August 6th, 2024
University of Pennsylvania
Arts & Sciences
Positive Psychology Center
Primals Project
Solomon Labs, 3720 Walnut Street,
Room C2, Philadelphia PA 19104
http://ppc.sas.upenn.edu/

SHAREABLE ANNOUNCEMENT

FUNDING OPP: $5k honoraria for PhDs/PhD students who write literature reviews on self beliefs as examined in eight non-psych disciplines: Asian Studies, African Studies, Latin American Studies, Philosophy, Art History, Comparative Religion, Anthropology, and Literature. For details see (https://tinyurl.com/4ezzfnyu). Penn psychologist Dr. Clifton and his team recently mapped core beliefs about the world as part of a large effort, identifying 26 main beliefs (e.g., "The world is dangerous"; https://tinyurl.com/y4m62r7k), which is having a catalytic effect on world belief research. Now the team is adapting the methodology to map core beliefs about the self (e.g., "I am special") and seek interdisciplinary perspectives.

PURPOSE OF DOCUMENT

This memorandum is meant to describe general expectations for the eight non-psychology literature reviewers.

QUALIFICATIONS

Reviewers must hold a PhD or be currently enrolled in a PhD program in one of the eight specified fields and be selected by Dr. Clifton as the external reviewer for that field.

CONTACT

If interested in this opportunity or if you have questions, please reach out to Abby Wheeler, Research Manager for the Penn Primals Project (abbyw@sas.upenn.edu). Ms. Wheeler will ask you for your academic CV, to confirm PhD status, to describe the nature of your interest in the topic of self beliefs, to confirm interest in publishing on the topic, and to confirm confidence that you can adhere to the timeline as described below. Screened candidates will then meet with Dr. Clifton.

One of the most important insights of psychology is that beliefs—as in representations of what is real—have vast psychological consequences, influencing behavior, wellbeing, and much more (Crum & Clifton, 2024). However, many of the most debated and controversial beliefs in human history are ultimately not that psychologically influential. The most psychologically impactful beliefs are often a specific type of belief that Crum and Clifton call "Core Beliefs."

Core Beliefs can concern any topic—the world, the self, one's school, a political party, and so forth—but the quality being attributed to the topic of belief must meet three criteria: simple, adjectival, and goal-adjacent. The following language was pulled from Crum and Clifton's 2024 paper:

> **Simple**. Core Beliefs involve modifiers that are conceptually simple and readily understandable to most people, including children (e.g., *The world is abundant* vs. *The world is zero sum*). Though linguistic and conceptual simplicity are different things, these modifiers are usually one or two basic words that concern a single-faceted—thus elemental—concept. More complicated modifiers (e.g., *positive sum/zero sum*) can be broken down into separable, more elemental forms to identify Core Beliefs (e.g., *abundant/barren*, *cooperative/competitive*, *safe/dangerous, etc.*). Core Beliefs are often implied by colorful language but are not themselves metaphors, aphorisms, or figures of speech. Unlike many beliefs associated with worldview (e.g., *I have free will; The government should be run by the people*), Core Beliefs are not complex, nuanced, or doctrine-like (e.g., *The world is improvable*).

> **Adjectival**. Core Beliefs describe *what* a topic is like, typically using "is" (or other predicate adjective) followed by adjectives (or a short word or phrase being "used as an adjective"; dictionary.com definition of *adjectival*). These adjectival modifiers ascribe a quality to the topic perceived as global (a summary statement of the whole rather than a part), summative (a description of a central/average tendency, making Core Beliefs continuous latent variables not binary, and permitting numerous exceptions not totalistic claims), and not merely temporary (the topic's present nature, which is perceived as reasonably representative of past and future states).

> **Goal-adjacent**. All Core Beliefs involve modifiers that are not eventually relevant to a goal, but immediately adjacent to it (see Dweck's, 2017, goal-relevance). *Goal-adjacent* means that the simple (criteria 1) and adjectival (criteria 2) modifier associated with a topic *directly* relates to the goals, needs, and interests of the human perceiver without additional intermediate interpretation of meaning (criteria 3). For example, the belief that *the world is large* is both simple and adjectival and may *eventually* relate to a goal, but it does not directly concern a common goal—so what if the world is large? Why does it matter if the world is large? Does that mean the world is dangerous, or beautiful, or perhaps abundant? *The world is dangerous* has clear implications for any perceiver who values their own safety; *the world is beautiful* for those who value perceiving and appreciating beauty; and *the world is abundant* for those who value opportunity and resources. Because many human goals and capacities to achieve them are widespread, Core Beliefs will often prompt similar reactions across people who use those capacities (e.g., vigilantly scanning for threats). For example, if one sees a situation as barren (vs. abundant), one is often more interested in more exhaustive exploitation of opportunities found than searching for new ones (Charnov, 1976).

Yet despite their psychological importance, Core Belief research has been hampered by a lack of consensus about what the main Core Beliefs are when it comes to virtually all topics of belief. For example, beliefs about the world and the self are often considered the two most important

belief topics (e.g., Janoff-Bulman, 1989). However, if one were to poll 10 psychologists "What are the main beliefs about the world?" one would likely get 10 different answers.

Historically, psychologists have defined, measured, and studied Core Beliefs one at a time and in incommensurate ways, leading to both redundancy and gaps in the literature. This is a recipe for stagnation in science, what the famous philosopher and historian of science Thomas Kuhn (1962) would diagnose as "pre-normal science." In pre-normal science, scientists are unable to collectively advance a single common project because we disagree about, among many things, the nature and number of the main variables under study. In contrast, in normal science—such as chemistry *after* the naming and definition of elements—all scientists are able to build on each other's work because the phenomena of interest is now labeled, understood, and operationalized the same way by all who study it—chemists can study the same chemicals.

Whatever the field of science, Kuhn claims that scientists cannot study the same thing if there is no agreement on what it is and how to measure it. Such science is "pre-normal" science. Core Belief research has been—according to this diagnosis—bogged down in the swamp pre-normal science.

Fortunately, an alternative pathway seems to be emerging. From 2014 to 2019, Dr. Clifton led an effort at the University of Pennsylvania to identify Core Beliefs about the world (often called *primal world beliefs*) not based on researcher opinion but, as much as possible, empirical analysis. The project was unprecedented in scale, going to great lengths to capture as near as possible all distinct conceptual options for world beliefs before using statistical analysis to identify distinct patterns in large samples, suggesting different dimensions of world beliefs. The effort began by getting inputs from, for example, tens of thousands of tweets, hundreds of historical texts, dozens of focus groups, reviews of six literatures, and so forth. This eventually led to the identification of 234 items representing as nearly as possible all candidate world beliefs as expressed across inputs, and then responses to items were examined in a few thousand subjects, using factor analysis and other statistical methods to determine clustering. The final result was the identification of 26 world beliefs, many of which were new to psychologists, with most clustering into the beliefs that the world is on balance more Safe (versus dangerous), Enticing (versus dull), and Alive (versus mechanistic). These world beliefs are now being studied across psychology subdisciplines, operationalized the same way, whether the researcher studies depression, violent extremism, suicide, gratitude, or something else—this is a first for research on Core Beliefs about the world. The Penn Primals Project is currently aware of over 45 labs with active studies running. See this 5-minute video summarizing this world belief mapping effort.

Now the same team, funded by the Templeton Religion Trust, is seeking to adapt and improve their methodology in order to spend the next several years mapping *self* beliefs. In the first year (2024-2025 academic year), we will be identifying self beliefs from the following nine sources.

1. English Tweets: ≥100,000 Tweets beginning with phrases like "I am [adj.]" via natural language analysis and machine learning approaches used in GPT3, drawn from a database of >2.2 billion
2. Chinese "Tweets": ≥10,000 Tweets on Weibo (i.e., Chinese version of Twitter), drawn from a database of 5 million, analyzed similarly
3. Open-text Beliefs: 10,000 paragraph-length descriptions of self beliefs in the individual's own words, analyzed similarly
4. Most-used Adjectives: 1,000 most-used adjectives in contemporary American English, based on a 1-billion-word representative corpus of eight genres (fiction, spoken, etc.)
5. Most-used Self Adjectives: 1,000 most-used endings of the phrase "I am…", based on the largest corpus of books in the world (200 billion words)
6. Historical Texts: 415 historically influential texts (scriptures, treatises, novels, etc.)
7. Qualitative Interviews: 20 non-researcher interviews, maximizing demographic diversity
8. Expert Interviews: 20 interviews with belief researchers
9. **Literature Reviews**: 9 reviews in Psychology (which will be conducted by Clifton's team), as well as reviews that will be conducted by experts in each of the following respective fields: Philosophy, Art History, Literature, Comparative Religion, Anthropology, and Asian, African, and Latin American Studies

All inputs must be received at specific times, to facilitate analysis. After this first year, we will begin creating hundreds of items to represent, as near as possible, a comprehensive understanding of all self beliefs that inputs identified. These items will then be administered to several thousand subjects, with responses subjected to factor analysis and many other analyses across 11 empirical studies in subsequent years. Results will be published in one focal parent paper in 2028, with several papers being produced along the way in support, including the literature reviews.

<div align="center">DELIVERABLE</div>

Each of these eight reviewers will pre-identify a target peer-reviewed journal in their discipline and write their review with that journal in mind. Though details are alterable based on the requirements of the target journal, in general we expect a 5,000 to 10,000 word article, and can be as long as 15,000, including references. If identifying a target journal in one's one discipline proves difficult, one option is *Review of General Psychology*, which welcomes interdisciplinary submissions, especially on a topic like self beliefs, known to have extensive psychological

implications. We are in discussions with journal editors about potential special issues to publish some reviews, but those discussion are tentative and ongoing.

The primary goal of each review is to identify, as near as possible, <u>*all major*</u> Core Beliefs about the self (i.e., the simple, adjectival, goal-adjacent qualities that have been attributed to the self) that have been examined in the discipline throughout the history of said discipline. These beliefs must generally involve the attribution of a quality to the whole self, not a small part of the self (e.g., *I am competent* versus *I am competent at the violin*). For example, the Comparative Religion reviewer might discuss the beliefs that "I am loved" or "I am chosen" in Christian theology. Each studied self belief must be defined succinctly and clearly explained so Penn psychologists and other interdisciplinary readers can understand the meaning of the self belief and how many the review covers. To that end, all reviews must include something akin to the following sort of summative thesis statement, though word for word inclusion is far from necessary:

> *This review found that, in the history of our discipline, the following [X number] self beliefs have received serious scholarly attention—the beliefs that the self is x, y, and z— and [X number] of others are also worth mentioning—the beliefs the self is a, b, and c. Each of these beliefs will be defined and the scholarly discussions about them summarized.*

Each review can (and should) take various angles and adopt additional theses to facilitate contribution and publication in the respective field, as the reviewer wishes.

In addition, somewhere in the body of the text, there should also be a brief discussion of the broader project. This should mention Crum & Clifton's (2024) definition of Core Beliefs, including Core Beliefs about the domain general self (i.e., beliefs that ascribe simple, adjectival, and goal-adjacent qualities to the domain-general self); Clifton et al's (2019) former effort to map world beliefs; and the current broader psychology project to map self beliefs that is adapting that methodology (expected Clifton et al., 2028) to which the respective review is contributing. This discussion can be done briefly in passing or in more detail, per reviewers' wishes. Including as a footnote or author note is also acceptable.

Reviews can also discuss what the discipline says about how "the self" is defined or structured— perhaps philosophers and comparative religion scholars may be interested in commenting on that. However, this should not compromise the main contribution which is identifying the simple, adjectival, goal-adjacent qualities that have been ascribed to the self and discussed by scholars in your discipline. Likewise, we also welcome any theorized psychological ramifications of the identified self beliefs (e.g., proposed effects on behavior, mental health, or emotions) and well as criticisms of the broader project from the respective disciplinary perspective.

HONORARIA

Reviewers will receive an honorarium of $4,000 from the University of Pennsylvania after their rough draft is received before the due date. They will also receive an additional $1,000 after submission to their target peer reviewed journal.

TIMELINE

The reviews are due as solid rough drafts to Dr. Clifton by midnight either February 8th, 2025 or June 15th 2025 (four are due at each date; to be decided with Dr. Clifton). "Solid rough drafts" means that manuscripts are complete and readable (i.e., they contain all relevant content and are ready to be read and analyzed by psychologists as part of the larger project, so we can incorporate contributions from each respective discipline). However, it need not be fully polished or ready for submission or publication in every respect (e.g., citation formatting can be inconsistent). Evidence of submission to the target journal will be due by the end of 2025.

KEY REFERENCES

Clifton, J. D. W., Baker, J. D., Park, C. L., Yaden, D. B., Clifton, A. B. W., Terni, P., Miller, J. L., Zeng, G., Giorgi, S., Schwartz, H. A., & Seligman, M. E. P. (2019). Primal world beliefs. *Psychological Assessment*, *31*(1), 82–99.

Crum, A. J., & Clifton, J. D. W. (2024). *Core Beliefs* [Manuscript under review]. Department of Psychology, Stanford University.

Janoff-Bulman, R. (1989). Assumptive worlds and the stress of traumatic events: Applications of the schema construct. *Social Cognition, 7*(2), 113–136.

Kuhn, T. S. (1962). *The Structure of Scientific Revolutions*. The University of Chicago Press.