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Unexpected Side Effects: A Cautionary Note on Challenges of Persistent Self-Transcendence

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Self-transcendence is an ambiguous construct without consensual meaning, yet many claim that it relates to, or even causes, beneficial outcomes. Few discuss its potential deleterious side effects, choosing to focus primarily on positive effects. However, anything with sufficient potency to heal may have unintended side effects, especially when it leads beyond a transitory state to becoming an enduring trait, such as when self-transcendence (ST) becomes persistent self-transcendence (PST). With PST, evidence is overviewed here, along with two illustrative case reports, that people can suffer emotional difficulties, motivation changes, loss of self-reflexivity, anhedonia, dissociation, depersonalization, memory problems, and other psychological concerns. This is discussed in terms of the disruption of the sense of self, which ordinarily serves as an integrative center for the person that conveys a sense of agency. Possible neurobiological and sociocultural effects of PST are also discussed, with a focus on its role on narrative memory as the construction of self-concept. Evidence has also been accumulating on problematic side effects of meditation and mindfulness, techniques commonly presented as paths to PST. Given that PST is often presented as a pinnacle of human development and spiritual attainment, seekers of PST, psychologists, and other mental health professionals are urged to become informed about its possible side effects, and view this phenomenon in a more balanced way.

Keywords: *self-transcendence, persistent self-transcendence, self-loss, harms of meditation, nonduality, awakening, hypoeegoic*

The adage that anything strong enough to heal is also strong enough to harm applies to self-transcendence (ST) as a temporary state, and perhaps especially to persistent self-transcendence (PST) as an enduring trait. There is ample evidence for the many pleasant and positive effects of ST, but there has been a lack of attention to ST's potential for negative effects, especially when it becomes PST. This in no way suggests a negation of the many potential benefits of either ST or PST, but simply urges those interested in experiencing ST or attaining PST to be mindful of their potential side effects.

While there are no agreed upon definitions for ST and PST, a few overlapping definitions for ST have been offered (e.g., Cloninger, 1993; Frankl, 1969; Reed, 2003). For the purposes of this article, ST is defined as a state of self-expansion toward an identification with a larger whole, or even the largest whole beyond any limitation; alternatively, it is a state of disidentification

in which a conventional sense of self falls away in favor of identification with the farther reaches of Friedman's (1983, 2018b) model of self-expansiveness. Within contemporary psychology, transcendence can be seen as related to a variety of "hypo-egoic" states such as flow and deindividuation (Leary et al., 2006). PST is simply the enduring trait form of ST, rather than the transient state form. The notion of a persisting trait of self-transcendence can be traced at least as far back as Maslow's description of "plateau," as opposed to "peak," experiences (Krippner, 1972). He described these as being of longer duration and containing a witnessing and unitive aspect of consciousness that alters the experience of reality. Other possible meanings of ST and PST should not be prematurely foreclosed, and future research may reveal many additional perspectives and nuances.

The transpersonal construct of self-expansiveness (Friedman, 1983, 2018b) was designed

to define and empirically measure the ways in which identity can expand to include aspects of the world beyond what is understood as the individual in contemporary Western culture (Friedman, 2002, 2018b). This model shows how the personal self-concept, a cognitive belief about the self as embodied in present space and time, can expand to include other aspects related to the person as going beyond the present in spatial and temporal ways, including identifying with what can be called transpersonal aspects (e.g., with all of humanity or even the entire cosmos). While the notion of self can expand to include all that exists within space and time, Friedman's model eschews the transcendence of nature, which he sees as purely metaphysical speculation; at the same time, it alludes to the potential for identifying with supernatural possibilities (e.g., with a divinity beyond any limitations of space-time). Self-expansiveness provides a cognitive framework for a transpersonal construct, but it remains intentionally silent about actual transcendence of the self, whether in the form of ST or PST.

Rather than only the cognitive transcendence of a conceptualization about the self, ST seems to reflect the impact of some sort of first-hand experience. That experience may contain elements of emotion, but can be seen as more than a simple emotional state due to its impact on the conceptualization of self. ST may require either a radical expansion or dissolution of the usual sense of self, at least as the word "self" is usually understood within contemporary psychology. Within this discipline, the self is mostly seen as limited to the "individual," although it may be understood in other (e.g., more collective) ways, such as in terms of relational belonging to a social group in which an individual as apart from the group might make little sense (Glover & Friedman, 2015). For example, the etymology of the English word "individual" stems from the root "divid" (as in "divide"), suggesting not only an indivisible unit or whole-integral organism, but also a perceived separation of the self from the rest of the world, and something that the word "transcendence" connotes being surpassed in some ways.

In this regard, those experiencing ST, and especially the more durable experience of PST, may find themselves culturally at odds within the

contemporary West, which holds individualism as a basic value, since the self is no longer experienced as an isolated monad separate from the rest of the world. Instead, the self is experienced both cognitively and affectively, and perhaps in other more profound ways (e.g., through unmediated-direct experience), as being inextricably embedded within the world.

ST and PST can be seen as akin to similar terms that are mostly but not exclusively secular, such as awakening, cosmic consciousness, enlightenment, nonduality, no-self, participatory consciousness, transcendent self-expansiveness, and unitive consciousness, to name just a few—while noting that none of these are particularly well defined either. They may also be roughly equated with many traditional religious and spiritual terms, such as *anattā*, *Buddhahood*, *Christ consciousness*, *fanaa*, *nirvikalpa*, *samadhi*, and *unio mystica*, to name just a few. While such comparisons may provide general context for understanding ST and PST, these sacred notions must not be de-contextualized or colonized to fit into the cultural frame of Western psychology.

That there is such a diversity of language in regard to transcendence suggests there is need for conceptual clarifications that are beyond the scope of this paper. Self-transcendence may even be a mystery best left undefined and maybe even unstated (e.g., see Friedman, 2018b). Others such as Taves (2020) have advocated for an expanded framework, including more sophisticated measures reflecting advances in research on how the sense of self can be altered by meditation and other related means designed to cultivate ego dissolution.

The Challenges Posed By PST

Certain religious and spiritual traditions posit PST as the ultimate attainment (e.g., Conze et al., 1954; Wade, 1996), as do some contemporary spiritual movements. However, there is a risk of insufficient recognition of PST's potential for harm, especially among some of those who extoll its virtues for their own benefit, such as teachers whose livelihoods rely on promoting ST and PST.

There is the additional challenge of finding appropriate mental health care should such challenges be encountered. For example, Greenwell

(2018) described “awakening,” a term used similarly to our use of PST, as a clear remembrance of being one with all existence in an overall positive way that involves a “continual alignment with truth ... plunging into the unknown mystery of transformation ... [and] rather than abandoning individual humanity, enlightenment is a lightening of it and includes compassion for the ways we become stuck in separateness” (p. 11). As part of this overall glowing depiction, however, Greenwell discussed the feeling of aloneness that often accompanies awakening and, if that leads to psychological problems, the difficulty in finding appropriate help, such as an understanding and sympathetic psychologist or counselor who would not improperly diagnose or treat the state.

Although many spiritual teachers depict PST, or its many similar terms, in predominantly positive ways, some embrace more nuanced approaches. Bonder (1998) warned that awakening is when the real work of purification begins. Weinman (2013) disputed the popular myth of awakening as being exclusively wonderful as a cosmic joke, because “there is no ego inside that is enjoying that awakened state” (p. 24). Adyashanti (2008) echoed this, describing awakening as involving a type of deconstruction, “unbecoming who we are not, about undeceiving ourselves” (p. 114) in a process of loss that often creates a sense of disorientation. As a scholar, Forman (2011) similarly wrote a detailed account of his personal challenges with awakening. For example, he described changes in his drive and motivation, and the issues it created in his marriage, as well as having to deal with the arising and releasing of traumatic memories.

Writings such as these, which often use the term awakening in a way similar to our use of PST, portray such experiences in overall positive terms, while also acknowledging that there are pitfalls. Stephens (2018) discussed the challenges of PST described by claimants and teachers, discrepancies between popular expectations of PST versus its lived experience as described by claimants, as well as the conflicting definitions, descriptions, and systems for understanding PST. An understanding of challenges associated with ST and PST is also familiar in spiritual traditions, where it may be known by names such

as “Zen sickness” or “kundalini emergency.” While such challenges are often mitigated in traditional cultures through the presence of teachers, guides, or communal support structures, or the delay of focused practice until a later stage of life (e.g., Matt, 1995), many in the contemporary West engage in intentional practices designed to cultivate ST or PST, such as meditation and use of psychedelic medicines, without the benefit of beliefs, rituals, community, or traditional religious support structures. Individuals may stumble upon PST through events such as a near-death experience (NDE), which itself can be the source of various adverse effects, such as depression, anxiety, anger, suicidal ideation, divorce due to radical changes in values, isolation, and other difficulties integrating the experience (Fracasso et al., 2013, p. 371). Awareness of the shadow side of PST is particularly necessary for therapists and others who incorporate interventions intended to inculcate PST, as these interventions have the potential for iatrogenic as well as salutogenic outcomes.

Yaden et al. (2017) viewed various forms of ST on a continuum, beginning with temporary experiences that are relatively mild, such as absorption during an interesting task. Then they moved to discussing more powerful experiences such as awe, typically an overwhelming but transient emotion, and more impactful peak experiences such as mystical realizations. At the upper end of the spectrum, they placed “no-self” experiences which, when enduring, are similar to what we are calling PST. In their descriptions of these, they emphasized that “an aspect of consciousness usually taken for granted—the sense of being a bounded, separate self—is conspicuously absent” (p. 1). Although their research found a high incidence of positive outcomes from ST, such as improved personal well-being and increased prosocial behavior -- and their research participants often described their ST as one of “life’s most meaningful moments” (p. 2), they also identified various challenges. They discussed two distinct features of “no-self” experiences: one annihilational, and one relational. They proposed that the annihilational component might indicate a reduction in self-salience, which could alleviate the excessive self-focus often associated with the “self-centered ruminations of depression ... [and

the] hyper self-awareness of anxiety ... by providing a temporary reprieve from the sense of one's self" (p. 8). However, if the "reprieve" from sense of self is persistent or even permanent, there may be consequences for such a loss of self.

Research on PST

Very little empirical research has been conducted on PST, by that or other names, especially on its possible harmful effects. Most that exists seems to support the bold claims of teachers and affirm the hopes of seekers that all its outcomes are benevolent, whereas only a few entertain potential challenges. Friedman (2018a) argued that "psychology as a science has not yet meaningfully engaged directly in exploring this topic" (p. 116), and no known scientific framework yet exists in which to cogently place such a discussion, although it is sorely needed, as Taves (2020) also advocated.

While there is no shortage of claims extolling the positive effects of PST (e.g., Prendergast, 2003; Taylor, 2017) – and some even theorize it being the pinnacle of psychological development (e.g., Cook-Greuter, 2000; Wade, 1996) – few have looked at its shadow. Martin's (2010) work is one that has explored this important topic. He found no simple relationship between level of egoic development and what he terms *persistent nonsymbolic experience* (PNSE), which he equated with PST. He administered the Washington University Sentence Completion Test (WUSCT), which purportedly measures ego development, and the Hood Mysticism Scale (M-Scale) to 36 people reporting PNSE. Even though the participants showed high scores on the M-Scale as would be expected, they exhibited a wide range of developmental levels as measured by the WUSCT, contradicting earlier claims, such as those from Butlein's (2005) study of 15 psychotherapists in which five reporting PNSE scored higher on the WUSCT than the other ten, that those with PST demonstrate high levels of ego development.

Similar to Butlein's (2005) findings, Costeines' (2009) nondual subjects found an absence of fear and worry, and Kilrea's (2013) subjects reported a felt-sense of the perfection of life, even within the seeming dysfunction of war, abuse, and violence; pervasive sense of okay-ness,

fulfillment, contentment, ease, subtle joy, relaxation, and rest; and no sense of needing to do anything in the usual sense. However, Costeines' (2009) and Kilrea's (2013) glowing reports of the myriad benefits supposedly associated with PST were based on samples of those who made their livelihood by teaching self-transcendence, and who could have had some motivated bias in their reporting.

Taylor (2013) interviewed twenty-five participants who identified as having experienced a spiritual awakening, again a concept similar to PST, and his thematic analysis revealed many positive outcomes, but he also mentioned finding that spiritual awakening was often reported as a dramatic and sudden shift occurring in "two different modes: one involving a sudden collapse of the ego or self-system, the other related to an explosive release of energy" (2018, p. 133). A significant number of the participants reported difficulties, including psychological disturbances, confusion, cognitive problems, difficulty dealing with practical tasks, and physical problems such as sleeplessness and ongoing pain.

Wade (2018) also found potential problems among those identified with PST, as she identified:

people whose awakening process cost relationships and jobs; led some to homelessness and incarceration in mental institutions; and debilitated others for years with kundalini disturbances ... [concluding that] doing non-duality "on your own" clearly involves hazards. Granted that religious communities and teachers have been corrupt, that some individuals involuntarily awaken without seeking, and that few communities or teachers know how to manage kundalini awakenings, individuals awakening without some of the traditional supportive structures religious institutions provided are likely to face many challenges. (p. 38)

Some studies have indicated that temporary or persistent harm is a genuine possibility, particularly if ego dissolution occurs alongside fear or other negative states that could arise in certain types of ST practices. Lindahl and Britton (2019) specifically studied loss of self in their study of Buddhist meditators who had challenging experiences, and

found that 72% (49/68) reported some change in sense of self; about half of those reporting this type of change also indicated related distress (55%; 27/49) or impairment (45%; 22/49). The researchers broke these results down into six different types of self-loss: change in narrative self (30%; 15/49), loss of sense of ownership (20%; 10/49), loss of sense of agency (30%; 15/49), change in sense of embodiment (33%; 16/49), change in self-other or self-world boundaries (69%; 34/49), and loss of sense of basic self (29%; 14/49). The category most strongly associated with distress was loss of sense of basic self (64%; 9/14); least associated with distress was the category of change in self/other or self/world boundaries (35%; 12/34). The category most strongly associated with impairment was change in narrative self (53%; 8/15), with a close second for loss of sense of basic self (50%; 7/14); least associated with impairment was change in self/other or self/world boundaries (24%; 8/34). They did indicate the potential for cultural mismatch between traditional Buddhist values and the largely Western practitioners they studied.

Lindahl and Britton (2019) pointed out that diminished sense of self is both a component of and risk factor for certain psychopathologies (Raballo et al., 2018) and may have contraindications (2019). While their sample size was modest, their results suggested that certain types of lessening of sense of self, such as loss of basic sense of self or change in narrative self, may be more likely associated with distress and impairment, while other types, such as changes in the sense of boundaries between self and others or self and the world exhibited much weaker links to distress and impairment. The researchers concluded that therapists treating those who have experienced difficulties from ST or PST would benefit from an understanding of the specific practices that person has been using and their particular contexts.

Martin (2019; Martin et al., 2021), who earns his livelihood helping people attain PST, surveyed numerous claimants and now collects data on his students. He developed a classification system of the clusters of traits that people have reported, or “locations” of what he termed PNSE. Location 4 in particular is described as a strong perceptual shift into nonduality that is accompanied by loss of

emotion, loss of a sense of agency, and emptiness, and can cause discomfort in people who were not expecting it, or a cultural mismatch in people whose spiritual expectations may not align with emptiness and lack of emotion, particularly those coming from a Christian perspective. For other students whose expectations align with the descriptions of enlightenment described in Buddhism or Advaita Vedanta (Collins, 1982; Lipner, 1986; Robinson & Johnson, 1982; Torwestern, 1985), the emptiness of Location 4 can be very desirable.

Martin (2019) reported that people claiming PNSE tend to have a baseline of wellbeing, but neither constant bliss nor freedom from suffering, nor consistently high levels of moral (e.g., prosocial) behavior. The core experiences include a dramatic reduction in self-referential thought, a deep background sense of fundamentally being “OK,” a unique quality of experiencing and ultimately extinguishing emotional reactions, reduction in self-reflexivity, changes in memory (perhaps due to decreased self-reference), and unexpected changes in interpersonal relationships. He mentioned that although some students experience challenges, including a reduction in motivation, generally their anxiety and depression became reduced and they tended to positively value their PST, so this is an anecdotal counterpoint to our cautionary note. The authors also note that ST or PST experiences that are initially difficult or adverse could become salutogenic once they are fully processed and understood, perhaps with the help of therapist or clinician who is well-informed about such experiences.

Seeking PST and the Harms of Meditation

There are indications that the seeking process itself can cause disruptions or difficulties for people. Scholars as far back as Underhill (1911/2002) have discussed the phenomenon known as the “dark night of the soul” among spiritual seekers. Hunt’s (2007) theoretical analysis suggested that the complete absence of a felt sense of spirituality, which he equated with both dark night of the soul and dissolution of self, can parallel schizophrenic and schizoaffective conditions. Hunt’s findings speculated indicate that anhedonia, or inability to

feel pleasure and other positive states, may be a necessary part of spiritual development.

Tzu, Bannerman, and McCallum's (2016) qualitative study investigated nine people who had consciously sought nonduality and reported being in that state for two years. They found several challenging themes during the subjects' transitions into nonduality, including "disillusionment with seeking, failurehood, and the seeker's hell; ego deconstruction and questioning of reality; experiences of intuitive knowing and gnosis; direct experiences of non-duality; recollection of childhood experiences of no-self and oneness; reassertion of the mind and ego, as well as fluctuations in and out of non-duality" (p. 291). This suggests that people can have difficulties in the process of getting to PST.

PST can be attained through numerous practices or pathways, as explained by Greenwell (2018). One of the most commonly discussed methods, of course, is meditation. Baarentsen et al. (2010), Josipovic (2013), Mills et al. (2017), and Newberg and Waldman (2018) are just some of the many who assert a connection between meditation and PST. Several strands of research shed light on potential challenges from PST that might stem from meditation.

Van Dam et al. (2017) discussed meditation-related effects and found challenges serious enough to warrant medical attention or additional treatment in more than 20 published studies, with documented instances of anxiety, depersonalization, mania, and psychosis. They did note that meditation safety guidelines, while preliminary, show progress toward assessing and promoting safety. Van Dam et al. (2017) detailed the numerous methodological problems in meditation research studies, and the actual effect sizes of meditation-based intervention show a range from zero to moderate efficacy. If PST states are found to result from meditation, then given the potential for side effects, especially among those with pre-existing psychological concerns, weighed against these modest benefits, perhaps the widespread "prescription" of meditation as a panacea for all may not be advisable.

Castillo's (1990) review of literature and interviews with six meditators found that meditation can cause depersonalization and derealization.

He did not conclude that such depersonalization was difficult or negative, but clinicians or affected persons may not agree. As a counterpoint, Deane et al. (2020) contrasted the type of depersonalization that causes suffering from the sought-after "selfless" experiences achieved via meditation. They proposed an "allostatic control model" (ACM) for the sense of self, with depersonalization understood as a loss of allostatic control, or loss of self-efficacy, versus meditative selflessness which results from the use of focused attention and improves domain general control of self. In other words, depersonalization involves a missing or weakened sense of control, whereas an adept meditator develops the ability to remain poised in the event of mind-wandering and other ruminations, resulting in a pleasant improved general control of self.

Van Dam et al. (2017) compared the many daunting challenges to studying states of mindfulness as being similar to those defining and studying "intelligence," and suggested measuring supporting mental faculties rather than attempting to directly measure variables like mindfulness. This parallels our concerns about studying transcendence, whether ST or PST, due to definitional ambiguities and the difficulty of researching such a complex, subjective state. Such difficulties can make it more challenging to pinpoint the cause of people's challenges, and can make it more difficult to describe those challenges to therapists and healthcare providers. The suggestions Van Dam et al. (2017) offer for the challenges of studying meditation deserve genuine consideration by ST and PST researchers.

Fortunately, considerable research on the downsides of meditation is now underway and could inform research on PST as well. Lindahl et al. (2019) discussed the adverse effects of meditation and called for detailed knowledge of both psychopathology and contemplative experiences in order to effectively disambiguate the two. Their insights are based on ongoing qualitative studies of 60 Buddhist practitioners and 30 Buddhist teachers. They discussed benign cognitive shifts associated with meditation, including increased mental stillness, heightened meta-cognition, and positive changes in worldview, but also mentioned concerning changes, as have many others (e.g.,

Kornfield, 1979; Pagis, 2010; Chen et al., 2011; Full et al., 2013). Some specific detrimental changes from meditation include impairments in executive functioning (Shapiro, 1992; Yorston, 2001) and delusional, irrational, and paranormal thought and beliefs (Walsh & Roche, 1979; Miller, 1993; VanderKooi, 1997; Chan-Ob & Boonyanaruthee, 1999; Lomas et al., 2015; Kaselionyte & Gumley, 2018).

Although meditation has become a popular technique for addressing numerous psychological problems, such as anxiety and depression, some have documented psychological problems arising from its practice (e.g., Kornfield, 1979; Shapiro, 1992; Miller, 1993; Lomas et al., 2015), and most pertinent to our concerns about PST, diminished affect (e.g., Kornfield, 1979). Several types of unpleasant somatic experiences have also been documented in research on meditation. Practitioners have reported changes in sleep patterns, appetite, pain, thermal sensitivity, energy level, involuntary movements, and sensations of pressure or tension (Britton et al., 2013; Chan-Ob & Boonyanaruthee, 1999; Chen et al., 2011; Kornfield, 1979; Lomas et al., 2015; Miller, 1993; Shapiro, 1992; VanderKooi, 1997; Yorston, 2001;). Britton et al. (2021) developed a measure called the Meditation Experiences Interview (MedEx-I) based on their previous work (Lindahl et al., 2017) and found that for people seeking treatment for affective problems, meditation in mindfulness-based practices produced distress and negative impacts at the same rate as other psychological treatments, such as psychotherapy. While all three forms of mindfulness training in this study produced a large effect size in improvement from baseline to post measures, and only a handful of people in their sample reported negative effects of any duration at all, it is important to mention that negative effects occurred because of the way mindfulness has been marketed as “harmless” to the general public.

Given the prevalence of Buddhist teachings around “no-self” (from the Pali term *anatta*) that places positive value on the selflessness and emptiness of persons (from Sanskrit terms *pudgala-nairātmya* and *pudgala-s'ūnyatā*), some of these changes in sense of self that meditators experience may be downplayed, or even celebrated in

subcultural communities practicing Buddhist or other meditation techniques within the contemporary West. These may, however, be quite problematic to those experiencing them, despite that they are normalized or even seen as signs of spiritual attainment within certain communities of practice. Changes in the sense of self that are involuntary, and difficult or impossible to reverse, can be both destabilizing and distressing, and almost everyone who meditates will experience negative emotions of some kind (Young, 2016). Within a Buddhist context, Compson (2018) pointed out that the interpretation of such changes and how to address them responsibly, including evaluating whether they are helpful or hurtful, requires sustained dialogue between Buddhist and secular perspectives on both meditation and cognition.

Similar concerns about the potential harms of mindfulness-based meditation practices have been brought to mainstream clinical psychology by Aizik-Reebs et al. (2021), Baer et al. (2019), Britton (2019), Britton et al. (2021), Dobkin et al. (2012), Farias (2022), Farias & Wikholm (2016), Goldberg et al. (2022), Hafenbrack et al. (2021), Hanley et al. (2016), Hanssen et al. (2021), Howard (2016), Lindahl et al. (2017, 2019), Lustyk et al. (2009), Schindler et al. (2019), Shonin et al. (2014), and Van Gordon et al. (2017). Cebolla et al. (2017) conducted an internet survey of 342 meditation practitioners, showing that 25.4% reported unwanted, albeit often transitory, effects, including depersonalization, negative emotions, and pain. One question pertaining to PST that we could not find addressed in the meditation research is whether and, if so, how often and under what circumstances these challenges might become persistent.

Finally, Vieten et al. (2018) explained that those who are enthusiastic about the benefits of meditation may be hesitant to examine adverse effects of meditation. This could be due to worry that it would restrict research or create fear or mistrust of their practice. This is also a concern, as we do not want to discourage people from exploring meditation, which could be an unfortunate side effect of us writing this cautionary note, but it is necessary for people to be appropriately informed of potentials for side effects related to ST and PST.

Two Case Reports

For a deeper conveyance of the types of problems that can occur with PST, following are two case reports from previous published work. Each case illustrates that phenomena consistent with descriptions of PST are not only positive, but also have their shadow side, particularly if they do not produce the effects one was taught to anticipate. These cases demonstrate that the language of PST is broad enough to include symptomology associated with disorders such as depersonalization,

First Case

Susanne Segal (1996) is an example of someone who had a profound awakening experience similar to what we would call PST, and one that was very psychologically upsetting to her. It occurred years after her Transcendental Meditation teacher training, but long after she had stopped meditating and while she was living an otherwise normal life. While waiting at a bus stop in Paris, she shared:

In one moment, everything that I had ever taken to be my personal self completely disappeared. It was just gone. As I waited for the bus to approach, something in consciousness was loosening somehow. And when it got there--I am sure it had nothing to do with the bus driving up--this reference point of an "I," a someone that everything was about and that everything that occurred in life was structured around, was gone. It was like a switch had been turned off. And it was never to turn on again. The first response that the mind had to this completely ungraspable experience was absolute terror, but that terror never changed the experience for a moment...never got the reference point back again (Segal, in Lumiere & Lumiere-Wins, 2003, p. 271).

Segal spent over ten years struggling with confusion and terror over having lost her core sense of self. She consulted with numerous psychotherapists, two of whom diagnosed with her depersonalization disorder, but the diagnosis did not fit what she was experiencing. She became a psychologist herself and wrote a book about her experience. Segal introduced her book as:

an account of the fourteen-year aftermath of a complete and irrevocable shattering of personal identity, a permanent switching off and falling away of everything I had called my individual self. This profound transformation has been described in many of the classic spiritual texts of the East. However, because of my cultural beliefs, upbringing, values, and fears, I encountered it in a particularly Western fashion. The experience was so different from anything I had previously imagined or conceived that its impact took more than a full decade to assimilate. During that time, I searched for written accounts of similar experiences that might help me through the most challenging and terrifying times of the mind's response to the totally ungraspable emptiness of "me-ness," but I found none. (p. xiv)

Her experience was difficult to process and understand because, as she wrote:

Every description I'd ever heard of spiritual development had included some mention of bliss, ecstasy, or joy. But there was no bliss in this experience of no-self. When the mind turned inward again and again to locate an experiencer, a self-concept, it repeatedly generated terror as it found only emptiness. (p. 74)

While Segal rejected the label of depersonalization, her presentation in many ways accords with that diagnosis. This raises the possibility that beliefs associated with her prior meditation practice may have caused her to reject an appropriate psychiatric diagnosis and instead attempt to understand her challenging condition through a spiritualized lens. While spiritual meaning-making can be helpful in coping with psychoemotional challenges, attempting to force the symptoms of depersonalization into a solely spiritual rubric of ego transcendence may represent problematic denial of a clinical condition. This makes it all the more important for clinicians to be aware of the potential for misdiagnosis, and the potential for co-occurrence of states such as PST and psychological problems warranting conventional treatment.

Second Case

Another unvarnished account of losing the sense of self can be found in the writings

of Bernadette Roberts (1993). Like Segal, her experience was unexpected, not particularly wanted, and was interpreted through a Western spiritual lens. Roberts became a Carmelite nun at the age of seventeen, and after eight and a half years of monastic life found the experience of unity with God that she had been yearning for. She left the cloister, earned a degree in philosophy, started a family, and founded a Montessori school. She led an otherwise normal life yet remained a devout contemplative Catholic who spent a lot of time in prayer. Her initial shift occurred during a nine-day process, and while she was walking home that ninth day,

I turned my gaze inward, and what I saw stopped me in my tracks. Instead of the usual unlocalized center of myself, there was nothing there, it was empty; and at the moment of seeing this there was a flood of quiet joy and I knew, finally I knew what was missing—it was my “self.” (p. 23)

The falling away of this self was not a passing experience, but an event that ushered in a whole new dimension of existence, an existence wherein there was no self anymore. This new dimension had first to be discovered, and adjusted to—a period of many years. (p. 167)

She experienced a period of disorientation, and even disappointment, because her feeling of union with the Divine was completely lost to the point where, after several months, her sense of Christ and God changed as well:

The search for the divine center or still-point—God within—revealed not one emptiness, but two, for when there is no self, there is no Other; without a personal self, there seems to be no personal God, for without a subject, there can be no object. The still-point or unitive center had vanished, taking with it every sense of life the self possessed—a self which could no longer be felt to exist. ...Yet, life was somewhere, because all else went on as usual. (p. 86–87)

Roberts (1993) was asked whether or not self-consciousness is necessary for thinking. Her answer was:

Ordinarily it never occurs to the mind how completely subjective it is, or how automatically and unconsciously every thought, word, and deed is filtered through a self-conscious mechanism. Thus, when the door upon self is closed, we seem at first to be in an unusual dimension; but because everything appears as usual—or because life goes on as before—we are at a loss to say what has changed. We know something is missing but cannot put a finger on it. When this happens, or when the subject can no longer see itself, it feels lost to itself and begins groping around for some object of mind to fill the old need. Yet of itself and by its own efforts the objectless mind is powerless to do this, nor will any other object come into view or arise to take its place. (p. 96)

As with the previous case, an experience aligning with the onset of depersonalization disorder occurred in a person with spiritual beliefs regarding the virtues of transcending self—and the symptoms were interpreted solely through a spiritualized lens. What is telling in both cases is that the experience was one of loss. Rather than a sense of self that grew in richness until it met and submerged into a surrounding vitality, as people often assume of PST, the experience was one of loss and emptiness. The risk here, once again, is that if depersonalization happens to an individual with spiritual beliefs about transcendence of self, symptoms of a potential clinical disorder could be reified into evidence of a spiritual transformation into PST. This is not meant to diminish or invalidate Roberts' (1993) interpretations about her experience, only to note the importance of thoughtful investigation from multiple perspectives for any individual case, particularly if distress is reported.

Neurobiological Effects of PST

Several research studies (Brefczynski-Lewis et al., 2007; Brewer et al., 2011; Fingelkurts et al., 2016; Garrison et al., 2015) have established that long-term meditation affects the default mode network (DMN) of the brain. The DMN is a set of regions across the brain that are active during autobiographical memory, thoughts about the future, and mind-wandering, and is involved in self-

referential thinking (i.e., when people think about themselves, or think about what others might be thinking about them; Kolb & Whishaw, 2015). If, as these studies indicate, long-term meditation reduces activity in the DMN, then it follows that meditation may reduce self-referential thought, thus providing a possible physical mechanism for bringing about a reduced sense of self.

However, it is crucial to specify which type of self-reference is considered desirable to transcend. A study by Farb et al. (2007) found that individuals newly-trained in mindfulness-based stress reduction differed from non-meditators in one specific type of self-referencing. While both groups showed activation of cortical midline and left-brain networks in *conceptual* self-referencing, neophyte meditators activated right-brain structures associated with sensory processing for *present-moment* self-referencing; non-meditators, by contrast, showed no change from cortical midline and left-brain networks for referencing self in the present moment. It is possible that some forms of meditation may reduce conceptual self-referencing through cultivation of non-conceptual (sensory) present-moment self-referencing, which may then gradually displace conceptual self-referencing. This approach to diminishment of self-reference would appear to result in an increase of sensory awareness of the presence of self, in stark contrast with symptoms of depersonalization,

One interesting neurobiological area in this regard is memory changes frequently reported by people presenting with PST (e.g., Martin, 2019). The concept of self is intrinsically tied to memory (Foster, 2009), so that loss of the sense of self may relate to memory loss. Individual identities are based in part upon personal narrative from memories. The connection between self and memory was explored by early scholars, such as the philosopher Hume (1739/2003), a theme later taken up by psychologist James (1890). Modern theorists (e.g., Addis & Tippet, 2008; Conway, 2005; Klein, 2010) have tackled this connection as well, and a considerable body of empirical research, such as using neuroimaging (Gillihan & Farah, 2005; Slotnick, 2017).

Given the many connections between loss of self and memory established by meditation research,

it is important for researchers to be aware that PST's impact on sense of self could also affect memory. Fortunately, EEG and fMRI research on meditative states and PST is underway (e.g., Hinterberger et al., 2014) and will hopefully shed light on such potential neurobiological effects.

Discussion

PST and similarly described traits, such as being awakened, have been presented as the highest stage of ego developmental and the pinnacle of human attainment. PST has also mostly been characterized as something overall positive, freeing people of negative emotions such as fear and anxiety, while providing a state of mental clarity, deep empathy, equanimity, wisdom, and just about every other good trait imaginable. Undeniably, however, there are reports of intense difficulties accompanying PST for some, especially with integrating this trait within sociocultural settings where there may not be frameworks for understanding them. Even if the result of PST is overall positive and desirable, the process of getting there and integrating such a transformative experience warrants careful guidance and a frank discussion of the challenges. Just as with pregnancy and childbirth, a sought-after outcome such as PST may be just as beautiful and worthwhile, but also just as messy and disruptive. An honest accounting of the side effects and risks need not deter people from meditating or seeking PST, just as an honest accounting of the side effects and risks of childbirth need not deter people from having children.

There is a risk in psychology, as with other scientific disciplines, to allow compelling narratives to displace data and assume the leading role in constructing science. For example, two articles on "loving kindness meditation" made extraordinary claims that simply were not supported by their data, namely that short-term practice of this type of meditation increases vagal tone—presumably a beneficial outcome (Kok et al., 2013)—and slows biological aging (Le Nguyen et al., 2019). Heathers et al. (2015) debunked the former claim, and Friedman et al. (2020) debunked the latter, resulting in corrections being published. Friedman et al. (2020) recently wrote about the importance of providing balance to

the psychological literature by working with editors to correct flawed research such as these and, in previous writings, he and his colleagues have called such problems examples of wishful thinking (Brown et al., 2013, 2014a) and romantic scientism (Brown et al., 2014b). Similarly, many studies of ST and PST that focus almost exclusively on its beneficial effects may reflect a wish for a simple solution to life's complex difficulties (e.g., the advice to "just meditate") and offer an inspirational narrative despite what data may demonstrate. This article is a "cautionary note" (e.g., Friedman, 1999) offered to balance the many writings lauding the worth of ST and PST, including those supported by research, that may impose a rosy lens that minimizes or ignores their potential detriments. At the same time, this cautionary note on ST and PST very much acknowledges the genuine impact and potency of these states. The motivation for this note was one author's personal experience of PST, lasting now five years, which began with nine months of distress, alterations in memory function, and reduction in empathy.

The authors are not discouraging use of methods meant to develop PST, such as meditation practices, but rather encouraging their informed and responsible use. Important ethical issues exist, such as the need for professionals working in this area to give adequate informed consent of possible iatrogenic effects of their interventions and the imperative for researchers to look for both benefits and detriments in order to be balanced. Also, even if ST impacts certain types of functioning, especially if it progresses to PST, both experiences could be healing and transformative if people could voluntarily manage to return to a more ordinary way of experiencing and functioning when required.

However, any mainstream psychological hesitations toward ST would likely be magnified toward PST claims. Similarly, possible harms inuring from PST are more concerning than harm from ST. By an admittedly rough analogy, it is one thing to enjoy getting "high" occasionally as in "using" a recreational drug, but it is quite another to try to function well while persistently "abusing" a recreational drug. The basis for these greater concerns about PST is that the sense arguably has an adaptive function in the thriving, and even very

survival, of human beings. To be more precise, Damasio (2000) proposed a three-part model of selfhood, of self in which all parts having an adaptive function. We speculate that one of these self-parts, the "protoself" (i.e., the pre-conscious collection of neural patterns), may be more essential, and less likely for a person to persistently transcend and still survive as an individual. However, transcendence of the "core consciousness" self-part (i.e., phenomenological experience of selfhood in the present moment) may lead to a reduced narrative-autobiographical self-concept, and this possibility leads to our concern. Dor-Ziderman et al. (2013) proposed a similar model of self, the third part of which they called "narrative self-awareness." Whatever it is called, the disruption or dissolution of this narrative self could cause problems for some, or at least necessitate support from an experienced provider, even if it leads to what others might appreciate as valuable or even supremely valuable. Stephens (2021) found, for example, significantly higher scores in depersonalization and dissociation, but also slightly higher scores in mental health, in people self-reporting two working definitions of PST: nonduality, defined as having the persistent sense of not being a separate self (persistent, rather than a temporary meditative or mystical experience); and spiritual awakening, defined as having had a persistent shift resulting in a knowing/sense of oneness, or nonseparation, with all of existence.

To eradicate the narrative self temporarily might be enjoyable, especially if one has developed an annoying self that is overly self-critical, but one must question what it is to live without an experience of self. Stated differently, without a sense of coherent identity and resulting agency, how can one adequately function? Selfhood may have evolved as part of *homo sapiens sapiens* by having some adaptive function and, just as having a liver and toes are useful to people, perhaps amputating the self does not always lead to desirable outcomes. Consequently, questioning the sovereignty of the self or re-envisioning self as a social construct may be beneficial in some ways, but its deconstruction might cause unintended side effects.

Then again, psychological research has been based disproportionately on Western, edu-

cated, industrialized, rich, and democratic (WEIRD; Henrich et al., 2010) samples and models, and has placed a high value on the development of a well-individuated, well-defined, and ethical self. For example, in the last stage of Erikson's (1959) psychosocial developmental model, an optimally developed person's life culminates with "ego integrity," whereas a person with a poorly developed ego would be fated to suffer in "despair." In this way, PST runs counter to the prevailing beliefs and goals of much of conventional psychology, and therefore likely would be seen not only as suspect, but also warranting a diagnosis of some type of psychopathology, as in the case of Segal (2009).

In some cultural traditions that value PST, a long-term meditator or contemplative would be part of a monastic community, or would have waited until retirement, e.g., *vanaprastha* in the Hindu tradition, to begin a serious meditation practice. Either option presents a safeguard of sorts, a solution to address potential negative side-effects of PST. Meditation and related practices have only been seriously studied for a few decades, so contemporary culture may not have sufficient fail-safes for potential negative consequences from PST. Yet some contemporary psychological research encourages practices that may produce this trait, such as meditation, based on incomplete knowledge, while mostly ignoring the potential for deleterious consequences, especially in persons with other psychological concerns. That the attainment of PST may be deleterious in some sociocultural contexts, such as those lacking adequate supports, but perhaps not in others requires a more nuanced approach than is usually taken when promoting practices intended to cultivate PST.

Future research on PST should investigate the possibility of adverse effects on psychosocial functioning (e.g., related to intrapersonal processes and interpersonal relationships), and neurobiological functioning (e.g., related to motivation and memory), which we have identified as concerns. In such studies, it would be useful to look not only at positive benefits, such as by administering well-being and similar scales, but also at signs of negative detriments, such as by administering psychological measures based on reported side effects. PST itself may or may not be measurable, but simple

outcome studies can be designed to account for the relative benefits versus detriments of what people are experiencing. Along with advances in neurobiological and memory approaches, more sophisticated sociocultural frameworks may be necessary to understand PST fully, both its positive and negative sides. Such holistic research would provide a richer and more nuanced picture than research whose agenda is primarily slanted toward a confirmatory bias, seeking and consequently finding only the benefits of PST.

Finally, exciting neurobiological advances are being explored that might allow innovative approaches to studying this area, such as through the use of EEG. Hopefully, future research on persons experiencing distress from ST or PST will provide more insight about these neurobiological relationships. If long-term meditation reduces activity in the DMN, but not in older areas of the brain such as the limbic system, which may have been activated by a negative experience or trauma, this could be a cause of distress or unhealthy behavior in PST. Perhaps those who have lost their sense of separate self, but may still display anxious, fearful, and otherwise unhealthy behaviors are experiencing internal inconsistency, a cognitive dissonance as some regions of the brain might have been altered while others were not, leading to incongruent brain processing. This leads to a number of questions. Even for psychologically healthy people with PST, if they were to have a lower-functioning DMN when their sympathetic nervous system gets activated, how would they cope? Are those reporting PST able to function in socially appropriate ways equivalent to the general population, or does PST impair their social functioning in some ways? Even though the affect and cognition of a separate self may be diminished with PST, and with it a sense of personal identity and agency, a physical body remains and functions separately from other physical bodies, has unique responsibilities, obligations, and identifiers, as well as experiences its own physical urges (i.e., one remains a separate being, even if experiencing being merged into a larger whole). There are many exciting unknowns about how the brain and behavior may be affected by long-term meditation, especially in concert with a loss of self. One of the

most promising approaches to understanding PST, including its possible deleterious effects, could be through brain imaging and other emerging technologies that might reveal what has previously been hidden.

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