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‘I Have This Feeling of Not Really Being Here’

Buddhist Meditation and Changes in Sense of Self

Abstract: *A change in sense of self is an outcome commonly associated with Buddhist meditation. However, the sense of self is construed in multiple ways, and which changes in self-related processing are expected, intended, or possible through meditation is not well understood. In a qualitative study of meditation-related challenges, six discrete changes in sense of self were reported by Buddhist meditators: change in narrative self, loss of sense of ownership, loss of sense of agency, change in sense of embodiment, change in self–other or self–world boundaries, and loss of sense of basic self. Changes in sense of self could be transient or enduring, positive or distressing, enhancing or impairing. These changes were also given varied appraisals, ranging from insights associated with Buddhist doctrines to psychopathologies such as depersonalization. In this study of practitioners reporting meditation-related challenges, more global changes in sense of self were associated with higher levels of impairment. These results have implications for both Buddhist meditation as well as mindfulness-based interventions.*

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1. Introduction

One of the distinguishing features of Buddhism is the emphasis placed on the critique of ‘self’ through key concepts such as the ‘not-self characteristic’ (Pāli. *anattā-lakkhaṇa*) and the ‘selflessness’ or ‘emptiness of persons’ (Skt. *pudgala-nairātmya*, *pudgala-śūnyatā*). As Buddhist traditions developed and were transmitted from South to Central and East Asia, significant meditative attainments — such as *satori* and *kenshō* — continued to be associated with changes in sense of self. However, the meaning of these terms, the way they are to be put into practice, and the nature of the anticipated experiential outcomes associated with them is not always clearly described.

Scholars have long pointed out that Buddhist discourses critiquing, refuting, or minimizing self are not univocal, but varied in meaning and significance across Buddhist texts and traditions (Gomez, 1999). Furthermore, research from the cognitive sciences has contended that the ‘sense of self’ is comprised of multiple processes — ranging from a conceptual, autobiographical sense of self to more basic, embodied processes (Gallagher, 2000). Given the pervasive rhetoric around changing (even to the extent of eradicating) one’s sense of self through Buddhist meditation, it is important to be specific about *which* senses of self are the target for transformation. Indeed, the intersection between Buddhism as a ‘religion of science’ and clinical psychology has led to a therapeutic reading of Buddhist doctrines and practices (McMahan, 2011), including those related to not-self. Such projects have typically assumed that a reduction in self-related processing — however this is understood — will result in increased mental health or well-being (Brown, 2015; Ryan and Rigby, 2015; Hadash *et al.*, 2016). However, changes in sense of self — especially at more basic levels of selfhood — have also been associated with psychopathologies including depersonalization and psychosis (Sass and Parnas, 2003; Parnas *et al.*, 2005; Cermolacce, Naudin and Parnas, 2007; Sierra and David, 2011, Nelson and Raballo, 2015). Thus, it is important to be precise about what Buddhists have in mind when valuing insights into not-self and experiential shifts in the sense of self.

2. Buddhist Literature and Scholarship on the Interpretation of Anattā

As one of the core teachings of the Buddha, the doctrine of *anattā* is central to Buddhist philosophy and Buddhist identity. Buddhists across lineages uphold as the hallmark of the tradition the insight that

'self' is *in some sense* an illusion, and one that perpetuates human suffering. One question that has concerned practitioners and scholars alike is precisely *in what sense* is the self an illusion? The term *anattā* is variously translated from Pāli into English as 'no-self', 'non-self', or 'not-self'. These translations communicate either a doctrinal or metaphysical critique of an entity ('no-self'), or, alternatively, a practical injunction for how to contemplate aspects of human experience (as 'non-self' or 'not-self'). Given the range of sources within the Pāli Canon, it is possible to find some sources in support of *anattā* as a basis for correct philosophical views (e.g. *Alagaddūpama Sutta* (MN22)), other sources rejecting metaphysical or ontological claims as a 'thicket of views' (e.g. *Sabbasava Sutta* (MN 2)), and others still that emphasize a more pragmatic reading (e.g. *Anattalakkhaṇa Sutta* (SN 59.22)).

A number of scholars have made significant contributions to our understanding of *anattā* in recent decades. Some contend that the critique of self represents a process of identity formation for early Buddhists in contradistinction to their Hindu contemporaries. For example, Nicholson (2014) has argued that the *anattā* doctrine functioned as a way for early Buddhists to establish a 'metaccontrast' to their Hindu competitors, thus differentiating their nascent movement (p. 741). Gethin (1998) summarizes a commonly held position that *anattā* 'is not an absolute denial of self as such, but a quite specific denial of self as an enduring substance' (p. 145). However, other scholars have challenged and nuanced the once dominant understanding that the concept primarily signals a metaphysical position.³ Hamilton (2000) and Shulman (2014) argue that the earliest strata of Buddhist teachings concerned the transformation of experience through contemplative practices and were not attempts at a systematic philosophy. Furthermore, Rudd (2015) contends that it is hard to see how eliminating the belief in an enduring self alone would lead to the transformative changes associated with liberation. Similarly, Collins

³ The doctrinal dimensions clearly remained important more broadly across Buddhist traditions, as many later texts and later philosophers grappled with clarifying *anattā* both in relationship to the development of new ideas within the Buddhist tradition as well as against counter-arguments from other traditions. Such developments will not be the focus of this paper and have been addressed at length elsewhere (e.g. Kapstein, 2001; Duerlinger, 2003; 2013; MacKenzie, 2008; Wynne, 2010; Ganeri, 2012; Eltschinger and Ratić, 2013). The scope of this paper also precludes discussion of how these issues in Indian Buddhism were taken up as Buddhist thought and practices were disseminated throughout Asia over the course of many centuries.

(1982) suggests that an understanding of *anattā* is complete only if we attend to the resultant ‘change in character’ that practical investigations are meant to bring about: the elimination of personality view (*sakkāya-ditthi*) and the more fundamental conceit ‘I am’ (*asmimāna*) (pp. 94, 114).

In the context of Buddhist contemplative practices, the practical applications of not-self entail investigating how notions of self-consciousness and personal identity arise in relation to the five aggregates (*khandha*) — in particular how these psychophysical processes, while themselves conditioned and ‘impersonal’, nevertheless give rise to a sense of ownership and control over experience, as well as the feeling or sense that ‘I am’ (Hamilton, 2000; Wynne, 2010; Shulman, 2014). An example of the practical approach can be found in the *Mahāpunnaṃ Sutta* (MN109). In this discourse, the Buddha first explains how personality view (*sakkāya-ditthi*) comes about and how it ends:

An untaught ordinary person... regards material form as self, or self as possessed of material form, or material form as in self, or self as in material form. [Repeats with respect to the aggregates of feeling, perception, mental formations, and consciousness.] This, monk, is how self-identity view comes about. (Ñānamoli and Bodhi, 1995, p. 889)

Personality view ceases to arise through not regarding the self to be identical to the psychophysical aggregates, possessing the aggregates, or located among the aggregates. Then, the Buddha is asked to explain how the more subtle processes of I-making, mine-making, and the conceit ‘I am’ are to be overcome.

One sees all material form as it actually is with proper wisdom thus: ‘This is not mine, this I am not, this is not my self.’ [Repeats with respect to the aggregates of feeling, perception, mental formations, and consciousness.] It is when one knows and sees thus that in regard to this body with its consciousness and all external signs there is no I-making, mine-making, or underlying tendency to conceit. (*ibid.*, 1995, p. 890)

Thus, the *Mahāpunnaṃ Sutta* presents a distinction between conceptual belief in self (personality view, *sakkāya-ditthi*), which is eliminated through contemplating how the self is neither identical to nor distinct from the five aggregates, and more fundamental processes of I-making (*ahamkāra*) and conceit (*asmimāna*), which are eradicated through contemplating the aggregates as ‘This is not mine, this I am not, this is not my self.’

Directives to challenge one's typical sense of ownership and sense of agency can also be found in Buddhaghosa's *Path of Purification* (*Visuddhimagga*), which enumerates forty ways in which the practitioner is to see and comprehend the psychophysical aggregates. These include: 'as *alien* (*parato*) because of inability to have mastery exercised over them'; 'as *void* (*suññato*), because devoid of the state of being an owner, abider, doer, experiencer, director'; and 'as *not-self* (*anattato*) because of having no owner' (Buddhaghosa, 1991, pp. 632–3). A similar approach is advocated in the *Anattalakkhana Sutta* (SN 59.22). In his commentary on this *sutta*, Mahāsi Sayādaw (2013) identifies four types of false selves: an abiding self as an entity in the living body (*nivāsī atta*); a controlling or directing self (*sāmi attā*); an agentive self (*kāraka attā*) that executes physical and mental acts; and an experiencing self (*vedakā attā*) believed to be the recipient of feelings. These are the processes that, in his view, are mistaken for the entity 'self'; to no longer mistake these processes as self is to overcome the conceit 'I am' (*asmimāna*) (Fink, 2012). Shulman (2014) makes the important point that in the *Anattalakkhana Sutta* the Buddha suggests that 'one should regard' or 'one should observe' (*datthabbam*) the aggregates as 'not-I' or 'not-my-self'. Thus, as Collins (2013) puts it, in the practical application of Buddhist doctrines such as *anattā*, 'the meditator successfully introjects the categories and sees the world and experience of it "through" them' (p. 115). The result is more than a conceptual shift in one's experience of the aggregates; in addition, this practice is expected to lead to an affective stance of becoming detached (*nibiddā*) and dispassionate (*virāga*) with respect to them (Shulman, 2014, p. 84).

In summary, scholarship on the interpretation of *anattā* has shown that this core Buddhist teaching has not only doctrinal but also practical applications. The practice of *anattā* described in the Pāli discourses and commentaries has the aim of diminishing identification with the aggregates, which results in an affective stance of detachment and mitigates against erroneous views about selfhood. However, given that first-person reports of meditative experiences are exceedingly rare in Buddhist literature, and that reconstructing 'experience' from Buddhist literature is fraught with methodological challenges (Sharf, 1998), other methods are needed to investigate the extent to which meditation practices result in these theoretical changes. Some recent research has already investigated changes in sense of boundaries reported by contemporary Buddhist meditators (Berkovich-Ohana *et al.*, 2013; Dor-Ziderman *et al.*, 2013; 2016; Ataria, 2015; Ataria, Dor-

Ziderman and Berkovich-Ohana, 2015). However, these studies did not assess the impact of these changes or how they were appraised, nor did they investigate changes in other senses of self. The next section of this paper will draw upon data from the Varieties of Contemplative Experience study to describe various changes in sense of self reported by contemporary Buddhist meditators in the West, the impact of those experiences, as well as how such experiences are appraised.

3. Changes in Sense of Self in the Varieties of Contemplative Experience Study

The Varieties of Contemplative Experience (VCE) research project is a mixed-methods study of Western Buddhist meditation practitioners and teachers from Theravāda, Zen, and Tibetan lineages (Lindahl *et al.*, 2017). Because the range of possible effects associated with meditation remains under-studied in current research, the VCE project deliberately recruited practitioners who could provide qualitative reports on significant experiences that were unexpected, challenging, difficult, distressing, and/or functionally impairing. The project further investigated how practitioners and teachers alike interpret and respond to such experiences.⁴ Although subjects had to be able to report about meditation-related challenges to be included in the VCE study, not all challenges pertained to the sense of self. For some practitioners, changes in sense of self were reported as positive experiences and normative insights, while their primary challenges were with respect to changes in the somatic, perceptual, cognitive, affective, conative, or social domains. For others, changes in sense of self featured prominently in the reports of their meditation-related challenges. Given the semi-structured nature of the interview, changes in sense of self were not directly queried; the data presented below illustrate the various ways in which practitioners voluntarily described and interpreted changes in their sense of self in the broader context of an interview on meditation-related challenges.

The sense of self domain of the VCE study consists of six categories: change in narrative self; loss of sense of ownership; loss of sense of agency; change in sense of embodiment; change in self–other

⁴ For a comprehensive overview of the study methods and results, see Lindahl *et al.* (2017).

or self–world boundaries; loss of sense of basic self. These categories were operationalized through a combination of data-driven coding derived from practitioner reports and theory-driven coding based upon how discrete senses of self are differentiated in phenomenology and the cognitive sciences.⁵ The next sections will introduce each of the changes in sense of self and will provide examples from the VCE study. Subsequent sections will summarize the overall patterns in the data set, discuss predictors of impacts, and comment on the range of appraisals.

3.1. Change in narrative self

The ‘narrative self’ is the most conceptual, autobiographical, and temporally extended sense of self (Gallagher, 2000; McAdams 2011). This category was operationalized to capture a change in one’s conception of personal identity or a change in the content of one’s ‘story of me’. This could include previously implicit aspects of the ‘story of me’ becoming apparent, generally leading to a questioning, abandoning, or revision of that story. It could also include a disintegration or dissolution of the personality structures that support the ‘story of me’ or personal identity.

Some practitioners reported changes in how they viewed the relationship between their narrative self and other aspects of their experience:

I remember brushing my teeth [and] cleaning the sink, and then having this feeling: ‘Oh, I’m cleaning this sink because I think that this is something that is enlightened, or is something a good Buddhist would do.’ And then I fixed the rug. And then all day long I saw how all my actions were reinforcing this story that I had told myself, and it was really deflating and unsettling and just made me kind of sad. [...] And this story that I was telling myself was the very thing that was preventing me from being with my experience. [...] I would build these stories up about what I thought practice was or who I would be when I practised, but my real life didn’t match that narrative that I had told myself. (#52, Zen M)⁶

However, for some, changes in narrative self resulted in confusion:

⁵ See Lindahl *et al.* (2017) for a discussion of qualitative coding methodology and the Supplementary file S4 (Phenomenology Codebook) for the inclusion and exclusion criteria for each sense of self category.

⁶ Practitioner reports have been slightly edited for clarity and brevity.

And my sense of self got confused. I questioned a lot about who I thought I was. I didn't know what the 'self' was anyway. 'I don't even know who I am anyway, so why should I continue to pretend what I think I'm doing...' There was a lot of weird thought processes like that. When I thought about who I was, it was very unclear to me what that means. (#64, Zen M)

In some cases, the change was described as a complete loss of personal and narrative identity. For the next practitioner, this started during a meditation retreat and persisted into daily life:

But on the inside, I was deeply wounded in the sense of my identity. I felt that my identity was threatened. I would walk, and I would feel that I forgot my past. At some point on the retreat, I literally forgot my name. I was like, 'Wait, what is my name again?' Yeah, I totally forgot. [...] I would look at other people and interact with people, and they would say regular things like, 'Oh, I like that type of ice cream' or 'Oh, I like that thing.' And I remember hearing that, and I'm like: 'Wait, how do you know that? How do you know what you like and dislike? How do you know who you are?' It was like I couldn't figure out who I was, what I like, or who I am. I felt like I had no identity. (#87, Theravāda F)

And for others the loss of a narrative self and personal identity had further impacts on their motivation and drive:

It basically felt like whatever personality I thought I had before just disintegrated. And it wasn't an expansive disintegration into unity or bliss or anything like that. It was a disintegration into dust. And I really had the feeling of being in a very, very, very narrow, small, limited psychological space. [...] I didn't believe in all the things that people do to tell themselves that 'something is worth it' or 'just be you' — all those positive psychological frameworks that people use to get through life just seemed really unconvincing. [...] I came to this conclusion during that time period that personality is just a structure without any real substance to it. And I don't know if that really solved anything for me or resolved anything for me. [...] But I was just convinced that there wasn't any point in working on this structure. (#71, Theravāda F)

3.2. *Loss of sense of ownership*

The narrative self is often contrasted with more basic, embodied processes, including the sense of ownership (Gallagher, 2000; Tsakiris, Schütz-Bosbach and Gallagher, 2007). Typically, we have the sense that our thoughts, body sensations, emotions, and memories are 'ours' or 'belong to us'. Practitioners experiencing a loss of sense of ownership described feeling that their body, body parts, thoughts, or

emotions no longer belong to them, sometimes to the extent that they are experienced as impersonal, as belonging to no one.⁷

Some changes in the sense of ownership were positive and were appraised in relation to key Buddhist doctrinal concepts, such as this example of loss of ownership over thoughts:

Things would arise and there was so much clarity about there being no self, about not being a fixed and abiding self — things would just arise as a part of the experiencing. [...] All the way throughout retreat, everything was so amazingly clear that, 'Wow! Everything is happening, arising, experiencing, the grounds of experiencing.' [...] Whatever thoughts came up or ideas about me or the world, it was just so clear that they weren't real. They were just thoughts arising in this space; they were conditioned arising, if you like. [...] I forget it much more often and I have to bring myself back into connection with it, because the personality views have been so gripping over the last year or two. I would say what was amazing was how ordinary it was, but in quite an extraordinary way. Freeing — that's the word. I felt so free. And, when I come back to that place, the word I would use is an immense freedom — not bliss, just freedom — freedom from suffering. (#46, Theravāda F)

Other practitioners experienced loss of ownership over their body, and in the following case the experience was explicitly differentiated from Buddhist insights:

Yeah, well I didn't have a sense of my body belonging to a 'me'. There wasn't a sense of 'me' there. I could feel my hand — there was a feeling of a hand, but it didn't feel like my hand. Yeah, [it] didn't feel like my hand, my chest, my head. [...] There are so many ways to have insight into selflessness where there's a kind of clarity. This was not that at all. There was no awareness — no meta-awareness — of the process. (#08, Theravada M)

In some reports of loss of ownership, such as this change with respect to emotions, psychological appraisals were entertained:

In some ways I felt like I was — what's that... is it called depersonalization? Yeah, the state in which one's thoughts and feelings seem unreal or not to belong to oneself. So I felt like I wasn't connected to what I was feeling. [...] For the previous waves of emotions, when that was happening, I felt I was very aware of the emotion, but I didn't

⁷ Following Chadha (2017), this category could also be called the 'sense of loss of ownership' in so far as one's 'sense of ownership' and 'sense of agency' are typically 'thin' and not a significant part of our phenomenal experience; rather it is during the *loss* of these senses that there is a positive phenomenology.

feel like it was mine, exactly, because it was so strange how it just came about sort of all of its own accord, and it didn't make sense to me. I didn't have a story behind it, like, 'Oh, I'm angry because blah, blah, blah.' It just felt like anger. And so, in a way, it didn't feel like mine. (#84, Theravāda M)

3.3. *Loss of sense of agency*

The sense of agency has been described as the sense of ownership over one's actions, although some have also argued for a greater separation between the two aspects of sense of self on account of differences in underlying processes or mechanisms (de Vignemont and Fourneret, 2004; Tsakiris, Longo and Haggard, 2010). Practitioners in the VCE study who reported a loss of sense of agency described feeling that actions that were typically voluntary now felt involuntary and beyond their control, or reported there being no 'doer' or 'no one' who decides, controls, or executes actions. A loss of sense of agency also included being concerned with 'who' would perform daily actions. Sometimes, a loss of agency was reported in terms of adopting unusual bodily postures involuntarily or the feeling that some other person, power, or force was performing actions through the practitioner's body.

Some practitioners reported a loss of sense of agency over simple, ordinary actions:

I was on this automatic pilot of just being able to go to the bathroom and feed myself — because those things were on this sort of automatic pilot that I was able to keep doing them. But there wasn't a 'me' doing them. (#19, Tibetan F)

As above with the loss of sense of ownership, some practitioners reported a loss of sense of agency that they appraised as an anticipated result of Buddhist meditation practice:

There are experiences that I had in meditation, where I was doing walking meditation and suddenly knew that nobody was walking. That, once the intention arises — however intention arises in the mind for walking to happen — it initiates the walk, one foot initiates the other foot and the next and the next... but there is no one. The body is walking, but no one who owns who is taking a walk. The first time that I realized that, it was not so mind blowing. I thought, 'Wow, there's no one there.' [...] I've had the realization, and the next moment after that you say, 'Hey, I did it! I had the awareness of not-self!' And right back is the sense of self, who is feeling proud of themselves, that they just had that. (#06, Theravāda F)

For some practitioners, these were ongoing changes that endured beyond the practice session:

And for most of the time it now seemed that this 'Robert'⁸ was kind of doing its own thing with a little sense of control somewhere. So that did some serious damage to the sense of centre-point and subject and controller and doer and agent. Not that it wasn't there, and sometimes it was more strongly there, but it changed my walking around experience into this totally different thing where it really seemed like: 'Wow, okay, now I'm starting to really get what no-self is talking about, both in terms of control and in terms of perception.' So, that was very different. (#34, Theravāda M)

Another practitioner found such changes distressing, and recruited neuroscientific language to explain her experience in terms of brain dysfunction:

So, cognitively, I could not focus and I could not gain control over my will. That was something that was severely damaging to me because it felt like my mind couldn't control my body or my will, if that makes sense. [...] I remember that vividly. I was climbing up the stairs once, and I just stood there, and I was like: 'Why am I climbing up the stairs? Who did that? What sort of motor system triggered this action that was climbing up the stairs?' It felt like there was a huge disconnect between my motor actions and my prefrontal cortex, which was not working. (#87, Theravāda F)

When a loss of agency was enduring and associated with unfamiliar movements or behaviours, some practitioners attributed a force, energy, or being as the agent of their actions:

I started to find myself thrust into different yoga poses, some of which I knew, some of which I didn't know. And, in one case in the very beginning — I think it was within the first day or two of this experience — the energy was thrusting my body into a pose that there was no way that my current physical condition could hold. (#30, Theravāda M)

3.4. *Change in sense of embodiment*

The sense of an embodied self is construed through various processes of body representation, and these too can be changed or lost (Giummarra *et al.*, 2008; Blanke, 2012). Changes in sense of embodiment include reports of 'out-of-body' experiences or feeling 'disembodied', whether generally or at a specific distance and direction

⁸ Personal names have been replaced with pseudonyms.

from the body. Also included are changes in locatedness within the body schema, such as from behind the eyes to the middle of the head or to the heart; generally feeling dissociated from the body or body sensations; being relocated above, behind, to the side, or displaced in some way from the body; or feelings of falling through space or through the ground.

Some changes in sense of embodiment were shifts in the location of self with respect to specific areas of the body schema:

I experienced a kind of enlightenment experience, had a kind of *satori* experience, where I had an experience of a tremendous reduction in suffering. [...] What I experienced was a sensation of my conscious awareness of my body dropping from my head into my heart, and then a sense of being continually present in my heart centre. That's a strange thing to describe; it was very experiential. It was a feeling of my self being in my heart instead of anywhere else. (#58, Tibetan M)

Others found their sense of self relocated beyond the body schema:

I couldn't really pinpoint where my self was. I remember, at one point, I was eating and the swallowing — and it was like I was just the swallowing. My sense of 'I' — that's what I was. And then, another time, walking in the hall and hearing the heater working, and it was like and that's where I was. It was a very different kind of experience. (#62, Tibetan F)

Some changes were initially disorienting or disconcerting, but ultimately were presented in relation to Buddhist concepts:

My body was slipping away; my very sense of self was disappearing into a black hole. I had experiences of my body virtually disappearing or dropping through the ground or through the floor — feeling like I was suddenly dropping three or four feet. It would freak me out. And I had an experience like that, went to sleep, but the experience wouldn't stop. [...] And there were other moments where it felt like I was actually, literally coming apart at the seams that night, where, instead of just moving in one direction, I was moving in all directions, as if... I can't... It's hard to describe, but it was like something just moving right through the centre of myself, as if I was going to come apart. [...] And I meditate now, and I have — and, increasingly, my meditation experiences are becoming more and more pleasant, more and more absorptive — just deeper states of no-self, deeper states of my body disappearing. (#11, Theravāda M)

Some practitioners made explicit connections between their changes in sense of embodiment, their approach to meditation practice, and clinical constructs:

At that retreat and even for years afterward, I think I was dissociating from my body to a certain degree or maybe even a large degree. Even though I was paying close attention to the sensations, I think that maybe I was dissociating in order to observe without reacting. (#71, Theravāda F)

Changes in which the sense of self was displaced beyond the body schema could arise as a response to emotional intensity:

Now the problem is what happened later, where we'll get to, is I experienced these emotions very intensely in my body, and it kicked me out. And the defence mechanism now is this anhedonia, or this nothingness, or this loss of self, or this thing, whereas before it was the thoughts. [...] And I read a paper on schizophrenia he [Louis Sass] wrote, and I just saw this paper and thought, 'Fuck, I have schizophrenia.' It sounded so like schizophrenia. Like: hyper-reflectivity, hyper-awareness, diminished feeling from inside because all this stuff... It was like I was observing my body from outside, everything felt strange, the whole atmosphere looked different. And then there was also the loss of self that came with it. (#78, Theravāda M)

For others, it resulted in difficult periods of blunted affect that endured into daily life:

I was outside of my body, and I couldn't get back inside. I was about eight to ten inches to the right, and I couldn't get in. It was like being in a hell realm. My mind functioned okay, not great. But, as I said, I could tell you things. My body was 100 percent fine; it functioned completely well. What suffered for me was my emotional body. I had two young children. I couldn't feel anything about them. I couldn't connect with them. I went through all of the routines, you know: the bedtime routine, getting them ready and kissing them and all of that stuff. But there was no emotional connection. It was like I was dead. It was really like the living dead. It was like being in the hell realm for a year. (#12, Theravāda F)

3.5. *Change in self–other or self–world boundaries*

One of the ways in which the sense of self is typically construed is through the body's processes of differentiating self-related percepts from percepts originating in the environment (Christoff *et al.*, 2011). Recent studies have also shown that the sense of boundaries can extend beyond the body to include what is called a 'peripersonal space' (Maister *et al.*, 2014). However, the boundaries between self and others or self and world can expand, diminish, or break down entirely. In such instances, practitioners reported feeling like they had spilled out of their ordinary embodiment into the world such that there

was no longer ‘self’, only objects. Or, conversely, others reported feeling as if their sense of self had expanded to include external objects or people.

Some practitioners described a change in sense of boundaries in terms of an expansion of self beyond the body to include objects or people in the environment:

I remember one incident in particular, I think during the first sit, where I realized that my sense of self was extended to my cushion. So sometimes if people even walked close to my cushion, it was as if they were trampling on my self. So I realized the pervasiveness of self. And I don’t know if that’s in any really deep way, but those were the kinds of things that made me feel like I was getting something out of it. (#85, Theravāda M)

Other practitioners reported an expanded sense of self arising during informal practice:

So, [the retreat] was in the spring and I was doing some raking leaves, and just as I was raking, this really profound feeling of ‘this is all me’ came to me. And so the ‘this is all me’ — what that means is that my identity is literally everything that I could see through my eyes. So, the rake that I was holding in my hands was me. The ground that I was raking was me. The feet that I could see down at the bottom of my body, that was me. The steps up to the residence, that was me. The sky was me. The trees were me. And so, everything was just ‘me’. And that there wasn’t really anything else. It was all just ‘me’. [...] Those experiences that I related about what I would call *kenshō* experiences, there was no viewer in those — it was just what was there, and there was no viewer observing it. And so I would say that that would also confirm the general theme of Eastern philosophy of no-self. (#49, Zen M)

Some practitioners described a change in sense of boundaries as a lack of separation between their bodies and people or objects in the environment:

The boundary between me and my environment began to break down. A bird flew in front of me, but it didn’t fly in front of me — it flew through me. I continued to walk. There were some dogs off in the distance about 200 feet, and one of them mounted the other and they were copulating, and I remember feeling a tremendous joy about this — but it was all happening within me, which is very consistent with a *satori* experience. Now, at the same time, I was manic, so it’s hard for me to be clear on whether the illness was distorting the experience or whether this was genuinely a *satori* experience, but I had never experienced anything like this in mania before. (#28, Zen M)

Practitioners who experienced a diminished sense of boundaries also reported a concurrent sensitivity to perceptual or emotional stimuli — a permeability that could be enduring and distressing:

Another thing was that I didn't feel like I had any personal space — like, a sense of a boundary-ness. [...] If you came close to me, I'd just feel you in a painful way — it's like you're inside of me or something. So if anybody had any feelings or emotions... Of course, I was too whacked out to be able to tell what they were, but I could feel it. So I was very permeable in that way. It was not a pleasant experience, either. (#08, Theravāda, M)

3.6. *Loss of sense of basic self*

Some have argued that, more fundamental to all of the senses of self described above, there is a basic sense of 'ipseity', 'feeling of being', or 'for-me-ness' underlying ordinary experience (Sass and Parnas, 2003; Zahavi, 2005; Ratcliffe, 2008). This too can be changed, distorted, or to some extent lost. Changes at this basic level of selfhood can be very difficult to describe, and can include references to 'not being there', 'disappearing', or 'not existing'. In contrast to other changes in sense of self, experiences at this level indicated a fundamental change regarding existence or being.

For this practitioner, the loss of basic self emerged from meditating specifically on 'no-self', but then continued on into daily life, developing into an agoraphobia that lasted for nine years:

[On that retreat,] all we did was talk about 'no-self', and I was quite aware of the fact I was not centred. I kept thinking, 'I am not centred.' And I had had some good experiences before and had depth in meditation before that, but it just threw me for a complete loop. I just had no centre. I felt like I was not grounded to the actual ground itself. Nothing happened to me on the retreat, but I just felt light-headed, like my head was going someplace else and I wasn't attached to the ground. I went home — someone dropped me off from school. I had a two-block walk home. Like a blink of an eye, that was the end of the walking — I couldn't make it home. I just became frozen, paralysed. I could not take a step, I was so terrified. In that moment I felt like I was not connected to the ground at all. I couldn't move. Then I became very small in my own being. [...] I was gone, I was lost — there was nothing there. I didn't believe I even had a shadow. I didn't believe anyone could even really see me. It was terrible. [...] The agoraphobia came around as a result of that no-self. [...] There is something called Zen psychosis, and I would assume that's what happened to me. But I didn't know that until after it was over, and I didn't care. I was too busy trying to get through day-to-day existence. (#14, Theravāda F)

Others had such changes emerge in relation to other practices that were not specifically on the theme of *anattā*:

And there was still this feeling like I wasn't there. I kept asking [the teachers], 'Tell me what I look like. Tell me what it's like to be here with me. Because I don't even feel like I'm here.' [...] And it was difficult for me to talk to them, and I was trying to describe to them, 'You know, I have this feeling of not really being here. How do I work that into the meditation?' And they kept saying just focus on the sensation. [...] I'm kind of wondering which sensation is it that tells me that I don't really feel like I'm here? I can't really identify that, right? Maybe, it's somewhere... When you feel angry, right, there's a sensation of anger. But there's no real sensation of not-being-here. [...] I was trying to tell them like, 'You know, I don't feel like I'm here. How do I work with that?' And they seemed to say, 'Oh, that's just another impurity.' (#63, Theravāda M)

Another practitioner described feeling disoriented on account of a loss in the unity of her experience:

I didn't even know what an individual discrete consciousness was, or a person, but I lost contact with the essence, so it wasn't like a realization experience — it was just complete delusion. [...] One thing I've experienced is where I feel like my consciousness became a kaleidoscope. I remember when I first came out of retreat, someone would say something, and then it's like I would experience a million different ripples. It's almost like you're looking at a lake and someone's throwing in lots of pebbles, and it was like I wouldn't know which thread to follow. It was like I could become aware of all the different conceptual dimensions, emotional dimensions, spiritual dimensions, energetic dimensions, interpersonal dimensions, and I wouldn't know where to land. [...] We can become aware of those different layers, but there's usually a unifying principle or like a magnetizing principle or a midline so that we can find our way through. (#76, Tibetan F)

3.7. Summary of changes in sense of self among practitioners in the VCE study

As the above examples illustrate, changes in multiple senses of self can result from Buddhist meditation practice. These experiences could be transient or prolonged, positively or negatively valenced, and enhancing or impairing of functioning. Such changes occurred across a range of practice contexts and included circumstances in which practitioners were not actively pursuing or expecting them.

Seventy-two percent of practitioners in the VCE study (49/68) reported one or more changes in sense of self.⁹ Many practitioners reported changes in sense of self that were multidimensional, meeting criteria for more than one category, with 65% (32/49) reporting two or more changes, and 41% (20/49) reporting three or more. Most changes in sense of self were fairly evenly distributed within our sample, with between 20% (10/49) and 33% (16/49) of practitioners reporting each of five types of change in sense of self. The exception was change in self–other or self–world boundaries, which was reported by twice as many practitioners (69%; 34/49) (see Table 1).

3.8. Sample characteristics and changes in sense of self

Table 1 displays demographic variables of the sample who reported changes in sense of self. Of note, 27 (55%) practitioners were also meditation teachers at the time of interview, and nearly half (47%) had neither a psychiatric nor a trauma history. As Table 1 shows, most demographic and practice-related variables were consistent across types of changes in sense of self. Specific changes in sense of self were not predicted by practice tradition, by gender, by being on retreat versus in daily practice, or by a practitioner's prior psychiatric or trauma history, with one exception: women were twice as likely as men to report changes in sense of embodiment.

⁹ The original VCE study was comprised of 20 practitioners each from Theravāda, Zen, and Tibetan traditions. This paper also includes within the Theravāda group data from 8 additional practitioners of *vipassanā* in the tradition of S.N. Goenka who were participants in a subsequent replication study.

Category	No. Practitioners Reported	Practice Tradition	Gender	Practice Intensity ^a	Psych/Trauma History	Distress/ Impairment
Any in the sense of self domain	49 / 68 (72%) ^b	Theravāda: 23/28 (82%) ^b Zen: 13/20 (65%) ^b Tibetan: 14/20 (70%) ^b	Male: 26/37 (70%) ^b Female: 23/31 (74%) ^b	Retreat: 39 (80%) Daily: 10 (20%)	Psych: 12 (25%) Trauma: 20 (41%) Neither: 23 (47%)	Distress: 27 (55%) Impair: 22 (45%) Neither: 22 (45%)
Change in narrative self	15 / 49 (30%)	Theravāda: 4/23 (17%) Zen: 8/13 (61%) Tibetan: 3/14 (21%)	Male: 8/26 (31%) Female: 7/23 (30%)	Retreat: 10 (67%) Daily: 5 (33%)	Psych: 2 (13%) Trauma: 5 (33%) Neither: 9 (60%)	Distress: 8 (53%) Impair: 8 (53%) Neither: 7 (47%)
Loss of sense of ownership	10 / 49 (20%)	Theravāda: 7/23 (30%) Zen: 2/13 (15%) Tibetan: 1/14 (7%)	Male: 6/26 (23%) Female: 4/23 (17%)	Retreat: 8 (80%) Daily: 2 (20%)	Psych: 4 (40%) Trauma: 3 (30%) Neither: 4 (40%)	Distress: 4 (40%) Impair: 3 (30%) Neither: 6 (60%)
Loss of sense of agency	15 / 49 (30%)	Theravāda: 8/23 (35%) Zen: 4/13 (31%) Tibetan: 3/14 (21%)	Male: 9/26 (35%) Female: 6/23 (26%)	Retreat: 11 (73%) Daily: 4 (27%)	Psych: 4 (27%) Trauma: 8 (53%) Neither: 5 (33%)	Distress: 6 (40%) Impair: 6 (40%) Neither: 9 (60%)
Change in sense of embodiment	16 / 49 (33%)	Theravāda: 10/23 (43%) Zen: 3/13 (23%) Tibetan: 3/14 (21%)	Male: 5/26 (19%) Female: 11/23 (48%)	Retreat: 13 (81%) Daily: 3 (19%)	Psych: 6 (38%) Trauma: 9 (56%) Neither: 5 (31%)	Distress: 9 (56%) Impair: 7 (44%) Neither: 7 (44%)
Change in self-other or self-world boundaries	34 / 49 (69%)	Theravāda: 13/23 (57%) Zen: 11/13 (85%) Tibetan: 10/14 (71%)	Male: 18/26 (69%) Female: 16/23 (70%)	Retreat: 26 (76%) Daily: 8 (24%)	Psych: 8 (24%) Trauma: 14 (41%) Neither: 16 (47%)	Distress: 12 (35%) Impair: 8 (24%) Neither: 22 (65%)
Loss of sense of basic self	14 / 49 (29%)	Theravāda: 7/23 (30%) Zen: 4/13 (31%) Tibetan: 3/14 (21%)	Male: 8/26 (31%) Female: 6/23 (26%)	Retreat: 13 (93%) Daily: 1 (7%)	Psych: 6 (43%) Trauma: 6 (43%) Neither: 5 (36%)	Distress: 9 (64%) Impair: 7 (50%) Neither: 5 (36%)

Table 1. Overview of changes in sense of self in the Varieties of Contemplative Experience study. ^a Retreat or daily practice information refers to the context in which changes in sense of self first appeared for a practitioner. ^b Denotes percent of total sample. All other percentages refer to the subset of practitioners who reported changes in sense of self (n = 49).

3.9. Impacts from changes in sense of self: distress and impairment

In addition to these variables, this study also assessed the presence of distress and impairment associated with each reported change in sense of self. At this point it is important to remember that, although these data were collected as part of a study on meditation-related challenges, not all practitioners reported changes in sense of self as their primary challenge. Among those reporting changes in sense of self, 55% (27/49) reported associated distress and 45% (22/49) reported associated impairment in functioning. Additionally, Table 1 displays the percent of practitioners who reported distress and impairment for each particular change in sense of self. Distress and impairment were most likely to accompany changes in basic self and least likely to accompany changes in sense of self–other or self–world boundaries. Pearson correlation analyses were used to identify if predictors of distress and impairment were more related to phenomenology, practice intensity, or demographic variables. The total number of sense of self categories ($r = 0.35$, $p = 0.02$) was a significant predictor of impairment and a trend-level predictor of distress ($r = 0.26$, $p = 0.07$). No other demographic or practice-related variables — including practice tradition, gender, retreat versus daily practice, or psychiatric and trauma history — were related to distress and impairment.

3.10. Varied appraisals of changes in sense of self

Changes in sense of self were appraised in various ways, ranging from normative insights, to insignificant side effects of practice, to potentially concerning psychopathologies. All six changes in sense of self were in some circumstances appraised by some practitioners in relation to Buddhist doctrines or normative conceptions of the Buddhist path. Practitioners' appraisals were not limited to those of their own practice tradition or lineage; in some cases their appraisals were drawn from other traditions. Practice tradition, practitioner expectations, and teacher appraisals all likely contribute to how an experience is appraised. That is to say, it may be that practitioners are more likely to interpret their experience as normative when they are pursuing a change in sense of self as a goal, when they are engaging in a practice expected to lead to such a change, or when their teachers offer normative interpretations. However, there were also practitioners who were aware of or were offered Buddhist interpretations but rejected them, appraising their experiences instead in terms of psycho-

pathology or other biomedical frameworks. It may be the case that those for whom the experience is unexpected, unwanted, distressing, or enduring in such a way that it impairs functioning in daily life are more likely to question normative appraisals or consider alternative appraisals including those associated with psychopathology. It may also be the case that certain changes in sense of self in which there is greater overlap with known psychopathologies — such as loss of sense of agency and loss of sense of basic self — may be more difficult to assimilate and appraise as normative signs of progress.

Finally, practitioner appraisals of changes in sense of self were also subject to change over time. Changes that seemed distressing, impairing, and beyond practitioner control were sometimes appraised in relation to psychopathology at first, and then reappraised as normative once stabilized and under practitioner control, and vice versa. As unpacked in Lindahl *et al.* (2019), appraisals of and responses to meditation-related challenges are highly contextual and involve many changing dynamics as practitioners negotiate their experiences in relation to texts, teachers, and other figures such as family members and psychologists. Because appraisals are also determined through social relationships with teachers and other authorities, practitioners sometimes entertained multiple appraisals of their changes in sense of self, especially in circumstances when those changes endured beyond a retreat or practice context and into daily life.

4. Implications

4.1. *The theory and practice of no-self in contemporary Buddhism in the West*

As meditation has entered into the mainstream in modern times, various versions of no-self and not-self teachings have also been widely communicated in popular books on Buddhism written for a Western audience. Commonly, such approaches establish some sense of self as an obstacle or problem, and the elimination of that sense of self as the means to happiness, well-being, or awakening. Popular books by contemporary Buddhist authors in the West feature titles such as *Untangling Self: A Buddhist Investigation of Who We Really Are* (Olendzki, 2016), *Stepping Out of Self-Deception: The Buddha's Liberating Teaching of No-Self* (Smith, 2010), and *No Self, No Problem: Awakening to Our True Nature* (Thubten, 2009). These authors present the self as 'parasitic', 'erroneous, maladaptive, and downright

hazardous' (Olendzki, 2016, pp. 124, 119), claiming that 'only the idea of "me" separates us from the unconditioned truth of our being' (Smith, 2010, p. 33), and that 'the only way we can bring about perfect, total awakening, right now in this moment, is by dissolving the self on the spot' (Thubten, 2009, p. 41). Similar teachings are also promoted in scientific and clinical approaches to meditation, as will be discussed below.

Recently, scholars working at the intersection of Buddhism, phenomenology, and cognitive science have acknowledged that there are possible analogues between forms of psychopathology and the elimination of personal ownership implied in early Buddhist discussions of *anattā*. In particular, Albahari (2011) aims to account for how personal and perspectival ownership would change upon the attainment of *nirvana*. Importantly, she writes,

it is quite possible to conceive of a state, akin to a global depersonalization, where all sense of bounded identity is lost. This opens up the distinct cognitive potential for a transformative experiential insight into the reality of no-self, although by all accounts it will not be pathological. (p. 102)

However, Albahari also admits that 'a major challenge for those defending the psychological possibility of *nirvana* is thus to show how it could be possible for the sense of self to be eroded in ways that avoid debilitating pathology' (*ibid.*, p. 112). The Varieties of Contemplative Experience study offers an initial empirical response to Albahari's queries. Changes in sense of self feature prominently among the range of challenging experiences associated with Buddhist meditation. Although for some practitioners these changes were positive and appraised as normative insights, attenuations in sense of self, even when deliberately pursued as an intended outcome of Buddhist meditation, were in many cases accompanied by distress or impairment. Crucially, the greater number of dimensions of selfhood attenuated by meditation — that is, the more 'global' the change in sense of self — the more likely the experience was to be associated with impairments in functioning or, in Albahari's words, to be 'debilitating'.

4.2. Changes in sense of self at the intersection of meditation and medicine

The putative benefits associated with the pursuit of no-self or not-self extend beyond Buddhist soteriological goals and into prescriptions for

well-being in mindfulness-based programmes (MBPs). MBPs are often evaluated in terms of their impact on self-related processes such as self-compassion, self-acceptance, self-concept, or self-evaluation (rumination) (Gu *et al.*, 2015; Michalak *et al.*, 2015). In addition to these processes of self-enhancement, the theory and practice of no-self is also a significant part of both Mindfulness-Based Stress Reduction (MBSR) and Mindfulness-Based Cognitive Therapy (MBCT). During training, MBP providers are taught to deliberately avoid using language that reifies a sense of self by omitting the use of the first-person pronouns ‘I’, ‘me’, and ‘my’, employing instead the present participle when instructing. Providers also teach participants to restate ‘I am angry’ as ‘anger is present’ (Teasdale, Williams and Segal, 2014, p. 145). Participants are also taught that ‘thoughts are not facts. Nor are they really “mine” or “me”’ (Williams *et al.*, 2007, p. 164). In *Teaching Mindfulness: A Practical Guide for Clinicians and Educators*, MBSR creator Jon Kabat-Zinn describes how Buddhist teachings underlie these instructions, which he claims are central to the effective teaching of MBPs:

[W]hile there is observing, for instance, we do not have to create, or reify, an ‘observer’... This may be why the Buddha once said that all of his years of teaching could be encapsulated into the one sentence: ‘Nothing is to be clung to as I, me, or mine.’ One valuable use of the present participle in the English language is that it can leave subject and object indeterminate, unvoiced... This kind of experiencing... of knowing without a knower... lies at the heart of the pedagogy presented here. (Kabat-Zinn, 2010, p. xvii)

Similarly, one of the creators of MBCT has advanced an argument that the therapeutic efficacy of MBPs is grounded in the Buddha’s teaching of suffering as originating in part through identifying with experiences as ‘me’ or ‘mine’ (Teasdale and Chaskalson, 2011a,b).

Clinical textbooks also present no-self as ‘fundamental’ or ‘indispensable’ to mindfulness meditation’s salutary effects on health. For example, in the *Handbook of Mindfulness*, Brown (2015) suggests that ‘Perhaps fundamental to the effects of mindfulness training on positive functioning is the disidentification from these phenomena that an individual normally takes to be “me”’ (p. 318). In another chapter from the same volume, Ryan and Rigby (2015) contend that mindfulness is about ‘being able to experience the relative manifestations of “me” from moment to moment, while simultaneously being aware of the true dream-like nature of the self (“no-self”) that is indispensable in working toward happiness’ (p. 255).

While disidentification from thoughts and emotions — a process referred to alternately as decentring, psychological distancing, or cognitive defusion (Bernstein *et al.*, 2015) — is a central element of MBPs, other forms of disidentification sometimes assumed to be circumscribed to more advanced meditation practice are nevertheless present in MBPs as well. For example, in *Full Catastrophe Living*, a book commonly given to MBP participants, Kabat-Zinn (1990) advocates ‘dis-identifying from the entire play of inner experience’, including the body: ‘Whatever you are, “you” are definitely not your body’ (*ibid.*, p. 297). Based upon the theory and practice of Buddhist contemplative traditions, Brown (2015) also describes a more extended form of disidentification ‘not just from maladaptive thoughts, emotions, and sensations... but from *all* such experiences; with a capacity for sustained observation of internal experience is theorized to come a deep sense of calm and equanimity’ (p. 319). Recent scientific research, also explicitly informed by Buddhist teachings, has also advocated for a mode of ‘experiential selfless processing’ — in which ‘there is no sense of the self as an immediate subject of experience, devoid of a sense of identification, ownership, agency or self-referential evaluation of experience’ — as a putative mechanism of mindfulness as well as mental health (Hadash *et al.*, 2016, p. 2).

The promotion of no-self and not-self in scientific and clinical circles and in MBP programmes is worth noting for a few reasons. Many authors explicitly and repeatedly use passages from Buddhist texts to theorize that practices of disidentification and experiences of selfless processing should lead to greater happiness and well-being. However, it is important to recognize that those advocating for no-self are basing their claims on normative conceptions of the Buddhist path, rather than on a body of established empirical research. In 2011, Hölzel *et al.* pointed out that the Buddhist concept of no-self ‘is rather difficult to operationalize’ and has ‘yet to be rigorously tested in empirical research’ (pp. 547–8). This remains an area where further research is necessary to disentangle religious claims from evidence-based treatments. Certain types of contemplative practices and certain dimensions of mindfulness may be more likely than others to lead to ‘deconstructions’ in senses of self (Dahl, Lutz and Davidson, 2015), and these meditation-induced changes in sense of self may be beneficial or harmful depending on which levels of self are targeted and whether the change facilitates or impedes the goals of a specific person. Furthermore, given that diminished sense of self is both a

component of and risk factor for certain psychopathologies (Raballo *et al.*, 2018), and given the distress and impairment described by some meditation practitioners in the VCE study, attenuating senses of self is unlikely to be a therapeutic panacea; rather, like most other practices and processes, it is likely to have boundary conditions and potential contraindications (Britton, 2019). Future research based upon the VCE data set will aim to account for the different appraisals of changes in sense of self by attending to the criteria teachers and practitioners alike use to differentiate challenging normative experiences that are a ‘part of the path’ from concerning signs of psychopathology. In addition, future publications will offer neurobiological hypotheses concerning how meditation affects different senses of self. Following Britton (2019), this approach will offer an integrated model that accounts for both the positive, beneficial effects that come from the attenuation of certain self-related processes under certain circumstances as well as the negative, impairing effects that come when such processes continue beyond optimal conditions.

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