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BRIEF REPORT

Brief Measures of the Four Highest-Order Primal World Beliefs

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Primal world beliefs (“primals”) are beliefs about the basic character of the world (e.g., “the world is an abundant place”). The first effort to empirically map primals identified over two dozen such beliefs. The four highest-order beliefs—the overall belief that the world is *Good* (vs. bad), followed by *Good*’s three dimensions of *Safe* (vs. dangerous), *Enticing* (vs. dull), and *Alive* (vs. mechanistic)—were novel and strongly correlated to many theoretically relevant outcomes such as depression. However, measuring these four beliefs currently requires administering the 99-item Primals Inventory (PI-99) and computing lengthy subscales (71, 29, 28, and 14 items). This article validates briefer measures. Study 1 ($N = 459$) and Study 2 ($N = 5,171$) examines the dimensionality, internal reliability, and test–retest reliability of scores on an 18-item measure of *Good*, *Safe*, *Enticing*, and *Alive* (PI-18). Study 3 ($N = 3,947$) does the same for a briefer 6-item measure of overall *Good* world belief (PI-6). Study 4 ($N = 5,794$) compares both versions to the PI-99 (the gold standard) and 14 of its correlates, including depression and life satisfaction. We conclude by recommending the PI-6 and PI-18 for most research and clinical uses and note that correspondence of three parallel forms implies not only scale accuracy but also robustness of the latent phenomena.

Public Significance Statement

Scientists have found that people vary on four main beliefs about the world that are highly correlated to personality and mental health: The beliefs that the world is *Good*, *Safe*, *Enticing*, and *Alive*. But currently, the only way to measure these beliefs is with a long 99-question survey. This article helps researchers and clinicians by creating two shorter measures of these important beliefs.

Keywords: measurement, Primals Inventory, primal world beliefs, short-form scale, Good world belief

Supplemental materials: <https://doi.org/10.1037/pas0001055.sup>

Rapunzel: *Why can’t I go outside?*

Witch: *The outside world is a dangerous place.*

People frequently make extremely broad statements about the world’s basic qualities, such as “The world is a shithole, overflowing with garbage and disease” (2010 tweet) and “The world is beautiful, you just have to look around” (2021 tweet). Some statements portray world beliefs as developing, (e.g., a 2021 tweet “The older I’ve gotten the more I’ve realized the world is dangerous, you gotta be safe and lookout for yourself”) while others aim to manipulate world beliefs to gain advantage (e.g., the fictional witch teaching Rapunzel the world is dangerous to make her afraid to leave her tower). While many of

these statements are likely mere expressions, might they sometimes point to something deeper? This article aims to validate brief ways of measuring some of these primitive-sounding world beliefs.

Such world beliefs are understudied. Beck (e.g., 1979) organized depression-inducing beliefs into beliefs about the self, the self’s future, and the self’s world (i.e., the Cognitive Triad). But in practice, consistent with Beck’s intention (personal communication, March 1st, 2019), *world* here concerns people in one’s immediate social environment (e.g., “My boss hates me”). Traumatologist Janoff-Bulman (1989) suggested humans have hyper-globalized world schemas that influence how ambiguity is interpreted across domains. But the handful of beliefs Janoff-Bulman identified a priori are conceptually similar and difficult to distinguish empirically (e.g., Kaler, 2009). In a seminal review of the worldview literature, Koltko-Rivera (2004) discusses dozens of beliefs about freewill, God, and so forth, but only one such primitive-sounding belief concerning overall “world nature,” called belief in a just world (BJW) or just world belief.

By far the most-studied world belief, BJW is the view that the world is a “karmic” place where individuals get what they deserve and deserve what they get (Montada & Lerner, 1998; Nesbit et al., 2012). This belief is thought to have a cascading causal influence across personality and well-being domains (Bartholomaeus & Strelan, 2019).

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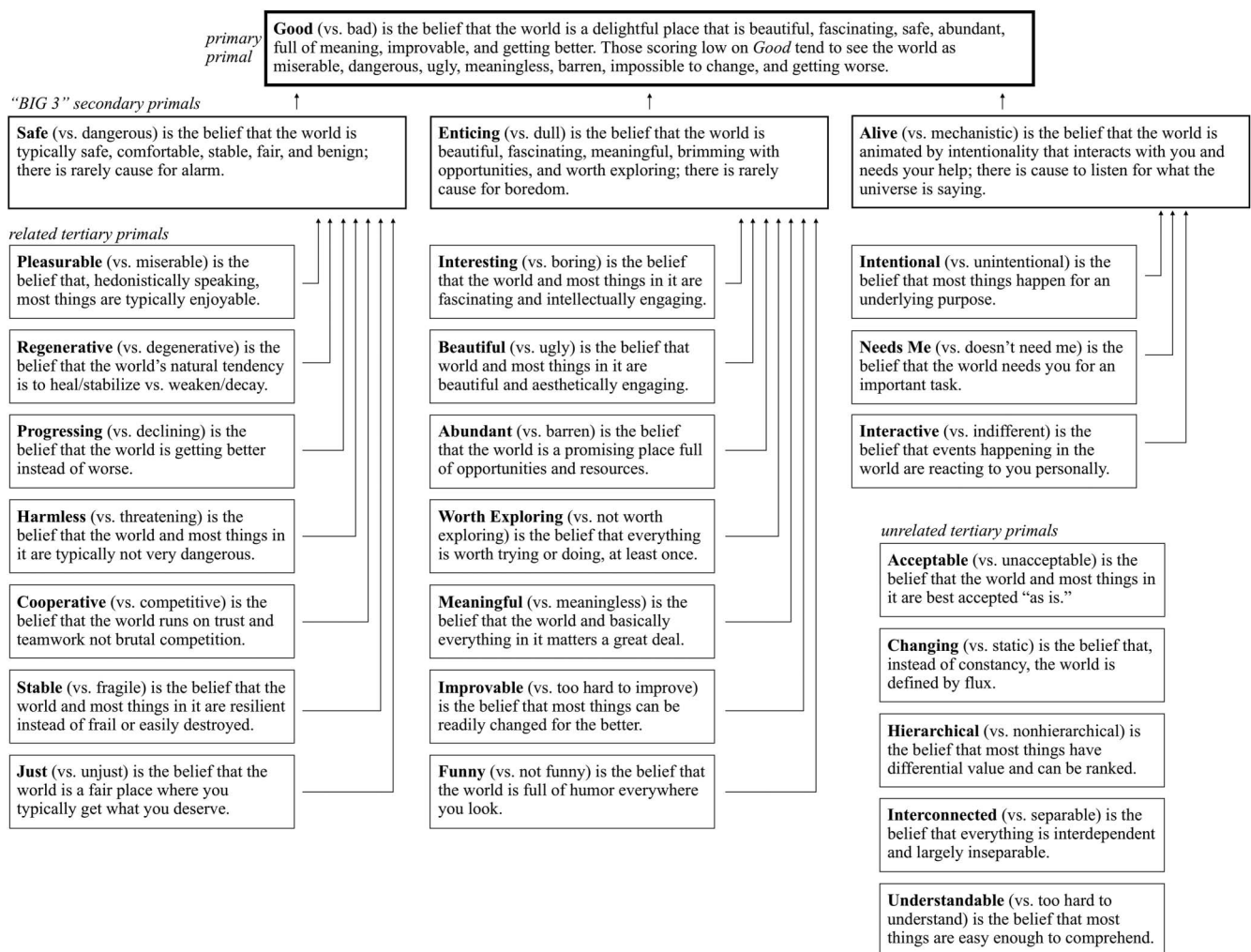
Correlational (and some experimental) research from a few hundred studies tie high BJW to (a) working harder, presumably because the world is expected to reward hard work (e.g., higher-gross domestic product, Furnham, 1993; higher grades, Dalbert & Stoeber, 2005); (b) being nicer, presumably because the world rewards kindness and playing by the rules (e.g., Correia & Dalbert, 2008); (c) being happier and more successful, presumably because they worked harder, were nicer, just contexts are pleasant; and just perceptions provide post hoc rationalizations for success (e.g., increased life satisfaction Otto et al., 2009); and (d) blaming the unfortunate such as the sick, presumably because the world punishes fairly (e.g., Sakallı-Uğurlu et al., 2007). Could other world beliefs exert a similarly broad influence? For example, maybe some optimists are simply those that happen to think the world is objectively a good place. Maybe neuroticism is partly driven by the belief the world is dangerous.

Clifton et al. (2019) made the first broad-based effort to empirically map world beliefs. They labeled them *primal world beliefs* (“primals”) to distinguish simple, adjectival, goal-relevant world

beliefs (e.g., “the world is dangerous”) from metaphysical, incidental, or historical world beliefs (e.g., “the world is composed of 118 chemical elements”). Like other descriptive taxonomic efforts (e.g., identifying Big Five personality traits), work was pursued with no particular dependent variables in mind or strong dimensionality expectations. Ten initial projects sought to identify all major candidate primal world beliefs. Example projects included the analysis of over 80,000 tweets beginning with phrases like “the world is”; the 840 most-frequently used adjectives derived from 190,000 texts (450 million words); and over 1,700 descriptions of the world gleaned from 385 of history’s most influential texts, including: philosophical treatises, religious scriptures, novels, political speeches, and films. This led to the identification of 234 items representing a reasonably exhaustive list of candidate primals which were subjected to three rounds of exploratory and confirmatory factor analyses.

Dimensionality reduction analyses identified 26 hierarchically arranged dimensions (Figure 1): 22 dimensions at the bottom (*tertiary primals*, including just world belief), 17 of which form three clusters

Figure 1
Definitions and Structure of Primal World Beliefs



Note. 26 primals (22 tertiary, 3 secondary, and 1 primal) were identified by Clifton et al. (2019); figure from Clifton & Kim, (2020).

(secondary) primals, informally called “Big Three”), which in turn form a supercluster (the *primary* primal). The primary primal is the overall belief that the world is a *Good* (vs. bad) place. The three secondary primals—essentially the main reasons to see the world as more or less good—are *Safe* (vs. dangerous), *Enticing* (vs. dull), and *Alive* (vs. mechanistic)—with *Alive* being less central. All are normally distributed. Five test–retests now suggest high stability over time (even during the COVID19 pandemic, Ludwig et al., 2021). Arguably the only two primals that have received previous research attention are *Just* and *Progressing*, both under the *Safe* cluster.

Promising research directions have emerged from mapping these beliefs. Based on correlations with theoretically related outcomes such as depression, suicide ideation, curiosity, neuroticism, trust, and optimism, the four higher-order primals (*Good*, *Safe*, *Enticing*, and *Alive*) appear most clinically relevant (e.g., optimism and *Good* correlated at $r = .67$). Yet currently the only way to measure these four beliefs is to administer very lengthy subscales from the 99-item Primals Inventory (PI-99) of 71, 29, 28, and 14 items, respectively (Clifton et al., 2019). This lengthiness stymies researchers, clinicians, and the general public when measuring the very primals most worth measuring. Shorter measures are needed.

The goal of this brief report is to validate two short Primals Inventories to measure higher-order primals *Good*, *Safe*, *Enticing*, and *Alive*. The first (PI-6) is a unidimensional 6-item measure of *Good* for use when the highest-order primal is the chief interest and space is limited. The second (PI-18) is a multidimensional 18-item measure of secondary primals *Safe*, *Enticing*, and *Alive* where pooled items also measure higher-order *Good* world belief, as done in the original PI-99 (Clifton et al., 2019) and common among measures of higher- and lower-order factors (e.g., CES-D, Radloff, 1977; PERMA Profiler, Kern & Butler, 2016; NEO-PI-R, Costa & McCrae, 2008). To create these two scales, Study 1 and 2 examines the dimensionality, internal reliability, and test–retest reliability of PI-18 scores; Study 3 does the same for the PI-6; and Study 4 compares both to the PI-99 as the gold standard through direct score comparison and comparison of correlational relationships to 14 mental health and demographic variables in the wider nomological net (e.g., depression).

Our scale-building philosophy for this effort has been called *construction-minded scale-building* (Clifton, 2020b). This means that instead of exploring the shape of latent phenomena, we assume it is already mapped (by the PI-99) and we must merely construct a mimicked measured variable with fewer items. A secondary goal was to retain a few items that tap secondary or tertiary primals for practical research purposes. For example, if a survey only has room for the PI-6, it would be helpful if the PI-6 included an item that is both an adequate indicator of *Good* and *Enticing*, so item-level analysis can suggest relevant secondary primals. Though useful for research and clinical follow-up, and though this variance should mostly cancel out in pooled scale scores, intentionally retaining systematic signal (across subjects not items) not included in the measurement model will also slightly worsen fit statistics, rendering confirmatory factor analysis (CFA) indices difficult to interpret. For this reason, studies below report but do not interpret CFA fit statistics, leaving the reader to judge how close is close enough.

Otherwise, item-selection decisions mirrored PI-99 decisions. We selected items from the initial pool of 234 items (Clifton et al., 2019; Study 1; $N = 930$; pp. 210–217 of their supplement) based on factor loadings balanced against four additional considerations: language variety, item response characteristics, retaining reverse-scored

items, and key scale-specific concerns. As for the PI-99, retaining at least one opposite-scored item was considered essential for primals measurement, allowing continuum specification (Tay & Jebb, 2018). The major scale-specific concern was skew; only affecting *Enticing*. Retaining top-loading items from a large item pool resulted in (a) retaining some items in the PI-18 and PI-6 not in the PI-99, where the target had been tertiary variance, and (b) not including all PI-18 items in how *Good* is calculated, as in the PI-99. See Supplemental Material for methodological details.

Study 1

Starting with the PI-18, Study 1 seeks to confirm the adequacy of the intended measurement model (three separate subscales for *Safe*, *Enticing*, and *Alive* and 1 pooled scale for *Good*) and more generally test how items behave when greatly reducing items administered.

Method

Of 459 Americans recruited via mTurk in June 2016 ($M_{\text{age}} = 36.5$ years, $SD_{\text{age}} = 11.7$ years), 63% were female, 81% white, 40% currently married, and 67% college graduates. Three subjects had missing demographic information. We administered the five-item Satisfaction With Life Scale (SWLS; Diener et al., 1985) as an early convergent validity check, comparing relationships to previous mTurk samples completing the PI-99 (Clifton et al., 2019). Internal reliability was assessed with standardized Cronbach's α . To test the measurement model, we conducted scree plot analysis, minimum average partial analysis, parallel analysis, exploratory factor analysis, confirmatory factor analysis, and reliability analysis. All studies received IRB approval.

Results and Discussion

The intended measurement model was the best way to interpret the data (pp. 5–10 of Supplemental Material). Only three factors explained >1 eigenvalue. Scree analysis suggested 3–4 factors. Minimum average partial analysis suggested three factors. Parallel analysis suggested four maximum. A 3-factor exploratory factor solution (PROMAX rotation, EQUAMAX prerotation, $k = 3$) produced simple structure (salience = .295), explaining just over 100% of item variance (possible when examining squared multiple correlations). An inferior four-factor solution produced factors reflecting *Safe*, *Enticing*, and *Alive*, and a fourth less meaningful factor involving six items (four multiloading) comparatively more associated with *Good* world belief (e.g., the top-loading item on the fourth factor was “Most things in the world are good” at .59). CFA indicated the intended model (CFI = .96, RMSEA = .06) was superior to a model measuring only *Safe*, *Enticing*, and *Alive* (i.e., excluding higher-order *Good*; CFI = .83, RMSEA = .11). In both models, all parameters were significant per Wald tests. A one-factor exploratory factor solution had one non-loading item (“The universe doesn’t care . . .”). Compared to previous mTurk PI-99 studies (Clifton et al., 2019), primals correlated similarly with sex, age, and life satisfaction, but *Enticing* items were more skewed. Internal reliability was adequate at .78 (*Safe*), .80 (*Enticing*), .79 (*Alive*), and .81 (*Good*). Two items damaged the reliability of subscale scores (“It takes a lot for things to fall apart” and “The universe doesn’t care . . .”) and also loaded lowest on their respective factors (.45 and .54). The highest item-total correlation

across subscales was .71. Five item-total correlations $< .40$ were: “It takes a lot for things to fall apart” on *Safe* and *Good*, and “The world is a somewhat dull . . . ,” “It feels like dangers . . . ,” and “The universe doesn’t care . . . ” on *Good*, yet these items marginally damaged reliability.

In sum, Study 1 showed that the intended measurement model was the best way of understanding item variance: there is an overall factor and three subfactors. However, not all items performed as expected in the new item context and there was room for improved internal reliability. Thus, we chose to exchange a handful of underperforming items for, in most cases, two items with one aimed at capturing a third most-related tertiary primal.

Study 2

Study 2 reexamines in a larger sample the dimensionality, internal reliability, and test–retest reliability of scores on the finalized PI-18.

Method

AuthenticHappiness.Org allows members of the public to participate in studies and see their scores. Of 5,171 unique respondents from Feb. 2019 to Dec. 2020, 62% were male, 56% younger than 35, 54% college graduates, and 103 countries were represented, with most (69%) in the USA. Of these, 322 took the survey additional times, allowing assessment of test–retest reliability via pairwise correlation. Other analyses are same as Study 1.

Results and Discussion

The PI-18 behaved similarly as it did in Study 1, with some improvements (pp. 11–14 of Supplement Material). Again, only three factors explained >1 eigenvalue, scree analysis suggested 3–4 factors, minimum average partial analysis suggested three, parallel analysis suggested four max. A three-factor exploratory factor solution (PROMAX rotation, EQUAMAX prerotation, $k = 3$) produced simple structure (salience = .295) save a single multiloader (“Most things have a habit of getting worse”) loading on *Safe* (.35) and *Enticing* (.40). Three factors again explained just over 100% of item variance. An improbable four-factor solution was considered anyway, producing an inadequate structure reflecting *Alive*, *Safe*, reverse-scored *Enticing*, and forward-scored *Enticing*, the latter two sharing five multiloaders. CFA suggested the intended model (CFI = .90, RMSEA = .08) was superior to the model excluding *Good* (CFI = .80, RMSEA = .11). All parameters were significant per Wald tests and loaded on a one-factor exploratory factor solution (salience = .295). Internal reliability of scores rose for all subscales, to $\alpha = .88$ for *Good*, to $\alpha = .83$ for *Safe*, to $\alpha = .83$ for *Enticing*, and to $\alpha = .85$ for *Alive*. The only item with an item-total correlation $< .40$ was also the only item that damaged—albeit negligibly—any subscales’ internal reliability of scores (“While some things are worth checking out . . . ”), yet it was still the third highest-loading item on its intended dimension (.65; *Enticing*). The highest item-total correlation across subscales was $r = .75$ (“Everything happens for a reason and on purpose” on *Alive*). Test–retest correlations among 322 subjects taking the survey on average 14.3 days apart ranged from $r = .90$ to $r = .89$. However, because 74% took surveys the same day, we reran analysis on the 26% ($n = 84$) who took surveys at least a day apart (mean 55 days

apart, median 37 days apart), which was $r = .76$. In sum, in a sample over 10 times larger than Study 1, the intended measurement model was confirmed, internal reliability increased, and test–retest reliability was found.

Study 3

Study 3 involves the same analysis in Study 2, but this time examining the PI-6.

Method

The PI-6 was also placed on AuthenticHappiness.Org. Of 3,957 unique respondents, 61% were male, 54% younger than 35, 55% college graduates, and in 93 countries, with most (63%) in the USA. Of these, 179 took the PI-6 additional times, allowing test–retest reliability assessment. All analyses are same as Study 2.

Results and Discussion

The intended one-factor model for the PI-6 performed best (pp. 15–17 of Supplement Material). Only one factor explained >1 eigenvalue, scree analysis suggested one factor, minimum average partial analysis suggested one, and parallel analysis suggested two maximum. A one-factor exploratory factor solution produced simple structure, even at salience = .50, and explained just over 100% of item variance. A two-factor solution was considered, but produced less meaningful factors of entirely forward- and reverse-scored items. CFA results were CFI = .91 and RMSEA = .17. All parameters were significant per Wald tests. Internal reliability was $\alpha = .86$ with all items contributing. Item-total correlations ranged from .52 to .71. Test–retest reliability was $r = .88$ among 179 subjects who took the survey on average 20 days apart and $r = .78$ among the 53 who took the surveys on different days on average 68 days apart. In sum, Study 3 confirmed the unidimensional model, with good internal reliability and test–retest reliability.

Study 4

Study 4 compares the PI-6 and PI-18 to each other and the PI-99 as the gold standard.

Method

The PI-99 was also placed on AuthenticHappiness.Org. Of 5,794 unique respondents, 63% were male, 50% younger than 35, 61% college graduates, and in 105 countries, with most (69%) in the USA. Sizeable subsamples ranging from 1,848 to 5,793 (Tables S16) took multiple versions of the Primals Inventory or nonprimal measures.

We compared scores in three ways. First, we correlated primals to themselves across versions (e.g., comparing PI-6 *Good* to PI-99 *Good* among the 1,848 subjects who took both). Second, we compared correlations to the 22 tertiary primals not measured by the PI-6 or PI-18 (e.g., PI-6 *Good* and PI-99 *Good* correlations to PI-99 *Hierarchical*). Third, we compared correlations to 14 demographic and mental health variables in the wider nomological net. Single items measured age, gender, and education. Depression was measured by Radloff (1977) 20-item Center for Epidemiological Studies–Depression (CES-D) scale, which concerns experiences over the past week, uses a 4-point likert scale, and is validated for nonclinical

samples (example item: “I had crying spells”). Life satisfaction was again measured by the SWLS. The remaining variables were measured by Butler and Kern’s (2016) PERMA Profiler. The PERMA Profiler’s overall psychological flourishing score pools five equally weighted criteria: positive emotion, engagement, relationships, meaning, and accomplishment. These five subscales are complemented by additional subscales for health, and negative emotion, which are all three items each. Loneliness is one item. An example health item is: “Compared to others of your same age and sex, how is your health?” All involve 11 response options (e.g., *terrible* to *excellent*).

Results and Discussion

To be a valid measure of the same construct, short-form scales must strongly correlate with parent scales (criterion validity) and mimic the parent’s correlational relationships with other variables (convergent and divergent validity). Study 4 found strong evidence of both for both new scales. In samples nearing or above 2,000 subjects, *Good*, *Safe*, *Enticing*, and *Alive* correlated with themselves across versions between .82 and .88 (Table 1) and mimicked each other in relation to 22 other primals (Tables S17, S18, and S19 of Supplement Material) and 14 other variables in the broader nomological net (Table 2; Tables S20, S21, S22, S23, and S24). Correlations to these 14 other variables were only $|r_{\text{mean}}| = .03$ different and never (of 84 possibilities) more than $|r| = .09$ different. For example, PI-18 *Alive* and PI-99 *Alive* correlated identically with flourishing (both at $r = .44$) and life satisfaction (both at $r = .38$). This convergence was notable given comparisons used subsamples with at least 50% different subjects, scale administration was not concurrent, and scales were administered in different orders.

General Discussion

Cognitive behavior therapy—arguably the most evidence-based form of psychotherapy—was designed “based on the underlying theoretical rationale that an individual’s affect and behavior are largely determined by the way in which he structures his world” through various often primitive-sounding beliefs (Beck et al., 1979, p. 3). By impacting the interpretations of ambiguity across situations, *Just* world belief has been thought for decades to have a cascading influence on clinical outcomes like depression and behavior patterns such as perseverance (e.g., Bartholomaeus & Strelan, 2019). Yet Clifton et al.’s (2019) effort to map world beliefs found *Just* to be unexceptional among 26 world beliefs, being one of seven facets of *Safe* world belief, itself a facet of *Good* world belief. Moreover, after examining pairwise relationships with over 100 personality, clinical, well-being, religious, political, and demographic variables in the broader nomological net, many primals

(especially higher-order primals *Good*, *Safe*, *Enticing*, and *Alive*) were found to be more highly correlated with theoretically influenced outcomes—even seemingly *Just*-specific outcomes like perseverance. Despite the obvious need for further study on the four neglected higher-order primals (though not entirely unstudied, e.g., Janoff-Bulman, 1989), efforts have been hindered by scale length. Indeed, the PI-99’s *Good* subscale, at 71 items long, is ten times longer than the average scale in psychology (Cortina et al., 2020).

This article validated two shorter measures that do not trade much accuracy for brevity. This was possible because the original PI-99’s length was driven by the need to measure 22 tertiary primals. Numerous items were included in higher-order subscales because they were available, but above studies confirm only a fraction are actually needed. Studies 1 and 2 established the internal reliability, test–retest reliability, and dimensionality of scores on an 18-item Primals Inventory (PI-18) measuring *Good*, *Safe*, *Enticing*, and *Alive*. Study 3 did likewise for a unidimensional 6-item measure of *Good* (PI-6). Study 4 then compared new versions to the PI-99, establishing criterion, concurrent, divergent, and convergent validity. A strength of our approach was parallel validation of multiple scale versions in sizeable samples, allowing direct comparison of scores.

A limitation was that test–retest reliability samples were relatively small. Because results are consistent with other PI-18 test–retests (Ludwig et al., 2021), additional PI-6 test–retests would be helpful. Another concern is marginal CFA fit statistics (CFI twice approached .95 and once exceeded it). As noted, some decline was expected because systematic item-level variance was purposefully retained but not included in the measurement model. Tables S23, S24, S25, and S26 of supplement indicate these retained items are indeed capable of indicating more granular primals, but marginal CFIs nonetheless limit the PI-6 and PI-18 compared to the PI-99. Given high internal reliability and convergence across scale versions, we see this as a reasonable trade-off, allowing more information to be gathered with fewer items. Another limitation was fixed order administration (in Studies 2–4). Split-half reliability, invariance, and performance in pen-and-pencil contexts remain unexamined.

In the process of validating measures, some light was also shed on the latent phenomena itself. Five years ago, it was not apparent if primals existed or involved robust signal—perhaps too much was being made of hyperbolic, affect-driven, state-like overgeneralizations (such as those in the opening paragraph). Clifton et al.’s (2019) validation of the PI-99 established the robustness of tertiary primals especially, but legitimate questions remained about the newly identified higher-order primals, especially the 71-item *Good* subscale, which concerns not only the most general of environments (the world) but also the most general of evaluations (goodness)—and α is known to become a useless indicator for scales half as long (Cortina, 1993). Maybe tertiary primals are robust and can be

Table 1
Correlating Primals to Themselves as Measured by the PI-6, PI-18, and PI-99

Variable	PI-6	PI-18			
	Good	Good	Safe	Enticing	Alive
<i>n</i>	1,848	1,947	1,947	1,947	1,947
Same belief measured by the PI-99	.82*	.88*	.86*	.83*	.84*

Note. Likewise, PI-18 Good and PI-6 Good correlated at $r = .86$ ($n = 2,369$).

* $p < .0001$.

Table 2

Primals Measured by the PI-6, PI-18, and PI-99 Correlate Similarly to 14 Mental Health and Demographic Variables in the Wider Nomological Net

Variable	Good			Safe		Enticing		Alive	
	PI-99	PI-6	PI-18	PI-99	PI-18	PI-99	PI-18	PI-99	PI-18
Depression	-.54*	-.51*	-.49*	-.51*	-.44*	-.42*	-.38*	-.35*	-.34*
Life Satisfaction	.51*	.46*	.49*	.45*	.40*	.44*	.38*	.38*	.38*
Flourishing	.57*	.53*	.56*	.47*	.41*	.52*	.49*	.44*	.44*
Positive Emotion	.55*	.54*	.55*	.47*	.43*	.49*	.46*	.41*	.43*
Engagement	.44*	.39*	.44*	.33*	.28*	.46*	.45*	.27*	.29*
Relationships	.45*	.44*	.44*	.38*	.33*	.39*	.39*	.33*	.34*
Meaning	.55*	.50*	.53*	.44*	.38*	.50*	.45*	.49*	.47*
Accomplishment	.46*	.43*	.45*	.38*	.33*	.41*	.38*	.37*	.36*
Negative Emotion	-.48*	-.47*	-.46*	-.47*	-.43*	-.38*	-.39*	-.19*	-.24*
Loneliness	-.34*	-.31*	-.32*	-.31*	-.29*	-.29*	-.29*	-.15*	-.17*
Health	.36*	.36*	.37*	.34*	.33*	.29*	.28*	.22*	.26*
Female	-.03	-.01	-.08*	-.03	-.00	-.09*	-.10*	-.10*	-.11*
Age	.25*	.22*	.30*	.28*	.34*	.19*	.26*	-.08*	-.07*
Education	.19*	.17*	.26*	.19*	.29*	.15*	.24*	-.09*	-.09*

Note. n for all correlations ranged from 2,063 to 5,793 (Table S16). All comparisons involve samples overlapping <50%, indicating robustness. Scale administration was not concurrent, but on average weeks apart, which likely dampened Pearson's r , but unlikely matters for comparability purposes since all samples were similarly impacted.

* $p < .0001$.

measured with 4–5 items sprinkled across 95 other items, but *Good* world belief might express a mere artifact of dispositional optimism. However, the above close correspondence of three alternative *Good* subscales (i.e., parallel form reliability), increases confidence that primals exist, are measurable, and are being accurately measured—*Good* especially. The six-item PI-6 correlated with the PI-99's 71-item subscale at $r = .82$ and correlated similarly to all 14 mental health and demographic variables (r values were never $>.06$ different; $M_{\text{diff.}} = .03$). Depression, for example, correlated with PI-99 *Good* at $r = -.54$ and PI-6 *Good* almost the same at $r = -.51$. Some divergence is also due to mere attenuation: more internally reliable scales inevitably tend to correlate more with other variables and PI-99 *Good* is more internally reliable and indeed slightly more correlated to 10 of the 14 variables. In short, the new six-item *Good* scale appears essentially equivalent to one nearly 12 times longer.

Though self-report may be unavoidable when measuring primals, future research could further determine the robustness of primals by testing more dissimilar self-report approaches. For example, an ultra-brief single-item scale with 11-reponse options anchored by opposing adjectives (e.g., *very good* to *very bad*) may be sufficient to capture overall *Good* world belief. Indeed, that this sort of barebones approach is even plausible suggests much has been learned in recent years about the robustness of primal world beliefs.

As primals measurement progresses, we recommend the PI-6 and PI-18 for research and clinical use. For clinical purposes, the PI-6, PI-18, and PI-99 remain publicly available at www.AuthenticHappiness.org where individuals can identify their primals and how they differ from the general population. For research uses, a guide to administering the Primals Inventory and selecting among versions is available at <http://dx.doi.org/10.13140/RG.2.2.26716.72320>. When length allows, we recommend starting research efforts with the PI-99 because intuitions have been wrong about which primals are relevant (e.g., dangerous world belief appears uncorrelated to political conservatism, Clifton, 2020a). When length precludes the PI-99, the PI-18 is likely the best balance of brevity and

granularity. For many clinical purposes, however, the PI-6 may be the only version many researchers ever need to use.

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Appendix

Final Versions of the PI-6 and PI-18

PI-6

Instructions (please bold as noted)

Below are very general statements about the world—not the world we wish we lived in, but the actual world as it is now. Please share your sense of agreement or disagreement. When in doubt, go with what initially **feels true of the real world**. There are no wrong answers. There's no need to overthink.

Response Options (response score should not be visible to respondents)

Strongly Agree (5), *Agree* (4), *Slightly Agree* (3), *Slightly Disagree* (2), *Disagree* (1), *Strongly Disagree* (0)

Items in the Order Given in Study 3 and 4 (* indicates r-scored)

Most things in the world are good.

In life, there's way more beauty than ugliness.

Most things have a habit of getting worse.*

On the whole, the world is an uncomfortable and unpleasant place.*

Good things in the world outweigh the bad things.

Please mark this statement “slightly disagree.” (attention check optional)

On the whole, the world is a bad place.*

PI-18

Instructions and Response Options

Same as above

Items in the Order Given in Study 2 and 4 (*=r-scored, G = Good, S = Safe, E = Enticing, A = Alive)

In life, there's way more beauty than ugliness.^{GE}

It often feels like events are happening in order to help me in some way.^{GA}

I tend to see the world as pretty safe.^{GS}

What happens in the world is meant to happen.^{A only}

While some things are worth checking out or exploring further, most things probably aren't worth the effort.^{*GE}

Most things in life are kind of boring.^{*GE}

The world is an abundant place with tons and tons to offer.^{GE}

No matter where we are or what the topic might be, the world is fascinating.^{GE}

The world is a somewhat dull place where plenty of things are not that interesting.^{*GE}

On the whole, the world is a dangerous place.^{*GS}

Instead of being cooperative, the world is a cut-throat and competitive place.^{*GS}

Events seem to lack any cosmic or bigger purpose.^{*A only}

Most things have a habit of getting worse.^{*GS}

The universe needs me for something important.^{GA}

Most things in the world are good.^{GS}

Please mark this statement “slightly disagree.” (attention check optional)

Everything happens for a reason and on purpose.^{A only}

Most things and situations are harmless and totally safe.^{GS}

No matter where we are, incredible beauty is always around us.^{GE}

Detailed scale administration instructions are available here: <https://doi.org/10.13140/RG.2.2.26716.72320>

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