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REGULAR ARTICLE

Well-being as Need Fulfillment: Implications for Theory, Methods, and Practice

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Abstract

The most prominent concept championed by human resource professionals, point solution providers, and the mental health care industry is the construct of holistic *well-being*. Despite the tremendous attention focused on well-being, the concept lacks theoretical consensus among its proponents. Like the concept of engagement, this field cries out for clearly stated definitions that embed the concept within a theoretical framework, allowing theory development to avoid the prolific category errors of the past 50 years. This paper argues for a more sophisticated approach to the concept of well-being, grounding it in the vast psychological literature on human motivation. Herein lies the contribution of our paper; we argue that the apparent diversity of operational definitions employed by academics and practitioners can be understood as tentative attempts to draw ever nearer to key motivational concepts, without ever quite getting there. We review the leading definitions of well-being in the literature and find that they are reducible to a core set of human motives, each backed by full research traditions of their own, which populate a comprehensive model of twelve human motivations. We propose that there is substantial value in adopting a comprehensive motivational taxonomy over current approaches, which have the effect of "snowballing" ever more dimensions and elements. We consider the impact of setting well-being concepts in existing motivational constructs for each of the following: (a) theory, especially the development of well-being frameworks; (b) methods, including the value of applying a comprehensive, structural approach; and (c) practice, where we emphasize the practical advantages of clear operational definitions.

Keywords Well-being · Wellness · Employee well-being · Employee wellness · Motivation · Emotion · Happiness

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Introduction

The concept of well-being[1] has become a primary focus in several related fields including human resource management, gerontology, mental health, health care, and public health, among others. What began as a series of disconnected parallel workstreams in social gerontology, community mental health, and cultural studies of *happiness* or *subjective well-being* has mushroomed into a major area of research interest. This paper reviews the current state of well-being theory, finding the field to be highly fragmented with muddled theoretical and operational definitions beset by category errors, with most frameworks failing to separate causes from effects, state variables from trait variables, and endogenous psychological variables from exogenous environmental or policy variables. This paper argues for a more parsimonious approach to the well-being concept, grounding it in meta-theory provided by the broad psychological literature on human motivation. A recently conducted literature review identified 191 distinct components of well-being; these components are categorized according to the distinct needs they represent. Results demonstrate that the tremendous variety of well-being dimensions can be easily accommodated by a unified model of 12 human needs. The discussion section considers the implications of grounding well-being concepts in motivational theory for well-being theory, suggesting that the motivational framework permits theorists to view the full landscape of needs to ensure theory is comprehensive and balanced. Implications for methods and practice are also reviewed focusing on the practical advantages of clear operational definitions and the ability to generate clear hypotheses about the dynamics of well-being components.

The Current State of Theory

Attempts to measure population-level well-being began as early as the 1940s, with the advent of the well-being concept's appearance in the opening clause of the World Health Organization's (1946) constitution, which defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." This new, affirmative definition of well-being has been taken up by social scientists representing widely divergent research traditions who have introduced frameworks and assessments with increasing intensity ever since.[2] Few concepts have been embraced so quickly in so many different fields. This strong and growing interest is confirmed by Google Trends (accessed December 20, 2022), which shows a steady upward trend in Google searches involving the phrase "well-being"

[1] For the purposes of this paper, the term "well-being" will refer also to "wellness," "thriving," "flourishing," and "happiness" since they are used interchangeably throughout the literature.

[2] Recent dramatic increases in attention devoted to well-being as the "holy grail" for management have been driven by Chief Human Resource Officers (and their consultants, point solution providers, Employee Assistance Programs, etc.) who have vested interests in the overall well-being of their workforces, made increasingly salient by the COVID-19 pandemic. A recent article in Forbes Magazine breathlessly declared *The Future of Work is Employee Well-Being* (Meister, 2021).

beginning in July 2004 (their earliest data) at an index of 0, increasing to an index of 100, indicating the strongest search volume to date, in April 2022. This trend has resulted in a proliferation of well-being frameworks that attempt to describe both the concept of *global* (i.e., overall) well-being and its many subcomponents. Because this concept ostensibly defines what may be the most important "bottom line" outcome measure for a wide array of population health researchers, getting it right is of the utmost practical importance.[3]

Fortunately, academic researchers have published recent literature reviews covering the variety of ways that well-being has been defined (Blount et al., 2020; Oliver, Baldwin, & Datta, 2018; Linton, Dieppe, & Medina-Lara, 2016; Miller & Foster, 2010; Roscoe, 2009). The results of these reviews are not encouraging for those seeking clarity. Roscoe (2009) begins her seminal paper decrying the state of confusion surrounding definitions of wellness and well-being:

> "Despite significant attention to wellness in the literature, there is surprisingly little consensus on the definition of the construct" (p. 216).

This sentiment is echoed by Oliver et al. (2018), who summarizes the state of the literature as follows:

> "Wellness is a concept at the forefront of health promotion. It has practical and therapeutic benefits applicable across a plethora of life domains. However, to date, there is no agreed-upon definition on what constitutes wellness among researchers in the field" (p. 41).
> "Although similar in nature, these dimensions have been defined differently and are oftentimes confusing to differentiate by mere definition alone. There are conflicting theories as to which dimension represents what and, more importantly, to an actual definition of the construct of wellness" (p. 51).

Note that this is not a new problem, as suggested by Ryff (1989):

> "There has been particular neglect at the most fundamental level in this realm, namely, the task of defining the essential features of psychological well-being. It is argued that much of the prior literature is founded on conceptions of well-being that have little theoretical rationale and, as a consequence, neglect important aspects of positive functioning…The general neglect of theory in formulating life satisfaction and related constructs… has been acknowledged as a significant limitation…" (pp. 1069-1070).
> "There is a clear need for enriched theoretical guidance in attempts to identify the critical influences on well-being and to formulate the mechanisms by which these influences occur." (p. 1079).

[3] The recent widespread adoption of the *social determinants of health* perspective is a direct descendant of subjective well-being research, which originally began incorporating exogenous influences on well-being such as housing, crime rates, transportation, services, family relations, marital status, work, income change, and education.

Fig. 1 The Surgeon General's Framework for Workplace Mental Health and Well-Being (2022)

More concerningly, these reviews have examined the peer-reviewed theoretical and empirical work of academics. As is typical with popular new concepts, practitioners have also jumped into the definitional fray, compounding the proliferation of well-being related concepts, dimensions, and elements. As a particularly visible entrant, U.S. Surgeon General Vivek Murthy recently introduced a framework for defining Workplace Well-being (Murthy, 2022). (Fig.1)

Category Errors

Because of the variety of starting points of different research traditions, the well-being literature teems with a plethora of constructs, dimensions, components, and subcomponents. Lacking a solid theoretical footing, the field has been gripped by an "arms race" of expanding well-being definitions, as illustrated in Table 1: In the 1960s and 1970s, well-being models included an average of four domains; this increased to an average of five in the 1980s and 1990s; since 2000, the average number of domains

Table 1 The proliferation of well-being components over time

Year	Author	Review	Social	Emotional	Intellectual	Physical	Spiritual	Occupational	Environmental	Financial	Growth	Creativity	Identity	Autonomy	Self
1961	Dunn	b				●			●	●					
1977	Ardell	b	●	●		●	●								
1979	Lafferty	b, c	●	●	●	●	●								
1980	Hettler	a, b, c, d	●	●	●	●	●	●							
1985	Greenberg	b, c	●	●	●	●	●								
1990	Leafgren	c, d	●	●	●	●	●	●							
1991	Sweeney & Witmer	a, b	●				●	●							●
1992	Crose et al	b, c, d	●	●	●	●	●	●							
1992	Zimpher	a	●	●								●			
1992	Chandler, Miner Holden, & Kolander	a	●	●		●	●		●						
1994	Depken	c	●	●	●	●	●	●							
1997	Adams et al	a, b, c, d	●	●	●	●	●								
2000	Renger et al	b, c, d	●	●	●	●	●								
2000	Durlak	b, c, d	●	●	●	●	●		●						
2000	Myers, Sweeney, & Witmer	a	●		●	●					●				
2002	Montague	b	●	●	●	●	●	●	●			●	●	●	●
2004	Anspaugh et al	b, d	●	●	●	●	●		●						
2004	Myers & Sweeney	b	●	●	●	●	●	●	●	●	●	●	●	●	●
2004	Travis & Ryan	b	●	●	●	●	●	●	●	●	●	●	●	●	●
2005	Hales	b, d	●	●	●	●	●	●	●						
2005	Helliwell	d	●	●		●	●	●	●						
2006	Ryff & Singer	d	●	●		●			●						
2007	L. T. Foster	d	●	●	●	●	●	●	●						
2009	Botha & Brand	b	●	●	●	●	●	●							
2010	Rath & Harter	e	●			●		●	●	●					

Table 1 (continued)

Year	Author	Review	Social	Emotional	Intellectual	Physical	Spiritual	Occupational	Environmental	Financial	Growth	Creativity	Identity	Autonomy	Self
2012	Brown & Applegate	b	●			●	●			●					●
2012	Wounds International	e	●	●		●	●								
2013	Granelo	a	●	●	●	●	●		●			●			
2016	Eden Alternative	e	●	●		●	●				●				
2017	Heaney	e	●	●		●	●			●		●	●		
2021	Meister	e	●	●		●	●	●	●	●					
2022	Chartered Institute of Personnel & Development	e	●	●		●	●	●		●	●				
2022	Surgeon General	e	●			●	●		●		●			●	
2023	Edlin & Golanty	e	●	●	●	●	●	●	●	●					
2023	Accenture	e	●	●		●				●					
2023	Aon	e	●	●		●				●					
2023	Deloitte	e	●	●		●				●					
2023	Willis Towers Watson	e	●	●		●				●					

[a] Blount et al. (2020); [b] Oliver et al. (2018); [c] Roscoe (2009); [d] Miller & Foster (2010); [e] Block (2023)

has again increased to seven domains, with some entrants proposing 12 (Travis & Ryan, 2004) and up to 17 (Myers & Sweeney, 2004) domains of well-being.[4] It is the purpose of this paper to attempt to clarify the ontological and epistemological foundations for the concepts that have increasingly overwhelmed well-being theory.

The literature is awash in category errors. In scientific research, it is important to define concepts in terms of their ontological and epistemological levels of existence and levels of analysis. If a researcher is interested in the attitude construct, she will invariably point to its cognitive, affective, and behavioral characteristics, which together define the construct and, importantly, exist as roughly equivalent classes of brain and body; correspondingly, there are brain regions heavily involved in thought (e.g., the prefrontal cortex), emotion (e.g., the limbic system, and the orbitofrontal and insular cortex), and motoric activity (e.g., the motor cortex). Applying Gilbert Ryle's (1949/2009) criterion of sense-making to guard against category errors, we can speak of a person's thoughts, feelings, and behavioral inclinations in a meaningful way.[5]

Stepping into the wilds of well-being frameworks, we encounter ever more egregious category errors. Problems begin to accumulate when theorists cast ever-wider nets in seeking to be holistic and comprehensive, bringing in well-being modifiers like *learning, safety, belonging, flexibility, financial*, *accomplishment, creativity, potential, essential, occupational, spiritual, skill, perception, knowledge, attitude, self-esteem, autonomy*, etc. It makes little sense to speak alternately of one's financial and spiritual well-being. Finances are a specific subcategory of material resources to which we could reasonably add material possessions or landholdings. Spirituality is a superordinate category that encompasses principles and ideals like fairness, equity, ethics, faith, meaning, and purpose.

It's All Psychological

Perhaps the most fundamental category error plaguing well-being theory is the failure to adequately distinguish between exogenous causes and endogenous effects. The four major review articles repeat a nasty habit of listing domains or dimensions of well-being without making such a distinction. If, as the social psychological tradition maintains, we treat subjective well-being as a psychological construct, it is reasonable to ask how we should account for such dimensions as the physical, financial, occupational, or environmental. These are all *exogenous*, and presumably causal, factors, the perceived states of which (relative to our past experiences or expectations) get summarized as inputs to our subjective well-being, which is inherently *endogenous*. Because the entire well-being construct relates to one's *subjective* well-being, every component of well-being must be

[4] The same trend is evident in the exhaustive literature search conducted by Linton, Dieppe, & Medina-Lara (2016), although the averages are suppressed by the inclusion of single dimension frameworks. When the 99 frameworks reviewed are analyzed by decade, we obtain the following average numbers of dimensions: 1960s-1980s: 2.6; 1990s: 2.8; 2000s: 2.9; 2010s: 3.5.

[5] To their credit, many well-being frameworks respect this principle when they differentiate dimensions of physical, mental, and social well-being, or between its cognitive or intellectual and emotional facets.

inherently *psychological*; that is, each component represents the individual's *subjective* evaluation of *how they are doing* in each life domain.

Category Errors among Psychological Constructs

Complicating matters, certain well-being theories include various permutations of psychological, intellectual, and emotional well-being as distinct components of well-being, which exist at incommensurate levels of abstraction. Well-being evaluations are typically the joint products of cognitive/intellectual and emotional processing, both of which exist as subordinate concepts to the psychological level. Accordingly, it makes little sense to speak alternately of one's emotional, intellectual, and psychological well-being.[6] This would be akin to Ryle's classic example: *"I see the library, the dorms, and the philosophy building, but where is the university?"*.

Adding further complications, a wide variety of familiar psychological constructs have been proposed in various mediator and moderator roles regarding subjective well-being: The Big Five personality traits, particularly extraversion and neuroticism; depression and anxiety; self-esteem; locus of control; self-concordance; alienation; stress; and social support. Because there is an evaluative consequence to most, if not all, psychological constructs, this approach makes some sense: feelings of self-esteem, support, and control should make us happier; states of alienation, anxiety, and depression should degrade our subjective well-being. From the perspective of theory development, we already face a host of exogenous variables (e.g., finances, housing, social support) and endogenous variables (e.g., emotional and cognitive processes working together to produce our subjective well-being); now we must also contend with a variety of endogenous states and traits that shape our psychological processing. Some go as far as positing that personality traits may be components of subjective well-being.[7]

General vs. Specific, Rational vs. Emotional, Positive vs. Negative

Within the social psychological tradition, subjective well-being has been considered in its essence to be an *attitude*. As an attitude, attempts to disentangle and clarify constructs have led to the "usual suspects" of distinguishing between rational and emotional components, and within the emotional components, between positive and negative affect, which operate independently of each other.[8] Applying additional

[6] By the same token, social well-being is not at the same level of abstraction as those of the emotional, intellectual, or psychological; the commensurate opposing level to *social* concerns would be *self*-focused concerns.

[7] "While no one is claiming that subjective well-being is a personality trait… certain trait variables are either *components* of subjective well-being or causally related to it." (Andrews & Robinson, 1991, p. 69; italics added).

[8] A major finding in the early days of the field was that evaluations of life satisfaction tended to draw mostly from thoughts, whereas evaluations of happiness tended to be fueled by feelings, and that positive and negative feelings operated independently of each other, suggesting that positive and negative affect must be measured separately in well-being assessments.

hard-won insights about attitudes (Petty & Cacioppo, 1996), attention has also been paid to differentiating between general and specific levels; in well-being research, this shows up as the distinction between global well-being and the level of well-being associated with specific life concerns or domains. In this vein, work has been devoted to trying to predict overall well-being from the weighted averages of component domains, with limited success.

Bringing the Exogenous and Endogenous Back Together

Various attempts have been made to bring together external conditions and subjective evaluations in mathematical models that purport to predict personal happiness. The leading candidates have been a sort of comparison between one's internal expectations and aspirations, and one's current level of attainment against those benchmarks. In plain language, this is what we want versus what we have. Measures of gaps or ratios of the circumstances to which one *aspires* against the circumstances actually *attained* have been attempted, with the general prediction that the smaller the gap, the more happiness will ensue. Some have taken this further, seeking to evaluate multiple discrepancies against what we have: what we want, the best we've ever had, what we expect now, what we expect in the future, what we deserve, and what we need (Michalos, 1985). These gap-based approaches have been particularly useful for explaining the apparent disconnect in cases of relative affluence associated with lower subjective well-being. This is known as the *status effect*, that our subjective notions of SES are based on comparison to close others rather than to objective levels, and that these relative evaluations are a reliably stronger predictor of subjective well-being than objective SES levels (Boyce, et al., 2010; Cundiff & Matthews, 2017; Navarro-Carrillo, et al., 2020).

From the perspective of theory development, the distinction between *what we want* and *what we have* provides an opening for differentiating between endogenous and exogenous factors. We begin with the standard S–O-R assumption that exogenous factors (*what we have*) tend to behave as stimuli, which influence the psychological state within the organism (*compared to what we want*), creating impulses that are then channeled into the organism's behavior. A less rigid model than S–O-R would allow for multiple causal directions and feedback loops. As we will argue, core well-being constructs should be thought of as psychological mediators, specifically, *motivations*, which direct the person to seek certain kinds of opportunistic stimuli (S), trigger emotional experiences (O), and prepare the body for action (R). Goal-directed strivings, because they direct organisms to change from homeostatic imbalances to improved, balanced states, are dynamic by nature. Fortunately, a more flexible alternative to S–O-R may be found in Maruyama's (1963) model of deviation-amplifying mutual causal processes. In contrast to the typical self-regulation systems of homeostasis, which keep state values for things like temperature, salinity, and pH within a prescribed range, deviation-amplifying processes thrust states toward an increasing rate of change (e.g., a crack in a rock makes an opening for a small plant; as the plant grows, its roots push the crack to open wider; as it widens, more plants enter the

crack causing further cracks, and so on). The goal-seeking processes that underlie subjective well-being behave in this manner, e.g., a recent arrival to a strange city looks for work to pay for food and shelter; once employed, her needs evolve toward seeking stable housing and a reliable food supply; upon attainment, her needs evolve into a desire for home ownership, which places her in a particular neighborhood where she is situated somewhere between a relatively low to relatively high level of affluence, which triggers additional needs. These feedback loops drive increasing rates of change that increase or decrease perceived goal attainment resulting in dynamic states of subjective well-being.

We start, then, with the assumption of deviation-amplification as the natural outcome of interactions and feedback loops between the organism and the environment, causing changes to behavior which simultaneously change the environment and the organism, and so on. This is the complex homeostatic mechanism that regulates interactions between the S–O-R players. Nevertheless, it is still possible to delineate distinct roles for each construct as environmental stimulus (or condition); states or traits inherent to, and existing within, the organism; or as an externalized response reflecting the interaction of stimulus and organism.

Hierarchical Framework for Well-Being Concepts

Figure 2 presents a theoretical hierarchy, intended to be free of category errors, for understanding well-being concepts. As we have argued, the primary distinction is made between endogenous psychological variables and exogenous environmental variables.

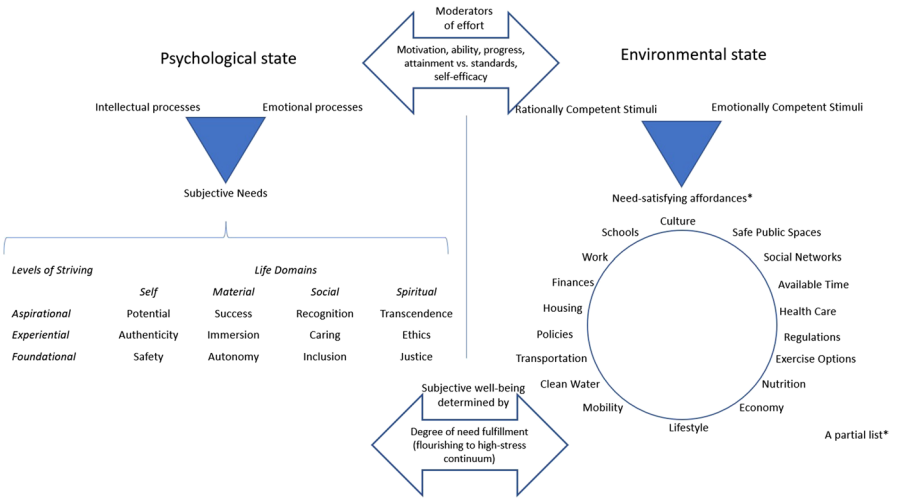

Fig. 2 A hierarchical model of well-being concepts

Endogenous, Psychological Variables

Within the psychological, it is common and appropriate to differentiate primarily rational and primarily emotional processes. Because psychological processes almost always recruit both rational and emotional systems, we argue that both should be considered jointly most of the time.

We now descend one step below the level of abstraction of the rational and emotional; at this level, we address the multiplicity of human needs, goals, and values, which are pursued using both cognitive and affective systems. As suggested by many theorists, subjective well-being reflects an evaluation of the comparison of performance against goals (or standards) that can be defined in many ways. The emphasis on goal attainment as the most important route to subjective well-being has been championed by the leading psychological theorists in the field (Emmons, 1986; Oishi & Diener, 2009; Ryff, 1989, 2014; Tov & Diener, 2009), as illustrated by the following quotations:

> "The crux of the present argument is that… goals and directions in life are, in themselves, central criteria of psychological well-being." (Ryff, 1989, p. 1078).
> "The satisfaction of psychological needs contributes to higher well-being" (Ryff, 2014, p. 8).
> "Taken together, the findings suggest that some motives may correlate universally with well-being." (Tov & Diener, 2009).
> "Variables influence subjective well-being if they affect people's ability to achieve their goals." (Diener, Diener, and Diener, 2009a, 2009b).
> "Indeed, there is ample evidence that goal attainment is associated with positive emotional experience and life satisfaction." (Oishi & Diener, 2009).

The notion of striving for goal attainment begs the question, *which goals?* Answering this question has been a major focus for well-being theorists who have used both inductive and deductive approaches to enumerating lists of psychological goals, resulting in the ever-expanding list of well-being dimensions. The purpose of this paper is to apply a model of human motivation based on first principles with the goal of defining a complete set of higher-order human needs, goals, and values (Pincus, 2022a). We emphasize that the proper scope for such an analysis is restricted to endogenous needs, goals, and values, which exist as psychological constructs within the organism. We will return to this in the latter half of this paper.

Exogenous, Environmental Variables

Let's now consider the counterparts of psychological variables in the exogenous, external environment. The environment affords opportunities to the organism, appealing to both rational and emotional systems. More to the point, the environment affords different opportunities for goal pursuit and attainment. For every one of the higher-order human needs, environmental conditions can help or hinder their

fulfillment. This is a key point, one that should clear up much of the confusion that has reigned in well-being frameworks. A particular environmental condition or resource can help fulfill multiple goals (e.g., a warm, sheltered cave can provide feelings of safety *and* help attract a mate *and* be a point of pride), or none of these goals; thus, there is a many-to-many relationship between exogenous conditions and endogenous needs. Unfortunately, many well-being models include *environmental well-being* as a key component when this is a logical impossibility. The environment is comprised of literally everything outside the organism (e.g., culture, school, work, money, housing, nutrition, health care, time, social networks, systems of law, safe spaces, etc.); it is the interaction of the organism with the environment, particularly the alignment between the organism's current needs and what the environment affords to meet those needs that can lead to need fulfillment and the subjective sense of well-being.

Many well-being frameworks include financial well-being as a core element. Finances are, by definition, exogenous factors. Having money may help one feel rich, or powerful, or superior, but no amount of money can produce such feelings alone. If well-being is a subjective state, there can never be a form of well-being that is defined by the availability of a certain stimulus. There always must be a context of desires, expectations, comparisons, and prioritizations relative to other needs.

Similarly, many well-being frameworks include occupational well-being as a dimension. Whether expressed as occupation, career, job, or work, this is indisputably an exogenous, environmental factor, not a psychological construct. Having a job is a commitment that *can* produce a sense of fulfillment, meaning, loyalty, pride, shame, or resentment, but having a job doesn't necessarily provide any of these; it is an environmental affordance that offers many different latent potentials. It is the psychological context, the subjective degree of attainment against subjectively understood standards, that gives it meaning.

Method

Reanalysis of the Linton, Dieppe, & Medina-Lara (2016) Literature Review

Fortunately, the literature on well-being theory, components, and assessments has been extensively reviewed. The most comprehensive of these reviews is undoubtedly that of Linton, Dieppe, & Medina-Lara (2016) which covered nearly 100 models representing 191 distinct components of well-being. Their work provides a starting point for researchers interested in describing the structure and taxonomy of well-being concepts.

Results

Our analysis of their work lends additional support for the conclusion that well-being theory has been muddled and confused.

- Of the 191 components identified, two-thirds (129) were associated with only a *single* theory.
- Only 12 percent (23) appear in at least four theoretical frameworks.
- The most cited component, *psychological well-being*, appeared in only 7 percent of theoretical frameworks (13).

These results suggest a serious problem of definitional consistency. As expected, the resulting elements range widely across multiple conceptual categories including as antecedents, outcomes, and indicators of well-being itself; physiological states[9] and bodily functions[10]; emotion descriptors; cognitive descriptors; stress and goal-related descriptors; temporal descriptors; and environmental conditions.

Nevertheless, we can use our framework as a scaffold upon which the various concepts can be arrayed. If we begin at the top left of the diagram, we first encounter what we will call *general psychological conditions.* It is important to note that fully *one-third* of the theories well-being reviewed by Linton, et al. (2016) present only a single dimension, which corresponds to this level of abstraction. These include:

- Well-being (overall)
- Psychological well-being (overall; eudaimonic; other)
- Life satisfaction
- Mental health/symptoms/well-being

At the next level of abstraction down, we find a variety of summary-level rational and emotional well-being concepts. A recurring theme in most of the observed concept categories is the appearance of both positive and negative expressions of each component. Accordingly, rational concepts include generic, positive, and negative elements:

- Generic: Cognition, mental functions, intellectual wellness
- Positive: Mental alertness
- Negative: Confusion-bewilderment

Correspondingly, there are emotional concepts that are generic, positive, and negative:

- Generic: Global affect, emotional well-being, emotional reaction, energy level, mood
- Positive: Positive affect, cheerfulness, happiness, contentment, enjoyment, pleasure, hope, optimism, vitality, fortitude, vigor, zest, activation

[9] Physical states included as dimensions of well-being include a*ging, fatigue-inertia, fitness, illness, nutritional balance, symptoms, physical functioning, functional well-being, somatic symptoms, pain, general health*, and *physical well-being (overall).*

[10] Bodily functions included as dimensions of well-being include *breathing, dexterity, eating, physical senses, hearing, speech, vision, sleep, mobility*, and *elimination*.

- Negative: Negative affect, agitation, anhedonia, anxiety, depression, anxious arousal, lonely dissatisfaction, regret, distress, hostility

At the next lower level of abstraction, we find the essential mechanisms that produce different states of well-being. These are the set of fundamental human needs as described by a recent unified model of human motivation (Pincus, 2022a, 2022b). Supporting this contention, we find that nearly half of the concepts identified by Linton et al. (2016) represent discrete needs, from feeling safe to having a life purpose. These concepts address intrapsychic concerns related to the self (e.g., safety, authenticity, self-actualization); relations with the material world of work and play (e.g., autonomy, absorption, achievement); social needs (e.g., social acceptance, intimacy and caring, respect and recognition); and concerns with immaterial principles (e.g., social justice, ethical behavior, higher purpose). Applying a structured model of human motivation to these needs is the primary focus of this paper, to which we will return shortly.

On the other side of the ledger, we find corresponding levels of abstraction associated with the exogenous environment. Starting from the top right of the diagram, we first encounter what we will call *general environmental conditions.* These include global concepts like *environmental quality of life* and *objective factors.*

At the next level of abstraction down, we find a few summary-level rationally and emotionally competent stimuli, our adaptation of Damasio's (2012) term for external stimuli that are effective in eliciting an emotional response from the organism; we have added corresponding terms for stimuli that are effective in eliciting a cognitive response. Unlike the psychological domain, the concepts at this level tend not to reflect states of availability (positive) and deficiency (negative); these distinctions are reserved for the next lower level of abstraction. Accordingly, at this level we find only generic descriptors like *Eco-awareness*, *Temporality,* and *Stressors.*[11]

A great deal of concept proliferation within well-being theory has taken place at the next lower level of abstraction, the level of specific categories of environmental affordances or resources. These are exogenous environmental resources that have the potential to fulfill fundamental human needs, both material and immaterial, both self-oriented and social. As indicated above, these resources interact with need states in a one-to-many relationship; that is, a single resource (e.g., a friend) can help someone meet a variety of needs. As Matsuyama's model would suggest, there are also recursive interactions between multiple environmental affordances and any given need.

Accordingly, there are environmental concepts that range from the general to the specific:

[11] The fact that there are relatively few well-being concepts at this level does not mean that it is not important conceptually, but rather that this level tends not to have a lot of natural language associated with it. Social scientists have developed their own vocabulary to describe this level including the ethological concept of *releasers* and Damasio's concept of *emotionally competent stimuli*.

- General: Work/Occupation, financial, economic, roles, social, parenting
- Specific lifestyle: Usual activities, interests/hobbies, leisure, recreation, vacations, physical activity, sex life, alcohol consumption
- Specific living situation: Neighborhood, home, independent living, housekeeping.

Emergent Points of Consensus

Since several literature reviews and meta-analyses of this literature have been conducted recently, we will not repeat the cataloguing of papers by commonalities here. Instead, we will use the points of consensus as a starting point for our main contention, which is that human well-being is best conceived as a product of human motivation, and that the various constructs proposed neatly fit into a structured taxonomy of human motivation.

Across the papers reviewed, several points of consensus emerge (Table 2; Andrews & Robinson, 1991; Ryff, 1989; Diener et., 2009; Seligman & Csikszentmihalyi, 2000; Ryan & Deci, 2001; Ackerman et al., 2018; Linton, et al., 2016):

1. Well-being is primarily considered to be an *individual*-level, not group-level, construct; as such, group level effects are the aggregated result of individual results.
2. Well-being is a *latent* psychological variable and therefore can be estimated but never directly observed.
3. Well-being is primarily conceived of as a *state* rather than a trait.
4. Well-being is a *multi-dimensional* construct that includes cognitive, emotional, and behavioral dimensions, but is primarily considered *affective*, and positive and negative affect operate independently but complementarily.
5. Well-being is primarily conceived of as the consequence of affectively charged goal-directed states, which is typically referred to as *motivation* in the psychological literature and is explicitly labeled as *motivation* or *need striving* in many seminal works.

Repeated calls have been made to address the problem of non-parsimonious construct proliferation, and for conceptual development to address questions of nomological validity in the hopes of identifying a larger well-being framework that can integrate the disparate and growing collection of constructs.

Why Motivation?

It's no coincidence that the major definitions of the well-being construct, despite their widely ranging theoretical origins, happen to fall perfectly in line with the definition of motivation, given by Pincus (2004) as *an individual-level, unobservable state of emotion or desire operating on the will and, as a psychological mediator, causing it to act*. We contend that this is because the concept of well-being

Table 2 Definitional Characteristics of Well-being and Human Motivation

Consensus Definition	Well-being	Human Motivation
Construct is defined as an *individual*-level, not group-level, psychological construct	●	●
Construct is a *latent* variable that is not directly observable	●	●
Construct is conceived of primarily as a *state* rather than a trait	●	●
Construct is conceived of as being multi-dimensional, with cognitive, emotional, and behavioral dimensions, but is primarily *affective*	●	●
Construct is defined as an affectively charged goal-directed state, and often explicitly labeled as *motivation* or *need striving*	●	●

inherently describes states of need striving and fulfillment, which are in essence motivational states. The goal of this paper is to suggest that a conceptual model already exists that can accommodate all these concepts, and that splitting hairs over which aspects of which concepts are antecedents, mediators, or consequences, is much like trying to parse out which are cognitions, emotions, or behavioral inclinations. From a motivational perspective, these concepts each have facets in all these readout channels, i.e., a single motivational construct, say the need for *mastery,* can be fostered by certain conditions, can become a salient need, is experienced both affectively and cognitively, and can be expressed in action.

In their seminal article, Oishi and Diener (2009) explicitly describe subjective well-being as an output caused by goal pursuit and attainment, in other words, *motivation*. Helpfully, Diener and Oishi's research went beyond the typical correlational studies by investigating goal attainment *longitudinally* as a predictor of subjective well-being, convincingly demonstrating that fulfillment of goals, particularly those that are important to the individual, is causally related to their experienced subjective well-being.[12]

> "From daily experiences, all of us must recognize the pervasive role of goals in our lives, because achieving a goal or failing to do so makes our everyday lives enjoyable or miserable…" (p. 93).

In surveying the literature, the attributes that consistently define the concept of well-being also define the concept of motivation. Motivation is the engine that produces well-being.

Perhaps the leading theory of motivation is Buck's (1985) PRIME Theory, which stands for Primary Motivational and Emotional Systems. PRIME postulates that motivation is a state of built-up potential energy that, when actualized, is released through cognitive, emotional, and behavioral channels. These different outputs all serve a unique purpose: the function of syncretic cognition is to provide the opportunity for flexible self-regulation; emotional expression supports social coordination; and physical responses help guide adaptive behavior. The consensus view of well-being includes the same pattern of cognition (e.g., upbeat thinking), emotion (e.g., pleasurable feelings) and behavior (e.g., taking positive action).

It should perhaps be unsurprising that well-being describes a state produced by motivations. The source of all motivation and emotion, according to both Damasio (2012) and Buck (1985), can be traced to mechanisms of homeostasis that maintain optimal levels of glucose, pH, blood pressure, etc. to support the functioning of the organism. These mechanisms are actuated unconsciously and automatically and are evolutionarily much older than consciousness. Damasio conjectures that the reason we have minds *at all* is the need to sense changes in

[12] Oishi & Diener additionally demonstrated the role of culture in shaping the degree to which goal attainment is socially sanctioned, giving independent goal attainment a larger impact on subjective well-being for European Americans and interdependent goal attainment a larger impact on subjective well-being for Asian Americans and Japanese subjects.

our bodies to provide us flexibility in how to respond to imbalances. By extension, higher-order motivations (e.g., the need to feel respected, successful, self-actualized, and having a life purpose) are built on top of neural mechanisms designed to satisfy physiological needs. Although biologically rooted, increasingly higher motives move further and further away from their physiological substrates and are increasingly determined by culture.[13]

Applying a Taxonomy of Human Motivation to Well-being Constructs

A unified model of human motivation has recently been introduced that provides a comprehensive taxonomy of human emotional needs (Pincus, 2022a). Surprisingly, despite the abundance of mini theories of motivation developed in the psychological literature, no comprehensive model based on first principles existed to organize motivations like the needs for achievement, competence, safety, immersion, mastery, belonging, or self-actualization. Maslow's need hierarchy, which is regularly invoked in the well-being literature, provides a partial solution to this problem, however, his focus on rare, self-transcending individuals caused him to bypass a wide variety of fundamental motives including the need for caring relationships identified by Bowlby and Harlow, the needs for material power and achievement described by McClelland, the need to develop an authentic identity described by Erikson, the need for justice described by Bloom and Lerner, the need for a moral code described by Kohlberg, Haidt, and Greene, and the need for experiential immersion described by Csikszentmihalyi, among others.

With the initial goal of creating a taxonomy of discrete motives, we started with the assumption that human behavior occurs within four life domains: the domain of the *self* (inner-directed), the *material* domain (object-directed, focused on the world of work and play), the *social* (other-directed), and the *spiritual* (immaterial, idea-directed). These same four domains have been previously enumerated in many different fields (Pincus, 2022a), among them social and developmental psychology, philosophy of religion, and even by each of the five major world religions. If motivation is fundamentally about change, the four life domains answer the question, *where (in what part of life) do you want to change?*

With the life domain selected, the next logical question becomes *what type (or level) of change do you want to make*? To answer this question, we proposed three possible levels of striving. Using Aristotle's three states of existence, we posited that the life domains can be crossed by states of existence: a foundational level of potential (*being*), an intermediate level of potentiality-as-such

[13] As suggested by Vygotsky & Cole (1978) and Leont'ev (1978), the development of one's self-concept, as a kind of summary of one's needs, is heavily determined by social environments that are particularly defined by culture.

(*doing*), and an higher level of actuality (*having*).[14] When the four life domains are crossed by the three modes of existence, we obtain a matrix that can be said to be comprehensive (similar to the periodic table) since there are no other domains of life or modes of existence. In our earlier review of the motivation literature (Pincus, 2022a), we identified more than 100 distinct motivational constructs; all found homes within one of the twelve matrix categories of motivation, supporting the assertion that it is comprehensive. The matrix of human motivations appears in Table 3, along with the distribution of concepts taken from a review of four commonly used well-being assessments (i.e., Ryff et al. (2010); Tennant et al. (2007); Lui & Fernando (2018); Waterman et al. (2010). Across nine of the matrix cells there is good dispersion of well-being concepts; three core human needs, however, receive no mentions whatsoever, underscoring the importance of developing theory on a solid footing.

As suggested by the first question above, the matrix columns distinguish motivational concepts in terms of the *location* of the wanted change (i.e., change in feelings about oneself; about one's interactions with the material world, about one's social position, or about one's status regarding principles). As suggested by the second question, the matrix distinguishes motives by the level of change desired (i.e., change in potentiality, change in potentiality-as-such, or change in actuality).

There are two additional features of the matrix, which concern hierarchical progression and the polarity of motivational energy:

- Like Maslow's (1970) need hierarchy and Aristotle's model, our model holds that progression within any of the life domains requires the successful satisfaction of more basic needs before the next level becomes activated, e.g., before an individual can become concerned with striving for social esteem, they must previously achieve feelings of inclusion and intimacy.
- Each of the 12 motives described in the model can be activated through striving for more of a positive state (e.g., inclusion) and/or the desire to lessen a negative state (e.g., exclusion). This distinction between promotion and prevention needs is a fundamental principle of motivation theory (Deci & Ryan, 2000), reflected in common language descriptions of people being motivated either by a "pull" (the lure of an improved state) or a "push" (the desire to leave a state of dis-

[14] Aristotle (350 BC/1933) proposed the same three-level delineation between states of existence: potentiality (having potential), potentiality-as-such (motion that makes use of that latent potential), and actuality (the finished product). The classic example of this distinction involves the building of a house. The building materials could be used to build a home, or they could be used to build some other structure, e.g., a barn; this is their state of potentiality, what Aristotle called "the buildable." The action of building the home transforms the state of the materials toward the goal of actualization as a house but is an intermediate step in the process; this is the state of potentiality-as-such. When the house is finished, the building materials are in a state of actualization. The same distinctions were made more recently by Rand (1993).

Table 3 A unified model of human motivation (Pincus, 2022a, 2022b) with distributions of well-being item content

Three Modes of Existence	Four Life Domains			
	Self	Material	Social	Spiritual
	Aspirational (higher) motives			
Backward-Looking Outcomes	Fulfilling Potential & Limitation	Success & Failure	Recognition & Indifference	Higher Purpose & Materialism
% of qualifying items	10.4%	7.3%	0%	10.4%
Experiences in the Moment	Authenticity & Conformity	Immersion & Stagnation	Caring & Uncaring	Ethics & Wrongdoing
% of qualifying items	14.6%	14.6%	11.5%	0%
Forward-Looking Expectations	Safety & Anxiety	Autonomy & Disempowerment	Inclusion & Exclusion	Justice & Injustice
% of qualifying items	13.5%	10.4%	8.3%	0%
	Foundational (lower) motives			

Assessments included: [a] Ryff, et al. (2010); [b] Tennant, et al. (2007); [c] Lui and Fernando (2018); [d] Waterman, et al. (2010).

tress).[15] The matrix appears as a two-dimensional table in Table 3 for ease of printing and reading, however, a more accurate representation takes the form of a three-dimensional, four-sided pyramidal structure. Each life domain is represented by one of the four faces of the pyramid. The bases represent foundational needs, the peaks represent aspirational needs, with experiential needs falling in between.

- The narrowing from the base to the peak of each side is intended to reinforce the idea that we must begin with the basic motives in each domain before we may proceed upward toward higher strivings. As Maslow would have it, progressively fewer individuals are able to reach the higher levels, reducing their relative size toward the apex.
- The choice of a four-sided pyramid is also intended to reinforce the point that the domains represent pairs of opposites: The domain of the self is antipodal to the social domain, and the material domain is antipodal to the spiritual domain; this proposition has implications for hypothesis generation, to which we will return at the end of this paper.

Assuming that most readers are unfamiliar with our model, we now turn to a brief introduction to the twelve motivations, and to connect key dimensions from the well-being literature to each. In all, 80 of the 191 concepts identified by Linton et al. (2016) corresponded to cells in the matrix and can be described as discrete motivations. As noted, because of the tendency to offer singular, global conceptions of well-being in the literature, the percentage of components findings homes in the matrix is suppressed.

- The remaining 111 concepts include 60 global psychological well-being concepts; these were excluded on the basis that the consensus view holds that the well-being construct is *multi-dimensional*, not unidimensional.
- Because the consensus view holds that well-being is a psychological state, we excluded the 12 physical states (e.g., fitness, fatigue, illness, health, etc.) and the 10 bodily functions (e.g., breathing, eating, elimination, etc.).
- We further excluded the 22 concepts describing purely environmental factors (e.g., home, neighborhood, work, etc.) and seven general environmental concepts (e.g., objective factors, environmental quality of life, temporality, etc.).

Analysis of the 80 Motivational Concepts

Providing unexpected support for our model, among the motivational concepts appear components that perfectly correspond to our four life domains:

[15] Individuals can be motivated by both positive aspirations or avoidance of frustration of the same motivation, by either the positive or the negative form, or neither. Note that this distinction appeared in the earliest well-being papers (e.g., Bradburn, 1969). Because these forces work together in a complementary manner, we have not made different predictions about the operations of positive and negative strivings.

- Self-domain: *Intrapersonal characteristics.*[16] As the most significant theoretical expansion of the well-being concept, Ryff (1989) distinguishes three kinds of self-oriented needs, the needs for psychological safety (*self-acceptance),* authenticity (the self-oriented aspect of *autonomy*), and fulfilling personal potential (*personal growth).*
- Material domain: *Satisfaction of material needs.* It is notable that Ryff's (1989) theoretical expansion of the well-being concept includes the desire for effective interactions with the material domain as one of six components. Ryff refers to this as *environmental mastery*, defined as "participation in a significant sphere of activity outside the self…to advance in the world and change it creatively through physical or mental activities" (p. 1071). As delineated below, our model concurs that this is an important domain of human needs but goes on to distinguish three levels of striving within it.
- Social domain: *Social well-being (overall), interpersonal functioning, need for relatedness, psycho-social flourishing, social function, social/emotional support, relationships.* Ryff's (1989) expansion includes *positive relations with others* as an essential component of well-being, which she defines as "warm, trusting interpersonal relations…feelings of empathy and affection… love, deeper friendship, and more complete identification with others." These terms span the range of human needs in the social domain, whereas our model delineates three hierarchical levels corresponding to social connection and belonging; intimacy and love; and esteem and recognition.
- Spiritual domain: *Spiritual well-being (overall), psychological & spiritual well-being, spiritual fulfillment, spirituality.* As shown below, Ryff's (1989) expansion addresses one of the three spiritual needs included in our model, the need for transcendent purpose.

Motives of the Self

Safety and Anxiety

The need to feel a sense of safety and security is the most basic need in many models. When the need for safety is activated, there is a striving for feelings of protection, confidence, and peace of mind. At least twelve major theories of motivation include a need for safety as a core motive (Pincus, 2022a). In recognition of the foundational nature of this need, safety needs represent the largest share of motivational concepts reviewed by Linton, et al. (2016). These include the concepts of *acceptance, being at peace, comfort, harm avoidance, inner balance, inner haven, peace of mind, personal safety, relaxation, self-acceptance, self-care, self-esteem, self-regard, self-satisfaction,* and *stability*. Tellingly, Ryff's (1989) theoretical expansion begins with the

[16] In the interests of readability, we have opted to leave out references to the specific well-being theories reviewed by Linton et al. (2016), who list the original sources associated with each enumerated dimension of well-being.

proposal to include *self-acceptance* as a core dimension of well-being that is related to mental health and self-actualization across the life span.

Authenticity and Conformity

At the subsequent hierarchical level of self-relevant experience, comes the human need to feel able to express one's unique individuality in the face of pressures to conformity. This takes the form of a need to see oneself as different in a positive way. At least nine major theories of motivation include a need for authenticity as a core motive (Pincus, 2022a). As the neglected "middle-child," neither first nor last, the experiential, potential-as-such level of striving garners consistently fewest mentions among well-being theories. Nevertheless, it makes its presence known. Among the concepts reviewed by Linton, et al. (2016) there are a few mentions of the need for authenticity in the form of *creativity, self-discovery, and self-realization.* Ryff's proposed expansion specifically addresses the need for authenticity under the banner of autonomy needs: "The fully functioning person is also described as having an internal locus of evaluation, whereby one does not look to others for approval, but evaluates oneself by personal standards. Individuation is seen to involve a deliverance from convention, in which the person no longer clings to the collective fears, beliefs and laws of the masses" (p. 1071).

Fulfilling Potential and Limitation

The most advanced level of striving in the self-domain is represented by the need for self-actualization, the desire to grow into one's full personal potential. At least eleven major theories of motivation include self-actualization as a core motive (Pincus, 2022a). There are several mentions of this motive among well-being theories including *self-actualization, personal fulfillment, realizing life potential, learning,* and *personal growth.* Ryff's (1989) theoretical expansion includes the need for *personal growth* toward actualizing one's full potential as an essential component of well-being.

Motives of the Material Domain

Autonomy and Disempowerment

The foundational striving of the material domain is the need for autonomy, the need to feel capable and competent to act in the material world. At least seven major theories of motivation include the need for autonomy, including the concepts of empowerment, self-efficacy, and self-determination (Pincus, 2022a). There are several examples of the autonomy motive within the well-being literature including *autonomy, self-efficacy, positive readiness & expectancy, competence, control,* and *environmental mastery.* Ryff's (1989) theoretical expansion explicitly includes the need for autonomy as the drive for self-determination and independence of action; when applied to one's desire for freedom and capability to act in the material world, this

motivation is aligned with our model's concept of autonomy. The need to develop, maintain, and express one's individuality as an end in itself is better aligned with our model's need for authenticity in the domain of the self.

Immersion and Stagnation

The experiential level of the material domain is the striving for immersion, to feel absorbed in the moment. At least thirteen major theories of motivation include this motive (Pincus, 2022a). True to form, the experiential level of striving in the material domain is relatively neglected in well-being theories, but garners a few mentions including a*bsorption, sensation seeking, and stimulation*. As noted above, Ryff's proposed addition of *environmental mastery* overlaps heavily with our notion of immersion in the material domain.

Success and Failure

The highest striving in the material domain is the need for material achievement as the result of one's efforts. At least seven major psychological theories of motivation include this motive (Pincus, 2022a). Surprisingly, there are only four theories that include this need within the well-being literature reviewed by Linton, et al. (2016), which is expressed as *achievement* or *achievement at work*. We speculate that the dearth of attention given to the need for material success in well-being frameworks may be due to philosophical opposition to "vulgar" material success as a source of fulfillment when placed beside more "elevated" notions as self-actualization and self-transcendence. As noted, Ryff's concept of environmental mastery, particularly as a successful end-state, overlaps with our concept of success needs.

Motives of the Social Domain

Inclusion and Exclusion

At the foundational level of the social domain is the need for belonging and inclusion that opens the door to creating social affiliation and intimacy. At least nine major motivational theories include this need, which has gone by many names including the need for affiliation, connection, and belonging (Pincus, 2022a). As the second most common motive, the need for inclusion is relatively popular among well-being theories, appearing under several names including *attachment, community, community well-being, friendliness, friendships, social acceptance, social coherence*, *social integration,* and *trust*. In a departure from the pattern exhibited in the need categories considered above, well-being theories have also tended to explicitly refer to negative need states (i.e., exclusion), among them a*lienation, social isolation,* and *downward social comparison.* We suspect that the widespread adoption of this need in well-being models stems from the field's origins in gerontology, a field particularly sensitive to conditions of social isolation.

Caring and Uncaring

The experiential level of the social domain is represented by the need for mutual love, caring, and intimacy. At least eight major motivational systems include this need, which has been similarly labeled the need for attachment, intimacy, or nurturance (Pincus, 2022a). The well-being literature is surprisingly light on the need for love as a component of well-being. Tellingly, the review by Linton et al. (2016) never mentions the word *love*. Nevertheless, near-synonyms do appear in the literature including *affection, partner relations, relationships,* and *social closeness*. Perhaps symptomatic of the social domain, here too we find an example of a negative motivation, in this case, a*ggression.*

Recognition and Indifference

The aspirational level of the social domain is represented by the need for social respect and recognition. At least eight major motivational theories include this need, which has been synonymously named the needs for admiration, honor, or esteem (Pincus, 2022a). The need for recognition makes a reasonably strong showing among well-being frameworks including *praise & respect from others, social actualization, social contribution, social potency, social service, social commitment,* and *status.*

Motives of the Spiritual Domain

Justice and Injustice

The foundational level of the spiritual domain is represented by the basic needs for justice and fairness, the notion that, in their world, good is rewarded and bad is punished. The justice motive appears in many motivational systems, particularly those focusing on moral development (e.g., Piaget's and Kohlberg's theories of moral development, Lerner's just world hypothesis, Bloom's roots of good and evil, Haidt's moral foundations theory, etc.; Pincus, 2022a).

Perhaps surprisingly in the wake of the Black Lives Matter movement, controversial Supreme Court decisions, and the COVID-19 pandemic, the contribution of the need for justice to well-being receives almost no mention; the Linton et al. (2016) review of 99 theoretical models does not contain the words *justice* or *fairness*. This absence underscores the value of a structured model in developing theory.

Ethics and Wrongdoing

The experiential level of the spiritual domain is represented by the need for culturally specified ethics. This is the desire to live in a manner consistent with normative moral values, which is built atop the foundations of justice. This motive similarly appears in multiple motivational systems that focus on moral

development including those of Kohlberg, Batson, Staub, Haidt, and Immanuel Kant (Pincus, 2022a).

Like the need for justice, the need for ethics receives scant attention in well-being theories, with a single mention of the need for *civic action*. Considering the dramatic conflicts emerging in our society between groups whose outlooks are built on different moral foundations (e.g., tradition vs. fairness; sanctity vs. individual freedom; honor vs. tolerance; etc.), the absence of this need from well-being frameworks again underlines the importance of employing structured models to guide theory development.

Higher Purpose and Materialism

The apex of the spiritual domain is represented by what Maslow and Kohlberg independently viewed as the highest and noblest striving, the need to serve a higher life purpose or calling. As suggested, many of the most influential motivational theorists include the need for higher purpose or transcendence, a list which includes Viktor Frankl (Pincus, 2022a). In marked juxtaposition against the needs for justice and ethics, the need to transcend one's material and bodily limitations toward a higher, spiritual purpose is a regular feature of well-being frameworks, particularly those that posit spiritual foundations of well-being. These include *existential well-being, faith/belief, life purpose, religious well-being, the search for meaning, transcendental/spiritual needs*, and *purpose in life*. Ryff's (1989) theoretical expansion includes *purpose in life* as one of the essential components of well-being, described as "comprehension of life's purpose, a sense of directedness, and intentionality." We suspect that the emphasis on these kinds of needs reflects the well-being field's growing awareness of research demonstrating improved health, mental wellness, and resilience among highly spiritual individuals.

Discussion

Implications for theory

The long-standing problem of clearly defining well-being is well documented (Ryff,, 1989; Ryff & Singer, 2006; Ryff, 2014; Diener, 2009a, 2009b). As Ryff and others have lamented, the well-being construct has struggled to find a solid theoretical footing. By failing to ground the well-being construct within a comprehensive theoretical model, the field has suffered from massive concept proliferation, as indicated by the nearly 200 distinct concepts named by Linton et al. (2016). This situation represents a failure of parsimony, to be sure, but it more fundamentally represents the failure to articulate the character of well-being itself. Well-being is a higher-order, latent psychological construct that is composed of affective, cognitive, and behavioral expressions, which are elicited by the degree to which a variety of fundamental needs are met. It is not, and cannot be, defined by exogenous resources. The real

action in determining felt states of well-being occurs within the individual, in their felt degree of fulfillment of the 12 needs.

One of the most substantial benefits to theory development of our proposal is to organize the blizzard of well-being concepts within a structure that first differentiates between endogenous and exogenous variables, and next differentiates between different levels of abstraction. That accomplished, it provides a logical and arguably comprehensive structured framework for thinking about higher-order human needs. We hope that by recognizing these theoretical guardrails, concept proliferation in well-being models will slow as newly proposed constructs are sorted into groups of similar constructs in shared cells of the matrix.

Another benefit is immediately obvious from our analysis of Tables 3 and 4, which reveals the degree of coverage of concepts by matrix cells. As noted, little to no attention has been paid to the needs for recognition, justice, and ethics, an indefensible error. These underrepresented concepts are now available to be articulated and included in future research and assessments.

Our model also specifies that each need state can operate as either a promotion or prevention need (or both). Theory development has tripped over this distinction, particularly in the social domain. By incorporating the polarity of need states, future theory should be better equipped to explicitly distinguish positive and negative need states, and, hopefully, will lead to assessments that measure the 12 needs in terms separately in terms of their promotion and prevention faces.

We suspect that the greatest contribution to theory development is the establishment of a general theory of well-being that is comprised of every higher-order human need (Pincus, 2022a). The proposed model of human needs takes the form of a pyramid formed by four sides representing four life domains; these are set as pairs of opposites, self vs. social, and material vs. spiritual. Through a "distance" metaphor, we proposed stronger linkages between adjacent domains (e.g., self – material – social), and weak linkages for antipodal domains (self – social, material – spiritual), for which there exists strong theoretical and empirical support (Kohlberg & Power, 1981; Mahoney, et al., 2005; Pincus, 2023b).

It is worth noting that cross-cultural work on subjective well-being regularly identifies two recurring themes:

- The first of these relates to cultural pressures related to the self vs. social distinction. The fulfillment of other-directed needs is associated with enhanced well-being in communalistic cultures, whereas the fulfillment of self-oriented needs is associated with improved well-being in individualistic cultures (Kitayama & Markus, 2000; Kitayama et al., 2000; Markus & Kitayama, 1991; Oishi & Diener, 2009).
- The second concerns the cultural forces that promote materialism vs. idealism. Rather than the communalism/individualism split, this difference tends to be associated with industrialization, with consumerism a feature typically associated with highly industrialized cultures and idealism associated with less industrialized, traditional cultures (Oishi, 2000; Sheldon et al., 2004; Chirkov, et al., 2003).

Across multiple reviews of the subjective well-being literature, these are the two most cited cultural distinctions (Tov & Diener, 2009). We suggest that these

Table 4 Well-being items that conform to the consensus view

Motivational matrix cell	Factor or Component	Well-being assessment item	Source
Safety	Self-Acceptance	My attitude about myself is probably not as positive as most people feel about themselves	a
Safety	Self-Acceptance	In general, I feel confident and positive about myself	a
Safety	Self-Acceptance	I feel like many of the people I know have gotten more out of life than I have	a
Safety	Self-Acceptance	When I look at the story of my life, I am pleased with how things have turned out	a
Safety	Self-Acceptance	I like most parts of my personality	a
Safety	Self-Acceptance	When I compare myself to friends and acquaintances, it makes me feel good about who I am	a
Safety	Affect	I've been feeling optimistic about the future	b
Safety	Affect	I've been feeling relaxed	b
Safety	Satisfaction	I've been feeling good about myself	b
Safety	Autonomy	I've been feeling confident	b
Safety	Affect	I've been feeling cheerful	b
Safety	Eudaimonic well-being	Confidence in self	c
Authenticity	Autonomy	I am not afraid to voice my opinions, even when they are in opposition to the opinions of most people	a
Authenticity	Autonomy	I tend to worry about what other people think of me	a
Authenticity	Autonomy	My decisions are not usually influenced by what everyone else is doing	a
Authenticity	Autonomy	I judge myself by what I think is important, not by the values of what others think is important	a
Authenticity	Autonomy	I have confidence in my opinions, even if they are contrary to the general consensus	a
Authenticity	Autonomy	It's difficult for me to voice my own opinions on controversial matters	a
Authenticity	Autonomy	I tend to be influenced by people with strong opinions	a
Authenticity	Autonomy	I've been able to make up my own mind about things	b
Authenticity	Autonomy	I believe I have discovered who I really am	d
Authenticity	Autonomy	It is more important that I really enjoy what I do than that other people are impressed by it	d
Authenticity	Autonomy	Other people usually know better what would be good for me to do than I know myself. (R)	d
Authenticity	Satisfaction	I find a lot of the things I do are personally expressive for me	d
Authenticity	Eudaimonic well-being	Creativity	c
Potential	Personal Growth	I gave up trying to make big improvements or changes in my life a long time ago	a
Potential	Personal Growth	For me, life has been a continuous process of learning, changing, and growth	a

Table 4 (continued)

Motivational matrix cell	Factor or Component	Well-being assessment item	Source
Potential	Personal Growth	I do not enjoy being in new situations that require me to change my old familiar ways of doing things	a
Potential	Personal Growth	When I think about it, I haven't really improved much as a person over the years	a
Potential	Personal Growth	I have the sense that I have developed a lot as a person over time	a
Potential	Personal Growth	I am not interested in activities that will expand my horizons	a
Potential	Personal Growth	I think it is important to have new experiences that challenge how you think about yourself and the world	a
Potential	Competence	I believe I know what my best potentials are and I try to develop them whenever possible	d
Potential	Competence	When I engage in activities that involve my best potentials, I have this sense of really being alive	d
Potential	Competence	I am confused about what my talents really are. (R)	d
Autonomy	Environmental Mastery	I often feel overwhelmed by my responsibilities	a
Autonomy	Environmental Mastery	In general, I feel I am in charge of the situation in which I live	a
Autonomy	Environmental Mastery	I am quite good at managing the many responsibilities of my daily life	a
Autonomy	Environmental Mastery	I have difficulty arranging my life in a way that is satisfying to me	a
Autonomy	Environmental Mastery	The demands of everyday life often get me down	a
Autonomy	Environmental Mastery	I have been able to build a living environment and a lifestyle for myself that is much to my liking	a
Autonomy	Autonomy	I usually know what I should do because some actions just feel right to me	d
Autonomy	Financial well-being	Control of finances	c
Autonomy	Physical well-being	Control over physical health	c
Autonomy	Eudaimonic well-being	Solve problems I face	c
Immersion	Satisfaction	I've been feeling useful	b
Immersion	Affect	I've had energy to spare	b
Immersion	Competence	I've been thinking clearly	b
Immersion	Satisfaction	I've been interested in new things	b
Immersion	Competence	I find I get intensely involved in many of the things I do each day	d
Immersion	Competence	I think it would be ideal if things came easily to me in my life. (R)	d
Immersion	Satisfaction	I feel best when I'm doing something worth investing a great deal of effort in	d
Immersion	Satisfaction	If I did not find what I was doing rewarding for me, I do not think I could continue doing it	d

Table 4 (continued)

Motivational matrix cell	Factor or Component	Well-being assessment item	Source
Immersion	Satisfaction	I can't understand why some people want to work so hard on the things that they do. (R)	d
Immersion	Satisfaction	It is important to me that I feel fulfilled by the activities that I engage in	d
Immersion	Competence	If something is really difficult, it probably isn't worth doing. (R)	d
Immersion	Competence	I find it hard to get really invested in the things that I do. (R)	d
Immersion	Physical well-being	Energy to do necessary things	c
Immersion	Financial well-being	Doing fun and interesting things	c
Success	Purpose in Life	I don't have a good sense of what it is I'm trying to accomplish in life	a
Success	Purpose in Life	I enjoy making plans for the future and working to make them a reality	a
Success	Self-Acceptance	In many ways I feel disappointed about my achievements in life	a
Success	Competence	I've been dealing with problems well	b
Success	Satisfaction	As yet, I've not figured out what to do with my life. (R)	d
Success	Eudaimonic well-being	Plan for the future	c
Success	Eudaimonic well-being	Reaching goals	c
Inclusion	Environmental Mastery	I do not fit very well with the people and the community around me	a
Inclusion	Positive Relations with Others	I know that I can trust my friends, and they know they can trust me	a
Inclusion	Positive Relations with Others	I often feel lonely because I have few close friends with whom to share my concerns	a
Inclusion	Positive Relations with Others	I enjoy personal and mutual conversations with family members and friends	a
Inclusion	Relatedness	I've been feeling interested in other people	b
Inclusion	Eudaimonic well-being	Getting along with people	c
Inclusion	Social well-being	Spending time with friends/relatives	c
Inclusion	Eudaimonic well-being	Stimulating conversations	c
Caring	Positive Relations with Others	I have not experienced many warm and trusting relationships with others	a
Caring	Positive Relations with Others	Maintaining close relationships has been difficult and frustrating for me	a
Caring	Positive Relations with Others	People would describe me as a giving person, willing to share my time with others	a
Caring	Positive Relations with Others	Most people see me as loving and affectionate	a
Caring	Relatedness	I've been feeling close to other people	b

Table 4 (continued)

Motivational matrix cell	Factor or Component	Well-being assessment item	Source
Caring	Relatedness	I've been feeling loved	b
Caring	Social well-being	People to talk to when have problems	c
Caring	Financial well-being	Life at home	c
Caring	Eudaimonic well-being	Making a difference in other's lives	c
Caring	Social well-being	Count on friends/family in crisis	c
Caring	Social well-being	People who love me	c
Recognition	< missing >	< missing >	
Justice	< missing >	< missing >	
Ethics	< missing >	< missing >	
Purpose	Purpose in Life	My daily activities often seem trivial and unimportant to me	a
Purpose	Purpose in Life	I have a sense of direction and purpose in life	a
Purpose	Purpose in Life	Some people wander aimlessly through life, but I am not one of them	a
Purpose	Purpose in Life	I sometimes feel as if I've done all there is to do in life	a
Purpose	Purpose in Life	I live life one day at a time and don't really think about the future	a
Purpose	Autonomy	My life is centered around a set of core beliefs that give meaning to my life	d
Purpose	Satisfaction	I can say that I have found my purpose in life	d
Purpose	Satisfaction	I believe it is important to know how what I'm doing fits with purposes worth pursuing	d
Purpose	Satisfaction	I believe I know what I was meant to do in life	d
Purpose	Eudaimonic well-being	Meaningful life	c

distinctions, or tensions, are not arbitrary but represent the fundamental axes that define all higher order human needs. These are the essential tradeoffs in human life: the degree to which we focus on ourselves vs. others, and the degree to which we focus on materialism vs. principle.

The next frontier for research will be to describe the way that discrete needs interact with each other to promote developmental progression of well-being at both the individual level and the level of populations. Our pyramidal model proposes that this kind of progress necessarily moves in the direction of transcendence of categorical boundaries, with the goal of unifying all twelve needs, i.e., what gives me a sense of accomplishment also provides a model of ethical behavior; what brings me a sense of material success also brings honor to my family; what provides a sense of authenticity also provides a sense of purpose, etc.

Implications for Methods

Because of the multidimensional affective nature of psychological well-being, the field has struggled to develop adequate measurement approaches to avoid the limitations posed by verbal statements and numerical rating scales. The use of images rather than words for affective assessments has a long history (Pincus, 2023a). Accordingly, those engaged in research on subjective well-being have leaned heavily on "graphic devices that do not depend on the words of a particular language, (which are) particularly attractive for multinational studies" (Andrews & Robinson, 1991, p. 72).

Another area of development in subjective well-being assessment concerns limiting the controllability of response. Because humans tend not to make accurate emotional self-assessments when asked about them rationally (whether due to alexithymia, the difficulty identifying one's emotions, or to social desirability or to the demand characteristics of the situation), alternative methods have been pursued. These include the adoption of implicit association measures of life satisfaction (Kim, 2004; Tov & Diener, 2009), which measure reaction time of different pairings to reveal implicit mental associations. Biological markers have been extensively correlated with measures of psychological well-being ("neuroendocrine regulation, inflammatory markers, glycemic control, and cardiovascular risk" [Ryff, 2014]), brain activity (left vs. right frontal hemispheric activation, amygdala activation), and even brain volume. We argue that these sophisticated measures are effective for assessing the *consequences* of subjective well-being but do not in any way measure its *causes* or the *state* of well-being itself.

We argue that a fundamental reorientation to assessing subjective well-being is needed. If we assume that psychological well-being is fundamentally a product of *motivational-emotional* processes, then reliance on written statements evaluated numerically is inherently flawed because standard measures require rational, analytical processing by subjects. A variety of new methods have evolved in the decades since Bradburn's (1969) observation that positive and negative emotions could operate independently in producing well-being states.

These methods tend to be known as "System 1" approaches, designed to bypass cognitive filters, so that researchers can directly measure motivational-emotional states including direct neuro-imaging (e.g., fMRI, EEG), biometric measurement (e.g., facial EMG, facial coding, electro-dermal response, pupillary dilation, eye tracking, heart rate, blood pressure, respiration), and indirect measures of motivational-emotional meaning (e.g., time-constrained image-based elicitation; Pincus, 2023a). Because psychological well-being is fundamentally a motivational-emotional construct, its assessment requires new approaches that match its emotional character.

Implications for Practice

Despite the multitude of models and assessment options available that claim to define and measure subjective well-being, the continued lack of a meta-theory has hampered the ability to develop coherent theoretical systems and measures. By placing the tremendous variety of well-being concepts within a unified theory of human motivation, the challenge of describing and measuring its essence is largely solved and should provide helpful guidance to practitioners who must explain their models and what they purport to measure.

As an example of the benefits of starting with a clear meta-theory, we review the case of a particularly influential model of subjective well-being. On October 20th, 2022, U.S. Surgeon General Vivek Murthy introduced a new framework for understanding workplace well-being based on sets of needs:

> "The Surgeon General's Framework for Workplace Mental Health & Well-Being is intended to spark organizational dialogue and change in the workplace. It can also catalyze areas for further research, strategic investment, and broader policy advancement. Centered around the foundational principles of equity and the voices of all workers, it includes five Essentials and necessary components for addressing workplace mental health and well-being *based on human needs*. Organizations can use this Framework to support their workplaces as engines of mental health and well-being." (Murthy, 2022; italics added).

This framework is intended to be comprehensive, having been informed by workers, unions, corporate leaders, and experts in business and academia. By providing a "map" of the full landscape of well-being and mental health, it is intended to provide a structure for human resources and management to review their policies, procedures, and practices against, to look for gaps. Going further, Murthy (2022) recommends that organizations build in "systems for accountability, review existing worker engagement survey data to better understand the needs among disproportionately impacted groups, utilize validated tools for measuring worker well-being, and ensure processes for continuous quality improvement." Because of the wide-ranging implications of using this framework as a basis for creating monitoring and feedback systems and the creation of validated assessment tools, ensuring that it is indeed comprehensive in accounting for human needs is of great importance.

The Surgeon General's Well-being Framework

The framework proposes the existence of five basic human needs, which can each be subdivided into pairs, resulting in a total of ten needs (Table 5).

Comparing the unified model with the Surgeon General's framework reveals that there is a strong degree of overlap between the sets of needs, however, by positing only ten needs, our model would suggest that this framework is missing at least two needs. Upon inspection, we make the following observations (Table 6):

- All of the highest level, aspirational needs (potential, success, recognition, and purpose) are reflected, at least to some degree, in Murthy's framework.
- The foundational needs are nearly all accounted for; the very same labels are used for two of the foundational needs - safety and autonomy. Only the need for justice or fairness is absent from the bottom row, a significant absence in light of the prominent calls for social justice in the wake of the COVID-19 pandemic and Black Lives Matter movement. Some cells are double counted: Safety and Security are viewed by the unified model as aspects of the same need for psychological safety; having personal agency is similarly foundational to a sense of autonomy and flexibility (i.e., you are free to do things a different way).
- Interestingly, the middle row representing experiential needs is the area of least overlap between the two frameworks. Although alluded to in passing, they are not identified as discrete needs. This is perhaps surprising as these needs are among the top emerging topics in human resource management: the ability to bring one's whole self to work (authenticity), the ability to become fully absorbed in one's work (immersion), and the sense that the organization truly values doing the right thing when it comes to customers and employees (ethics).
- Pincus (2022a) has argued for the need to formally include the once-neglected spiritual domain of immaterial ideals and principles. The comparison with this framework reveals that this continues to be a challenge as the spiritual needs for both justice and ethics are absent (cf. Colquitt et al, 2001).

We would argue that there are clear heuristic benefits to applying a unified model of human strivings, which derive from its structuring of needs according to life domain and level of striving, giving it a hierarchical order as well as an indication of needs that naturally go well together, acting in mutually reinforcing ways, as opposed to those that have the potential to work at odds.

Beyond its heuristic value, a unified model of human motivation provides a series of testable hypotheses, which can illuminate the specific relationships between each of the 12 needs and environmental conditions that can be influenced by policy. Knowing precisely which of the 12 needs are most salient and potentially impactful within a particular cultural setting provides essential guidance to those responsible for improving well-being. The cultural meaning of negative emotional needs

Table 5 Foundations of well-being proposed by Murthi (2022)

Meta Need	Protection from Harm	Opportunity for Growth	Mattering at Work	Work-Life Harmony	Connection & Community
Variant 1	Safety	Learning	Dignity	Autonomy	Belonging
Variant 2	Security	Accomplishment	Meaning	Flexibility	Social Support

Table 6 Murthi's foundations of well-being embedded in the unified pyramid of human motivation

	Self	Material	Social	Spiritual
Aspirational	Learning (Potential)	Accomplishment (Success)	Dignity (Recognition)	Meaning (Transcendence)
Experiential	*Authenticity*	*Immersion*	Social Support (Caring)	*Ethics*
Foundational	Safety*, Security	Autonomy*, Flexibility	Belonging (Inclusion)	*Justice*

Needs in italics are missing from the Murthi (2022) framework; asterisked items represent instances where the unified model and the framework use identical labels

is particularly important for structuring interventions, e.g., the drive to avoid shame would have an entirely different meaning in a collectivist community than an individualistic one. When interventions are aligned with culture, the meaning of those interventions will tend to harmonize, fueling adaptive growth.

As Kurt Lewin famously said, "there is nothing so practical as a good theory." Beginning with a holistic meta-theory based on first principles can make life easier for theorists, researchers, and practitioners in a multitude of ways, by providing a common language and framework that ensures that all key concepts are represented.

Conclusion

In conclusion, this paper responds to the call for integration of the rapidly proliferating, ungrounded concepts, foundations, dimensions, and elements related to subjective well-being. We contend that the secret to unlocking a meta-theory to encompass the wide and ever-expanding well-being concepts has always been hidden in plain view in the many descriptions of subjective well-being as a consequent state of need strivings and fulfillment. The need is critical because, in addition to rapid growth among researchers and theoreticians, concepts of well-being are increasingly employed as clinical endpoints for testing interventions, new drugs, and other therapies. At best, the absence of integrative theory has slowed progress in the crucial field of subjective well-being; worse, vast resources may be directed toward measuring poorly defined constructs, making it difficult to link causes and effects.

By clearly distinguishing between exogenous environmental factors and endogenous psychological factors, cause-effect relationships should be more easily specified. By embedding the components of well-being within a unified model of 12 human needs, well-being theorists will be better positioned to ensure that all fundamental needs are represented, and that they are represented in a balanced manner. By applying a structured model of needs, theorists will be better able to specify hypotheses about inter-need relationships, e.g., social needs will tend to move together, possibly in opposition to self-needs, and spiritual needs will be interrelated, possibly in opposition to material needs.

Data Availability All data generated or analyzed during this study are included in this published article (and its supplementary information files). Original source materials are available from the author by request.

Declarations

Conflict of Interest There are no conflicts of interests which need to be disclosed.

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