Griskevicius, V. (2008). A room with a viewpoint: Using social norms to motivate environmental conservation in hotels. *Journal of Consumer Research, 35*, 472-482.
- Granskog, J. E. (1993). In search of the ultimate: Ritual aspects of the Hawaiian ironman triathlon. *Journal of Ritual Studies, 7*, 3-25.
- Greenfield, E. A., & Marks, N. F. (2004). Formal volunteering as a protective factor for older adults' psychological well-being. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 59*, S258-S264.

- Gruber, R. P., & Block, R. A. (2003). Effect of caffeine on prospective and retrospective duration judgements. *Human Psychopharmacology: Clinical and Experimental*, *18*, 351-359.
- Haidt, J. (2010). Finding meaning in vital engagement and good hives. In *Meaning in life, and why it matters* (pp. 92-101). Princeton, NJ: Princeton University Press.
- Harlow, L. L., Newcomb, M. D., & Bentler, P. M. (1986). Depression, self-derogation, substance use, and suicide ideation: Lack of purpose in life as a mediational factor. *Journal of Clinical Psychology*, *42*, 5-21.
- Harter, S. (1992). Visions of self: Beyond the me in the mirror. In J. E. Jacobs (Ed.), *Nebraska symposium on motivation* (pp. 99-144). Lincoln, NB: University of Nebraska Press.
- Heine, S. J., Proulx, T., & Vohs, K. D. (2006). The meaning maintenance model: On the coherence of social motivations. *Personality and Social Psychology Review*, *10*, 88-110.
- Heintzelman, S. J., & King, L. A. (2014). (The feeling of) meaning-as-information. *Personality and Social Psychology Review*, *18*, 153-167.
- Heintzelman, S. J., Trent, J., & King, L. A. (2013). Encounters with objective coherence and the experience of meaning in life. *Psychological Science*, *24*, 991-998.
- Heisel, M. J., & Flett, G. L. (2004). Purpose in life, satisfaction with life, and suicide ideation in a clinical sample. *Journal of Psychopathology and Behavioral Assessment*, *26*, 127-135.
- Hershfield, H., Mogilner, C., and Aaker, J. (2017). Rethinking time for well-being. In A. Gneezy, V. Griskevicius, & P. Williams (Eds.), *NA - Advances in Consumer Research* (Vol. 45, pp. 79-84). Duluth, MN: Association for Consumer Research.
- Hershfield, H. E., Mogilner, C., & Barnea, U. (2016). People who choose time over money are happier. *Social Psychological and Personality Science*, *7*, 697-706.

- Hicks, J. A., Schlegel, R. J., & King, L. A. (2010). Social threats, happiness, and the dynamics of meaning in life judgments. *Personality and Social Psychology Bulletin, 36*, 1305-1317.
- Hicks, J. A., Trent, J., Davis, W. E., & King, L. A. (2012). Positive affect, meaning in life, and future time perspective: An application of socioemotional selectivity theory. *Psychology and Aging, 27*, 181-189.
- Hinds, J., & Sparks, P. (2009). Investigating environmental identity, well-being and meaning. *Ecopsychology, 1*, 181-186.
- Hirschman, E. C., & Holbrook, M. B. (1982). Hedonic consumption: Emerging concepts, methods and propositions. *Journal of Marketing, 46*, 92-101.
- Howell, A. J., Passmore, H. A., & Buro, K. (2013). Meaning in nature: Meaning in life as a mediator of the relationship between nature connectedness and well-being. *Journal of Happiness Studies, 14*, 1681-1696.
- Huta, V., & Ryan, R. M. (2010). Pursuing pleasure or virtue: The differential and overlapping well-being benefits of hedonic and eudaimonic motives. *Journal of Happiness Studies, 11*, 735-762.
- Huta, V., & Waterman, A. S. (2014). Eudaimonia and its distinction from hedonia: Developing a classification and terminology for understanding conceptual and operational definitions. *Journal of Happiness Studies, 15*, 1425-1456.
- Janoff-Bulman, R. (1992). *Shattered assumptions: Towards a new psychology of trauma*. New York, NY: Free Press.
- Kahneman, D., Krueger, A. B., Schkade, D., Schwarz, N., & Stone, A. A. (2006). Would you be happier if you were richer? A focusing illusion. *Science, 312*, 1908-1910.

- Kashdan, T. B., Biswas-Diener, R., & King, L. A. (2008). Reconsidering happiness: The costs of distinguishing between hedonics and eudaimonia. *The Journal of Positive Psychology, 3*, 219-233.
- Kashdan, T. B., & Breen, W. E. (2007). Materialism and diminished well-being: Experiential avoidance as a mediating mechanism. *Journal of Social and Clinical Psychology, 26*, 521-539.
- Kauppinen, A. (2012). Meaningfulness and time. *Philosophy and Phenomenological Research, 84*, 345-377.
- Keinan, A., & Kivetz, R. (2010). Productivity orientation and the consumption of collectable experiences. *Journal of Consumer Research, 37*, 935-950.
- Kellert, S. R. (1993). The biological basis for human values of nature. In S. R. Kellert & E. O. Wilson (Eds.), *The biophilia hypothesis* (pp. 42-69). Washington, DC: Island Press.
- Keltner, D., & Haidt, J. (2003). Approaching awe, a moral, spiritual, and aesthetic emotion. *Cognition and emotion, 17*, 297-314.
- Kernis, M. H. (2003). Toward a conceptualization of optimal self-esteem. *Psychological Inquiry, 14*, 1-26.
- Kernis, M. H., & Goldman, B. M. (2006). A multi-component conceptualization of authenticity: Theory and research. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (pp. 283-357). New York, NY: Academic Press.
- Killingsworth, M. A., & Gilbert, D. T. (2010). A wandering mind is an unhappy mind. *Science, 330*, 932-932.
- King, L. A. (2001). The hard road to the good life: The happy, mature person, *Journal of Humanistic Psychology, 41*, 51-72.

- King, L. A. (2002). Gain without pain: Expressive writing and self-regulation. In S. J. Lepore & J. Smyth (Eds.), *The writing cure* (pp. 119-134). Washington, DC: American Psychological Association.
- King, L. A., Hicks, J. A., Krull, J. L., & Del Gaiso, A. K. (2006). Positive affect and the experience of meaning in life. *Journal of Personality and Social Psychology, 90*, 179-196.
- Kobau, R., Sniezek, J., Zack, M. M., Lucas, R. E., & Burns, A. (2010). Well-being assessment: An evaluation of well-being scales for public health and population estimates of well-being among US adults. *Applied Psychology: Health and Well-Being, 2*, 272-297.
- Krause, N. (2007). Longitudinal study of social support and meaning in life. *Psychology and Aging, 22*, 456-469.
- Krause, N. (2009). Meaning in life and mortality. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 64*, 517-527.
- Kray, L. J., George, L. G., Liljenquist, K. A., Galinsky, A. D., Tetlock, P. E., & Roese, N. J. (2010). From what might have been to what must have been: Counterfactual thinking creates meaning. *Journal of Personality and Social Psychology, 98*, 106-118.
- Lambert, N. M., Stillman, T. F., Baumeister, R. F., Fincham, F. D., Hicks, J. A., & Graham, S. M. (2010). Family as a salient source of meaning in young adulthood. *The Journal of Positive Psychology, 5*, 367-376.
- Landau, M. J. (2018). Using metaphor to find meaning in life. *Review of General Psychology, 22*, 62-72.
- Langer, E. J. (1989). *Mindfulness*. Reading, MA: Addison-Wesley.
- Lazarus, R. S. (1966). *Psychological stress and the coping process*. New York, NY: McGraw-Hill.

Leclerc, F., Schmitt, B. H., & Dube, L. (1995). Waiting time and decision making: Is time like money? *Journal of Consumer Research*, *22*, 110-119.

Lepore, S. J., & Smyth, J. M. (2002). *The writing cure: How expressive writing promotes health and emotional well-being*. Washington, DC: American Psychological Association.

Liu, W., & Aaker, J. (2008). The happiness of giving: The time-ask effect. *Journal of Consumer Research*, *35*, 543-557.

Lowery, B. J., Jacobsen, B. S., & McCauley, K. (1987). On the prevalence of causal search in illness situations. *Nursing Research*, *36*, 88-93.

Lynn, Michael (1991). Scarcity Effects on Value: A Quantitative Review of the Commodity Theory Literature. *Psychology and Marketing*, *8*, 45-57.

Lyubomirsky, S., Dickerhoof, R., Boehm, J. K., & Sheldon, K. M. (2011). Becoming happier takes both a will and a proper way: An experimental longitudinal intervention to boost well-being. *Emotion*, *11*, 391-402.

Mansfield, E. D., & McAdams, D. P. (1996). Generativity and themes of agency and communion in adult autobiography. *Personality and Social Psychology Bulletin*, *22*, 721-731.

Martela, F., & Steger, M. F. (2016). The three meanings of meaning in life: Distinguishing coherence, purpose, and significance. *The Journal of Positive Psychology*, *11*, 531-545.

Mascaro, N., & Rosen, D. H. (2006). The role of existential meaning as a buffer against stress. *Journal of Humanistic Psychology*, *46*, 168-190.

Mascaro, N., & Rosen, D. H. (2008). Assessment of existential meaning and its longitudinal relations with depressive symptoms. *Journal of Social and Clinical Psychology*, *27*, 576-599.

McAdams, D. P. (1985). *Power, intimacy, and the life story*. New York, NY: Guilford.

- McAdams, D. P. (2001). The psychology of life stories. *Review of General Psychology, 5*, 100-122.
- McAdams, D. P. (2006). *The redemptive self: Stories Americans live by*. New York, NY: Oxford University Press.
- McAdams, D. P., Hoffman, B. J., Day, R., & Mansfield, E. D. (1996). Themes of agency and communion in significant autobiographical scenes. *Journal of Personality, 64*, 339-377.
- McAdams, D. P., Reynolds, J., Lewis, M., Patten, A. H., & Bowman, P. J. (2001). When bad things turn good and good things turn bad: Sequences of redemption and contamination in life narrative and their relation to psychosocial adaptation in midlife adults and in students. *Personality and Social Psychology Bulletin, 27*, 474-485.
- McGonigal, K. (2015). *The upside of stress: Why stress is good for you, and how to get good at it*. New York, NY: Penguin Random House.
- McGregor, I., & Little, B. R. (1998). Personal projects, happiness, and meaning: On doing well and being yourself. *Journal of Personality and Social Psychology, 74*, 494-512.
- McKnight, P. E., & Kashdan, T. B. (2009). Purpose in life as a system that creates and sustains health and well-being: An integrative, testable theory. *Review of General Psychology, 13*, 242-251.
- McLanahan, S., & Adams, J. (1987). Parenthood and psychological well-being. *Annual Review of Sociology, 13*, 237-257.
- Mehl, M. R., Vazire, S., Holleran, S. E., & Clark, C. S. (2010). Eavesdropping on happiness: Well-being is related to having less small talk and more substantive conversations. *Psychological Science, 21*, 539-541.
- Myers, D. G., & Diener, E. (1995). Who is happy? *Psychological Science, 6*, 10-19.

- Mogilner, C. (2010). The pursuit of happiness: Time, money, and social connection. *Psychological Science, 21*, 1348-1354.
- Mogilner, C., & Aaker, J. (2009). "The time vs. money effect": Shifting product attitudes and decisions through personal connection. *Journal of Consumer Research, 36*, 277-291.
- Nakamura, J., & Csikszentmihalyi, M. (2003). The construction of meaning through vital engagement. In C. L. M. Keyes & J. Haidt (Eds.), *Flourishing: Positive psychology and the life well-lived* (pp. 83-104). Washington, DC: American Psychological Association.
- Nelson, S. K., Kushlev, K., & Lyubomirsky, S. (2014). The pains and pleasures of parenting: When, why, and how is parenthood associated with more or less well-being? *Psychological Bulletin, 140*, 846-895.
- Newport, F. (2017). *The Gallup Poll: Public opinion 2015*. Lanham, MD: Rowman & Littlefield.
- Nisbet, E. K., Zelenski, J. M., & Murphy, S. A. (2011). Happiness is in our nature: Exploring nature relatedness as a contributor to subjective well-being. *Journal of Happiness Studies, 12*, 303-322.
- O'Connor, K., & Chamberlain, K. (1996). Dimensions of life meaning: A qualitative investigation at mid-life. *British Journal of Psychology, 87*, 461-477.
- Oettingen, G., Mayer, D., Timur Sevincer, A., Stephens, E. J., Pak, H. J., & Hagenah, M. (2009). Mental contrasting and goal commitment: The mediating role of energization. *Personality and Social Psychology Bulletin, 35*, 608-622.
- Oettingen, G., & Schwörer, B. (2013). Mind wandering via mental contrasting as a tool for behavior change. *Frontiers in Psychology, 4*, 1-5.
- Olivola, C. Y., & Shafir, E. (2013). The Martyrdom Effect: When pain and effort increase prosocial contributions. *Journal of Behavioral Decision Making, 26*, 91-105.

Orehek, E., Sasota, J. A., Kruglanski, A. W., Dechesne, M., & Ridgeway, L. (2014).

Interdependent self-construals mitigate the fear of death and augment the willingness to become a martyr. *Journal of Personality and Social Psychology, 107*, 265-275.

Owens, G. P., Steger, M. F., Whitesell, A. A., & Herrera, C. J. (2009). Posttraumatic stress disorder, guilt, depression, and meaning in life among military veterans. *Journal of Traumatic Stress, 22*, 654-657.

PayScale (2018). The most and least meaningful jobs. Retrieved May 14, 2018, from <https://www.payscale.com/data-packages/most-and-least-meaningful-jobs>

Percival Carter, E., & Williams, L. (2017). Meaningful consumption provides long lasting benefits at a high cost. In A. Gneezy, V. Griskevicius, & P. Williams (Eds.), *NA - Advances in Consumer Research* (Vol. 45, pp. 63-67). Duluth, MN: Association for Consumer Research.

Perlow, L. A. (1999). The time famine: Toward a sociology of work time. *Administrative Science Quarterly, 44*, 57-81.

Phillips, W. M. (1980). Purpose in life, depression, and locus of control. *Journal of Clinical Psychology, 36*, 661-667.

Phinney, A. (2006). Family strategies for supporting involvement in meaningful activity by persons with dementia. *Journal of Family Nursing, 12*, 80-101.

Piff, P. K., Dietze, P., Feinberg, M., Stancato, D. M., & Keltner, D. (2015). Awe, the small self, and prosocial behavior. *Journal of Personality and Social Psychology, 108*, 883-899.

Quoidbach, J., Dunn, E. W., Petrides, K. V., & Mikolajczak, M. (2010). Money giveth, money taketh away: The dual effect of wealth on happiness. *Psychological Science, 21*, 759-763.

- Quoidbach, J., Gilbert, D. T., & Wilson, T. D. (2013). The end of history illusion. *Science*, 339, 96-98.
- Reker, G. T., & Woo, L. C. (2011). Personal meaning orientations and psychosocial adaptation in older adults. *SAGE Open*, 1, 1-10.
- Robinson, J. P. (2013). Americans less rushed but no happier: 1965-2010 trends in subjective time and happiness. *Social Indicators Research*, 113, 1091-1104.
- Robinson, J. P., & Godbey, G. (1999). *Time for life: The surprising ways Americans use their time*. Philadelphia, PA: Pennsylvania State University Press.
- Rodell, J. B. (2013). Finding meaning through volunteering: Why do employees volunteer and what does it mean for their jobs? *Academy of Management Journal*, 56, 1274-1294.
- Routledge, C., Arndt, J., Sedikides, C., & Wildschut, T. (2008). A blast from the past: The terror management function of nostalgia. *Journal of Experimental Social Psychology*, 44, 132-140.
- Rudd, M., Hildebrand, C., & Vohs, K. D. (in press). Inspired to create: Awe enhances openness to learning and the desire for experiential creation. *Journal of Marketing Research*.
- Rudd, M., Vohs, K. D., & Aaker, J. (2012). Awe expands people's perception of time, alters decision making, and enhances well-being. *Psychological Science*, 23, 1130-1136.
- Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52, 141-166.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57, 1069-1081.
- Ryff, C. D., & Singer, B. (1998). The contours of positive human health. *Psychological Inquiry*, 9, 1-28.

- Sandelowski, M. (1991). Telling stories: Narrative approaches in qualitative research. *Image: The Journal of Nursing Scholarship, 23*, 161-166.
- Sarason, I. G., & Stoops, R. (1978). Test anxiety and the passage of time. *Journal of Consulting and Clinical Psychology, 46*, 102-109.
- Schlegel, R. J., Hicks, J. A., Arndt, J., & King, L. A. (2009). Thine own self: True self-concept accessibility and meaning in life. *Journal of Personality and Social Psychology, 96*, 473-490.
- Schlegel, R. J., Hicks, J. A., King, L. A., & Arndt, J. (2011). Feeling like you know who you are: Perceived true self-knowledge and meaning in life. *Personality and Social Psychology Bulletin, 37*, 745-756.
- Schwartzberg, S. S., & Janoff-Bulman, R. (1991). Grief and the search for meaning: Exploring the assumptive worlds of bereaved college students. *Journal of Social and Clinical Psychology, 10*, 270-288.
- Shah, A. K., Shafir, E., & Mullainathan, S. (2015). Scarcity frames value. *Psychological Science, 26*, 402-412.
- Sheldon, K. M., & Lyubomirsky, S. (2006). How to increase and sustain positive emotion: The effects of expressing gratitude and visualizing best possible selves. *The Journal of Positive Psychology, 1*, 73-82.
- Sheldon, K. M., Ryan, R. M., Rawsthorne, L., & Ilardi, B. (1997). "True" self and "trait" self: Cross role variation in the big five traits and its relations with authenticity and well being. *Journal of Personality and Social Psychology, 73*, 1380-1393.
- Shim, B., Barroso, J., Gilliss, C. L., & Davis, L. L. (2013). Finding meaning in caring for a spouse with dementia. *Applied Nursing Research, 26*, 121-126.

- Shiota, M. N., Keltner, D., & Mossman, A. (2007). The nature of awe: Elicitors, appraisals, and effects on self-concept. *Cognition and Emotion, 21*, 944-963.
- Sias, P. M., & Cahill, D. J. (1998). From coworkers to friends: The development of peer friendships in the workplace. *Western Journal of Communication, 62*, 273-299.
- Silver, R. L., Boon, S., & Stones, M. H. (1983). Searching for meaning in misfortune: Making sense of incest. *Journal of Social Issues, 39*, 81-101.
- Smith, C. A., & Ellsworth, P. C. (1985). Patterns of cognitive appraisal in emotion. *Journal of Personality and Social Psychology, 48*, 813-838.
- Spiller, S. A. (2011). Opportunity cost consideration. *Journal of Consumer Research, 38*, 595-610.
- Steger, M. F. (2009). Meaning in life. In S. J. Lopez & C. R. Snyder (Eds.), *Oxford handbook of positive psychology* (pp. 679-687). New York, NY: Oxford University Press.
- Steger, M. F. (2012). Experiencing meaning in life: Optimal functioning at the nexus of well-being, psychopathology, and spirituality. In P. T. P. Wong (Ed.), *The human quest for meaning* (pp. 165-184). New York, NY: Routledge.
- Steger, M. F., & Dik, B. J. (2009). If one is looking for meaning in life, does it help to find meaning in work? *Applied Psychology: Health and Well-Being, 1*, 303-320.
- Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The Meaning in Life Questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology, 53*, 80-93.
- Steger, M. F., & Kashdan, T. B. (2009). Depression and everyday social activity, belonging, and well-being. *Journal of Counseling Psychology, 56*, 289-300.

- Steger, M. F., Kashdan, T. B., Sullivan, B. A., & Lorentz, D. (2008). Understanding the search for meaning in life: Personality, cognitive style, and the dynamic between seeking and experiencing meaning. *Journal of Personality, 76*, 199-228.
- Steger, M. F., Kawabata, Y., Shimai, S., & Otake, K. (2008). The meaningful life in Japan and the United States: Levels and correlates of meaning in life. *Journal of Research in Personality, 42*, 660-678.
- Steger, M. F., Oishi, S., & Kesebir, S. (2011). Is a life without meaning satisfying? The moderating role of the search for meaning in satisfaction with life judgments. *The Journal of Positive Psychology, 6*, 173-180.
- Stellar, J. E., Gordon, A., Anderson, C. L., Piff, P. K., McNeil, G. D., & Keltner, D. (2018). Awe and humility. *Journal of Personality and Social Psychology, 114*, 258.
- Stetson, C., Fiesta, M. P., & Eagleman, D. M. (2007). Does time really slow down during a frightening event? *PloS One, 12*, e1295.
- Stillman, T. F., Baumeister, R. F., Lambert, N. M., Crescioni, A. W., DeWall, C. N., & Fincham, F. D. (2009). Alone and without purpose: Life loses meaning following social exclusion. *Journal of Experimental Social Psychology, 45*, 686-694.
- Stillman, T. F., Lambert, N. M., Fincham, F. D., & Baumeister, R. F. (2011). Meaning as magnetic force: Evidence that meaning in life promotes interpersonal appeal. *Social Psychological and Personality Science, 2*, 13-20.
- Taylor, R. (1987). Time and life's meaning. *Review of Metaphysics, 40*, 675-686.
- Taylor, S. E. (1983). Adjustment to threatening events: A theory of cognitive adaptation. *American Psychologist, 38*, 1161-1173.

- Thompson, S. C. (1981). Will it hurt less if I can control it? A complex answer to a simple question. *Psychological Bulletin*, *90*, 89-101.
- Thompson, S. C. (1991). The search for meaning following a stroke. *Basic and Applied Social Psychology*, *12*, 81-96.
- Thompson, N. J., Coker, J., Krause, J. S., & Henry, E. (2003). Purpose in life as a mediator of adjustment after spinal cord injury. *Rehabilitation Psychology*, *48*, 100-108.
- Tov, W., & Lee, H. W. (2016). A closer look at the hedonics of everyday meaning and satisfaction. *Journal of Personality and Social Psychology*, *111*, 585-609.
- Tugade, M. M., & Fredrickson, B. L. (2004). Resilient individuals use positive emotions to bounce back from negative emotional experiences. *Journal of Personality and Social Psychology*, *86*, 320-333.
- Turnquist, D. C., Harvey, J. H., & Andersen, B. L. (1988). Attributions and adjustment to life-threatening illness. *British Journal of Clinical Psychology*, *27*, 55-65.
- Twenge, J. M., Catanese, K. R., & Baumeister, R. F. (2003). Social exclusion and the deconstructed state: Time perception, meaninglessness, lethargy, lack of emotion, and self-awareness. *Journal of Personality and Social Psychology*, *85*, 409-423.
- Umberson, D., & Gove, W. R. (1989). Parenthood and psychological well-being: Theory, measurement, and stage in the family life course. *Journal of Family Issues*, *10*, 440-462.
- Valdesolo, P., & Graham, J. (2014). Awe, uncertainty, and agency detection. *Psychological Science*, *25*, 170-178.
- Veenhoven, R. (1994). Is happiness a trait? *Social Indicators Research*, *32*, 101-160.

- Veenhoven, R. (2012). Happiness: Also known as 'life-satisfaction' and 'subjective well-being.' In K. C. Land, A. C. Michalos, & M. J. Sirgy (Eds.), *Handbook of social indicators and quality of life research* (pp. 63-77). Dordrecht, NL: Springer.
- Vess, M., Routledge, C., Landau, M.J., & Arndt, J. (2009). The dynamics of death and meaning: The effects of death-relevant cognitions and personal need for structure on perceptions of meaning in life. *Journal of Personality and Social Psychology, 97*, 728-744.
- Vohs, K. D., Mead, N. L., & Goode, M. R. (2006). The psychological consequences of money. *Science, 314*, 1154-1156.
- Vohs, K. D., & Schmeichel, B. J. (2003). Self-regulation and extended now: Controlling the self alters the subjective experience of time. *Journal of Personality and Social Psychology, 85*, 217-230.
- Wade-Benzoni, K. A., Tost, L. P., Hernandez, M., & Larrick, R. P. (2012). It's only a matter of time: Death, legacies, and intergenerational decisions. *Psychological Science, 23*, 704-709.
- Wong, P. T. (2011). Positive psychology 2.0: Towards a balanced interactive model of the good life. *Canadian Psychology/Psychologie Canadienne, 52*, 69-81.
- Yang, Y., & Galak, J. (2015). Sentimental value and its influence on hedonic adaptation. *Journal of Personality and Social Psychology, 109*, 767-790.
- Zaichkowsky, J. L. (1985). Measuring the involvement construct. *Journal of Consumer Research, 12*, 341-352.
- Zauberman, G., Ratner, R. K., & Kim, B. K. (2008). Memories as assets: Strategic memory protection in choice over time. *Journal of Consumer Research, 35*, 715-728.
- Zaval, L., Markowitz, E. M., & Weber, E. U. (2015). How will I be remembered? Conserving the environment for the sake of one's legacy. *Psychological Science, 26*, 231-236.

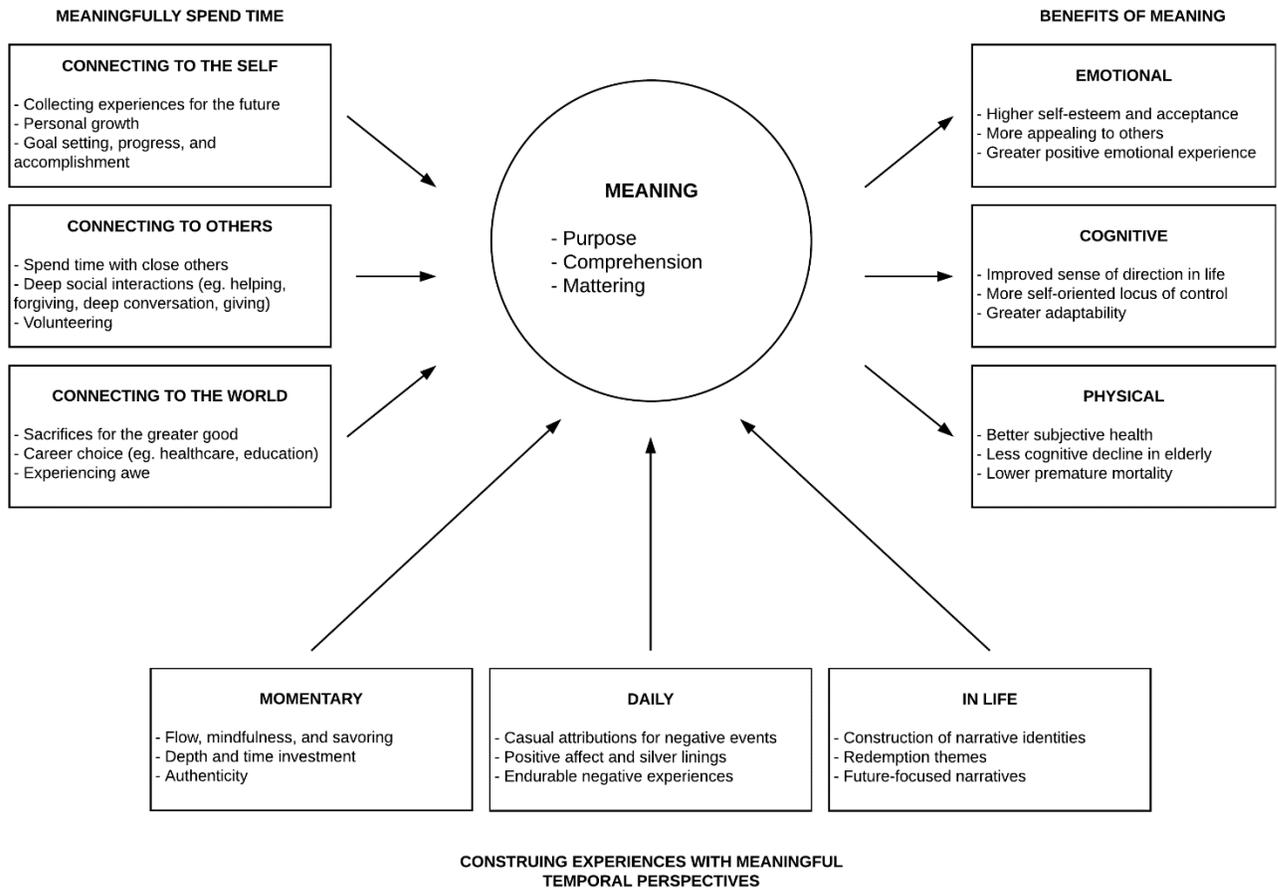


Figure 1: Illustration of frameworks for meaningfully spending and construing time.