

# The Engine of Well-Being

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The study of well-being is hampered by the multiplicity of approaches, but focusing on a single approach begs the question of what “well-being” really is. We analyze how well-being is defined according to the three main kinds of theories: “Liking” approaches (generally adopted by psychologists), “Wanting” approaches (predominant among economists), and “Needing” approaches (used in both public policy and psychology). We propose an integrative framework, the engine model of well-being, drawing on Seligman (Seligman, M. E. P., 2011, *Flourish*. New York, NY: The Free Press) and Sen’s (Sen, A. K., 1999, *Development as freedom*. Oxford, England: Oxford University Press) emphasis on the plurality of this construct by distinguishing among (a) inputs (resources that enable well-being), (b) processes (internal states of mechanisms influencing well-being), and (c) outcomes (the intrinsically valuable behaviors that reflect the attainment of well-being). We discuss implications for research, measurement, and interventions.

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Happiness, therefore, must be some form of contemplation. But, being a man, one will also need external prosperity; for our nature is not self-sufficient for the purpose of contemplation, but our body must also be healthy, and have food and other attention. Still, we must not think that the man who is to be happy will need many things or great things, merely because he cannot be blessed without external goods; for self-sufficiency and action do not depend on excess, and we can do noble acts without ruling earth and sea; for even with moderate advantages one can act excellently.

—Aristotle, *Nicomachean Ethics*, Book 10, 1178b 32–35, 1179a 1–5

Defining happiness, well-being, flourishing, and welfare has been an important pursuit for scholars in economics, political philosophy, moral philosophy, and psychology. The intuitive appeal of constructs such as happiness, well-being, and quality-of-life are undeniable, but partly as a result of this appeal, a perplexing array of theories of well-being have evolved, each with different biases, core concepts, and purposes. This is true not only across the social sciences and the humanities, but also within psychology.

Indeed, there is a major dilemma for theorizing about well-being. On the one hand, the study of well-being has been hampered

by the multiplicity of theory (Diener, Scollon, & Lucas, 2003), leading to a blurred and overly broad definition of well-being. Focusing on a single approach, on the other hand, has led to myopia in how the term “well-being” is understood by both researchers and the general public, which the multiplicity then attempts to correct. Drawing and building on the work of Hagerty et al. (2001), we present the engine model of well-being, a framework that aims to make sense of the multiplicity of theory by organizing the constructs at hand around inputs, processes, and outcomes. As we will discuss in greater detail later, inputs refer to *exogenous resources and endogenous traits that influence well-being*, processes refer to *internal states that influence choices*, and outcomes refer to *voluntary behaviors characteristic of well-being*. By specifying which of these three components of well-being a theory is interested in, we believe the different accounts can be systematically integrated. We discuss implications of this framework for research, measurement, and interventions.

This article begins by reviewing how the field of psychology has been particularly afflicted with a lack of clarity over the use of terms such as happiness, well-being, and quality-of-life. Second, we organize the concept of well-being around the engine model, which takes into account the dissimilar assumptions, terms, concepts, and data used. We assess the extent to which it is possible to compare research on well-being across disciplines and what may preclude such an analysis. Third, we discuss the major theories of happiness and well-being that are currently prevalent in psychology and in economics, in light of the new model proposed.

## The Need for Greater Theoretical Specificity

More than a decade has passed since Seligman’s presidential address to the American Psychological Association heralded the new field of positive psychology (Seligman, 2002a; Seligman & Csikszentmihalyi, 2000). During the past decade, the field has stimulated research aimed at redressing the science and practice imbalance between psychopathology relative to strengths and

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well-being (Linley, Joseph, Harrington, & Wood, 2006) and furthering the field's goal of the creation of "a psychology of positive human functioning. . . that achieves a scientific understanding and effective interventions to build thriving individuals, families and communities" (Seligman, 2002b, p. 7). The pace at which the field has grown has been rapid, in part because positive psychology afforded opportunities for researchers to investigate new topics that had previously been shunned (Gable & Haidt, 2005). For example, the field has played a significant role in exploring happiness (Lyubomirsky, 2008), happiness interventions (Lyubomirsky, Sheldon, & Schkade, 2005; Seligman, Steen, Parks, & Peterson, 2005), character strengths and virtues (Peterson & Seligman, 2004), positive emotions (Fredrickson, 2001), the relationship between optimism and psychological as well as physical health (Schueller & Seligman, 2008), and morality (Haidt, 2007). In short, positive psychology represents a thriving perspective within the wider discipline and represents a significant complement to the medical model, which emphasizes a deficit-centered, "repair-shop" conception of health, with merely returning to normal as its goal (Ryff & Singer, 1998).

However, the steep increase in research into well-being has been accompanied by an increased vagueness in the constructs used. This vagueness exists both at the level of terms (e.g., happiness, subjective well-being [SWB], hedonic well-being, life satisfaction, psychological well-being, etc.) as well as in the identification of the different components that make up the construct of well-being. For example, although early psychological work on happiness focused on defining it as subjective well-being (e.g., feeling happy, joyful, or satisfied with life; Easterlin, 1974; Wilson, 1967), more recent research has emphasized two distinct approaches: hedonic well-being and eudemonic well-being (Ryan & Deci, 2001). Hedonic psychology measures SWB, defined as the subjective evaluation of the quality of one's life involving both affective measures of positive affect and negative affect as well as a cognitive measure of life satisfaction (Diener, Suh, Lucas, & Smith, 1999). In contrast, eudemonic well-being measures assess the extent to which individuals are "doing well" (rather than merely "feeling good") by looking at constructs such as meaning, purpose, engagement, and flow, among others. So when psychologists talk about well-being, it is not always evident whether they are referring to hedonic or eudemonic conceptualizations of these constructs.

One example of the consequence of this conceptual confusion concerns the relationship between happiness and money. Diener and Seligman (2004) argued that well-being should be a focus of public economic policy, as "there are distressingly large, measurable slippages between economic indicators and well-being" (p.1). Growing economic prosperity has not been accompanied by an increase in well-being in developed countries, and although within countries richer people report being happier, the same does not hold true across countries, where happiness does not seem to increase according to national income per person. This lack of a relationship has been termed the "Easterlin paradox," after the economist Richard Easterlin (1974). While the belief that "money does not buy happiness" is now widespread, the data provide a much more complex and fascinating picture, but only if one decomposes "happiness" into better-defined elements. Prior research has often defined well-being concepts imperfectly, leading to confusion about the nature of the relationship between well-being and other important outcome variables.

For example, not all researchers have been able to replicate the existence of the aforementioned Easterlin paradox. While Easterlin (1974) found no relationship between a subjective measure of happiness and income within developed countries, Veenhoven (1991) found a curvilinear relationship between income and happiness, with increased income having diminishing returns. In addition, Diener, Diener, and Diener (1995) found that well-being rose significantly but moderately with income, but the relationship disappeared after the 75th percentile. Finally, Offer (2006) analyzed the relationship between well-being and income in 40 countries and found no relationship when the effects of social rank were controlled.

In an analysis of virtually all the data on well-being and income, Stevenson and Wolfers (2008), however, found a clear positive relationship between well-being and the logarithm of income across countries with no evidence of a "drop-off" point for wealthier countries. This was consistent with the relationship between well-being and income within countries, both in terms of comparisons between richer and poorer members of a single country and within countries as they became richer or poorer. We do not think that the logarithm of income (in which income is transformed so that the difference between \$1 and \$10 is as large as the difference between \$10 and \$100 or between \$100 and \$1,000) has any psychological meaning, other than restating the curvilinear relationship between income and well-being. However, the absence of any drop-off point as shown by Stevenson and Wolfers (2008) suggests the need to find out what aspect of well-being continues to grow with income.

One possible explanation for these conflicting findings may have to do with how well-being is measured in these studies, usually either by asking individuals how "happy" they feel, how satisfied they are with their lives, or to what extent they are living the "best possible life" (Graham, 2011). Conflicting findings may therefore be due to the conflation of mood (which is usually what people base their "happiness" reports on) and the judgment of how well life is going or the extent to which they are living the best possible life. Much of the literature on income and happiness uses measures of happiness and life satisfaction interchangeably, even though they map onto different components of well-being: an affective (positive mood) and an evaluative (life satisfaction) component. However, judgments of how well life is going (the evaluative component) and the extent to which one is living the best possible life are more strongly related to income and long-term changes in income (Graham, 2011; Lucas & Schimmack, 2009), whereas mood-based measures (the affective component) show a weak relationship with income in cross-sectional analysis, as well as a weak association with long-term increases in income (Diener, Kahneman, Arora, Harter, & Tov, 2009; Inglehart, Foa, Peterson, & Welzel, 2008). So it is likely that the evaluative component ("life is good") may increase without limit with income, but the mood component ("I feel happy") does not increase at all past some point with increasing income (e.g., Diener, Ng, Harter & Arora, 2010).

This more complicated picture points to the need for a better understanding of the constructs between measures and the methods used to measure them and makes Easterlin's (2003) claim "I take the terms well-being, utility, happiness, life satisfaction and welfare to be interchangeable" (p. 11176) no longer justifiable. Given the myriad definitions of well-being mentioned above, we believe

a framework for distinguishing different conceptions of well-being is of great importance.

### **The Engine Approach: Inputs, Processes, and Outcomes**

Veenhoven (2000) and Cummins (1998) have proposed a systems-theory approach to understanding well-being. In an extensive review of quality-of-life measures, Hagerty and colleagues (2001) argued that none of the 22 quality-of-life scales that they evaluated were based on a well-established theory (that is, an empirically supported “nomological net” of concepts and causal paths that specify how quality-of-life is related to exogenous and endogenous variables), and they proposed a systems-theory approach as a potential solution.

This approach distinguished between *inputs*, *throughputs*, and *outputs*. In Hagerty et al.’s (2001) account, input variables are environmental factors that influence quality-of-life, such as gross domestic product (GDP), political freedom, and health services. Throughput variables refer to an individual’s reactions and choices in this environment. Quality-of-life measures typically use objective measures as throughput variables, such as achieved education and personal health. Finally, output variables measure the results of the input and throughput variables. Veenhoven (1998) cites domain-specific and overall SWB, personal survival, and “contribution to the human heritage” as examples of output variables. It is important to note that output variables can have causal feedback effects on both input and throughput variables, influencing them either positively or negatively.

We use their framework as a direct antecedent for ours, which distinguishes between inputs, processes and outcomes for individual well-being. What goes into the three classes of variables, however, distinguishes our framework from theirs. The description below represents our integration of the well-being literature. The relevant concepts are summarized under the appropriate heading below.

#### **Input Variables**

We include as input variables two kinds of influences: exogenous and endogenous predictors of well-being. First, exogenous predictors include environmental variables such as income, education, and genetics. These input variables, such as income, green space, and clean water, fulfill exogenous needs and predict outcomes associated with well-being. The objective-list approach (below) consists of a compilation of exogenous input variables. These variables—including resources and income—afford the opportunity to engage in valuable activities and so contribute toward an individual’s well-being. Second, we also add personality variables—these are traits that predict well-being (Ryan & Deci, 2000; Schimmack, Oishi, Furr, & Funder, 2004). These endogenous variables are traits that include optimism, neuroticism, curiosity, abiding values, strengths and talents, and the trait of positive affectivity, which are all related to well-being.

#### **Process Variables**

Process variables are internal states that influence the choices that individuals make; the outcomes of these choices are the

behaviors that constitute the outcome variables. Following Carver and Scheier’s (1981) self-regulatory model, individuals respond to their environment by engaging in activities to achieve their goals. This is equivalent, utilizing Sen’s (1999) language below, to their choosing between different capabilities in order to achieve functionings. These choices can be affected by a number of variables, including specific beliefs or cognitions that they may have regarding their choices, the explanations they make, moods, emotional states that are consequences, and correlates of the choices. It is important that the engine places the subjective variables, such as mood, positive emotion, and cognitive evaluations, in the process part of the model. Note that although Hagerty et al.’s (2001) definition of a throughput focuses on objective measures of choice, the category of process defined here focuses on capabilities and subjective states.

### **Outcome Variables: Preferences, Behavior, and Goal-Driven Functionings**

The outcomes of the engine approach are the voluntary behaviors that characterize well-being: positive relationships; positive accomplishment; engagement in work, love, or play, authentic, autonomous behavior; and meaningful activity. Following Seligman (2011) and Sen (1999), we define well-being outcomes in terms of what people, when free from coercion, would choose to do for their own sake. Although individuals may sometimes pursue these outcomes for other ends (e.g., they may for instance think that accomplishment will bring positive emotion), many choose to do so because these outcomes are intrinsically motivating by themselves. Such an outcome should satisfy three conditions:

1. It contributes to well-being and a life well-lived.
2. Many people pursue it for its own sake, not merely to get any of the other elements.
3. It is defined and measured independently of the other outcomes.

Such behaviors constitute what Sen (1992) and Nussbaum (2011) define as functionings, or valuable doings that grow out of inputs. Such goal-driven functionings in objective list theories are the activities that individuals engage in to fulfill important goals; such goal-motivated activity is indicative of well-being (Brunstein, Schultheiss, & Grassmann, 1998; Hofer, Busch, & Kiessling, 2008).

We move now to a summary of the numerous theoretical accounts of well-being in psychology, economics, and the human development literature, with the ultimate goal of locating each approach within this more parsimonious model.

### **Distinguishing Theories of Well-Being**

One established framework for distinguishing among well-being theories in political philosophy is the distinction between Needing, Wanting, and Liking theories of well-being. Parfit (1984) categorized the conceptions of well-being into three types: (a) desire fulfillment theories, the satisfaction of revealed preferences; (b) objective list theories, the catalog of goods required for a well-

lived life; and (c) hedonistic theories, pleasurable mental states. He writes

What would be best for someone, or would be most in this person's interests, or would make this person's life go, for him, as well as possible? Answers to this question I call *theories about self-interest*. There are three kinds of theory. On *Hedonistic Theories*, what would be best for someone is what would make his life happiest. On *Desire-Fulfillment Theories*, what would be best for someone is what, throughout his life, would best fulfill his desires. On *Objective List Theories*, certain things are good or bad for us, whether or not we want to have the good things, or to avoid the bad things (Parfit, 1984, p. 493).

Geuss (2005) offered a similar categorization distinguishing between external or objectivist views, desire relative views, and overall-assessment views. For simplicity's sake, we will use the more succinct labeling that Dolan, Peasgood, and White (2006) and Dolan and White (2007) use to combine the insight offered by Parfit and Geuss: Wanting, Needing, and Liking Theories (see also Angner, 2007 and Griffin, 1986). In addition to these theories, we make a distinction between simple Liking accounts in psychology (e.g., the SWB approach) and psychological theories that posit the importance of crucial psychological resources for the presence of well-being. These eudemonic psychological accounts are list-based and are closely aligned to need-based and flourishing accounts in the social sciences and philosophy. These theories are best seen as subjective Needing theories in stipulating the importance of certain psychological needs or pathways for well-being.

We organize this section in the following way. First, we discuss Wanting theories. Second, we describe the two major strands—positive emotions and life satisfaction—of measurement within the Liking theory literature. We highlight some of the limitations of Liking approaches, specifically the contamination of life-satisfaction judgments by current mood (Schwarz & Strack, 1999; Veenhoven, 2006). Third, we outline two important Needing theories as well as three related psychological theories that posit the importance of discreet needs and other pathways for optimizing well-being. We finally come back to the framework introduced above (the engine model of well-being) for integrating these theories around inputs, processes, and outcomes.

### Rational Desire-Fulfillment Accounts (Wanting)

The first of these theory types—Wanting theory—dominates mainstream economics as well as reinforcement theories within psychology. According to this account, an individual achieves well-being when he is able to fulfill his “desires,” where desires are defined nonsubjectively. In economic terms, well-being is tied to satisfying most of one's preferences. There is no subjective *requirement*; that is, there is no expectation that satisfying one's preferences will lead to affective pleasure or satisfaction and no affective pleasure required (Moore & Crisp, 1996). Having satisfied preferences is thus different from feeling satisfied. Well-being is defined in terms of observed choices (Kahneman, 1999). Given that money generally enables individuals to satisfy their preferences and that increased wealth is accompanied by more abundant choice, this approach adopts money as a suitable indicator of preference.

Economists have traditionally been wary of studying and quantifying subjective mental states—or experienced utility, to use the

economist's term—and generally prefer to describe well-being in terms of individuals' market behavior. However, as Diener and Seligman (2004) point out, such an approach leaves out the consideration of nonmarket goods such as public spaces and air quality. One method that economists have used to address this limitation is the contingent-valuation approach, in which individuals are presented with hypothetical choices and asked to state their preferences in monetary terms. For example, they may be asked how much they would be willing to pay to preserve an important historical site (e.g., Navrud & Ready, 2002), or (from a negative standpoint) how much compensation they would want for living near an airport.

Harsanyi (1982) and other economists have asserted that not all satisfied preferences would result in increases in well-being, either because those preferences are based on insufficient information or are immoral or antisocial in nature. For this reason, Wanting theorists have preferred to focus on *idealized preferences* that are based on the possession of full information (Dolan & White, 2007; Griffin, 1986). As Kahneman and Sugden (2005) pointed out, this assumption may include the ability to predict one's experienced utility in all future scenarios.

For our purposes, the parallel is quite good for reinforcement theories. Positive reinforcement is based on instrumental choice (an objective preference measure), with no subjective component, and so it constitutes a “wanting” theory. From our point of view, well-being in reinforcement theory is approximated by how much positive reinforcement and how little punishment (both behavioral measures of preference) obtains. People and animals strive to get what they want because such behavior is positively reinforcing, not because it satisfies any particular need or drive and not necessarily because it engenders any subjective state of liking.

One problematic assumption with idealized preferences, however, is that there is a significant disconnect between what individuals believe will make them happy and the extent to which they are actually satisfied with what they get—that is, they like what they wanted. This phenomenon is termed *miswanting*, which involves having “less to do with not getting what we want and more to do with not wanting what we like” (Gilbert & Wilson, 2007, p. 551). A phenomenon related to miswanting is *medium maximization* (Hsee, Yu, Zhang, & Zhang, 2003), in which individuals lose sight of the ends of utility and focus instead on the means. As Diener, Lucas, Schimmack, and Helliwell (2009) point out, many of the assumptions that link income to well-being are violated by such phenomena.

### Liking (Hedonic Accounts)

Most laypeople equate happiness with “feeling good” although such a characterization is simplistic (Haybron, 2008). Hedonic accounts in psychology center on subjective reports of positive emotions, life satisfaction, and happiness, and they assess how people feel and think about their quality of life. This account incorporates SWB. Although SWB research predates the advent of positive psychology by at least two decades (and perhaps even longer: see Angner, 2011), SWB is perhaps the most widely used construct in the field.

As reported above, SWB accounts incorporate both hedonic experiences (momentary emotions and mood) and cognitive evaluations of how well life is going more generally. Because both of



these elements are subjective (the first being affective and the second cognitive in nature), this kind of account is termed subjective well-being, an umbrella term combining how we think plus how we feel about our lives (Diener et al., 1999).

Both Kahneman (1999) and Diener (2000) adopt this approach, but they differ in their interpretations of what constitutes “happiness”: Kahneman emphasizes the “experiencing self” by making the sum of all momentary emotions the barometer of well-being, whereas Diener sees the more reflective and evaluative “life satisfaction” as the better indicator of well-being. Kahneman’s research on the peak-end effect, in which individuals judge past events by their peak emotional experience and how such experiences ended (Kahneman, 1999), points to the biases inherent in individuals’ evaluative judgments. Thus, how individuals evaluate their lives may differ from how they actually experienced them.

Some commentators equate SWB with hedonic pleasure, but we emphasize its dual nature: “SWB includes diverse concepts ranging from momentary moods to global judgments of life satisfaction, and from depression to euphoria” (Diener et al., 2004, p.188). High SWB is associated, and may be causal, of quite a number of benefits (Fredrickson, 2001; Lyubomirsky, King, & Diener, 2005): high SWB individuals tend to have better health and possibly even longer lives (Danner, Snowden, & Friesen, 2001). High SWB is causally implicated in a large number of positive outcomes, as opposed to being merely caused by these positive outcomes (Lyubomirsky, King, et al., 2005): better health, better work performance, better social relationships, and more ethical behavior (Diener & Tov, 2007). In addition, Diener (2000) found that people from a wide number of countries valued SWB above income. SWB has also been advanced as an alternative to standard economic and social indicators (such as GNP and levels of education, crime and health) as a measurement of quality of life, and advocates have claimed that in combination with objective measures, SWB indicators can provide information that standard indicators cannot offer (Diener & Seligman, 2004; Diener & Suh, 1997; Diener, 2006; Oswald & Wu, 2010).

**Positive emotions.** Simply stated, hedonism takes the view that pleasure is the only thing that is good for us and pain is the only thing that is bad (Bentham, 1789/1996). Parfit (1984) refers to this view as *narrow hedonism*. Philosophical theories of happiness as hedonism have largely gone out of vogue (Sumner, 1996). At an empirical level, researchers have tended to include a more nuanced range of positive and negative feelings and emotions besides pleasure and pain. One example is the Day Reconstruction Method (DRM) used to measure the frequency and intensity of a variety of positive and negative emotions over time (Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004). This is a convenient, memorial (and less accurate) version of the online Experience Sampling Method (ESM) developed by Csikszentmihalyi and Larson (1987; see also Fleeson, 2007). Since positive emotions constitute the raw data of happiness overall, the level of happiness is calculated by adding up the total of those momentary positive emotions and subtracting the total momentary negative emotions. A second hedonic measurement method involves questionnaires such as the Positive and Negative Affect Scale (Watson, Clark, & Tellegen, 1988), which builds on Bradburn’s (1969) Affect Balance Scale. Individuals assess the degree to which they have a variety of positive and negative affective states over a particular period of

time. This approach has sometimes been referred to as the *Hedonic Well-Being* account (Waterman, 2008).

Another hedonic account is the Broaden-and-Build Theory (Fredrickson, 2001), which argues that positive emotion evolved for a different purpose than negative emotions. On this account, although negative emotions evolved to identify and get rid of an irritant, positive emotions developed to function in times when individuals might both consolidate and expand their resources. Positive emotions broaden the behavioral and cognitive repertoire and allow one to attempt more creative courses of action. In support of this hypothesis, positive emotions have been found to direct attention to a more extensive set of objects (Wadlinger & Isaacowitz, 2006), broaden peripheral attention and expand thought-action repertoires (Fredrickson & Branigan, 2005), make people more receptive to novel experiences (Kahn & Isen, 1993), and make one more likely to engage in holistic processing (Fredrickson & Branigan, 2005). Moreover, over time, experiencing frequent positive emotions can build long-term intellectual, physical, psychological, and social resources, such as resilience and curiosity (Fredrickson, Cohn, Coffey, Pek, & Finkel, 2008).

**Life satisfaction.** On this account, well-being is typically assessed by asking an individual, “How satisfied are you with your life?” The answer likely consists of more than just the sum of momentary positive emotions minus the sum of momentary negative emotions and incorporates both momentary feelings along with an evaluation of how his life is going (Dolan et al., 2006; Veenhoven, 2006). This type of question is different from asking individuals how they are “feeling” because it tries to appeal to a more reflective and evaluative perspective toward one’s life. Life satisfaction judgments thus depend on the standards individuals have set for themselves.

Many well-validated scales of life satisfaction have been developed. Diener and colleagues developed the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen & Griffin, 1985), a self-report questionnaire that asks respondents to rate five statements concerning their present satisfaction with life (e.g., “So far, I have gotten the important things I want in life”) on a 7-point scale. This scaled is the one of the most widely used scales in well-being research. Life satisfaction questions have also been included in many large-scale international surveys, but often use only one question in order to assess citizens’ well-being.

**Limitations of liking approaches.** The SWB approach has been advocated as the “gold-standard” measure for measuring human happiness (Kashdan, Biswas-Diener, & King, 2008). Other researchers have however criticized it for being simplistic and unnecessarily reductive. Jayawickreme, Pawelski, and Seligman (2008) argued that the example provided by philosopher Robert Nozick (1974) of the experience machine (i.e., most people would not want to live a life wired to a machine that produced the feelings of happiness) highlights the fact that subjective judgments alone cannot suffice for the judgment that a life is going well. Having high levels of positive emotion will not sufficiently compensate for an aimless or meaningless life or a life in which one does not produce or deserve feelings of happiness. In this regard, Seligman (2002a) argues that positive feelings are not necessary for many positive (i.e., those chosen above indifference) outcomes: “It is important to recognize that ‘happiness’ and ‘well-being’ sometimes refer to feelings, but sometimes refer to activities in which nothing at all is felt” (p. 261).

Moreover, despite the fact that life satisfaction, with its aim of capturing an individual's judgment of the quality of one's life, should ideally track preference satisfaction (and indeed count as a Wanting measure; Schimmack, 2009), its use as a surrogate measure for well-being has been critiqued (Forgeard, Jayawickreme, Kern, & Seligman, 2011; Kahneman & Krueger, 2006). Schwarz and Strack (1991) argued that how individuals rate life satisfaction depends on the information that is conscious, and this information could be heavily influenced by framing effects and mood (see also Haybron, 2007). They found moreover that general life satisfaction judgments were more affected by incidental affective feelings than domain-specific judgments of satisfaction (Schwarz, Strack, Kommer, & Wagner, 1987). Similarly, Veenhoven (2006) found that 70% of the variance in life satisfaction is explained by present mood. Manipulating the order of items on life satisfaction measure has also resulted in small yet significant changes in scores (Schimmack & Oishi, 2005). The context in which life satisfaction questions are asked can also influence scores. In one study, the relationship between the number of dates a student had in the past month and his or her life satisfaction was significant only when the dating question was asked *before* the life satisfaction question (Strack, Martin, & Schwarz, 1988). In response to these findings, some researchers have examined the conditions under which life satisfaction may be affected by mood and other contextual effects. Pavot and Diener (1993) for instance found that the contamination of life satisfaction judgments by mood occurs mostly for single-item measures. An additional problem is that life satisfaction has too often been equated to overall well-being, leading researchers to ignore other facets. As noted by Michaelson, Abdallah, Steuer, Thompson, and Marks, "it is all very well knowing that someone is satisfied with their life, but the interesting question is why" (2009, p. 56). Because of these issues, we believe that life satisfaction is problematic as a gold standard measure of well-being (but see Diener, Fujita, Tay, & Biswas-Diener, 2012).

Similarly, Keyes and Annas (2009) argue that focusing on SWB alone blurs the distinction between "feeling good" and "doing well," and claim that it may be better for one to do well without necessarily feeling good rather than vice versa. Jayawickreme et al. (2008) also argued that given the close relationship between SWB and extraversion, many people who are dispositionally low in positive emotion may report low levels of SWB no matter how well they may be doing in life. One implication of this is that interventions and policies meant to increase the SWB systematically undercount introverts. As will be discussed later, Seligman's (2011) well-being accounts and Sen's (1992) capabilities account get around this policy limitation by using multiple routes to well-being.

### Needing Theories—Objective-List and Eudemonic Accounts

Need-based theories catalogue the objective list of goods required for "well-being" or a "happy" life. These theories do not completely discount what people choose (Wanting) and how people feel (Liking), but they contend that what people need is more central to well-being. We first discuss objective list accounts and then eudemonic accounts.

The contents of the lists vary but tend to include items such as economic resources, political freedom, good health, education, and the ability to read. Thus, such accounts hold that "certain things are

good or bad for beings, independently in at least some cases of whether they are desired or whether they give rise to pleasurable experiences" (Chappell & Crisp, 1998, p. 553). Although some of these items may be measured from a subjective perspective, their validity for well-being is determined externally. Needing accounts were grand-fathered by Aristotle's (350 BC/1998) "flourishing" account of well-being. Aristotle proposed a perfectionist version of well-being in which the well-being of an individual is judged by considering how close they are to reaching the potential of humankind. Aristotle's term for this, *eudaimonia*, has been translated variously as flourishing, happiness, or well-being. That human beings will flourish (realize their potential) is the Aristotelian justification for the items on the objective list. Defining the good or full life has been a central concern of psychologists, political philosophers, and human development researchers, and multiple accounts have been advocated over the last 60 years (Ranis, Stewart, & Samman, 2006). For example, Alkire (2002) noted 39 different attempts at defining what makes for a good or flourishing life between 1938 and 2000.

**Maslow's hierarchy of needs.** Maslow's (1954, 1971) hierarchy of needs approach represents one of the earliest attempts in psychology to differentiate between subsistence and flourishing. The hierarchy of different needs emphasizes the importance of fulfilling one set of needs before progressing to other, higher-order needs. Maslow saw his list of needs as important motivators of human behavior and moreover distinguished between *growth* or higher-level and *deficiency* or lower-level needs (Wahba & Bridwell, 1976). Although satisfying deficiency needs helps avoid unpleasant consequences, satisfying growth needs helps an individual achieve a state of flourishing, which Maslow termed *self-actualization*.

The five levels in Maslow's hierarchy of needs are as follows:

1. Physiological needs (needs that are vital to physical survival)
2. Security needs (including safety and security)
3. Social needs (including belonging and love)
4. Esteem needs (including self-esteem and accomplishment) and
5. Self-actualizing needs (including personal growth and individualism)

Many of the needs that Maslow discussed have been shown to be important for well-being (Deci & Ryan, 2000), but some of the specifics of Maslow's theory have not held up well to empirical scrutiny (Wahba & Bridwell, 1976). We believe the distinction between removing disabling conditions (i.e., physiological and security needs) and building enabling conditions (i.e., social, esteem, and actualization) is important. Removing sources of misery diminishes obstacles and hence contributes to, but is not the same as, building well-being. Inglehart's (1997) human development approach linked the economic development of a society with a shift from deficiency-focused goals to growth-based goals. On this perspective, once the meeting of basic needs—removing disabling conditions—can be taken for granted, individuals tend to focus more on enabling, quality-of-life concerns, or higher-order needs.

Inglehart's theory arguably explains the curvilinear relationship between SWB and income, as well as highlighting the importance of human freedom (Inglehart et al., 2008).

**The capabilities approach.** The capabilities approach<sup>1</sup> developed by Amartya Sen and Martha Nussbaum is perhaps the best-known needs-based/flourishing account in the social sciences. Sen developed his capability approach as an alternative to standard economic models, which (as noted above) focus mostly on wanting or preference satisfaction. In his most recent extended refinement of this framework, *Development as Freedom* (Sen, 1999), he argued that although income analysis presents the best starting point for assessing development, it is misguided to limit one's attention to income. Sen quotes Aristotle's maxim that wealth is "merely useful and for the sake of something else" (350 BC/1998; p. 14), and it should be noted that in general he acknowledges strong conceptual similarities between his approach and the Aristotelian conception of *eudemonia* or optimal human functioning discussed earlier (Sen, 1993, p.46; and 1999, p. 73).

For Sen, focusing solely on the distribution of goods is insufficient as individuals differ in their ability to convert those goods into valuable functionings. Additionally, following Rawls' (1971/1999) argument that utility-based approaches do not differentiate between different types of pleasure and pain and focus only on aggregate utility at the expense of individual well-being, Sen dismissed preference-based approaches to well-being. For Sen, what is necessary is a framework that focuses on the extent to which individuals can function successfully with the goods that they have at hand. In setting up this framework, Sen distinguished between functionings, capabilities, functioning vectors, and capability sets (Sen, 1999, p. 75). Functionings—the core notion in his account—refer to the various activities that an individual may value doing, whereas that individual's capability refers to "the alternative combinations of functionings that are feasible for her to achieve" (p. 75). Capability is therefore a form of freedom, as it affords the opportunity to achieve multiple functioning combinations.

One of the main advantages of Sen's approach is that it is, like Seligman's (2011) account below, "inescapably pluralistic" (p. 76). For one, Sen does not identify his approach with a single list of functionings (Clark, 2006). Moreover, Sen acknowledges that his approach does not provide an exhaustive theory of justice or development: "To insist that there should only be one homogeneous magnitude that we value is to reduce drastically the range of our evaluative reasoning" (Sen, 1999, p. 77). Sen accepts that other principles must be taken into consideration.

Nussbaum (2003, 2011) has been critical of Sen's approach for being vague on the extent to which capability, well-being, and freedom are spelled out. Her *capabilities* approach (to be distinguished from Sen's *capability* approach) sought to rectify this shortcoming (Jayawickreme & Pawelski, 2012). This approach spelled out a substantive list of 10 capabilities (life, bodily health and integrity, senses/imagination/thought, emotions, practical reason, affiliation, living in relation with other species, play, and control over one's environment) which, while nonexhaustive, are non-negotiable in their equal worth, as they are together constitutive of what it means to achieve "truly human functioning" (Nussbaum, 2006, p. 71).

Despite the fact that the capabilities approach and the SWB approach represent the dominant accounts of human well-being in the social sciences, there has been remarkably little mutual ac-

knowledgment of the others' work. In reviewing the two literatures, Comim (2005) noted that although the two approaches share a common general objective—a richer understanding of what it means to live well—"this seemingly obvious overlap in their object of research does not seem to be accompanied by any considerable acknowledgment of the vast work that has been produced in the two fields" (p. 162).

## Eudemonic Psychological Theories of Well-Being (Needing)

Eudemonic accounts (Ryff, 1989, 1995; Ryff & Keyes, 1995; Ryff & Singer, 1998, 2002) arose as a complementary approach to the SWB perspective. The eudemonic perspective adopts a more theory-guided approach to well-being than SWB accounts and argues that SWB's focusing solely on felt emotion and life satisfaction neglects important aspects of positive psychological functioning (Ryff, 1989). Indeed, similar to Sen's approach, conceptions of well-being that tap into more eudemonic concepts such as meaning, purpose, and autonomy also provide valuable information on the well-being of individuals. A number of long-standing lines of research in psychology have examined such eudemonic constructs. We summarize the most prominent ones.

**Meaning.** The empirical study of meaning has made a comeback with the advent of positive psychology (Baumeister, 1992; Deci & Ryan, 1991; Kasser & Ryan, 1993; King & Hicks, 2007; Ryff, 1989; Seligman, 2002b). In particular, happiness and meaning have come to be seen as two different concepts. As Baumeister (1992) noted, having children may decrease affective well-being among parents, but contributes very significantly to meaning. Similarly, Nussbaum (2008) presents the examples of the "happy" warrior going into battle and the misanthropic David Trimble, who shared the 1998 Nobel Peace Prize, as examples of meaning-rich lives that are not necessarily "happy" ones.

Moreover, meaning-making is a powerful resource in times of adversity and has been associated with decreased psychological harm (Davis, Nolen-Hoeksema, & Larson, 1998; Nolen-Hoeksema & Davis, 2002; Tedeschi, Park, & Calhoun, 1998). When events that are incongruent with individuals' cognitive structures occur, those structures are modified or replaced with new structures—a process of accommodation. In light of Block's (1982) discussion of the role of accommodation in personality, this process can be viewed as the mechanism that drives changes in personality development over time (King & Hicks, 2007), and forces individuals to change their source of meaning (King, Scollon, Ramsey, & Williams, 2000). In a factor analysis of well-being measures, McGregor and Little (1998) found that meaning and happiness emerged as distinct constructs, further emphasizing its distinctiveness from more hedonic accounts. Chamberlain and Zika (1992) have found that meaning is positively related to life satisfaction, and it has been recognized that pursuing meaningful goals is a robust pathway to more positive emotion and to more life satisfaction (Locke & Latham, 2002; Seligman, 2002a, 2002b).

Perhaps the major difference between the eudemonic category of well-being accounts and the Liking accounts is that while

<sup>1</sup> Parts of this section are adapted from Jayawickreme & Pawelski (2012).



Liking focuses on feeling good or on a positive subjective evaluation as the target outcomes, eudemonic theories target both the process of living well and the value of positive states other than positive emotion and positive evaluations. Eudemonic accounts are list-based and closely aligned to need-based and flourishing accounts.

**Ryff's Psychological Well-Being Approach.** Ryff's Psychological Well-Being Approach (Ryff, 1989, 1995; Ryff & Keyes, 1995; Ryff & Singer, 1998, 2002) is one of the most well-known theories of eudemonic well-being. This eudemonic conception contains six dimensions, which we classify as a Needing theory because these dimensions are thought to be important for well-being whether or not an individual wants or likes them:

1. Self-acceptance: Holding positive attitudes toward oneself and one's past life
2. Positive relations with others: Having warm, trusting interpersonal relationships
3. Autonomy: Possessing qualities such as self-determination, independence, self-regulation of behavior, and an internal locus of evaluation
4. Environmental mastery: Having the ability to choose and/or create environments suitable to his or her psychic condition
5. Purpose in life: Having beliefs that give the individual the feeling that there is purpose in and meaning to life
6. Personal growth: Developing one's potential, and growing and expanding as a person

Keyes, Shmotkin, and Ryff (2002) argue that although the eudemonic and SWB constructs are related to each other, they are empirically distinct. Specifically, they found that in a sample drawn for the national Midlife in the United States survey, the best fitting model was one that posited SWB and eudemonia as two correlated latent constructs. This view ties in with lay conceptions of affective well-being and meaning as separate components of the good life (King & Napa, 1998). Keyes et al. (2002) also found that the probability of achieving high levels of both SWB and eudemonia increased as age, education, and extraversion; that conscientiousness increased and as neuroticism decreased; and that when compared with adults who had higher levels of SWB than eudemonia, adults with higher levels of eudemonia than SWB were younger, had more education, and showed more openness to experience.

**Deci and Ryan's Self-Determination Theory (SDT).** Although the ideals described above *define* well-being from an eudemonic perspective, Ryan and Deci (2000) define three psychological needs that are principal *predictors* of well-being: autonomy, competence, and relatedness. These needs have been shown to be cross-culturally valued (Sheldon, Elliot, Kim & Kasser, 2001) and relate to measures of life satisfaction (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000; Sheldon, Ryan, & Reis, 1996).

SDT has its origins in Deci and Ryan's (1980) work on *intrinsic motivation*—the pursuit of an activity for its own sake, interest,

and rewards, which is contrasted with extrinsic motivation, which refers to the pursuit of activities for instrumental ends. A second focus concerns the process through which extrinsic goals come to be assimilated and accommodated, or *internalized* (Deci & Ryan, 1985); this study of goal pursuit and their determinants and consequences has uncovered a distinction between goals based on their content. Kasser and Ryan (1996) found that life goals could be differentiated into those relating to *intrinsic aspirations* (including growth, affiliation, community contributions, and health) and those relating to *extrinsic aspirations* (wealth, fame, image, etc.). This study built on earlier research showing that individuals who had strong aspirations for financial success had lower levels of well-being compared to those who had strong aspirations for relationships growth and community (Kasser & Ryan, 1993). Ryan, Sheldon, Kasser, and Deci (1996) subsequently posited that one key difference between intrinsic and extrinsic aspirations is their relationship to the fulfillment of basic psychological needs.

The need for autonomy in self-determination theory points to a feeling of choice and volition in the regulation of behavior. Relatedness refers to the importance of feeling a close connection to and being cared for by others. The need for competence refers to the sense of efficacy that one has with regards to internal and external environments (Ryan, Huta, & Deci, 2008). One distinctive claim that they make is that these needs are related to intrinsic values that are an essential part of human nature, although they are careful to point out that this short list is not exhaustive. Satisfaction of these three needs is however essential for the development of intrinsic aspirations and psychological well-being (Kasser & Ryan, 1996). Moreover, the theory hypothesizes that attaining intrinsic goals will lead to the satisfaction of these needs and that attaining such goals would increase well-being: that is, need satisfaction would mediate the relationship between intrinsic goal attainment and well-being (Ryan et al., 2008).

**Seligman's Well-Being Theory.** Seligman's theory has had two incarnations. In both he holds that the unwieldy notion of "happiness" is merely an overarching term that describes the goals of the whole positive psychology enterprise. As a label it plays no role in the theory, just as the term "cognition" labels a scientific enterprise within psychology, but itself plays no role other than labeling in the theories of cognitive psychology. In the original theory Seligman (2002a) claimed that "happiness" decomposes into three elements: positive emotion, engagement, and meaning. This is close to a Liking account, because, except for objective aspects of meaning (you could feel great meaning but be deluded), the elements are subjective.

Seligman (2011) recently revised his original theory by adding two elements to his original account: positive relationships and accomplishment. In addition, Seligman redefined the endpoint of his theory as "well-being" rather than "happiness" in order to stress the multifaceted nature of human flourishing and to prevent the usual confusion that is often made between "happiness" and "cheerfulness." Seligman's new theory therefore posits that well-being consists of the pursuing and attainment of one or more of the five following elements: Positive emotion, Engagement, Relationships, Meaning, and Accomplishment (that he abbreviates as the acronym PERMA). This decomposition is not claimed to be exclusive or exhaustive at this point, but rather a first approximation toward a scientifically usable unpacking of the general construct of "well-being." Well-Being Theory is closer to a



Needing or a Wanting theory than a Liking theory, because only the positive emotion element is wholly subjective, with meaning, accomplishment, and relationships having both objective and subjective components (see also Forgeard, Jayawickreme, et al., 2011).

The pleasant life is the focus of hedonic theories of happiness discussed above. This life consists of successfully pursuing positive emotion about the present, past, and future, having as much positive affect as possible (and as little negative emotion) and learning the skills that amplify the intensity and duration of the positive emotions and diminish the negative emotions. The positive emotions about the past include satisfaction, contentment, fulfillment, pride, and serenity. Happiness is the inarticulate, but overarching, label for all the positive emotions. Positive emotions about the future include hope and optimism, faith, trust, and confidence. These emotions, especially hope and optimism, are learnable and are well documented to buffer against depression (Seligman, 1991, 2002a).

The second element is engagement. Engagement refers to a psychological state in which individuals report being absorbed by and focused on what they are doing. At its high end, engagement has been referred to as “flow” (Csikszentmihalyi, 1996), or the colloquial feeling of “being in the zone.” According to Csikszentmihalyi (1996, 1975), high levels of engagement are characterized by the following characteristics: the individual has clear goals and is intrinsically interested in the task at hand; the task presents challenges that meet the skill level of the individual; the task provides direct and immediate feedback to the individual; the individual retains a sense of personal control over the activity; and action and awareness become merged, such that the individual becomes completely immersed in what he or she is doing.

The third element in Well-Being Theory is positive relationships. There is no denying the profound positive influences that positive relationships have on well-being. However, do people pursue relationships for *their own sake*, or do we only pursue them because they bring us positive emotion or meaning or accomplishment? According to Seligman (2011), researchers do not know the answer to this with certainty or even have a crucial experimental test, because all positive relationships are accompanied either by positive emotion or meaning or accomplishment. This theory construes the important fact that positive relationships always have emotional or meaning or accomplishment benefits, not to mean that the relationships are done for the sake of getting positive emotion or meaning or accomplishment. Rather, so basic is positive relationships to the success of *Homo sapiens* that evolution has bolstered it with the additional support of the other three elements in order to ensure that people pursue positive relationships.

The fourth element in Well-Being Theory involves the pursuit of meaning. Meaning is an important component of well-being, as discussed earlier and is attained by using one’s signature strengths (characteristic activities at which people are especially “good” or “strong” on) and talents to belong to and serve something that one believes is bigger than the self.

The fifth component of well-being, accomplishment (or achievement), is often pursued for its own sake, even if it brings no positive emotion, no meaning, and no positive relationships. This motive is close to Nietzsche’s (1887/1968) “will to

power.” Winning only for winning’s sake can be seen in the pursuit of wealth for its own sake. Accomplishment need not be tied to winning and also includes motivation for mastery and competence. Accomplishment can be defined in terms of achievement, success, or mastery at the highest level possible within a particular domain (Ericsson, 2002). In some domains (e.g., sports, business, and education), accomplishment is measured through agreed-upon standards, such as competitions (e.g., gold medals at the Olympics), honors and awards (e.g., winning the Nobel Peace Prize), scholastic achievement tests (e.g., performance on the SAT), or reaching a particular level (e.g., president or CEO of an organization). At the individual level, accomplishment can be defined in terms of reaching a desired state and progress toward pre-stated goals (Heckhausen, Wrosch, & Schultz, 2010; Negru, 2008; see also Forgeard, Jayawickreme, et al., 2011, pp. 87–88).

### Reconciling the Different Theories Within the Engine Approach

We have thus far discussed the major theories of happiness and well-being that are currently in the literature (see Table 1). In the course of this discussion, it has become clear that each perspective has its own particular take on what the determinants and contents of well-being are (or should be), and that it seems unlikely, at least at first glance, that these perspectives can be related to each other in any meaningful way. As we shall see, however, organizing the theories around inputs, processes, and outcomes serves to link different accounts together and to integrate an otherwise chaotic picture in a meaningful way (see Table 2).

### Recapitulation of Each Theory and Its Location in the Engine

In retrospect, it is apparent that Wanting theories focus on the output variables: voluntary behavior, choice, and preference. Reinforcement theories focus exclusively on voluntary behavior and economic theories on choice. In contrast, Liking theories focus on process, with positive mood being the focus. Objective list theories are theories of input, by and large, whereas eudemonic theories, Sen and Nussbaum’s theory, and Seligman’s Well-Being Theory are all plural. In Seligman’s Well-Being Theory, positive emotion is a process variable, whereas signature strengths (such as optimism and kindness) are input variables and engagement, meaning, relationships and accomplishment are outcome variables. For Sen’s capabilities approach, inputs such as personal agency, democracy, and adequate nutrition are both important and are most easily measured. The ability for people to translate their inputs successfully into valuable outputs (functionings) is mediated by their capabilities, which are processes within the present framework. Nussbaum’s list of capabilities, in contrast, fits well as an input, as her approach stipulates that all 10 capabilities need to be fulfilled to an acceptable level before flourishing can occur. Self-determination theory is clearly an input-based approach that highlights the importance of satisfying three fundamental needs (autonomy, relatedness, competence). The Psychological Well-Being Theory of Ryff and her colleagues is about process variables that influence individual functioning.

Table 1  
*Theories of Well-Being*

Theory type		Theory	Widely used measures
Wanting		Desire-fulfillment Theories Reinforcement theories Idealized preference theories	Income Behavioral measures of preference
Liking	Subjective well-being	Positive emotions <sup>a</sup>	PANAS <sup>b</sup> DRM <sup>c</sup> Experience sampling method <sup>d</sup>
Needing	Objective	Needs <sup>e</sup> Human development (as defined by the United Nations Development Program's Human Development Index)	Human development Index
	Subjective	Capabilities <sup>f,g</sup> Psychological well-being <sup>h</sup> Self-determination theory <sup>i</sup>	Psychological well-being scale Basic psychological needs scale
	Plural	Well-being theory <sup>j</sup>	Plural measurement

*Note.* PANAS = Positive and Negative Affect Scale; DRM = Day Reconstruction Method. Following Dolan, Peasgood, & White, 2006. See text for the references to widely used measures: <sup>a</sup> Fredrickson, 2001. <sup>b</sup> Watson et al., 1988. <sup>c</sup> Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004. <sup>d</sup> Csik-szentmihalyi and Larson, 1987; Fleeson, 2007. <sup>e</sup> Maslow, 1954, 1971. <sup>f</sup> Sen, 1992. <sup>g</sup> Nussbaum, 2003. <sup>h</sup> Ryff, 1989. <sup>i</sup> Deci and Ryan, 1980. <sup>j</sup> Seligman, 2011.

The Engine is intended as a causal model, but not an exhaustive one. The most common chain of causality goes from input (e.g., income or the personality trait of extraversion) through process (good mood and the expectation of success) to outcome (good social relationships and highly engaged work). However, this direction of causality is a main effect, and it is far from complete, because every interaction is not only conceivable, but also actual. So, for example, a good marriage (outcome) produces more positive affect (process), which in turn can produce greater income (input). Thus, we are open to the presence of important feedback effects. Many of the relationships among these elements, moreover, may turn out to be merely correlational, rather than causal. The Engine approach, nevertheless, encourages researchers to declare what part of the engine their variables are then to seek out

causal relationships as well as correlations and other regularities among the three levels.

Given the large amount of evidence showing that the outcome variables in our model predict higher levels of SWB (including positive emotion, which we include in the model as a process variable), it is understandable that researchers may ponder whether these variables are actually outcomes or whether they might be input variables instead. Although a comprehensive review of these effects is beyond the scope of this article, we agree that outcome variables such as engagement, relationships, meaning, and achievement appear to have considerable effects on processes such as positive affect (e.g., Diener et al., 2010). However, the engine model again helps explain why, in our view, it is most productive to consider them as outcomes rather than inputs. Inputs can be best characterized as means to ends: education and literacy probably only matter as they increase competence and accomplishment and lead to better decision making; similarly, income is important because it is a resource that allows us to make choices and engage in desirable voluntary activities (all outcomes). These outcomes, as highlighted above, are outcomes precisely because individuals would pursue them for their own sake and not just as means to ends. As acknowledged by the presence of feedback effects in the model, outcomes may also influence inputs and processes, but they remain outcomes because they are what we ultimately strive toward. Again, this position stands in contrast to the use of one “final common path” or gold standard of well-being. Given the fact that most people would not want to experience satisfaction in the absence of the associated outcomes (e.g., good relations, high sense of meaning, etc.), we believe that these outcomes constitute the endpoint of well-being.

**Toward a Parsimonious Psychological Approach to Well-Being**

We want to emphasize that the engine is not a theory of well-being; rather it is the prologue to any adequate theory of the

Table 2  
*The Engine Framework*

Type	Role	Domains
Input	Exogenous resources and endogenous traits that influence well-being	Income Adequate nutrition Political freedom Education Healthcare Personality/strengths Values Talents/virtues Needs Capabilities <sup>a</sup>
Process	Internal states that influence individual choices	Positive affect Cognitive evaluations Self-control Capabilities <sup>b</sup>
Outcome	Voluntary behaviors characteristic of well-being	Engagement/meaning Accomplishment/contribution to the human heritage Relationships Goal-driven functionings

*Note.* See text for the references to Domains: <sup>a</sup> Nussbaum, 2003. <sup>b</sup> Sen, 1992.

future. An adequate theory of well-being must be plural methodologically and then spell out the causal mechanisms among the variables. Thus, the engine approach encourages a new diversity of measurement in order to capture the full spectrum of well-being:

1. Better subjective measurement, of course, separating out, for example, the cognitive evaluation component from the mood component in constructs such as “happiness” and “life satisfaction.”
2. Better objective measurement of inputs, such as wealth, health, talents, strengths, values, and personality.
3. Refined measurement of the outcome variables: strong relationships, meaningful activity, engagement, and high accomplishment. Crucial to this is the need for objective indicators to complement the subjective indicators widely in use. Unlike positive emotion, in which the report of the person who has it is dispositive, meaning, accomplishment and good relationships have subjective components, but they are not dispositive. The person can be wrong: I can believe I have a positive relationship with my dean, but objective indicators can falsify my belief. The same is true of meaning and accomplishment.

### Cleaning Up Measurement

From a public policy perspective, the importance of this plurality of measurement is crucial (Forgeard, Jayawickreme, et al., 2011). Most public policy initiatives attempt to change inputs (resources, health care, and education), and it is important that any national or individual well-being index distinguishes clearly among inputs, processes, and outcomes (Hagerty et al., 2001). Many quality-of-life scales conflate input and outcome measures in a way that makes clear-headed evaluation difficult. For example, Diener’s (1996) quality-of-life scale aggregates items such as physicians per capita with items about SWB. A well-being index that is useful to public policy needs to be more transparent, to integrate subjective and objective measures into superordinate variables, and to separate measures of input from measures of process from measures of outcomes. The research steps that follow would be aimed at determining whether and how the three are causally related to each other (Hagerty et al., 2001).

**Input measurement.** Research in the quality-of-life literature in sociology and the health sciences has highlighted several objective determinants of well-being, including health care, income, and education. Examples of input measurement include GDP per capita, unemployment rates, the Human Development Index, which combines GDP with education and life expectancy, and the Index of Social Progress (Estes, 1997). Of these, income is frequently seen at the most significant input, but as we have noted earlier, focusing solely on income and economic growth—the volume of goods and services—may lead to policies that interfere with people’s well-being (e.g., every time there is a divorce, GDP goes up). The Human Development Index is perhaps the most widely cited input measure and has been the most successful in pushing the field of developmental economics away from using purely economic indicators. However, it lacks psychological variables and we maintain that variables other than life expectancy and

education are important for well-being. From a psychological perspective, we recommend that measures of personality, strengths, talents, and values of a nation (or an individual) should be used to index positive or negative changes in endogenous inputs. A composite measure of these psychological inputs needs to be constructed and validated. This will provide important information that will complement measures of exogenous inputs and inform better policy making (Diener & Seligman, 2004; Samman, 2007).

**Process measurement.** The processes that influence the choices that people make have been the focus of most psychological research in well-being. The fields of cognition and emotion have well-developed, widely used indicators. These constructs dictate *how* people deal emotionally and cognitively with the choices that have been afforded them by the provision of important inputs, and identifying the predictive validity and causal role of each of cognitive and emotional constructs for output is an important goal of future research, two examples of which are (a) positive emotion decreases experimentally induced rhinovirus colds, likely by reducing inflammatory processes (Doyle, Gentile, & Cohen, 2006) and measuring positive emotion with accuracy in a population might be predictive of the penetration of an epidemic of influenza and (b) reducing impulsive catastrophic thinking by having people spell out the best case scenario to counter the worst case scenario in order to arrive at the most likely scenario creates better decision-making (Reivich, Seligman, & McBride, 2011).

**Outcome measurement.** Close relationships, accomplishment, engagement, and meaningful activity, which have both objective and subjective components, are examples of well-being outcomes. We believe that measuring *achieved* well-being is an important task, and measures sensitive to the plural ways in which people achieve well-being need to be used. Measures that include behaviorally based items, as well as the assessment of observers, would be particularly useful in assessing the output variables of positive relationships, meaning, and accomplishment.

Life-satisfaction as a gold standard outcome measure is therefore questionable in the engine view. Layard (2010) has argued that this is the final common path and the most practical measure of well-being. In his view, the rationale for increasing wealth is to increase well-being, so life satisfaction is the single outcome measure that should inform public policy. We disagree. As we noted earlier, we find life satisfaction too problematic as the single measure of well-being, because mood, framing, ordering, and the personality of the informant heavily influence them. More generally, our engine approach suggests that positive affect is useful as a process measure, but that the truly comprehensive theories and measures for public policy will need to include input and outcome variables as well (Hsee et al., 2008; So & Huppert, 2009).

### Using the Engine Framework to Focus Interventions

**Input-level interventions.** Intervening at the Input level, the goal would be to either increase the resources such as education, health, and income, which are needed for increasing well-being, or to increase the psychological traits that generate well-being. Following Inglehart et al., (2008), an appropriate intervention for increasing well-being in poor countries would be efforts to increase GDP, because increases in income when nations are below the safety net lead to higher well-being. Increased economic de-



velopment (Inglehart, 1997), as well as a more equitable distribution of resources, may also be relevant to increasing the capability set at the process level. However, as income increases beyond the safety net, people turn to goods such as agency, tolerance, democracy, social capital, and human rights as important determinants of well-being (Inglehart, 1997). Thus, in high-GDP countries, economic efforts should be supplemented with measures that facilitate important psychological needs such as autonomy and relatedness, because increasing income becomes a less potent means of increasing well-being. We also believe that Needing theories such as Nussbaum's (2006) capabilities approach provide valuable insight into which inputs are required for sustained well-being; this does not imply that we endorse such lists unreservedly or that we believe this framework should *prescribe* particular pathways (Jayawickreme et al., 2008; but see Schwartz, 2000). It is crucial that such lists include interventions aimed at bolstering the trait-like positive psychological inputs (e.g., by psychotherapy to decrease neuroticism or by compassion meditation to build the trait of empathy or the value of tolerance).

**Process-level interventions.** At the Process level, interventions should focus on the emotional states, the cognitive expectations, interpretations, and attributions a person makes (e.g., Beck, Rush, Shaw, & Emery, 1979; Seligman, 1993) and how to increase the individual capability set. Psychological science has developed many robust interventions with strong empirical validation that target such processes. Experiencing frequent positive affect has been shown to predict well-being outcomes (Diener & Chan, 2011; Lyubomirsky, King, et al. 2005). Thus, learning to savor positive emotions or to make less impulsive decisions are examples of relevant interventions at the process level. Interventions aimed at reducing levels of depression and negative affect can also assist at the process level (Offer, 2006; see also Forgeard, Haigh, et al., 2011).

**Outcome-level interventions.** At the Outcome level, identifying the preferences, choices, and instrumental repertoire is relevant to goal-directed behaviors (or functionings). Important outcome variables include family, friendships, physical and mental health, work and productivity, and contribution to community. Although many of these outcomes are not typically part of psychological discussions of well-being, they are tightly tied to the fulfillment of important life objectives and are an important part of the quality of life (Gasper, 2004). Teaching the skills of positive relationships or of a healthy lifestyle are examples of more traditional psychological interventions at the output level. Teaching such skills additionally has feedback effects on process and input variables, leading to greater well-being. Examples of such interventions include behavioral activation (Martell, Addis & Dimidjian, 2004) and having individuals engage in more extraverted behaviors (Fleeson, Malanos, & Achille, 2002; McNiel, Lowman, & Fleeson, 2009).

Ultimately, successful behaviors and functioning foster survival, contributions to the human heritage, and a deeper sense of well-being (Hagerty et al., 2001). Behaviors that are intrinsically motivated by values that foster engagement, meaning, successful relationships, and accomplishment represent the optimal use of a person's inputs and processes. We think that well-being is as much about *well-living* as it is about *well-feeling*, and so measuring and building outcome behaviors is integral to building well-being (Ekins & Max-Neef, 1992; Gasper, 2004).

## Conclusion

We have laid out the major perspectives on well-being in the field of psychology, economics and human development, and they fall into three classes: Needing, Wanting, and Liking theories. We have outlined an approach to well-being that yields an integrated account of how individuals, communities, and nations achieve well-being.

We conclude by reiterating the two most important points of this article. First, although economists and researchers working in human development have attempted to compare different accounts of well-being in the social sciences and the humanities (e.g., Comim, 2005; Gasper, 2004; Ruta, Camfield, & Donaldson, 2007; Samman, 2007), most psychologists remain unaware of alternative perspectives outside psychology. The capabilities approach is an important approach to well-being that continues to grow in the field of developmental economics, and integrating it with a psychological perspective is an illuminating and bridging exercise for both psychologists and for economists.

Second, this account sheds light on the fact that psychologists mean many things when they discuss "happiness" and "well-being." Having a clear grasp of how the different theories relate to each other is vital if psychologists are to understand what well-being is, what causes it, and how it can be enhanced. More clarity will help researchers in the social sciences and public policy to understand that positive psychology is not simply "happiology," but a rigorous and inclusive account of optimal human functioning.

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