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Cover Page Footnote

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Clusters of Individuals Experiences form a Continuum of Persistent Non-Symbolic Experiences in Adults

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Abstract: Persistent forms of nondual awareness, enlightenment, mystical experience, and so forth (Persistent Non-Symbolic Experience) have been reported since antiquity. Though sporadic research has been performed on these experiences, the scientific literature has yet to report a large-scale cognitive psychology study of this population. *Method:* Assessment of the subjective experience of 319 adult participants reporting persistent non-symbolic experience was undertaken using 6-12 hour semi-structured interviews and evaluated using grounded theory and thematic analysis. *Results:* Five core, consistent categories of change were uncovered: sense-of-self, cognition, affect, perception, and memory. Participants' reports formed phenomenological groups in which the types of change in each of these categories were consistent. Multiple groupings were uncovered that formed a range of composite experiences. The variety of these experiences and their underlying categories may inform the debate between constructivist, common core, and participatory theorists.

Keywords: non-symbolic consciousness, non-symbolic experience, nondual awareness, enlightenment, mystical experience, spirituality

Introduction

A category of human experience has been reported in the writings of philosophers and mystics since antiquity (Combs, 2003; Hanson, 1991; Stace, 1960). It goes by many names, including: *nondual awareness, enlightenment, mystical experience, transcendental experience, the peace that passeth understanding, unity consciousness, union with God*, and so forth (Levin & Steele, 2005; MacDonald, 2000; Thomas & Cooper, 1980).

These types of experiences, referred to collectively in this paper as Persistent Non-Symbolic Experience (PNSE), are often reported in spiritual and religious individuals; however, atheists and agnostics also report them (Newberg, d'Aquili, & Rause, 2001; Newberg & Waldman, 2006, 2009).

Virtually all information about these experiences comes from highly variable self-report data (McGinn, 1991; Stace, 1960). These types of experiences have traditionally

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been regarded as difficult to examine scientifically. Given the number and range of research tools available it seems increasingly possible to rigorously explore these types of psychological claims. The present research set out to determine testable claims and collect detailed first-person data in a way that sought to minimize the religious, cultural, and other contextual ways in which PNSE is often described. Questions were asked that related to: sense of self, cognition, affect, memory, and perception. The results suggested that similar psychological claims that clustered into distinct groupings were present across individuals self-reporting PNSE. These distinct groupings each appeared to offer a specific subjective flavor of the experience.

Defining the Phrase: Persistent Non-Symbolic Experience (PNSE)

It was initially difficult to gain cooperation from this research population. They generally believed they would not and could not be understood scientifically. Finding language that did not push them away during their initial introduction to the research program proved vital to their participation. Over the course of the research a variety of words and phrases were explored to find one that would be broadly accepted by potential participants.

The term *non-symbolic* was derived from Cook-Greuter's (2000) research involving ego development and transcendence. While she generally favored the word postsymbolic, in a 2000 paper she used a term related to non-symbolic, in the following context:

Eastern psychologies have often pointed to the nonsymbolically mediated, or immediate ways of knowing as the only kind of knowing that can lead to enlightenment or true insight into human nature. In fact, they consider our addiction to language-mediated, discursive thought as a major

hurdle in realizing the true or divine Self, or union with the Ground. (Cook-Greuter, p. 230)

In the field *non-symbolic* was the only term found that was widely and readily accepted by participants.

During most of the research period reported here, the phrases *persistent non-symbolic experience* and *persistent non-symbolic consciousness* were used interchangeably with participants. Most participants readily accepted either. Some participants objected strongly to one, while others objected just as strongly to the other. In recent years the word *experience* has been standardized on for academic presentation for simplicity, because what is represented by this research primarily concerns reports of participants' moment-to-moment way of experiencing the world.

The term *persistent* is used to denote a consistent, ongoing experience versus a temporary one. *Permanent* is not used because the research has shown that participants can exit their experience of PNSE, and this study involves living subjects. For the study, persistent is defined having continually experienced one or more forms of non-symbolic experience for at least 1 year.

Method

Participants

The data reported here comes from 319 participants who sat for in-depth interviews. These participants were drawn from individuals who met the following criteria: (a) self-reporting to experience a form of PNSE, whether religious, spiritual, or secular; and (b) participation in a community that provided validity to their claims. Stace's (1960) criteria regarding mysticism was initially used to qualify individuals for participation.

The participants were gathered using the snowball method. Initial participants were drawn from a broad literature and public documents search. A contact database was compiled, and potential participants were sent mail or email about the project with a request for participation. To locate additional potential participants, the initial individuals in our database were asked if they knew of others who, in their opinion, both met the criteria and might be interested in participating in the study.

Participants were asked to fill out an information form with basic demographic information as well as data about their religious or spiritual backgrounds and practices. The form also inquired about other behaviors, such as psychedelic drug use. Participants were free to answer only the questions they chose to. Because of this, not all participants responded to every question, and I include the word approximate in the data that follows.

The approximate average age of the 319 participants in this study was 54 (SD = 13, Median = 54, Minimum = 18, Maximum = 93). The approximate average age when non-symbolic experience became persistent was 42 (SD = 14, Median = 40, Minimum = 4, Maximum = 67). The approximate average number of years that a participant had reported persistent non-symbolic experience by the time of the study was 10 (SD = 13, Median = 7, Minimum = 1, Maximum = 65). Seventy-two percent of participants resided in the United States, with approximately an equal balance between its major geographic regions. Three percent resided in Canada, with the remainder in Europe (Germany, France, England, Scotland, Ireland, the Netherlands, Switzerland, and Italy) and Australia.

Seventy-eight percent of participants who reported their sex were male. Despite repeated attempts, it proved consistently difficult to recruit higher numbers of females who self-

reported PNSE. Diverse methodological attempts were made, including use of participant recruitment staff that included females who both did and did not self-report PNSE. Although they comprised about 40% of the potential participant database we compiled, fewer prospective female than male participants chose to participate in the study. They would often wish the project well, but comment that they were not attracted to participating in it. Despite this, they were as likely as men to provide referrals of other potential participants.

Of participants reporting their educational level, approximately 66% had at least a college degree. Only one did not graduate from the equivalent of high school. Most participants had been raised with one or more religious tradition, which included: Buddhism, Hinduism, Islam, Christianity, and Judaism. A small minority were raised as agnostic or atheist. Over half had practiced more than one religion or spiritual system prior to PNSE. At the time of the study, approximately half of the participants had no current religion.

The majority of participants had practiced a variety of forms of meditation or contemplative prayer, for anywhere from 3 days to 52 years prior to experiencing PNSE. Approximately 14% of participants had never meditated or practiced any form of centering or contemplative prayer. Approximately 52% of participants had used hallucinogenic drugs at some point; none reported these as the trigger that led to PNSE.

Data Collection

The first phase of data collection began by asking participants to fill out a broad range of well-established personality, developmental, state/trait, and lifestyle measures. These data did not show anything exceptional and have not been published. They revealed that individuals in this population experienced high

well-being, reduced incidence of depression, and less stress and anxiety. However, these are hardly groundbreaking findings given the thousands of years of well-known, similar claims from individuals within this population.

The next research phase was interview based. Over a 3-year period the author traveled to and met in person individually with participants. This resulted in the 319 interviews represented here. Interviews were in-depth, with most lasting 6 to 12 hours.

All interviews were recorded, initially using a Sony voice recorder and later Android-based cell phones in PCM format. Notes were only rarely taken during the interview process. If a participant wrote or drew something, the original was kept when possible. A digital photograph was also taken of the artifact. Interviews were conducted at the convenience of participants in a location they specified. The vast majority took place in participants' homes, but other locations included: restaurants, coffee shops, parks, universities, private clubs, and public libraries.

Questions were open-ended and centered on five primary domains: sense of self, cognition, affect, memory, and perception. The interview opened with a request for background information on the person and his or her experiences. Casual conversation followed for 30 to 60 minutes to allow time for sufficient rapport to develop. This time was also used to synchronize with the participant's language patterns and terminology. After this period, questions about cognition were asked. The initial questions were generally about something mentioned during the rapport-building period that was related to cognition.

The majority of participants mentioned a change in the amount of their narrative thoughts, so the first question almost always dealt with this. Sample initial questions included: "Did you detect a change in your

thoughts before and after the transition (an appropriately language-synchronized term would have been used here) in quantity, strength, or anything else? Were there more or less thoughts or did they seem unchanged, for example? Did they seem about the same or stronger or weaker?" When options like more or less were used, their presentation order was varied from interview to interview.

The next series of questions typically dealt with affect, followed by perception or memory. Sense of self responses naturally arose during this process in response to many of the questions asked. After cognition, affect, perception and memory had been initially inquired about, questions would iterate between the five question domains. The same questions would be presented in different ways and used in a variety of combinations to either ensure consistency and understanding, or to increase depth. Answers were often repeated back to participants in summarized form to verify understanding. A small percentage of participants were selected for second, and occasionally even third or fourth, interviews so that data collected at different times could be compared. These interviews followed essentially the same structure as the initial one.

During analysis, participants were sometimes contacted to clarify points or simply to perform validity checks on the researcher's interpretation and degree of understanding. Interviews were also shared with affiliated researchers to enable them to provide feedback for validity purposes. The interviews were fluid exchanges and often included long pauses while the participant thought about or waited for the answer. Even though a number of participants were used to talking about their experience and answering questions about it, they had not received questions like these and often had to contemplate their answers.

During the data collection period, participants could not have known other participants'

answers to these questions in advance. Although updates on the research were given at scientific conferences during this period, the answers to the questions asked were not published or publicly discussed anywhere to avoid biasing ongoing interview data collection. Most of the interview-based data collection was completed by the end of 2010.

Data Analysis

Analysis was conducted using a grounded theory approach (Strauss & Corbin, 1990). Constant comparison analysis (Glaser and Strauss, 1967) was performed on the qualitative interview data to refine the understanding of what was being expressed by the participants, and to attempt to increase the effectiveness of the interview process. Notes were made of impressions following each interview. Thematic analysis was performed on an ongoing basis to maximize the effectiveness and depth of subsequent interviews. Following the interview, the recording was listened to and notes were taken. These data were combined with the notes made after the meeting and any artifacts from the meeting itself for coding. Meaning-focused analysis was used both within each interview and between them (Fossey et al., 2002; Kvale & Brinkmann, 2008).

Discovery-focused analysis was also used to detect patterns between interviews. Pattern detection was attempted within the entire body of interviews as well as within and between subsets of the population. For example, between members of the same religious group or between data collected from different religious groups. The recording of each interview was reviewed in full twice. Portions of some were reviewed dozens of times.

Results and Discussion

The primary findings were that PNSE relates to fundamental changes in the perception of well-

being and the sense of self, and that, although there are commonalities, PNSE is not experienced the same way by everyone. There appeared to be a continuum of potential, related experiences. This continuum had distinct groupings, in which specific changes were seen in: sense of self, cognition, affect, perception, and memory. Some of these underlying changes are independent of spiritual or religious tradition, while others appear to be highly influenced by individual beliefs. It is possible that the range or degree of progression along the continuum is affected by the practices of a participant's spiritual or religious tradition.

The precise moment of the shift into PNSE was as varied as the people who reported them. There seemed to be no common subjective or objective trigger. Some participants realized this and were reluctant to share the specifics of their story out of concern that others would believe it as a precise path to follow.

The transitions to PNSE, like the participants themselves, reflected a cross-section of the human experience. For some PNSE arrived in a moment of prayer, meditation, or contemplation. For others when they had sunk to the deepest and darkest despair of their life. Still others entered PNSE during what most would consider normal day-to-day events. Examples collected during the research included, but are not limited to: looking out on a landscape, watching a bird land on a railing, driving down the road on the way home from work, playing with a cat, reaching for the soap during a shower, going for a walk, watching television, and getting dressed in the morning.

From the first handful of interviews, it was clear that there were similarities in the experiences being reported. Over time it became evident that each report could be grouped with other reports, and that multiple groups were present in the data. These were conceptually labeled and referred to as

locations in a conscious effort to avoid more loaded terms like *stages* or *levels*, which might imply that one group was superior to another. This article reports on the four most common locations, which are termed: *Location 1*, *Location 2*, *Location 3* and *Location 4*, although there are others. These four locations were the most common among the participants, and they seem to form a distinct grouping involving a related progression. Approximately 95% of participants fell within these locations.

A second grouping appears in Locations 5 through 9. A further grouping clearly begins at Location 10, however the location that grouping ends at is not clear. This research was not able to determine the precise number of locations, and limited space does not permit Location 5 and beyond to be extensively reported on here. Each location represents a specific way of experiencing one's sense of self and the external world that was described similarly by multiple participants when asked about aspects of their: sense of self, cognition, affect, perception, and memory.

It is important to note that we cannot be precise about the number of people in a location, because we did not know about the locations during much of the early data collection for the project. That data allowed knowledge of the locations to emerge over time. Accordingly, during that period of the research we did not always ask questions in a manner that would allow us to determine a participant's location. Because we did not know about the locations, we also did not know to try to elicit and track other information about them, such as whether a participant had experienced more than one location. From interviews after that point in the research, it was clear that most participants were in Location 1, followed by Location 2. Many fewer were in Location 3, still fewer in Location 4, and very few in Location 5 or later. This suggests that some locations may be more readily accessible than others.

Participants did not all report an initial transition into Location 1. They reported their initial shift as having occurred to Location 1, Location 2, Location 3 or Location 4. No participants reported an initial shift to Location 5 or beyond. The number of participants who reported directly shifting into each location declined with each higher numbered location. These reports are complicated by the participants who were in a specific religious tradition, as reported later in this article.

Many of the participants remained in the same location from their initial shift into PNSE, though the experience of it would generally deepen and become clearer over time. Other participants had transitioned to one or more other locations since entering PNSE. As the number of these reports increased it became clear that the locations were linearly ordered along a *continuum* of related, but often quite different, experiences. The labels Location 1, Location 2, and so on reflect this linear ordering. Transitions along the continuum could be either forward or backward.

As the overall picture was examined what emerged was a continuum that seemed to progress from normal waking consciousness toward Location 4 where participants reported no individualized sense of self, no self-related thoughts, an absence of certain types of affect, and no apparent sense of agency or ability to make a choice. Locations prior to this seemed to involve consistent changes toward this direction.

For those participants who did not remain in one location on the continuum, their spiritual practices and beliefs, and religious tradition seemed to influence how they evaluated their PNSE, the form they reported experiencing, and its progression. Some participants from religious and spiritual traditions that advocate specific forms of PNSE experienced other forms of PNSE prior to their transition into their tradition-approved version. These

typically went unnoticed or were viewed as developmental milestones on the path towards the recognized form of PNSE.

Based on participants' reports, the Christian tradition had a version of the continuum, especially pre-Bernadette Roberts (1993), that seemed to largely embody and end at approximately Location 3. This was also the case with Islam. Some of the participants' Hindu and Buddhist traditions went further, while others seemed to stop in about the same range as Christianity, or even earlier at Location 2. The techniques participants used and beliefs that they had previously absorbed seemed to affect which portions of the continuum they experienced, or at least what they chose to report. Some individuals who experienced multiple locations on the continuum stated they were able to consciously select the location they wanted to experience.

This transition to PNSE was typically pronounced and most participants noticed it immediately, even if initially they could not pinpoint exactly what had occurred. A minority of transitions were noticed a period of time after they had occurred. Surprisingly, this ranged from a few hours, to days, weeks, months, and even years. This was even the case for participants who were well educated in their tradition's view of PNSE, actively seeking it, and constantly examining their own experience for it. Participants who reported experiencing high levels of well-being prior to transition, and who transitioned to Location 1, were least likely to immediately notice their transition.

Those who were not involved in a religious or spiritual tradition that contextualized the transition to PNSE often felt that they might have acquired a mental disorder. This analysis was not based on mental or emotional distress. It was typically arrived at rationally, because the way they were experiencing reality was suddenly considerably different and, in most

cases, different from everyone they knew. Many of these participants sought professional mental health care, which no participant viewed as having been beneficial. Clinicians often told them their descriptions showed similarities to disassociation, depersonalization and derealization, except for the positive nature of the experience.

The transition to PNSE happened instantaneously in approximately 70% of participants. In the other approximately 30% it unfolded gradually, over periods that ranged from a few days to four months. These numbers may relate to a sample bias. A later research phase was able to induce the shift to PNSE in participants with a 4-month meditation and positive psychology protocol. While the information in the rest of this article remains similar for both populations, there was one key difference. In the later research phase, the numbers were reversed. Approximately 70% had a gradual transition while 30% reported an instantaneous one. Transitions between locations can also be instantaneous or gradual. When they are gradual, the traits associated with the next location often arrive with different timing, and in different orders across individuals. The transition to any location brought a substantial change in worldview and often shattered the sense of what was previously believed true regarding PNSE. This was even the case for transitions from one location to another.

The Core Elements of PNSE

To attempt to identify the most consistent PNSE elements reported by participants, the research primarily focused on changes in: sense of self, cognition, affect, memory and perception. These elements were used in an effort to get below individual beliefs and cultural differences, and with the hope of the data informing follow-on neuroscience research. This proved to be a highly effective

strategy that produced clear and consistent responses.

Participants across all locations reported that PNSE produced a deep sense of their life being fundamentally okay. Many described a previous moment-to-moment sense that something just was not quite right prior to their transition, which could also be thought of as a sense of fundamental or persistent discontentment. For some this was so subtle that they did not notice it until they transitioned. For others it was noticed and it affected their experience of life in various ways, including being related to feelings of: fear, anxiety, stress and worry. On the extreme end, this ongoing discontentment was often mentioned in relation to depression and existential despair.

The elimination of this sense of ongoing discontentment, and its replacement with a sense that things were fundamentally okay was often regarded as a major event for participants in their lives. Participants frequently mentioned that it dramatically affected their experience of life for the positive, and they felt it was a key reason for the reduction in their levels of fear, anxiety, stress, worry, and depression. Paradoxically, their life circumstances generally did not change or improve. This included things that were previously sources of stress, worry, and so on. The ability of these life circumstances to alter experience by affecting things like mood, was reported as reduced.

Prior to PNSE, some participants reported they were emotionally affected by things they had little to no control over such as political events, or other global issues such as concerns about global warming. These participants would often continue to report these types of concerns after PNSE, while at the same time feeling a deep sense that everything now seemed, somewhat paradoxically, fundamentally okay.

Participants also reported certainty that affected their worldview and became more established as a stable foundation for them over time. Those who experienced a shift from earlier locations on the continuum to later locations reported that former certainties and their associated experiences fell away. For example, Christian participants who underwent a transition from Location 3 to Location 4 lost their sense of Christ, God, and/or the Holy Spirit and experienced a profound change in the certainty they had previously derived from that ongoing experience. A new and deeper level of certainty often accompanied each shift.

This was also true for participants who were spiritual but did not come from a specific tradition. Often these participants reported their own kind of expanded, highly connective, or unified experience, though it did not generally involve a deity. Nonetheless, like Christians and others with specific traditions, these participants often reported feeling a sense of an all-pervasive energy, which was most often referred to as consciousness. They generally reported feeling this consciousness in everything, including inert matter, yet after the transition to Location 4 this sense was no longer with them. Curiously, its absence left them feeling even more certain about the truth of their experience.

Despite the vast and potentially unsettling shifts in sense of self, when asked, almost all participants stated that they would not prefer to go back to an earlier experience. They tended to see their current location as the ideal form of PNSE, even if they had argued differently in other locations and experiences. This was sometimes also the case when participants went forward on the continuum and then back to earlier locations. These participants were able to contextualize how they would have reported their experience of a later or earlier location as superior when in that location, and explain why their current location was nonetheless preferable.

Sense of self

One of the most universal changes in what participants reported related to their sense of self. They experienced a fundamental change from a highly individualized sense of self, which is common among the non-PNSE population, to something else. How that something else was reported often related to their religious or spiritual tradition(s), or lack thereof. For example, Buddhists often referred to a sense of spaciousness while Christians frequently spoke of experiencing a union with God, Jesus, or the Holy Spirit, depending on their sect. However, each experienced a transformation into a sense of self that seemed larger and less individuated than the one that was experienced previously. Often participants talked about feeling that they extended beyond their body, sometimes very far beyond it. One way to conceptualize this for purposes of discussion is as a change from a *localized* to *non-localized* sense of self.

There were nuances within how the sense of self was experienced at different locations along the continuum. In Location 1, the sense of self felt expanded, and often seemed more connected to everything in the immediate environment. Participants in this location still had an individuated sense of self that felt like a centralized locus for how they experienced the world.

In Location 2, a perceptual change occurred that resulted in participants reporting a sense of unity or oneness, of two different types. This has been described elsewhere as the perceptual unification of subject and object, or the absence of a subject/object split (Josipovic, 2019; Mills, Barsotti, Blackstone, Chopra, Josipovic, 2020; Stephens, 2018; Yaden, Haidt, Hood, Vago, & Newberg, 2017). Another way to conceptualize this is as the absence of a central locus of perception, or individuated self. This was often phrased by participants as there being no perception of a seer only seeing,

no perception of a hearer only hearing, and so on.

Some participants reported the experience that everything outside them was unified, but that they were still apart from it. Everything in their senses seemed to be just showing up, but even though there did not seem to be central locus of perception, they did not feel completely merged in to the seemingly unified perceptual field they were experiencing. Other participants reported feeling undifferentiated unification with their perceptual field.

Location 3 participants reported the experience of increasingly merging with either the divine or an all-pervasive consciousness. If they had been experiencing no centralized locus of self, there would be nothing that seemed separate to merge from or with. Thus, Location 3 involves a subject/object split, or individuated sense of self, though it is much more subtle than the highly individuated versions at Location 1 or that non-PNSE people experience.

In Location 4 an even more pronounced change occurred in sense of self; all aspects of having an individualized sense of self were reported as having vanished for these participants. Interestingly, this was also the case for some in Location 2. These participants sometimes stated that all experience of having an individualized self had vanished. Some of our longitudinal research subjects shifted from Location 2 to Location 4 during the research period, which allowed us to spot this tendency. Participants at Location 4 who had experienced Location 2 reported it as a more complete subject/object unification. They stated that prior to this location some aspects of an individualized sense of self remained, and that they could occasionally be drawn into them.

Although not the focus of this paper, it is worth noting that data from Location 5 and some other later locations suggest a similar pattern. Participants who transitioned from Location 4

to Location 5 report additional, formerly unseen, portions of their experience of individualized portions of their self going away as part of the transition process. This pattern has not been reported past Location 9.

Cognition

Another consistent report is a shift in the nature and quantity of thoughts. Virtually all of the participants discussed this as one of the first things they noticed upon initially experiencing PNSE. The nature and degree of the change related to a participant's location on the continuum, and ranged from a significant reduction in, to even complete absence of thoughts. A handful of individuals reported that the number of their thoughts greatly increased. Those who reported having thoughts, including increased thoughts, stated that they were far less influenced by them. Participants reported that for the most part thoughts just came and went within their subjective awareness, and were generally either devoid of or contained greatly reduced emotional content.

Almost immediately it became clear that participants were not referring to the disappearance of all types of thought. They remained able to use thought for problem solving and living day-to-day in the world. The reduction was primarily limited to self-related thoughts. Nevertheless, participants were experiencing a reduction in quantity of thoughts that was so significant that when they were asked to quantify the reduction, the answers nearly always fell within the 80-95% range. This high percentage may suggest why so many participants stated that all thought had fallen away.

When asked, participants did not say that they wished for their self-related thoughts to return to previous levels or to have the emotional charge returned. Participants generally reported that their problem-solving abilities, mental

capacity, and mental capability in general had increased, because it was not being crowded out or influenced by the missing thoughts. They would express the notion that thinking was now a much more finely tuned tool that had taken its appropriate place within their psychological architecture.

The amount of self-related thoughts as well as the percentage with emotional content continued to decrease as participants moved along the continuum. On the earlier parts of the continuum, participants could still be affected by thoughts and have their mind pulled into thought sequences similar to what other research has shown with mind wandering (Smallwood & Schooler, 2006). This was most pronounced in Location 1, diminished considerably further in Location 2, and was even more rare in Location 3. Participants reported noticing this process occurring relatively rapidly, and stated that this noticing led back to the experience of reduced self-related thoughts. Participants who had settled into Location 4 generally reported a complete absence of self-related thoughts.

Affect

Similar to thoughts, participants reported a significant reduction in both the range and overall experience of affect, which differed depending upon where they were on the continuum. Those at the early end of the continuum reported a range of positive and negative emotions, though participants who had deepened in these locations reported being much less subject to being affected by negative emotions as they arose. As participants moved from Location 1 to Location 3, the experience of positive emotion grew as a percentage of overall affective experience, and negative emotion occurred less frequently. At Location 3, participants reported their affective experience as highly positive. They described experiencing a single ongoing emotion that felt like a combination of impersonal or divine

compassion, joy, and love. Location 4 participants typically reported no experience of emotion, though they could report feelings such as frustration.

Participants who had been in Location 1 or Location 2 for years reported an increasingly pronounced change in the duration of their negative emotions. This often matched the duration cited as pertaining to the underlying physiological processes that create the sensation of affect in the body (Pert, 1999). It was as if emotional triggers were arising, but a key aspect of the participants psychological makeup that had formerly extended these experiences was missing.

Participants also reported a state of ongoing and deeper inner peace. Often, they gestured to their central upper chest, solar plexus, and/or central lower abdomen area when discussing it. This feeling could be temporarily reduced. This occurred most in Location 1, with the peaceful sensation reported as growing more durable further along the continuum. This reduction in peace usually occurred though external stimuli rather than internal thought processes. Often when dealing with deep trauma or other deep emotional triggers, such as intense family situations, participants in earlier locations described their feeling of peace being pushed down. They frequently accompanied the description with a gesture of their hands pushing down from their upper chest or solar plexus area to their lower abdomen.

Some participants left the situation that was causing this suppressed inner peace. This included getting divorced. Others chose to remain in the suppressing situation and stated that over a period of time the reaction extinguished. Reported time frames for extinguishing these types of deeper psychological triggers ranged from two weeks to seven years. The reports of extinguishing that extended beyond a few months often dealt with uncovering multiple layers of triggers

around a central core psychological issue or complex of related issues. However, some participants reported triggers that had not dissipated even though it had been many years, and in some cases decades. Surprisingly, this included participants in Location 4 though their experience of these triggers was generally of a faint and vague sensation in their body.

Perception

The PNSE changes that occur with perception are tied closely to cognition and affect. As with these other categories a continuum of change exists. The two primary changes relate to the degree of focus on the present moment versus the past or future, and how external events trigger internal experiences.

Participants reported a significant increase in their experience of and focus on what was happening in the present moment along with a dramatic reduction in thoughts about the past and future. The experience of the present moment accompanied reports of increased simultaneous multi-sensory experience. Participants reported experiencing the ongoing streams of information from multiple senses at the same time, such as hearing and smelling, and having these be integrated into a much deeper experience of the present moment.

On the early end of the continuum, participants had a greater experience of the present moment, but they were able to be pulled into thoughts involving the future and past more than participants at later locations. The further along the continuum participants went, the more reliably their experiences seemed to be rooted in the present moment. Participants in Location 4 reported a near total immersion in the present moment. Location 4 also included unusual perceptual effects for some participants, such as visual perception switching from 3D to 2D or a feeling of being stationary in the world even while moving, such as when walking or riding in a car. As this

occurred, they reported feeling like the world was moving through them.

Another distinct perceptual change that was reported by all participants related to how external events triggered internal reactions and emotional processes. Some interview questions related to external events that, prior to PNSE, were upsetting. A consistent example was that many male participants stated that it used to upset them when they were cut off dangerously in traffic. When asked how they reacted after the onset of PNSE, their answers depended upon where they were on the continuum. In Location 1 and 2, they could still have strong reactions to things that deeply triggered them. In the traffic example, they reported that it would not be uncommon for them to make an insulting gesture at the offending driver and accompany it with some swear words. For these participants, the primary difference was in what occurred immediately thereafter. With PNSE, in a matter of seconds (reported as 2 to 90 depending on the severity of the incident involved, and usually on the extreme low end of the range if not life-threatening) their emotional state would return to a baseline of high well-being, and they were no longer reactive or bothered by the incident. They stated that prior to PNSE they would have remained upset much longer in similar situations. Commenting on the difference, they typically speculated that the lack of an individualized sense of self seemed to affect whether or not, and how long, they held onto the perceived slights from these events.

Participants experiencing Location 4 provided further insight in to this phenomenon. An example occurred during a participant interview on a major college campus. It was one of the first warm days of the season and quite a few women on campus were lying out on the lawns in swimsuits. Knowing that the participant was heterosexual, I asked about his experience of all of these attractive young women. The participant responded that

occasionally he would notice his eyes orient to one of them, but nothing further would arise. When asked to speculate on why the orientation had occurred, he stated that he assumed it was a low-level hardcoded reproductive response in his nervous system.

Many participants in Location 2 were longtime meditators. For some of them, this seemed to extend their ability to report on the unfolding layers of these perceptual processes in detail. These individuals reported being able to begin to detect the difference between the orientation response (mentioned above) and the physical, cognitive, and affective processes that arose after it. They reported reaching a point where some events were reacted to by one or more of these layers while others were not. This was in contrast to participants in Location 1 who most commonly perceived all of these layers as one during an event, or at least as a greatly reduced number of discrete processes.

The ability of these perceptual processes to draw participants in to deeper action or reaction also depended upon continuum location. As they moved further along the continuum, participants were increasingly able to control their reactivity to external events. As this progression continued, this active control faded and became increasingly less necessary for two reasons. Initially this type of response would habituate and become automatic. Later, participants reported simply having fewer and fewer internal experiences arise in reaction to external events, similar to the orientating-only response mentioned previously.

Memory

All participants reported that they placed less importance on their personal memories, and their personal history in general. Both encoding and recall seemed to be affected depending upon where participants were located on the continuum. In Location 1, changes in encoding were generally not reported, though

participants stated that memories seemed to arise much less than previously. The number of memories that seemed to spontaneously arise were increasingly reduced the further a participant was along the continuum, similar to the reduction that occurred in self-related thought. Despite a sense among many participants that they were having memory issues, recall seemed accurate when participants were asked questions that related to their past.

As participants neared and entered Location 4, they frequently reported significant difficulty with recalling memories that related to their life history. They did not feel this way about facts, however they could around the details of the biographical moments surrounding the learning of those facts. They also reported that encoding for these types of memories seemed greatly reduced. Although this was their perception, it did not appear to be the case when talking to them. They were typically rich sources of information about their personal history and their degree of recall seemed indistinguishable from participants who were in earlier locations on the continuum.

These participants also felt that their short and mid-term memory was significantly affected. While I witnessed instances of participants being unable to remember details of conversations that had occurred only moments earlier, for the most part even participants who felt that they had this type of memory deficit seemed able to accurately recall recent parts of our conversation, things that happened earlier in the day, and so forth. It is possible that this historical information simply does not arise on its own for these individuals and thus does not seem to be as present. However, when asked specific questions the information does appear to be present.

There was a noticeable exception that seemed to be a genuine deficit. As early as Location 2, but getting quite severe by Location 4,

participants routinely reported that they were increasingly unable to remember things such as scheduled appointments, while still being able to remember events that were part of a routine. For example, they might consistently remember to pick their child up at school each day, but forget other types of appointments such as doctor visits. Often, they had adapted their routines to adjust for this change. Many would immediately write down scheduled events, items they needed to get at the store, and so forth on prominently displayed lists. When visiting their homes, I noticed that these lists could be found on: televisions, computer monitors, near toilets, on and next to doors, and so forth. It was clear that the lists were being placed in locations that the participants would look with at least some degree of regularity. As smart phones have become more widely adopted, many of these lists have migrated to scheduling apps that have reminders. Participants consistently stated that they would prefer to remain in PNSE even if going back to what they considered their prior normal experience of life meant that they would no longer have this type of deficit.

Additional Findings

In addition to the previous points on sense of self, cognition, affect, memory and perception, a range of additional findings emerged from the research. These often involved topics that have been either repeatedly expressed or hotly debated in the religious, spiritual, and other circles that have an interest in PNSE experiences. This section explores some of these findings.

Truth and Degree of Sensed Agency

In Location 4, participants reported no sense of agency. They reported that they did not feel they could take any action of their own, nor make any decisions. Reality was perceived as just unfolding, with doing and deciding simply happening. Nevertheless, many of these

participants were functioning in a range of demanding environments and performing well. One, for example, was a doctoral-level student at a major university. Another was a young college professor who was building a strong career. Still another was a seasoned public and private sector executive who served as a high-level consultant and on various institutional-level boards.

The change in sense of self and perception involving the subject/object split that occurs at Location 2 also seemed to bring with it a perceived change in agency. When asked about agency, Location 2 participants would say things like, “there is no doer.” Like Location 4 participants, they had a sense that things were just unfolding, and that they were not doing them. The longer a participant reported having been in Location 2, the greater the degree to which they experienced this.

Although it could reach the point where a Location 2 participant sounded like they were reporting the same thing as a Location 4 participant, this was not the case. Just as with the subject/object perceptual change, the change in agency was more comprehensive for Location 4 participants.

Participants at all locations reported a noetic sense that everything is fundamentally okay, regardless of current life circumstances. They often felt that they had been given deep truths and were unwilling to have these beliefs questioned. In Location 2, these feelings manifested as an intuitive sense that there was a correct choice or path in every situation. Many individuals in Location 2 were actively paying attention to and selecting the choice that felt correct regardless of whether it seemed to make logical sense or would be considered the socially acceptable thing to do.

Participants in Location 1 and Location 3 participants did not share this intuition. And,

both reported a sense of agency and felt they could make decisions and take actions.

Dogmatism: I’m in PNSE and You’re Not

PNSE was often accompanied by a tremendous sense of certainty that participants were experiencing a deeper or more true reality. This sense of internally experienced truth often led to a form of dogmatism. This was especially the case among participants who had only experienced one location on the continuum, or who were part of a group that officially sanctioned one or more locations. Due to the certainty they felt, these participants had difficulty accepting that individuals who described their experiences differently than what they experienced or considered acceptable were actually experiencing PNSE. Participants with dogmatic tendencies felt like theirs was the correct and true version of the experience. When asked to contrast their experience with the data collected from other participants, these participants would often definitively state that the research project was obviously having difficulty understanding what was and was not a valid PNSE experience.

Those who were knowledgeable of one or more spiritual system often had specific examples of where my analysis was failing. For example, when I asked one well known Theravada Buddhist teacher who at the time was in Location 2 about a Location 4 participant who reportedly had no affect or sense of agency, he strongly argued that the participant was stuck in a specific Jhana. Jhanas are temporary, precisely defined internal states that are often reached through meditation in this tradition. They are considered different from PNSE in his tradition. At the time, he was a well-known Jhana master who was able to enter these various states at will. His certainty was so strong that he entered into the Jhana he was referring to so that I could interview him in that state of consciousness and compare his responses to the other participant.

This Buddhist teacher was later introduced to the other participant, and for a time they formed a friendly relationship. Over the course of the research, participants were often networked in this way and the exchanges between them substantially increased the understanding of what each was attempting to share. In this case, the Buddhist teacher also had one of his most advanced students (also a participant in the study) shift on the continuum from a location that the teacher considered Enlightened to this location that he thought of as being stuck in a Jhana. The reports from this student as well as the other participant caused him to reconsider his position and accept the possibility that the location of no affect or agency could also be considered a valid form of PNSE. He later experienced it personally.

For participants who initially landed in Location 2 or later, their initial PNSE experience often brought with it such a deep sense of truth and certainty that it was hard for them to imagine it as anything but the correct version of the experience. However, when significant changes in the experience occurred, and the new experience felt as much or more certain and true than the previous experience, it led most participants to accept that there may be other shifts that can occur that also bring strong, and perhaps even greater, certainty with them. This allowed them to be more accepting not only of their own experiences but also of what others described to them.

Consistency of Personality

Despite an overwhelming change in how it felt to experience both themselves and the world after the onset of PNSE, the outward appearance of the participants changed very little. Generally speaking, they retained their previous mannerisms, hobbies, political ideology, food and clothing preferences, and so forth. If participants were environmentalists prior to PNSE, typically they remained so after

it. If they were not, they usually had not become one.

Many participants said that just after their transition to PNSE they were concerned that they would have to go to work and explain the difference in themselves to co-workers. They went on to be puzzled after a full day of work when no one seemed to notice anything different about them. It was also common for participants to never discuss the change that had occurred in them with their families and friends and to state that no one seemed to notice much of a difference. In short, although they had experienced radical internal transformation, externally people did not seem to take much notice of it, if any. Many of the participants did not have friends and family who were interested in PNSE. Participants who tried to discuss the change they were experiencing with those closest to them often encountered worry and concern. The most common result was for the participant to never bring it up again.

There seemed to be a clear distinction between a participant's personality and his or her underlying sense of sense of self. When the latter had shifted from the transition to PNSE, the former seems to be able to continue to function relatively unabated. There are exceptions. For example, the change in well-being in participants who were depressed prior to the onset of PNSE was spotted by those around them. Generally, however, the external changes were not significant enough to be detected, even by those closest to the participant.

Persistent but Not Permanent: The Loss of PNSE

In the course of reaching out to individuals self-reporting PNSE, the research project encountered 17 individuals who claimed that they had previously experienced PNSE. The length of persistence reported ranged from just

over 1 year to 23 years. One year was chosen for this research project as the minimum delineator of persistence.

Three of these 17 individuals reported loss of persistency due to brain injury or illness. Nine of the individuals reported losing PNSE during an extremely stressful time in their lives. The other five did not have any specific event or occurrence that explained it. Full interviews were not conducted with these individuals to ascertain where they were on the continuum at the time of PNSE loss, because they fell outside our participant parameters, however the communication with them suggested that they had been in a broad range of possible locations. This is a potentially rich area for future research, but one that was largely excluded from this inquiry so that the focus could be maintained on individuals with PNSE.

Most participants expressed the belief that PNSE could never be lost. They stated that it could be temporarily obscured, but that PNSE would always be present as the foundation of experience. Many of them believed this was the case for everyone, not just themselves. However, participants who personally knew someone who had lost PNSE were more likely to accept that it could happen to them, as were participants who had read or heard of accounts of this occurring. Participants whose personal experience of PNSE had not changed significantly on the continuum over time were the most likely to express the belief that PNSE was permanent and unshakable. When asked about accounts of those who had lost it, they would often state that individuals sharing those experiences were probably never fully experiencing PNSE.

Stress and PNSE

As mentioned, some individuals reported that stressful life events caused them to lose their PNSE. The first hint of this was a woman who stated she lost her PNSE of 5 years at a time

when her father had just died, her son was ill and unlikely to survive, and her husband of many years had left her. When asked about her internal state during this period, she stated that it was her usual equanimity until she lost the experience of PNSE. After several more of these types of reports the project began asking about life circumstances participants were kept in touch with, in part to look for stressful situations.

There were three times when it seemed like a participant's stress level might have been high enough to warrant a follow-up visit. The project's very first participant was one of these individuals. I had known this participant for over 20 years, since long before his transition to PNSE. He was a healthy, retired medical doctor in his 60's who was in Location 2.

Over the course of a week, his father died followed very rapidly by his sister. He was also going through a significant issue with one of his children. Over dinner I asked him about his internal state, which he reported as deeply peaceful and positive despite everything that was happening. Having known that the participant was bringing his longtime girlfriend, I had taken an associate researcher with me to the meeting to independently collect her observations. My fellow researcher isolated the participant's girlfriend at the bar and interviewed her about any signs of stress that the participant might be exhibiting. I casually asked the same questions to the participant as we continued our dinner conversation. Their answers could not have been more different. While the participant reported no stress, his partner had been observing many telltale signs: he was not sleeping well, his appetite was off, his mood was noticeably different, his muscles were much tenser than normal, his sex drive was reduced, his health was suffering, and so forth. None of these were being noted by the participant, even though he was professionally trained to identify them. The same was observed in the other two participants.

Summary of the Key Traits for Continuum Locations 1-4

Because information about the locations has been spread throughout other sections, this section provides short summaries that consolidate the relevant information concerning each location.

Location 1

Location 1 was primarily marked by the sense that on a deep level, things were fundamentally okay. Often this sense was in the background of participants experience, though they reported that it still had significant effects on their levels of fear, anxiety, stress, worry, and depression. Participants reported that even when psychologically triggered, they could look for and find the sense that at the deepest level, everything was okay.

Location 1 participants reported that their minds seemed much quieter because of a reduction in the quantity and/or affective strength of self-related thoughts, but there were still some emotionally charged thoughts that could pull them back into more active thought streams. They experienced a range of positive and negative affect, but their negative affect was more transient than prior to PNSE and did not have the power over them that it once did. Psychological conditioning could still trigger thought streams and stronger affect, but even these passed in a matter of seconds.

The overall change in their thoughts and affect left them with a feeling of deep inner peace and a sense of being more firmly rooted in the present moment. This peace generally felt more real than anything previously experienced and made their former experience of life seem less real by comparison. It could be temporarily suppressed by external psychological triggers, but would typically recover quickly once the stimulus was removed. Deeper psychological triggers, such as the death of a close family

member, could cause a longer suppression of inner peace that in some instances could last for several days. Location 1 participants also often reported that their sense of self seemed larger than, and to extend beyond, the physical body.

Location 2

Location 1 experiences deepened at Location 2. For example, Location 2 participants experienced an increased loss of self-related thoughts as well as a continued reduction in the ability of the thoughts that did remain to draw them in, when compared to Location 1. As they deepened in this location, the range of affect they experienced became increasingly positive, and the background sense that things were fundamentally okay increasingly came into the foreground.

The primary differentiating characteristic of Location 2 was the change in subject/object perception, and the resulting change in sense of self. Participants reported the absence of a central locus of perception, which they often referred to in terms of the self. They described it as feeling as though they had lost their individuated self, and having it replaced with a sense of perceptual oneness or unity. One way this was often phrased was as there being no seer only seeing, no hearer only hearing, and so on.

Participants in Location 2 were more likely to have a strong noetic sense that there was a correct decision or path to take when presented with choices. They expressed an inclination to make their decisions based on this sense, even when an option seemed to be less desirable, or even make no sense. Participants who progressed to this location from the previous one reported an increased sense of well-being.

Location 3

At Location 3, participants had shed their negative affect, and now experienced one dominant emotion that felt like a mixture of impersonal or divine compassion, joy, and love. The single remaining positive affect was a near constant experience and companion for Location 3 participants. The sense that things were fundamentally okay was now in the foreground of experience nearly all the time. Remaining traces of self-related thought had continued to fall away. Despite this, extremely strong psychological triggers, such as the death of a child, could produce temporary reductions in inner peace.

In Location 3, participants' experience of inner peace continued to deepen. They reported a feeling of connectedness and union with either their interpretation of the divine or of an all-pervasive consciousness. Participants at Location 3 described it as the pinnacle of human experience. It was common for them to state that they could not imagine the experience of being alive getting any better.

Participants at Location 3 often stated that the world was unable to be any other way than it currently was in the moment. While participants in other locations expressed this to some degree, it seemed to have grown very deep roots by this point. These participants generally did not place importance on choosing the correct decision or path like Location 2 participants. Participants who progressed to this point from the previous location reported an increased sense of well-being.

Location 4

Location 4 was quite different than the previous locations. Participants reported that all vestiges of self-related thought were reported were gone, as were experiences of emotion. The feeling of deep interconnectedness and union with the divine

or an all-pervasive consciousness found at Location 3 were also not reported. Participants reported having no sense of agency or ability to make decisions. They reported that it felt as if life was simply unfolding and they were watching the process happen.

The change in subject/object perception found at Location 2 seemed to return in an even deeper and more comprehensive form at this location. Participants who had experienced both Location 2 and Location 4 described a marked difference. The sense of a lost individuated self, and sense of perceptual oneness or unity from Location 2 was now described as a shallower form of a similar but more complete version experienced at Location 4. Paradoxically, this was also often described as feeling like a return to a more bodily centered form of experience.

Memory deficits were commonly reported in these participants, including the inability to recall scheduled events that were not regular and ongoing. Psychological triggers that were reported in this location involved fragments of negative emotions that were sometimes still felt but did not fully form. Participants who progressed to this location from one or more previous ones reported it as having a higher level of well-being.

Location 5+, the Further Reaches of Fundamental Wellbeing

Location 5+ refers to Location 5 or later on the continuum. As mentioned, all participants who fit these locations moved to Location 5 or later after having been at Location 4, or another earlier location. No participant reported a direct transition to Location 5 or later. All Location 5+ participants reported transitioning to this location from Location 4.

Some Location 5+ participants immediately recognized Location 4 as an intermediary location in their journey. Others believed they

had found the final location, and it took them a while to realize there may be additional road ahead. For the participants who moved beyond it, Location 4 was most frequently described as the point where a great deal of their individualized sense of self had been dissolved and disassembled, and a new level of opportunity created for how they experienced life.

Participants reported that Location 5 and later brought a degree of psychological reintegration beyond anything participants had previously experienced within PNSE. This seemed to even include very low-level brain processes such as the dissolution and reassembly of how the senses were perceived, and even the reintroduction of emotional-like experiences, for some. Each location from Location 5 through 9 generally involved at least one additional cycle of this type of deep disassembly and reintegration. These seemed to deal with scrubbing away the last vestiges of an individualized sense of self. Locations 5 through 9 seem to form a discrete set of locations, much as Locations 1 through 4 appear to. By the end of Location 9, when asked about their experience of sense of self, participants generally replied that it felt like only the universe was looking out their eyes.

Unlike the previous locations, transition to these later locations could be dangerous. The pieces of the remaining aspects of the participants' former sense of self that fell away in these later locations most often seemed old, deep, and very complexly embedded in the psyche. Some dealt with low-level processes such as how the senses come together to create experiences, and even fundamental bodily life support (breathing, heartbeat, etc.). Transitions in these later locations sometimes caused temporary glitches in how these core systems functioned within the body. Fortunately, most often these disruptions were short lived and things reformed quickly. However, a small minority of participants did report times when

they took longer and serious, even life threatening, problems resulted.

For example, some participants reported remaining unconscious, or had serious difficulties with the function of their bodies for periods of days, weeks, and even longer after they moved into one of these later locations. Most of these individuals were in supportive social systems that cared for them during these times. Some, however, were not and seemed to be alive mostly from a stroke of luck. For example, three had missed enough work that curious co-workers came looking for them, found them passed out on their living room floor, and called an ambulance.

It was clear that the decision to move into these later locations should not to be made lightly. It may be very important to have sufficient social support and monitoring. This can be an issue because at Location 4 and beyond there is a tendency to want to isolate in order to go deeper and further along the continuum.

The Fork in the Road at Location 5

Up to Location 4, the continuum appeared to be a single path. Things got more complicated at Location 5, and two different routes seemed to open up. The first, which will be referred to as the *Path of Freedom* (PoF), looks very much like a continuation and progression of Location 4. It involved continued lack of agency, emotion, divinity or an all-pervasive consciousness, and so on. The second, referred to here as the *Path of Humanity* (PoH), bears some resemblance to earlier locations. Generally speaking, the Path of Freedom was more common in Eastern research participants, especially monastics, and the Path of Humanity in Western ones.

One primary difference between the PoF and the PoH is that participants on the PoH described a reintegration of and return to some emotional experience. This is not the personal

emotion that was present prior to Location 3, or the composite emotional experience of Location 3. To some participants, it seemed very much like aspects of a limited range of traditional emotions, but impersonal. For others it was more deconstructed. For example, love was a common emotional experience for later location participants to report as having returned; however, when they were asked about how they experienced it, they often gave an answer that sounded nothing like what an average person would consider love. The subject of emotions from Location 4 on deserves its own article, and is too complex to comprehensively cover here. However, it is important to acknowledge because the return of some degree of emotionality led to participants reporting that they felt more human again, thus the name Path of Humanity – where as participants in Location 4 and later on the PoF typically reported that felt that they had gone beyond what it meant to be human.

Changes in the visual system were consistently reported by participants beginning around Location 5 and increased in intensity through Location 8. These were sometimes foreshadowed in earlier locations. For example, some Location 4 participants reported shifts to two-dimensional instead of three-dimensional vision, but this was very rare. The visual changes that began in Location 5 took many different forms. Some participants reported having greater night vision, even to the point that darkness appeared dim, but not actually dark. Relationships with light also changed. For example, some participants reported that perceptual objects appeared self- or inner-illuminated. Changes in visual meaning-making were reported at earlier locations, however the type and range of visual changes that occurred beginning at Location 5 appeared to have perceptual qualities.

Summary and Limitations

Although persistent forms of nondual awareness, enlightenment, mystical experience, and other forms of PNSE have been reported since antiquity, until now only sporadic research has been performed on these forms of lived experience. This study reports on the first large-scale cognitive psychology study of this population using semi-structured interviews evaluated using grounded theory and thematic analysis. Participants' reports formed multiple phenomenological groups in five core categories: sense-of-self, cognition, affect, perception, and memory. These groups formed a range of composite experiences that it was possible to visualize as a continuum of related experiences.

A great deal remains to be done in detailing and understanding this continuum of experiences. It is a rich area for future research and these results have some limitations. Many of the phenomenological claims made here can be evaluated further with standard psychological techniques. For example, well-being or emotional claims could be tested using well validated and standardized self-report measures. Though the largest yet, sample size and some aspects of diversity, such as sex, were limited. Additionally, all research was conducted in English, leading to the possibility of additional findings in non-English speaking populations.

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