



Request for Proposals

Primals Research Awards

A Project of the University of Pennsylvania and the Templeton Religion Trust

Issue Date: March 3rd, 2021

SOCIAL MEDIA ANNOUNCEMENT

FUNDING OPP: UPenn is awarding \$250k and \$125k grants for psych research (clinical, social, etc.) on primal world beliefs (e.g., *the world is dangerous*) which builds on this article (<https://tinyurl.com/y4m62r7k>). LOIs due 9/26/21. Full details: <https://tinyurl.com/b3mma5c3>

FORMAL ANNOUNCEMENT

The University of Pennsylvania Positive Psychology Center, with support from the Templeton Religion Trust, is pleased to announce the *Primals Research Awards*. Our goal is to promote new empirical research exploring how primal world beliefs ('primals') are formed, maintained, change, or influence nontrivial outcomes or psychological processes. As recently introduced (Clifton et al., 2019; <https://tinyurl.com/y4m62r7k>), primals are basic perceptions of the general character of the world as a whole, such as *the world is dangerous* and *the world is interesting*, that correlate with many behaviors and wellbeing-related variables. We are awarding one \$250,000 award and two \$125,000 awards that will be administered over 24 months (July 1, 2022 to June 30, 2024) to Principal Investigators proposing to examine primals from any of the following eight disciplinary perspectives:

1. Clinical Psychology
2. Positive Psychology
3. Health Psychology
4. Organizational Psychology
5. Political Psychology
6. Personality Psychology
7. Social Psychology
8. Developmental Psychology

Project leaders are Dr. Jeremy Clifton and Dr. Martin Seligman. Advisors are Dr. Crystal Park and Dr. Alia Crum. Letters of Intent (2 pages max) are due Sept 26, 2021. See full details here: <https://tinyurl.com/b3mma5c3>

ELIGIBILITY

Principal Investigators must have a PhD and be in a contracted faculty position at an accredited college or university (exceptions will be considered on a case-by-case basis). The competition is international. Only one proposal will be accepted per Principal Investigator.

BACKGROUND INFORMATION ON PRIMAL WORLD BELIEFS

(parts heavily adapted from Clifton & Yaden, 2021)

Humans can make broad, often conflicting statements about the world's basic qualities. Heraclitus and Parmenides debated whether the world was defined by change. Buddhism teaches *life is suffering* (The 1st Noble Truth). Westley from *The Princess Bride* agrees: "Life is pain, Highness. Anyone who says differently is selling something." King Solomon teaches "Everything is meaningless." Salman Rushdie disagrees: "Nothing is without meaning." Mother Gothel tells Rapunzel "the outside world is dangerous" to keep Rapunzel in her tower. Rapunzel leaves anyway because she agrees with Coldplay ("We live in a beautiful world") and Calvin from *Calvin & Hobbes* ("There's treasure everywhere"). Today, world generalizations pepper social media (e.g., "The world is a shithole, overflowing with garbage and disease").

While many of these statements are likely mere expression, might some point to something deeper? For example, seeing a habitat as barren (vs. abundant) is thought to impact key forager decisions about when to leave a food patch in search of greener pastures—leaving too early or late can impact caloric intake and reproductive success (Charnov, 1976). But psychologists have not studied the belief that the world is abundant, nor many other world beliefs, usually preferring beliefs about topics *within* the world instead. For example, Beck (e.g., 1979) organized depression-inducing beliefs into three topics: the self, the self's future, and the self's world (the Cognitive Triad). Yet by intention and in practice, *world* here concerns persons in one's social environment (e.g., "My boss hates me"; personal communication, March 1, 2019). Janoff-Bulman (1989) suggested humans have world schemas, but the few beliefs she identified *a priori* overlap conceptually and empirically (e.g., Kaler, 2009). Koltko-Rivera's (2004) seminal review of worldview research discusses dozens of beliefs about freewill, God, and so forth, but only one about overall 'world nature' called *belief in a just world*.

Belief in a just world is normally distributed in the population. Individuals range from seeing the world as a fully "karmic" place where individuals get what they deserve, to a place where experiences are rarely deserved (Montada & Lerner, 1998; Nesbit et al., 2012). It is by far the most-studied world belief. Several hundred correlational (and some experimental) studies tie high *just world belief* to dozens of outcomes that fall into four buckets:

- Working harder, presumably because the world is expected to reward hard work (e.g., higher GDP, Furnham, 1993; higher grades, Dalbert & Stoeber, 2005)
- Being nicer, presumably because the world rewards kindness and playing by the rules (e.g., Correia & Dalbert, 2008)
- Being happy and successful, presumably because they worked harder, were nicer, and just contexts are pleasant (e.g., higher life satisfaction, Otto et al., 2009)
- Blaming the unfortunate such as the sick and rape victims, presumably because the world punishes fairly (e.g., Sakalli-Uğurlu et al., 2007).

In sum, *just world belief* is thought to have a cascading influence across personality and wellbeing domains (Bartholomaeus & Strelan, 2019). What about other world beliefs?

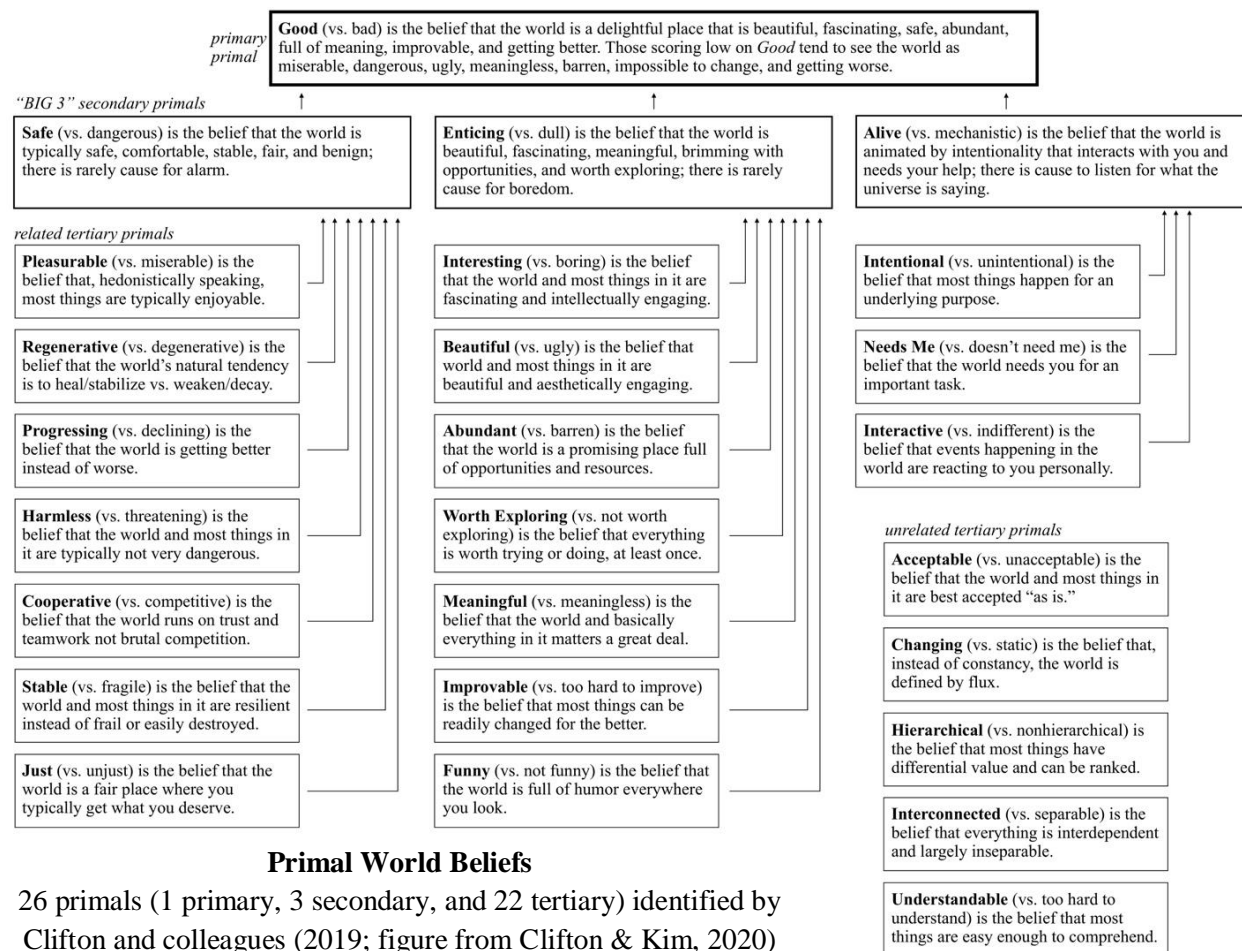
World beliefs are understudied, hard to study, yet important to study, seemingly all for the same reason: *the world* is a uniquely encompassing place. As recently argued (e.g., Clifton & Kim, 2020), understanding the behavior of a creature requires observing that creature in multiple

environments. Scientists observing a creature in one environment, such as a chimpanzee in a room, are *handicapped observers*, unable to distinguish context-specific behaviors (i.e., state-like reactions to particular environments, or at least perceptions of that environment) from organism-specific behaviors (i.e., trait-like expression of that creature's peculiar temperament). But what if a creature holds beliefs about the character of an environment that, for whatever reason, the creature never leaves? If so, such beliefs should still theoretically drive patterns of action, but now do so perpetually, with effects coterminous with the impact of organism-specific temperament. Furthermore, if that environment contained other creatures who also never left, but viewed said environment differently, all are *handicapped observers*, unable to distinguish context-specific from organism-specific behaviors. Finally, if creatures were unaware of their diverging beliefs—probable if beliefs are numerous and implicit—the stage is set for committing the fundamental attribution error on a massive scale. If this situation applies to humans, substantial variance in most major behaviors and outcomes—neuroticism, agreeableness, curiosity, extraversion, depression, to name but a few—could be powerfully shaped by the cascading influence of unidentified beliefs about the most psychologically salient characteristics of the one place humans never leave: the world.

Seeing this possibility, Clifton and colleagues (2019) made the first broad-based empirical effort to map world beliefs. They called them *primal world beliefs* ('primals') to distinguish simple, adjectival, goal-relevant beliefs (e.g., 'the world is dangerous') from metaphysical, incidental, or historical beliefs (e.g., 'the world is composed of 118 chemical elements'). Like other descriptive taxonomic efforts (e.g., identifying Big 5 traits), they had no particular DVs in mind or strong dimensionality expectations. The first step was to identify candidate primals through ten exploratory projects. For example, they analyzed >80,000 tweets beginning with "the world is"; the 840 most-frequently-used adjectives in American English; and >1,700 statements about the world gleaned from 385 of history's most influential texts (treatises, scriptures, novels, films, and speeches). This resulted in 234 items representing a reasonably exhaustive list of candidate primals which were subjected to three rounds of exploratory and confirmatory factor analyses.

Efforts revealed 26 hierarchically arranged dimensions (see below): 22 dimensions at the bottom (tertiary primals, including *just world belief*) with 17 forming three clusters (secondary primals), which in turn form a supercluster (the primary primal). The primary primal is overall belief in a *Good* world. The three secondary primals—essentially the main reasons to see the world as good—are *Safe* (vs. dangerous), *Enticing* (vs. dull), and *Alive* (vs. mechanistic)—with *Alive* being less central. All are normally distributed and not affect dependent. Test-retests suggest that, outside IQ, primals are among the most stable individual differences psychologists measure. Primals are generally orthogonal to demographics yet strongly correlated with many personality and well-being variables in a pattern consistent with two broad possibilities: a major source of human behavior has been overlooked and primals are symptoms (not causes) of these correlates. Clifton and colleagues (2019) conclude by specifying eight Topic Areas for further research.

The goal of the UPenn Primals Project is to foster efforts in below eight Topic Areas via research, collaborations, a conference, and the Primals Research Awards. In this contest, we will award a total of \$500,000 in the form of one \$250,000 grant and two \$125,000 grants to proposals in these Topic Areas that examine how primals are formed, maintained, change, or influence nontrivial outcomes or psychological processes.



EIGHT TOPIC AREAS

Topic Areas are listed below. Comments are meant to stimulate research ideas. Applicants can ignore these comments, choosing any direction they think would fulfill evaluation criteria.

1. Clinical Psychology: Depression, negative emotion, anxiety, stress, and attempted suicide correlate strongly with negative primals (Clifton et al., 2019; Clifton & Meindl, 2021). Given that cognitive behavioral therapy (CBT) is designed on the premise that similar beliefs influence these outcomes and can be changed (e.g., Beck et al., 1979), would CBT's effectiveness increase by addressing primals more directly? Testing a CBT-only condition versus a CBT+primals condition could be of immense value for clarifying primals' general psychological function and susceptibility to change. A simple stand-alone intervention might involve taking the Primals Inventory, discussing results in therapy, identifying primals to change, and teaching known disputational techniques. Do different primals interact with different pathologies, or is low *Good* the main risk factor for all? Can identifying spousal primals help marriage counseling efforts?

2. Positive Psychology: Primals correlate with many wellbeing-related variables (Clifton et al., 2019; Clifton & Meindl, 2021). Of many large relationships worth exploring, Clifton (2020a)

recently highlighted ten ranging from $r=.42$ to $r=.71$. These concern *Enticing* and gratitude, *Worth Exploring* and curiosity, *Regenerative* and optimism, *Safe* and trust, *Improvable* and self-efficacy, *Good* and positive emotion, *Enticing* and engagement, *Needs Me* and meaning, *Abundant* and life satisfaction, and *Good* and overall wellbeing. If such correlations are partly causal, can positive psychology interventions increase well-being by altering primals? Do some character strengths alter primals, or do primals precede certain strengths? Can we really expect individuals who see the world as a horrible place to sustainably adopt behaviors, like optimism and curiosity, which are known to increase well-being but make little sense in horrible places?

3. Health Psychology: Several primals like *Safe* are correlated with self-reported health (Clifton & Meindl, 2021), but are there objectively measurable physiological correlates, consequences, or precedents? Among many plausible health connections worth exploring, Clifton and health psychologist Dr. Eric Kim highlight the following five (2020). Could threat relevant primals increase fearful patterns of ambiguity interpretation stimulating (a) the cardiotoxic stress axis and (b) stress hormones known to up-regulate conserved transcriptional response to adversity (CTRA) gene expression? Both lead to increased inflammation and risk for many chronic conditions (e.g., heart disease, cancer). Do primals such as *Improvable* influence self-efficacy, which is known to impact health behaviors like diet and exercise? Do primals influence treatment expectations, which are known to impact treatment outcomes? Do primals such as *Cooperative* and *Regenerative* influence optimism and purpose, which are tied to longevity?

4. Organizational Psychology: Do primals contribute to success in some professions (Clifton & Meindl, 2021)? Do some jobs alter primals over time? Do teams with heterogeneous primals perform better? Does the belief that the world is *Cooperative*, *Safe*, and *Abundant* contribute to reciprocity styles? Workplace engagement might be especially related to *Enticing*; personal success to *Good*; and vocational callings to *Needs Me*. Are certain consumerist tendencies associated with certain primals? For example, are car ads that highlight safety features more appealing to those who see the world as dangerous?

5. Political Psychology: Can the primals framework help address political polarization by fostering dialogue between groups who see the world differently? A decades-old finding in political research has been that dangerous world belief correlates with (and is thought to increase) political conservatism, driving views on immigration, military spending, and so forth. However, it was not then known that dangerous world belief is multi-dimensional and the literature relied on a measure that overemphasizes dimensions in which conservatives see the world as dangerous (Clifton, 2020b). Using a more nuanced measure, dangerous world belief appears to be among primals *least* correlated with political ideology, with six primals explaining considerable variance, in a pattern that holds across political variables. An emerging theory now suggests the key difference between liberals and conservatives is the extent to which the world is seen not as dangerous but as an *inherently* hierarchical place where differences between all things—not just people—likely matter. Views on immigration and gender, for example, may stem not from threat-relevant beliefs but rather the assumption that differences in nationality and sex are probably important. Experimental evidence, however, is lacking.

6. Personality Psychology: Primals strongly correlate with personality traits. When primals change, do personality traits change? When is the opposite true? Do individuals rely on primals

to different extents when interpreting ambiguity? If so, how do differences arise and what are the results? How can we differentiate normative reactions to primals from dispositional tendencies that might be present regardless of one's primals? Is agreeableness or neuroticism influenced by primals like *Safe*; openness and extraversion by *Enticing*; and spirituality by *Alive*? When does causation go the other way? See Clifton et al. (2019; Table 2) and their supplement (notably pp. 310-323) for correlations between primals and personality traits (e.g., BIG 5).

7. Social Psychology: How do primals impact relationships? How do they spread? Are primals contagious, self-fulfilling, or self-reinforcing? Do primals spread in ways that help explain group differences? Are between-group differences negligible compared to within-group differences? What non-trivial behaviors do primals influence? What findings are not transferable from just world belief research and other belief literatures (e.g., Perry et al., 2013)? What factors lead some societies to be more homogenous in their primals than others? Where does religion fit?

8. Developmental Psychology: Where do primals come from? How do they develop? What is the role of genetics? Do babies have primals? Do certain beliefs about primals bolster negative primals, such as *seeing the world as dangerous keeps me safe* (Clifton, 2020b; Clifton & Meindl, 2021)? Strong proposals might employ quasi-experimental or prospective study designs to examine the impact of real-world events (e.g., test-retest efforts are now examining the impact of the COVID19 pandemic; e.g., Ludwig et al., 2021). Do negative events make primals more negative as Janoff-Bulman's (1989) Shattered Assumptions theory implies? Or are primals more akin to interpretive frameworks that often fail to reflect our backgrounds in a straightforward manner as Clifton (2020c) suggests? Some preliminary evidence suggests *Safe* shares little unique variance with exploratory behavior. If so, how are we to reconcile that with attachment theory? Many parents aim to teach negative primals to children (Clifton & Meindl, 2021). Do such teachings help children?

EVALUATION CRITERIA

Proposals will be scored on five criteria. Weightings give only a rough indication of priorities. Please note the Steering Committee reserves the right to reject any or all submissions, to waive any irregularities in submissions, and/or negotiate separately the terms and conditions of all or any part of submissions as determined to be in the best interest of the overall Primals Project.

- 1) **Significance of Contribution** (30%): Proposed research must aim to significantly contribute to our understanding of how primals—as defined and operationalized by Clifton and colleagues (2019)—are formed, maintained, change, or influence nontrivial outcomes or psychological processes.
- 2) **Quality of the Research** (25%): Projects should produce research publishable in top-tier scientific peer-reviewed journals. We value conceptual clarity, methodological excellence, and the incorporation of experimental, quasi-experimental, or prospective studies, DVs not measured by self-report, neuroscientific/biopsychological approaches, and fascinating/clever ideas.
- 3) **Catalytic Promise** (25%): Attractive proposals must lay a solid foundation for further work in the Topic Area.

- 4) **Quantity/Economy (15%):** Proposals must aim to produce at least one manuscript to be submitted to a top-tier journal by the close of the funding period (June 30, 2024). However, we prefer ambitious projects that economize resources so that two, three, four, or even five manuscripts are produced. Plans and target journals must be realistic.
- 5) **Topic Area Diversity (5%):** We prefer to fund no more than one proposal per topic area.

In addition to research, Awardee requirements include (a) submitting three progress reports, (b) hosting a half-day site-visit, (c) presenting findings to a qualifying conference/lab, and (d) joining us at the 2024 Primals Conference (pandemic allowing). This conference will be a 3-day, invitation-only, expenses-paid gathering in Philadelphia, tentatively scheduled for April, 2024. The goal is to bring together approximately 50 key researchers studying primals to discuss findings and consider future directions.

STEERING COMMITTEE

Primals Project leaders are Dr. Clifton and Dr. Seligman. The Primals Research Awards' 4-person Steering Committee includes Dr. Clifton (chair), Dr. Seligman, Dr. Park, and Dr. Crum. Dr. Carol Dweck is advisor-at-large. Other subject matter experts may be consulted.

Dr. Jeremy D. W. Clifton received a PhD in psychology from UPenn under Dr. Martin Seligman (advisor) and Dr. Angela Duckworth (committee chair). His primary research concerns primals with a secondary focus on measurement. Publications include the initial 2019 primals article featured in the Washington Post and a *Psychological Methods* piece on tradeoffs between validity and reliability. He is currently Senior Research Scientist and Primals Project Director at the UPenn Positive Psychology Center where he teaches a graduate course on research methods.

Dr. Martin E. P. Seligman is Zellerbach Family Professor of Psychology at UPenn and Director of the Positive Psychology Center. He is widely considered the founder of positive psychology, which has been his focus since championing it during his tenure as president of the APA in 1998. He has published over 300 scholarly articles and 30 books and is regarded as one of the most prominent intellectuals of modern times. He was senior author on the foundational primals paper.

Dr. Crystal L. Park at the University of Connecticut studies how specific beliefs influence well-being and ability to cope with life events. She is editor of the APA journal *Psychology of Religion and Spirituality*, a Fellow of the American Psychological Association and Society of Behavioral Medicine, former president of Division 36 of the APA (Psychology of Religion & Spirituality), and recipient of their Early Career Award, Mentoring Award, and William James Award. She was third author on the foundational primals paper.

Dr. Alia J. Crum received her BA from Harvard, her PhD from Yale, and is now Assistant Professor at Stanford. Her research focuses on how mindsets—the lenses through which information is perceived, organized, and interpreted—alter objective reality. Her groundbreaking experimental research has won several awards, including the Thomas Temple Hoopes Prize and the NIH New Innovator Award, and has been featured in major news outlets. She has been interested in and consulting on Clifton's primals research since 2014.

Dr. Carol S. Dweck has held professorships at Columbia, Harvard, and now Stanford and is considered by some to be one the most influential psychologists alive today. Her research focuses on how to foster success by influencing mindsets. Her bestselling book *Mindset* has been translated into more than 20 languages. She has been interested in and consulting on Clifton's primals research since 2013.

LETTER OF INTENT INSTRUCTIONS

Please email Letters of Intent (LOIs) to primalsresearchawards@gmail.com by 11:59PM EST Sunday, Sept. 26th, 2021. Attach the Principal Investigator's CV and the LOI (PDF, 1-inch margins, single spaced, Times New Roman, 12-point font, 2 pages max) with these elements:

- 1) *Title*: For internal purposes, create a formulaic 2-part title with "Primals & [relevant Topic Area]" followed by a project-specific subtitle (<25 words). For example:
 - "Primals & Developmental Psychology: Do Parents, Teachers, or Peers Most Influence the Primals of Children?"
 - "Primals & Politics: Does Effective Political Messaging Try to Change People's Primals or Appeal to Pre-existing Primals?"
- 2) *Principal Investigator* (no word limit): Name, contact info, and institution
- 3) *Big Idea* (<200 words): What is the big research question that animates your interest in primals research and that your project will help address? In general terms, how is your project structured to shed light on this question? Identify key literature if needed.
- 4) *Activities* (<500 words): Noting illuminating details, summarize intended activities, hypotheses, studies, methodologies, and manuscripts (with preliminary target journals) to be completed and submitted to journals within the 2-year award period. Mention key collaborators, if any.
- 5) *Simplified Budget* (no word limit): Provide a preliminary, ballpark sense of how funds might be used. List 1-8 estimated expenses in a 3-column table (expense, amount, and brief explanation). Add 3 rows for *direct costs* (expenses subtotal), *indirect costs* (overhead for your institution), and *total request* (direct and indirect costs). Indirect costs cannot exceed 15% of direct costs (i.e., \$16,304 for a \$125k award and \$32,609 for a \$250k award, leaving \$108,696 or \$217,391 for direct costs, respectively). Total requests should aim for either \$125,000 or \$250,000. Funds should not be used for major equipment purchases or 2024 Primals Conference travel expenses.
- 6) *Catalytic Promise* (<200 words): How does your project lay the groundwork for primals research in your Topic Area? What specific barriers/concerns are now in the way and how does your project address them? Many researchers are unfamiliar with primals. Is your project an ideal way to introduce the construct? If your Topic Area is dominated by certain researchers, journals, conferences, constructs, or methodologies, design your project to capitalize on these idiosyncrasies, and point that out to us.
- 7) *Researcher Fit* (<150 words): Noting key aspects of your CV, introduce us to who you are and your fitness to lead this project and communicate findings and the primals construct to researchers in your Topic Area.

LOIs cannot exceed 2 pages even if all element-specific word count limits are followed. The Steering Committee will advance select LOIs to the Full Proposal stage by Nov. 15th, 2021. Rejected LOIs will receive notification, but not feedback.

TIMELINE

2021	March 3	RFP Announced
	Sept 26	LOIs due
	Nov 15	Select LOIs invited to submit Full Proposals
2022	Jan 14	Full Proposals Due
	Feb 28	Awardees notified
	June	1 st Site Visit (dates TBD)
	July 1	Anticipated start date for all Awardees
2023	Feb 28	1 st Progress Report due
	April	Optional 2 nd Site Visit (dates TBD)
	Oct 31	2 nd Progress Report due
2024	April	Primals Conference (date TBD)
	June 30	Awards conclude, Final Reports due

CONTACT

Please email all inquiries to primalsresearchawards@gmail.com. Applicants are welcome to seek preliminary feedback on briefly-stated project ideas before LOI submission, though we may lack capacity to respond to all such requests. If interested in Clifton's *in press* or *submitted* manuscripts, please inquire.

REFERENCES

- Bartholomaeus, J., & Strelan, P. (2019). The adaptive, approach-oriented correlates of belief in a just world for the self: A review of the research. *Personality and Individual Differences*, 151, Article 109485. <https://doi.org/10.1016/j.paid.2019.06.028>
- Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive therapy of depression*. Guilford Press.
- Charnov, E. L. (1976). Optimal foraging: The marginal value theorem. *Theoretical Population Biology*, 9(2), 129–136. [https://doi.org/https://doi.org/10.1016/0040-5809\(76\)90040-X](https://doi.org/https://doi.org/10.1016/0040-5809(76)90040-X)
- Clifton, J. D. W. (2020a). Happy in a crummy world: Implications of primal world beliefs for increasing wellbeing through positive psychology interventions. *Journal of Positive Psychology*, 15(5), 691–695. <https://doi.org/10.1080/17439760.2020.1789703>
- Clifton, J. D. W. (2020b). *Leveraging the first comprehensive measure of primal world beliefs to further discussions in political, developmental, and positive psychology*. [Doctoral dissertation, University of Pennsylvania]. ScholarlyCommons. <https://repository.upenn.edu/dissertations/AAI28149825>
- Clifton, J. D. W. (2020c). Testing if primal world beliefs reflect experiences—Or at least some experiences identified ad hoc. *Frontiers in Psychology*, 11, 1145. <https://doi.org/10.3389/fpsyg.2020.01145>
- 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. <https://doi.org/10.1037/pas0000639>
- Clifton, J. D. W., & Kim, E. S. (2020). Healthy in a crummy world: Implications of primal world beliefs for health psychology. *Medical Hypotheses*, 135, Article 109463.

- <https://doi.org/10.1016/j.mehy.2019.109463>
- Clifton, J. D. W., & Meindl, P. (2021). *Parents intuit—incorrectly—that teaching their children that the world is a bad place is likely best for them*. [Manuscript submitted for publication]. Department of Psychology, University of Pennsylvania.
- Clifton, J. D. W., & Yaden, D. B. (2021). *Brief measures of the four highest-order primal world beliefs*. [Manuscript submitted for publication]. Department of Psychology, University of Pennsylvania.
- Correia, I., & Dalbert, C. (2008). School Bullying: Belief in a personal just world of bullies, victims, and defenders. *European Psychologist, 13*, 248–254. <https://doi.org/10.1027/1016-9040.13.4.248>
- Dalbert, C., & Stoeber, J. (2005). The belief in a just world and distress at school. *Social Psychology of Education, 8*(2), 123–135. <https://doi.org/10.1007/s11218-005-1835-2>
- Dzuka, J., & Dalbert, C. (2006). The belief in a just world and subjective well-being in old age. *Aging & Mental Health, 10*(5), 439–444. <https://doi.org/10.1080/13607860600637778>
- Furnham, A. (1993). Just world beliefs in twelve societies. *Journal of Social Psychology, 133*(3), 317–329. <https://doi.org/10.1080/00224545.1993.9712149>
- Janoff-Bulman, R. (1989). Assumptive worlds and the stress of traumatic events: Applications of the schema construct. *Social Cognition, 7*(2), 113–136. <https://doi.org/10.1521/soco.1989.7.2.113>
- Kaler, M. E. (2009). *The World Assumptions Questionnaire: Development of a measure of the assumptive world*. [Doctoral dissertation, University of Minnesota]. The University of Minnesota Digital Conservancy. <https://hdl.handle.net/11299/55049>
- Koltko-Rivera, M. E. (2004). The psychology of worldviews. *Review of General Psychology, 8*(1), 3–58. <https://doi.org/10.1037/1089-2680.8.1.3>
- Ludwig, V. U., Crone, D., Clifton, J. D. W., Schor, J., & Michael L. Platt. (2021). *Resilience of primal world beliefs during the COVID19 pandemic*. [Manuscript in preparation]. Department of Psychology, University of Pennsylvania.
- Montada, L., & Lerner, M. J. (1998). *Responses to victimizations and belief in a just world*. Plenum Press. <https://doi.org/10.1007/978-1-4757-6418-5>
- Nesbit, S. M., Blankenship, K. L., & Murray, R. A. (2012). The influence of just-world beliefs on driving anger and aggressive driving intentions. *Aggressive Behavior, 38*(5), 389–402. <https://doi.org/10.1002/ab.21439>
- Otto, K., Glaser, D., & Dalbert, C. (2009). Mental health, occupational trust, and quality of working life: Does belief in a just world matter? *Journal of Applied Social Psychology, 39*(6), 1288–1315. <https://doi.org/10.1111/j.1559-1816.2009.00482.x>
- Perry, R., Sibley, C. G., & Duckitt, J. (2013). Dangerous and competitive worldviews: A meta-analysis of their associations with Social Dominance Orientation and Right-Wing Authoritarianism. *Journal of Research in Personality, 47*(1), 116–127. <https://doi.org/10.1016/j.jrp.2012.10.004>
- Sakallı-Uğurlu, N., Yalçın, Z. S., & Glick, P. (2007). Ambivalent sexism, belief in a just world, and empathy as predictors of Turkish students' attitudes toward rape victims. *Sex Roles, 57*(11–12), 889–895. <https://doi.org/10.1007/s11199-007-9313-2>
- Xie, X., Liu, H., & Gan, Y. (2011). Belief in a just world when encountering the 5/12 Wenchuan Earthquake. *Environment and Behavior, 43*(4), 566–586. <https://doi.org/10.1177/0013916510363535>