



Seeing the Void: Experiencing Emptiness and Awareness with the Headless Way Technique

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Abstract

Objectives Practitioners in contemplative traditions commonly report experiencing an awareness that is distinct from sensory objects, thoughts, and emotions (“awareness itself”). They also report experiences of a void or underlying silence that is closely associated with this awareness. Subjects who carry out the Headless Way exercises frequently report an experience of emptiness or void at the same time as other contents (void-like experiences). The goals of this study were to (1) assess the reliability of these methods in eliciting the recognition of awareness and void-like experiences in participants who had no prior exposure to these techniques, (2) investigate the prevalence of these experiences in these tasks, and (3) to differentiate these experiences from closely related and potential precursor experiences.

Method Twenty adults participated in in-depth individual interviews in which they were guided through the Headless Way exercises. A thematic analysis was conducted on the interview transcripts.

Results Twelve of the participants reported a void-like experience, and five participants reported an experience of awareness itself. These experiences were respectively categorized as subsets of the more general categories of perceptual absences and the sense of not being person-like. Another novel finding was the real-time reports of awareness and void-like experiences during the exercises.

Conclusions Our findings provide preliminary evidence that the Headless Way exercises can effectively induce experiences of emptiness and awareness in participants without prior experience. The findings suggest that such experiences can be elicited outside of a traditional meditation context, including in non-meditators. Furthermore, the experience of not being person-like and of perceptual absences may be precursors and more general forms of recognizing awareness itself and the void-like nature of the mind.

Preregistration This study is not preregistered.

Keywords Contemplative experience · Headless Way · Phenomenological interview · Pure awareness · The void · Emptiness

A salient experience described in Asian religious texts and often reported by meditation practitioners is that of being a non-personal “pure” awareness (Forman, 1999; Metzinger, 2020; Shear et al., 1999; Thompson, 2014). We are aware of objects such as things in our environment, sounds, feelings, and thoughts, but according to these traditions these

are mere objects of awareness, not awareness itself (or consciousness as such). In the Advaita Vedanta tradition, in particular, it is claimed that “awareness itself” (that is awareness as distinct from its objects) can be recognized at the same time as ordinary sensations, thoughts, and emotions (Albahari, 2009; Gupta, 1998). Investigating this silent/void-like awareness has the potential to advance our understanding of consciousness by identifying its minimal possible instantiation (Metzinger, 2020) and may even indicate the essential nature of consciousness and the subject (Ramm, 2017, 2023). However, scientific studies have so far been predominately limited to contentless pure awareness rather than experiences of awareness at the same time as contents (Gamma & Metzinger, 2021). Qualitative and

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phenomenological investigations of pure awareness have been even rarer (Costines et al., 2021; Forman, 1999; Woods et al., 2020). In this study, we investigated experiences of “awareness itself” at the same time as contents (Gamma & Metzinger, 2021) and void-like experiences (i.e., an experience of “void” at the same as other contents) in subjects using a first-person approach developed by Douglas Harding—the Headless Way (Ramm, 2017, 2021, 2023). First-person methods, in particular, are needed to explore the dimensions of consciousness described above, as they are subjective phenomena that are only recognizable from the first-person perspective—outside observers can never observe another’s consciousness.

More generally, despite being essential for a science of consciousness, there still is a dearth of scientific studies which use first-person methods to investigate conscious experience (Bitbol & Petitmengin, 2013; Lutz & Thompson, 2003; Lumma & Weger, 2021). In the field of mindfulness, the use of quantitative measures, particularly rating scales, has dominated the literature. More recently, however, qualitative (Frank & Marken, 2022; Huynh et al., 2019) and phenomenological methods (Petitmengin et al., 2017, 2019; Sparby, 2019) have been used to provide a richer and more fine-grained picture of meditators’ experiences. Qualitative and phenomenological approaches can be used to identify underlying mechanisms of mindfulness practices (Frank & Marken, 2022), as well as the challenges and adverse experiences encountered in these practices (Lomas et al., 2015).

Scientific studies on mindfulness have predominantly concentrated on the clinical applications of these practices. For example, mindfulness-based interventions have been shown to be effective in the treatment of anxiety and depression (Blanck et al., 2018) and stress (Khoury et al. 2015). While the relief of psychological distress is obviously important, from the perspective of contemplative traditions such as Buddhism, these interventions miss the original point of mindfulness-based practices. In particular, for Buddhism, they do not address the root cause of the psychological discomfort and unsatisfactoriness that pervades our everyday lives (*dukkha* in Pali), namely identification with the self (Teasdale & Chaskalson, 2013). For evidence that reduction of bodily boundaries can increase happiness, see Dambrun (2016) and Dambrun et al. (2019); though for distressing experiences associated with alterations in/loss of the sense of self, see Lindahl & Britton, 2019).

An important contemplative experience in which one purportedly transcends the self is the experience of pure awareness (Gamma & Metzinger, 2021). A pure awareness experience is an experience of awareness itself, which goes beyond (or is completely without) sensory, affective, and cognitive qualities (e.g., color, shape, sound, feelings, thoughts) (Gamma & Metzinger, 2021; Metzinger, 2020; Ramm, 2023). The Tibetan Book of the Dead describes this

awareness as a “brilliant emptiness” that is “beyond characteristics, beyond color,” “a vast luminous expanse” (Padmasambhava et al., 2006, pp. 14–15). Contemplatives also report the experience of “nothingness” at the same time as being aware or awake during deep dreamless sleep (Alcaraz-Sanchez, 2021, Thompson, 2014, Chapter 8; Windt, 2015).

We can distinguish between objectless pure awareness experiences that is experiences of awareness without any contents or objects, as reported in deep meditative states, and object-directed pure awareness experiences that is experiences of awareness itself at the same time as sensory contents, thoughts, emotions etc. (Ramm, 2023). The former is the most studied state and is exhibited in advanced states of meditation in which awareness is experienced in the absence of all conscious content (sensations, emotions, thoughts) (Gamma & Metzinger, 2021). For example, pure awareness experiences have been found to have distinct neural (Josipovic, 2014; Travis & Pearson, 2000; Winter et al., 2020) and respiratory correlates (Austin, 1998).

On the other hand, contemplatives also sometimes report experiences of awareness itself (or consciousness as such) at the same time as normal sensory, affective, and cognitive content (Gamma & Metzinger, 2021; Forman, 1999, p. 142; Ramm, 2023). Yet little previous research has been done on this type of experience (Gamma & Metzinger, 2021). In the Indian spiritual tradition Advaita Vedanta, the experience of awareness itself at the same time as objects is referred to as “witness consciousness” (Albahari, 2009; Gupta, 1998). Jonathan Shear calls this state “pure consciousness experienced along with other experiential content” (Shear, 2014, pp. 222–224). This is an important category of contemplative experience for at least two reasons. Firstly, as both types of experience are arguably of the same fundamental awareness, albeit in different modes (either contentless or contentful), then in principle first-person descriptions of each should converge and mutually inform each other. Secondly, as object-directed pure awareness is purportedly recognizable off of the meditation cushion, this recognition can hence in principle be integrated into practitioners’ everyday lives (unlike the objectless pure awareness experience).

One reason given for why awareness itself is not usually recognized in everyday circumstances is that this is a highly advanced state of consciousness, dependent upon first experiencing objectless pure awareness (Forman, 1999, Chapter 8; Shear, 2011, pp. 144–145). Conversely, in the Dzogchen tradition, it is claimed that awareness itself or the luminous mind can be directly glimpsed by practitioners through a pointing-out instruction given by a Dzogchen master that is before any contentless pure awareness experience (Dzogchen Ponlop Rinpoche, 2003). Some contemporary meditation teachers also claim this possibility (e.g., Kelly, 2015). A first-person approach which converged on a similar conclusion was by Weger et al.

(2016) who used an introspective method to investigate the observing subject. They described an “I am” behind their thoughts which both witnessed and produced them.

A closely related experience is contemplative reports of void-like experiences at the same time as thoughts, emotions, and sensations. An example of this type of contemplative experience is reported by Forman, 1999, p. 142):

From that moment forward I was silent inside. I don't mean that I didn't think, but rather that the feeling inside of being me was like being entirely empty, a perfect vacuum. Since that time all of my thinking, my sensations, my emotions etc. has been on a silent background. It is as if what was me was now this emptiness.

Another example is from the American mystic Bernadette Roberts who had often experienced a pervasive silence during her meditations in a chapel, but which would usually be broken by fear of annihilation:

Once again there was a pervasive silence and once again I waited for the onset of fear to break it up. But this time the fear never came... Within, all was still, silent and motionless. In the stillness, I was not aware of the moment when the fear and tension of waiting had left. Still, I continued to wait for a movement not of myself and when no movement came, I simply remained in a great stillness, . . . Once outside, I fully expected to return to my ordinary energies and thinking mind, but this day I had a difficult time because I was continually falling back into the great silence. (Roberts, 1984, as cited in Forman, 1999, p. 134).

The inner silence continued into her everyday life while she walked, talked, laughed, and cried and even while cutting carrots. Forman labels these experiences the “dualistic mystical state” (Forman, 1999). We will refer to these as “void-like” experiences or content-involving void experiences to distinguish them from advanced meditative experiences of absolute void which are purportedly entirely contentless experiences and free of any subject-object duality (Josipovic, 2014). We also use the term “emptiness” in this paper in a phenomenal sense to refer to an “absence of the various types of contents” (Woods et al., 2024, p. 271) (e.g., an inner silence—see Woods et al., 2020, p. 11), rather than to the doctrine/insight in Buddhist traditions that all phenomena, including the self, have no inherent existence (Wallace, 2011, pp. 175, 184; for different meanings of emptiness in Buddhism see Gyamtso, 2001). Again, the experiences of interest are not totally contentless, so they could be more precisely referred to as content-involving emptiness experiences. One of the aims of this study was to verify and investigate the existence of content-involving void/emptiness experiences.

If “awareness itself” is the essential nature of consciousness and one's true nature is void-like (e.g., a silent, void-like awareness), then this is presumably present with all conscious episodes, which is another reason for thinking that there should be more direct means of recognizing this, perhaps even outside of a context of formal meditation. The important question becomes how can we reliably recognize awareness itself and the void-like nature of the mind, given that (if true) this fact is plausibly implicit in every moment of experiencing? According to Asian religious traditions such as Zen and the Advaita Vedanta, the essential nature of consciousness can be experienced by turning attention inwards to awareness itself (Shear & Jevning, 1999, pp. 190–194).

Particularly relevant to this claim is the Headless Way (HW), a modern Western spiritual practice developed by Douglas Harding (1986). The HW exercises involve reversing attention from objects to the looker in one's current first-person experience. In particular, the techniques orient one's attention to the spot where one cannot see their own head (i.e., the location one seems to be looking from in their visual perspective). Subjects who carry out the HW exercises frequently report a void-like experience and being a space for the world, rather than a thing in it (Harding, 1986; Lang, 2012; Ramm, 2017, 2021, 2023).

Central to this approach is the use of first-person experiments for investigating what it is like to be the subject of consciousness. These methods use apparatus to systematically guide participants to attend to their experience in a series of phenomenal contrasts (Block, 2014; Siegel, 2007). The use of apparatus to assist participants to attend to and distinguish between different aspects of their subjective experience is common to Gestalt psychology and illusion research (on the reliability of first-person experiments in the context of psychology, see Ramm, 2018).

The HW exercises are typically carried out in informal workshops in which participants share their experiences with each other. While phenomenological focus groups have their own advantages, such as collaborative meaning-making that goes beyond the capacity of any single individual (Bradbury-Jones et al., 2009), it is difficult to assess from such approaches whether an individual actually had an experience or is just going along with the group. The only empirical study we know of which investigates the effectiveness of the HW experiments is by Martin et al. (2023). They tested the effect of two intensive online meditation and positive psychology programs, which included HW exercises, on persistent self-transcendence. Sixty-eight percent of participants experienced persistent self-transcendence for the 4-month program ($n = 379$) and 65% of participants experienced persistent self-transcendence for the 6-week program ($n = 246$). However, the individual contribution of the HW exercises to persistent self-transcendence was not assessable

from the data so far processed (Jeffery A. Martin, personal communication).

In the current research project, we sought to guide participants through the HW exercises to assess whether they would spontaneously use language to describe their experience that was consistent with awareness and void-like experiences (i.e., when not supplied this language). By interviewing participants who were naïve to the techniques one-on-one, the experience of participants could be gauged without the influence of others (except for the interviewer). Additionally, as the study was not undertaken in a spiritual context (i.e., a practice or technique carried out within a spiritual or religious framework), it was hoped that there would be less influence of such preconceptions on their descriptions.

The research aims were as follows: firstly, to provide preliminary evidence that the HW exercises are reliable in eliciting experiences of awareness itself and content-involving void experiences outside of a spiritual context. Secondly, we sought to investigate the prevalence of these experiences in these tasks. Thirdly, we aimed to differentiate between these experiences and closely related experiences. That is, are there similar experiences that could be considered precursors to void-like experiences and experiences of awareness itself?

Method

Participants

Twenty participants were recruited for the study through social networks (e.g., a university undergraduate Facebook group, friends of friends on Facebook) and mailing lists (e.g., humanities mailing lists and a Zen group). The criteria for participation were that participants were at least 18 years old and that they had not previously done the HW exercises. One potential participant, who self-reported a history of dissociative experiences, was excluded from the study (due to

potential risks to the participant and confounds to the study). All participants were fluent English-speaking residents of Australia. Seven of the participants were female and 13 were male. Ages ranged from 25 to 86 years old ($M=52.1$, $SD=18.33$). Participant's self-reported years of regular meditation practice ranged from 0 to 66 years ($MDN=6$). Six participants reported that they were not regular meditators. Participants were paid AU\$30 for their time.

Procedure

The apparatus used in the study is as follows: (1) the card—a white A4 card with a head-sized oval hole in the center (160 mm × 215 mm) and a small mirror in the right-hand bottom corner (Fig. 1). (2) The tube—a tube created from two pieces of A3 white cardboard taped together on their long edges. The final dimensions of the tube were as follows: length = 420 mm, tube end = 190 mm diameter. Small slits were cut in the sides of the tube to provide air holes (Fig. 2). (3) A small rectangular mirror on a stand (180 mm × 240 mm).

The study was evaluated and given approval by the Witten/Herdecke University Ethics Committee. Participants were informed of the nature of the study and gave signed consent to participate, including for their data to be recorded, transcribed, and (anonymously) reported in scientific publications.

Sessions took place between 1 and 2 hr. Sixteen of the sessions took place by Zoom and 4 sessions took place in person. The audio of the sessions was recorded using Zoom or a small microphone. For the Zoom sessions, the apparatus was mailed to the participants before the session.

The exercises and questions of the study were centered around testing whether the subject is thing-like for themselves from their perspective; however, this overarching aim was not told to participants except in the very general form that we were exploring what it is like to be themselves from the first-person perspective. Participants were told that they would complete a series of awareness exercises and that they

Fig. 1 The Card Exercise. The images show from the first-person perspective successive views through the card, with the third image showing the perspective with the card on one's face

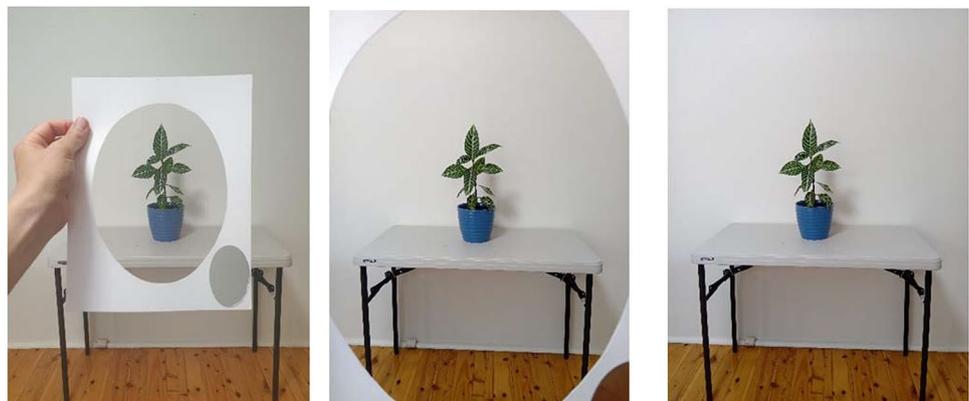




Fig. 2 The Tube Exercise. The image demonstrates how participants view their face in a mirror through the tube

would be asked to report their first-person sensory experience and that there were no right or wrong answers. To get participants in a phenomenological frame of mind (i.e., being sensitive to their subjective experience just as given), they were asked to be open and curious about their experience and to set aside common sense. They were also asked to avoid intellectualizing and reporting beliefs, thoughts, or emotions, or what they imagine. These instructions drew upon the phenomenological principles outlined by Depraz et al. (2000) and Douglas Harding (e.g., Harding, 1999, p. 8). As an example of the distinction between belief and subjective experience, participants were shown the Ebbinghaus Illusion (i.e., where the inner circles seem different in size even though they are actually the same size). All participants reported understanding the difference between how things seem in their subjective experience and what they might believe or imagine them to be.

All participants completed nine HW exercises in the same order. They were instructed that the first two exercises (looking down at their body and looking at their nose) were warm up exercises and they did not need to report their experience. The effect of the exercises was expected to be cumulative. The exercises were ordered such that they moved from the simplest aspect of the phenomenological landscape to more and more subtle aspects (such as the sense of self and the sense of being aware). A brief description of the exercises is given as follows (see Supplementary Materials 1 for the full experimental script):

- (1) **Looking Down at Body:** The participant looks down at their body and notices that they can see their feet, legs, arms, and torso, but not their head.
- (2) **Looking at Nose:** The participant opens and closes one eye at a time and notices what it is like to see their nose.

- (3) **Hands Exercise:** The participant brings their hands back past their head and notices what this is like in their subjective visual experience.
- (4) **Visual Field Exercise:** Participants trace out the boundaries of objects and notice that they are in a surrounding environment. Their attention is then drawn to the limited space in which objects are visible when their gaze is fixed straight ahead (i.e., the visual field). They are guided to trace out edges of the visual field with their hands (i.e., the periphery of their vision where they can no longer see anything). They are also asked to notice if there anything outside of this field of vision, visually speaking.
- (5) **Pointing Exercise:** The participant points at objects and notices their shapes and colors. By contrast, they then point to where you are looking from (their face) and are asked to notice if there any shapes and colors in this direction.
- (6) **Card Exercise:** Participants are asked to look in the mirror and notice where the face is, and its shapes and colors. They are then asked to notice that by contrast, the gap (head-sized oval-shaped hole) in the card is not a thing, and can hold anything in the room. To test whether where they are looking from is more like the face or the gap in the card, they are asked to slowly put the card on and notice what happens (Fig. 1).
- (7) **Closed Eyes Exercise:** Participants are guided through noticing their bodily experience, sounds, and thoughts and asked if they feel the shape and size of their body, whether they feel like they are bounded by it and if they seem to be person-like in their first-person experience (setting aside imagination and memory).
- (8) **Pointing Exercise 2:** Participants point off to one side (outside of their visual field) and then at their face and are asked to notice if there is a difference between these two locations in their visual experience.
- (9) **The Tube Exercise:** Participants are asked to look down the tube at their face in the mirror. They are asked to notice if their end of the tube is like the face in their visual experience (e.g., colored, shaped, open or closed, opaque or transparent). In the second part of the exercise, participants are asked if either end of the tube seems more awake or aware than the other (Fig. 2).

As well as instructions for carrying out the exercises, participants were asked questions to guide the exploration of their experience. After participants completed an exercise, they were asked an open question “What was your experience of doing that exercise?” The questions that were asked during the exercise were used as probe questions. Participants were given the option to repeat the exercise if they needed to. Some participants chose to report their experience while doing the exercise. At the end of the session,

participants completed a short online pilot questionnaire about their experience. The data for the questionnaire is not reported here due to space restrictions and also because there were no control conditions against which to test differences in scores.

Some minor refinements were made to the instructions as the study progressed. After the 5th session, participants were no longer asked about the location of their thoughts. Also, after the 5th session rather than asking if the near end of the tube seemed awake or aware, this was re-phrased as “does either end of the tube seem more awake or aware?” as this wording was deemed to be less leading. After the 12th session, participants were no longer asked if the near end of the tube was like a hole.

Data Analyses

The audio of the sessions was professionally transcribed verbatim. The first author read through all of the transcriptions and checked them against the audio recordings for any transcription errors which were then corrected. Any personally identifying information was removed from the transcriptions. The quotes presented here have been lightly edited. These data preparation activities were conducted solely by the first author.

The analysis of the data followed the procedure of thematic analysis (Braun & Clarke, 2006). Braun and Clarke define this approach as “a method for identifying, analyzing and reporting patterns (themes) within data” (Braun & Clarke, 2006, p. 79). They outline the method in six phases: (1) familiarizing yourself with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, (6) producing the report. These phases are not sharply delineated, but overlap, and there is some movement back and forth between them as categories are refined (for details of these phases, see Braun & Clarke, 2006). Although we found Braun and Clarke’s approach useful for coding the data and producing a hierarchical map of the themes, we acknowledge that our reporting of frequency data as well (i.e., mixed methods) may fit better with a content analysis approach in terms of an epistemological framework.

The data was coded into categories by the first author using a bottom-up (inductive) approach. The software MAXQDA was used to code the text and to produce the quantitative data. (Full details of the definitions for each category, including inclusion and exclusion criteria are provided in the document Supplementary Materials 2).

A report was categorized as a General Absence when participants used terms such as “emptiness” or “void” to describe their experience, or general terms such as “nothing” and “not anything.” If they qualified that they do not

see or feel anything or see or feel a body part then their report was coded as modality specific absence (e.g., Visual Absence for the visual modality or Somatic Absence for the bodily experience modality). Uses of the term “emptiness” in a Zen or Buddhist sense were excluded from the General Absence category. Two participants used the term “emptiness” in this sense.

Participants used more diverse terminology when it came to awareness itself experiences. Sometimes they referred to a consciousness without personal characteristics (e.g., name, age, gender, personality) or other physical features (e.g., solidity, shape, color) and other times they referred to a kind of pure observer without personal characteristics or physical features. It was judged that these responses were unified enough to be placed in a single category “Awareness Itself or Featureless Observer.” The labeling of this category was influenced by the literature on such experiences (Albahari, 2009; Gamma & Metzinger, 2021; Gupta, 1998).

Once all of the data had been coded, the first author read through all of the segments for each code. Based upon this, the codes were refined (e.g., inclusion and exclusion criteria were created so that there were clear boundaries between categories). During this process, some categories were merged if there was no clear distinction between their instances or if they belonged to a salient super-ordinant category. This process of refining the categories was informed by group discussions with all of the authors. The categories were further refined during the report writing process when the first author created a flow chart of the most theoretically important categories in a hierarchical structure (Fig. 3). For example, instances of not feeling bodily shape, bodily parts, or detail were all placed in the general category Somatic Absence.

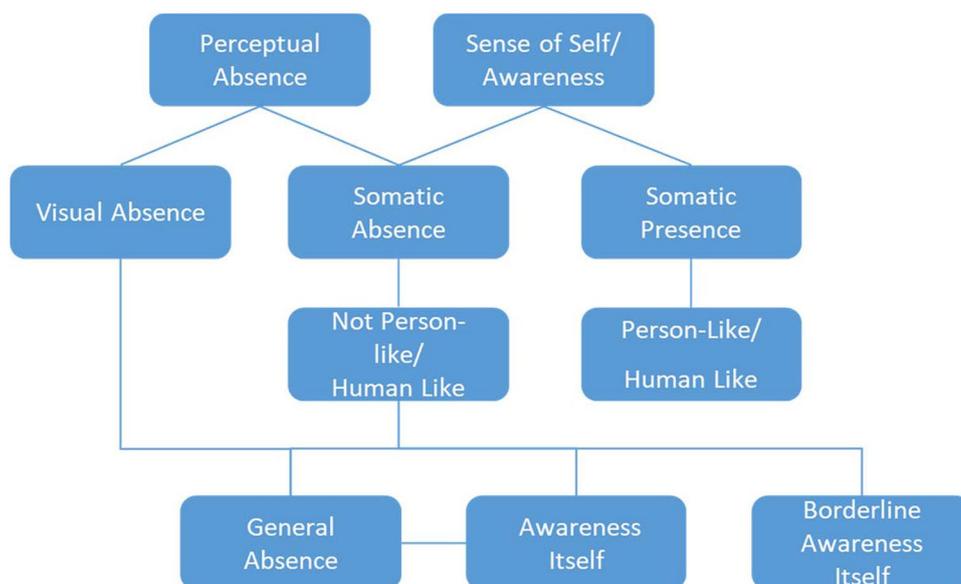
As “loss of self” and “ego dissolution” are quite vague categories (it depends upon what one means by “self”) (Millière, 2017), it was elected to categorize statements in this theme by whether or not there was a sense of being a person. Unsurprisingly, most participant statements about the loss of self were put in terms of not seeming to be person-like, as the last question of the Eyes Closed Exercise directly asked if they seemed to be person-like in their current experience.

Results

Overview and Quantitative Results

The first-person data provided by the 20 participants was incredibly rich and not all of the data can be analyzed here (see Supplementary Materials 2 for more results). The primary relevant phenomenological categories and their relation to General Absence and Awareness Itself/Featureless Observer experiences are shown in Fig. 3. The downwards

Fig. 3 Perceptual Absences and Sense of Self / Awareness and their Relations to Experiences of General Absence and Awareness Itself/Featureless Observer (Note: the two instances of “Awareness Itself” in the diagram are shortened from “Awareness Itself or Featureless Observer”)



direction represents a movement from the most general categories to the most specific categories. A number of experiences that were closely related to void-like experiences and awareness itself/featureless observer experiences were identified. In particular, perceptual absences were closed related to void-like experiences and the latter was coded as a sub-set of the former.

Similarly, Not-Person-Like or Human-Like was closed related to Awareness Itself or Featureless Observer experiences and the latter was coded as a sub-set of the former. Not-Person-Like or Human-Like was categorized as a subset of Somatic Absence. Somatic Absence was considered to be a subset of both Perceptual Absence and Sense of Self/Awareness (for the purposes of the data analysis, it was treated as only a subset of Perceptual Absence). For example, an absence of experienced bodily properties and/or personal characteristics was usually framed in terms such as “I didn’t experience my body” rather than in terms of a loss of the sense of self altogether.

The line between General Absence and Awareness Itself or Featureless Observer in Fig. 3 represents that there is also a relation between these experiences. For example, they may be precursors of each other and sometimes explicitly overlap. The Awareness Itself or Featureless Observer category was the most refined phenomenological category and was also the least frequently reported out of the types of experience represented in the diagram.

The quantitative results most relevant to the research question are shown in Table 1 (number of participants giving a response) and Table 2 (number of instances of a response). All 20 of the participants described not being able to see their head or face (Visual Absence). It was found that 12 out of 20 participants (36 instances) reported

an experience of void or emptiness (General Absence). Participants most often described experiencing a general absence during the Pointing Exercises (8 and 7 participants, respectively) and the Tube Exercise (8 participants). Two participants referred to a general absence to describe the region outside of their visual field during the Visual Field Exercise. Two participants used “dark” interchangeably with “void.” The most theoretically interesting reports were when the emptiness or void coincided with the location of the observer, particularly in the Pointing Exercises and the Tube Exercise. There were twice as many instances of participants describing themselves as not person-like (27) compared to person-like (13). Five participants out of 20 (seven instances) described an experience of awareness itself or being a featureless observer. These experiences all occurred during the Eyes Closed Exercise and the Tube Exercise. Finally, eight participants (20 instances) described a sense of depersonalization in which the face in the mirror or a body part did not seem to belong to them.

Another question of interest was how participants’ descriptions varied depending upon meditation experience. Figure 4 shows the number of instances of void-like experiences described by participants by their number of years of regular meditation. The data shows no clear linear relationship between meditation experience and tendency to report void experiences; that is, more meditation experience did not seem to either provide an advantage in the elicitation of void experiences or lead to a tendency to use terms such as “emptiness” or “void.” While there is not enough data to draw conclusions, it was interesting that there were few signs of even a trend towards an advantage for experienced meditators. In fact, when the participants were divided into

Table 1 Number of participants giving a response (code) by exercise type (max=20). As participants can give the same type of response for different exercises, the total is not the sum of a row, but the total number for that category when all of the exercises are collapsed into a single response variable (max=20). The numbers in brackets are the total for the code without the sub-categories

Code	Hands Exercise	Visual Field Exercise	Pointing Exercise	Card Exercise	Closed Eyes Exercise	Pointing Exercise 2	Tube Exercise	Tot
Perceptual absence	19	20	20	19	20	17	20	20
Sense of self/awareness			5	2	6	6	11	16
Visual absence	19	19	20	19	7	14	20	20
Somatic absence	1		4	4	20	2	7	20
Somatic presence	6	1	7	3	16	5	5	19
Not person-like/ human-like			2	4	16	2	7	17 (16)
Person-like/human-like		1			8	1	2	10
General absence	1	2	8		1	7	9	12
Awareness itself or featureless observer					3		3	5
Borderline awareness itself or featureless observer			2	2	4	2	3	7
Depersonalization	1		2	3	1	7		8

Table 2 Number of text segments for each code by exercise type. Super-categories such as Perceptual Absence show the total segments for the category when the sub-categories are collapsed into a single category rather than summed. This was done to eliminate double-counting of segments for super-categories; e.g., a participant responding that they both cannot see their head (Visual Absence) and cannot feel the shape of their face (Somatic Absence) in the same segment only counted as a single Perceptual Absence. The number in brackets is the total for the code without the sub-categories

Code	Hands Exercise	Visual Field Exercise	Pointing Exercise	Card Exercise	Closed Eyes Exercise	Pointing Exercise 2	Tube Exercise	Tot
Perceptual absence	26	36	40	44	111	31	63	351
Sense of self/awareness			6	2	6	6	12	(32)
Visual absence	26	33	36	42	8	23	51	219
Somatic absence	1		5	5	102	2	9	124
somatic presence	7	1	9	3	42	6	5	73
Not person-like/human-like			3	4	22	2	8	39 (27)
Person-like/human-like		1			9	1	2	13
General absence	1	3	9		1	10	12	36
Awareness itself or featureless observer					3		4	7
Borderline awareness itself or featureless observer			2	2	4	2	3	13
Depersonalization	1		2	3	1	13		20

groups of low meditation experience (0–5 years) and high meditation experience (6 years and over), the low meditation experience group reported on average more instances of void experiences ($M=2.10$) than the high meditation experience group ($M=1.40$). Age, which was strongly positively correlated with meditation experience ($r=0.67$), is another factor which may have affected participant’s ability to notice their experience. Again, however, there were not enough data points to draw conclusions on these relationships.

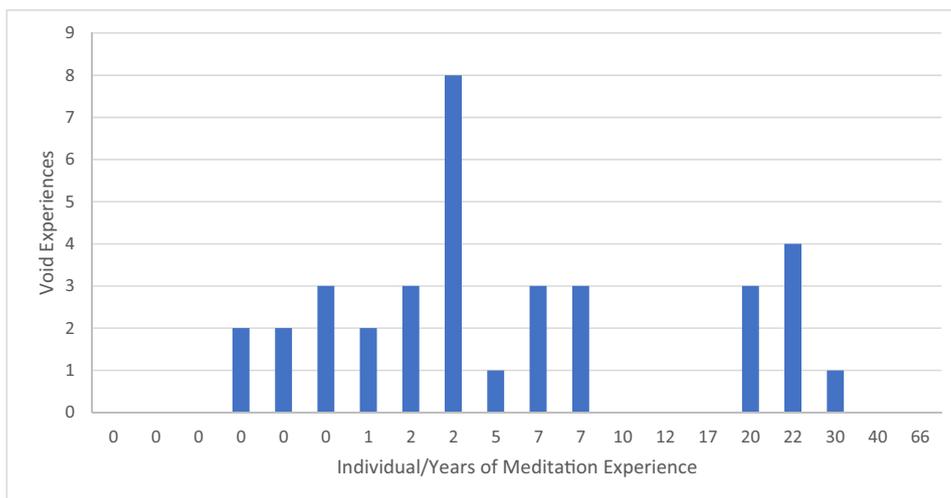
First-Person Reports

Perceptual Absences and General Absence

The most basic experience which all 20 participants agreed to was that they could not see their face. This was coded as a Visual Absence. An example is the pointing experiment:

R: Visually, I don’t have a visual. I mean, I see the anatomy, I imagine it, but it’s not the visual experi-

Fig. 4 Instances of Void-Like Experiences by Individual/ Years of Meditation Experience



ence. Yeah, I don't have any visual experience other than my nose. (P6)

Here Participant 6 (17 years meditation experience) stays at the level of just describing the visual experience (or lack of visual experience). The same participant gave a similar account of their lack of visual experience at their end of the tube:

R: I struggle with that task. Sorry, I don't know what to say. Yeah, no, I can't describe it in words. I think, well I don't know really because I don't have a visual experience. I have a physical experience, but that's not what you're after. Right? On my end it's physical. It's not visual.

Understandably, the participant could not describe the visual aspect of the experience. They also noticed the physical sensations at their end of the tube. Similarly, Participant 5 (40 years meditation experience) reported becoming more physically aware of their cheeks, nose, and eyes when pointing at them:

R: I can feel them, physically feel them that they're there. I have definite sensation that when I point at them, they sort of appear. (laughing)

The sense that one cannot see anything where they are looking from could be considered to be a precursor to the more general experience of emptiness or void. Another precursor to an experience of emptiness were reports that where they are looking from seems like a non-thing, a hole or gap. An example is from Participant 15 (7 years meditation experience):

I: And so, where you're looking from, is it, would you say it was more like that face in the mirror or more like the gap in the frame?

R: Definitely the gap in the frame. (P15).

In the context of the pointing experiment, Participant 7 (30 years meditation experience) was also asked whether what they were pointing at was thing-like or non-thing-like:

I: So, what do you seem be pointing at then, like, have you any descriptors other than like you can't see a thing, can you say its thing-like or non-thing-like where you're pointing at visually?

R: Well, it's really non-thing-like, it doesn't really seem like I'm pointing at anything.

The participant states that it is non-thing-like in their experience, but also goes on to give a more general description of a General Absence. The absence of visual experience in this location can be contrasted with the sense that the "nothing" was in fact visible, i.e., a positive experience, as reported by Participant 11 (2 years meditation experience) on what it is like outside of their visual field:

R: But it's like you can see it. There's a visual awareness of it. I reckon I could see it, like, but it's just black, like seeing nothing...I think that there's a visual awareness of that Nothing. I can sort of see that. I don't know how you see nothing but – let alone describe it.

So far, in the segments analyzed, participants' noticing the visual absence where they cannot see their head has not involved any reference to the self, particularly any sense of self-transcendence or loss of the personal self. In the following segment, by contrast, Participant 20 (2 years meditation experience) reported both a void-like experience and a shift in self-perception during the Pointing Exercise. Also evident is their sense of wonder:

R: Yeah, it's really weird. It's sort of like, it kind of makes you realize like on a perceptual level it's like

your head doesn't really exist. (laughs) There, it's almost like your head is just a space where it's all happening. Like, cause I'm not... I'm pointing at my head, but all I'm seeing is a hand pointing. I'm not actually seeing a head I'm pointing at—it's almost like it's shooting right through me. There's nothing to even point at. It's just sort of a finger-pointing. (laughing) Cause even like seeing the nose, I feel like that's still just an appearance there. It's not really, it's like it's not even attached (laughs), and it's very strange though.

So, in addition to the sense of absence, the participant describes a sense of there being no head at all, a detached floating nose, and the sense that they are insubstantial. The above description also brings in another positive aspect to the experience that in place of the head there is “space” in which it is happening. Four participants out of 20 referred to experiencing a space where they were looking from. The experience of emptiness in conjunction with the loss of self was also described by participant 16 (22 years of meditation experience) when doing the pointing experiment:

R: It was that similar kind of experience of disappearing in a funny way. Yeah. And even looking at my chest, I can't really see it. And doing this again, it's that feeling of not being there in a funny way, or being here but not tangibly. It's very strange, isn't it? Yes. Extraordinary. I'm not at all used to focusing really on my own flesh and blood - are we?

I: Yeah. Any other descriptions of what you seem to be pointing at?

R: It's just complete... well, it's empty. It's a kind of an emptiness. Not in the Zen understanding of emptiness, really. But it's just as though there's nothing here really in a funny way. It doesn't seem to be a 'me' there. (both laughing). If I normally do this, I'm pointing at (participant name), but because it's so focused, I'm sort of aware that there isn't. I don't know what I'm pointing at, really. So, interesting.

The sense of wonder was again evident, as well as the novelty of the experience. The sense of not knowing echoes that of the participant above who could not find words to describe their experience (or lack of experience). Both of the above participants also found the experience to be humorous. Another interesting aspect of the latter exchange was that the participant differentiated between the sense of emptiness they were experiencing and the concept of emptiness they had learned in the Zen tradition. Again, there was the sense of the self not being there or at least “not tangibly.” Their “not tangibly” qualification suggests that if there was a sense of self, it was not the usual personal or bodily sense of self. In this sense, the segment could be considered to be pointing towards

an awareness itself experience and hence it was additionally coded as a Borderline Awareness Itself or Featureless Observer experience.

As well as the pointing exercise, void-like experiences were most frequently described for participants in the Tube Exercise as illustrated in the following exchange with Participant 1 (no recent meditation experience):

I: Was it open or closed at your end of the tube?

R: Yeah, open.

I: Not like a thing?

R: Yeah. Just like empty or something going through, cause there were no features that I could recognize there. The face was located somewhere in the tube. At some point, I didn't know that there was a mirror. I forgot about the mirror being there. And I just saw a face in a hole looking at me.

I: A face in a hole, looking, and what was it looking at?

R: I don't think it was looking at anything because the face was looking at me, but I know there is nothing in that direction, nothing visual... I mean, there's something I can rationalize it, but there was nothing in my experience that was watching. There was no face there. The face was in front of me, not where I was looking from.

Again, for this participant, there is a sense of emptiness with a loss of or at least an altered sense of self—there was not only no perceptible face, but “nothing in my experience that was watching.”

Reports of emptiness experiences in the Tube exercise were not always given immediately, but sometimes only after repeated probes to attend inwards and asking if they had further descriptions. Particularly noteworthy is the following description by Participant 10 (7 years meditation experience) that was given in real-time while they were in the tube:

R: I'm not totally conscious of this end because I'm just looking at the mirror. So, this end—I tend to forget about this end because I'm not conscious of it, I'm just seeing the face in the mirror.

I: Okay, if you attend in that direction where you are looking from, what does it seem like?

R: Seems I'm just looking at a face, the sensation of looking, but yeah nothing more, I think. Yes, it's quiet and just looking.

I: So, notice that the face is opaque, so you can't see through it, and does your end seem opaque or transparent, is it like that face?

R: My end from looking it's almost like, yeah it's open. It's almost like from behind my head kind of thing. So, it's not just it's not confined to my head so to speak.

I: Is it kind of like a hole or seeing a hole or how would you describe?

R: Um, I guess I hate to use the word, but it feels like it's like emptiness, it feels like it's open and ah space, it's like, there's nothing in it.

In addition to the fact that this was a real-time phenomenological report, another interesting feature of this exchange was that the participant (who was a Zen practitioner) was reluctant to use the term “emptiness.”

Not Person-Like or Human-Like

A preliminary to an awareness itself experience was the common report of participants (16 out of 20 excluding subsets) that they could not experience anything that distinguished themselves as human or person-like:

I: So, a final question with your eyes closed. Do you seem to be person-like in your current sensory experience? So, we're dropping imagination and feelings and beliefs. So, what is it like to be you?

R: In this closed off scape here?

I: Yep, just going by current sensory experience.

R: No, I wouldn't say human. I wouldn't say that there's any distinguishing features that would identify what I can perceive as human or human-like. But I can't see any kind of structure, any kind of visual representation of myself in this perception. I could put something there as a marker.... So, I could imagine something there, but if I'm a not imagining something there, it's just a like black space. (P3, 1 year meditation experience)

As seen in this description, the participant was not able to perceive personal or human characteristics with their eyes closed. This however is different from explicitly identifying the observer as non-bodily consciousness. This possibility was usefully illustrated by Participant 5 in the following exchange:

I: So, what's it like to be you right now? (silence) Are you a person with a particular age and name and just going by the present, obviously you can just come up with...

R: No, in that sense. Not a person in a sense, sense of identity to do with name or age or gender, those things. There's no immediately experiencing those things. It's more organic in a way. I feel myself as a living, warm, alive... things happening in the body but not so much a person in the sense of age and name or there's just kind of sensory... I got to say sensory warmth, I guess. I feel like a living being. That's good. (laughing)

This description is interesting because although they could not experience any personally identifying features,

they explicitly described themselves as embodied and so this instance was coded as Person-Like or Human-Like.

Borderline Awareness Itself or Featureless Observer

There were a number of other examples of descriptions that were Borderline Awareness Itself or Featureless Observer experiences (13 instances). In these cases, the self or the observer is characterized as lacking properties, but not necessarily all properties (e.g., it could still be thing-like or a body). These reports were not as explicit as a full-blown reference to a non-bodily consciousness or observer that is in identifying the observer as being either non-bodily or insubstantial or just a consciousness. As an example, during the pointing experiment, one participant refers to a deeper self, but they are not clear on its characteristics (or lack of characteristics):

R: Yes, it's, you can point to hands and legs and everything, but when it points to this, it's more like to the self, to the deeper kind of self, but I can never know what's looking through these eyes and or what's talking to you now, I cannot define this. It's not like a foot or arm or something.

I: It's not thing-like, in that sense?

R: It is thing-like, but the thing that looking at or thinking about it, or figuring it out can never figure what is looking, is listening to you, it's just hard to define. You can't put in a box. It's not like an object as such. You can't define it. Yeah, so I'm on trial. (P10).

Even though they refer to a deeper self, they focus on the fact that they cannot really know or define it. They also go back and forth on whether it is thing-like or not. So overall, it is not a clear-cut case of an awareness itself or featureless observer experience. In particular, there is a distinction between not knowing the details of the observer (epistemological limitation) and the positive sense that the observer actually lacks all color, form, physicality, and personal characteristics (metaphysically speaking). Participant 10 returns these themes later. In regard to looking at their reflection in the mirror, they say:

R: Yes. I mean, you know I've always identified with this face. That is me. For many, many years. (laughs) This is in the mirror yes, of course.

I: You had to learn that. That it was you at some point?

R: I know that it's not really, I mean, it's part of me, it's me, but it's not quite me. It's not the real me. It's only my form.

Here they return to the sense that the face or the body is “not the real me” and that “it's only my form.” This is suggestive that the deeper or real self is not their body, though without explicitly saying what they mean by “the real me.”

Awareness Itself or Featureless Observer

Descriptions that fitted an awareness itself experience were only given in the Eyes Closed exercise and the Tube exercise. Two examples below are from the Eyes Closed exercise:

I: And does it seem like, so if, does it seem like you are like a particular person with a particular age and gender and identity sort of going by this experience?

R: I think as long as you don't think of your memory, I don't think so. No. I think that there's no specific person there, there is an entity that can perceive, but it doesn't have any kind of age, identity or anything like that. It's impossible for me anyway, to put any kind of particular shape or form or personality on that perceiver. (P9, no meditation experience)

Here the participant explicitly states that the perceiver is lacking in age, identity, shape, form, and personality. A report from Participant 15 (7 years meditation experience) also states that they do not seem to be a solid thing with form, and goes further in describing themselves as a spirit, as well as giving the positive characteristic of being like a space:

I: So, now just with your eyes closed still, just being aware of your sensations, the sound, darkness. Are you person-like in your own current experience? We're not going by imagination or memory. What's that like?

R: No. More like a spirit or something. It's intangible. It's not a form. It's not a solid thing. It's more like a space.

I: For like, sensations?

R: For things to show up.

Another significant aspect of this description is that it was made in real time, rather than recalled afterwards.

Most experiences of content-involving emptiness and experiences of awareness itself were described by participants apart from one another. Most did not explicitly link the two. One vivid example from Participant 13 (no meditation experience) brought together both experiences in the Tube Exercise below:

I: And so, contrasting the face and where you're looking from, does either end seem more aware or awake in some sense, if that makes sense...

R: Yeah. I mean, I have an awareness of my consciousness being at my end. So physically or visually, there's a sense of it being vague and not quite there, but there is a sense of my consciousness being at this end.

I: So, you can come out of the tube. (participant comes out of tube) Anything else to report about that?

R: Nothing comes to mind.

I: Did you find a big difference between the face and sort of the end you were looking from?

R: I do. Yeah. And that surprises me. I just lose all tangible sense of anything at this end, apart from my thoughts and awareness, but physically, it seems like everything's at the other end of the tube.

Again, the first part of the description was a real-time report. After coming out of the tube, the participant also reports "I just lose all tangible sense of anything at this end," which was coded as a General Absence, as well as Awareness Itself or Featureless Observer. Another example combining a void-like experience and awareness itself was Participant 15 (who previously described themselves as "spirit"). Also noteworthy was that the participant had just gone back into the tube and gave real-time descriptions of their experience for the first part of the dialogue.

R: I might do this again once you're gone, actually. It's quite interest—I don't know... Wondering what's going on.

I: Yeah. So, what's the contrast between the two ends?

R: Well, this end is blank. There's no face to it. It's like there's no solid at this end.

I: So also take notice of whether either end seems more awake or aware, in some sense.

R: This end is definitely; my end is definitely more awake and aware. The other end seems... Yeah, the other just seems dead, to just tell you the truth. It's just an object.

I: Any other descriptions of the near end?

R: No, not really. Maybe when I keep practicing it. (comes out of tube).

After a detour into their meditation experience, and how these methods could be helpful for "looking back within myself," the exchange returned to what their end of the tube was like:

I: And what do you find when you attend back in that direction?

R: Nothing. Yeah. So, like empty, just empty space. Like it was nothing solid. The solid was when I was looking at the other end—when I go back in, when it's coming back in this end, there was nothing to actually necessarily see. But like you say there... I think you asked what was more alive or what have you, was definitely this end, even though there was nothing actually... It felt like there was nothing, no body sort of thing. It still felt more vibrant.

The sense of aliveness or vibrancy to the void, in conjunction with their sense that was a non-solid awareness at their end, explicitly brings together both of these aspects into a single experience.

Depersonalization

Finally, a salient unexpected finding was that eight participants described a sense of depersonalization, in which they felt like the face they saw in the mirror was not their own or a body part did not belong to them. Most of the reports of depersonalization occurred when participants were looking at their face in the mirror through the tube:

R: The end that I'm looking at, or the face that I'm looking at, seems to be disconnected from my own sensation and seems more plastic.

I: So, you feel disconnected from that face in some sense?

R: Yeah.

I: You were the observer of it, would you say, or?

R: Yeah. (P4).

Participant 1 also described the sense of the face not being their own:

R: It wasn't the face on my end where there should be one. So, the other face wasn't me. It was a representation of me and my experience of it was of something different.

I: So, the face in the mirror seemed to be different from you?

R: Yeah.

The participant later returned to this sense of depersonalization:

R: I think this was the most intense in terms of the effect and the affect too. Cause the other experiments had some visual kind of novelty in themselves, but this one, besides the visual novelty, it was also the experience of alienating your own self in a way. And I feel that sense of something weird was going on.

Participant 5's descriptions suggested that sense that the face was not their own was related to looking at it objectively and also the face's isolation from everything else:

R: It's almost like there's a separate person or thing looking back you. It's quite strange. And because it's just the face isolated from everything else it's kind of disconnected from the person. It's a bit like a death mask. So, it's got a shape and color and texture, but you're kind of looking at your face much more objectively, not as though, not like when you look in the mirror, because I guess when you look in the mirror, you're, I don't know, cleaning your teeth or putting your makeup on or something or kind of assessing your face, but it's a different experience to that. It's less personal. It's quite odd. (laughing).

I: So, it didn't necessarily seem like you, is that what you...

R: Yes, it was easy to imagine it wasn't me or it felt like that it wasn't me.

Discussion

In this study, a phenomenological interview of 20 participants was conducted using the Headless Way experiments. The aim was to guide participants in an investigation of what it is like to be the first-person subject. The current approach is in contrast to techniques frequently studied within the field of mindfulness studies which focus on being aware of breath, thoughts, or bodily sensations etc. (objects of awareness) within the present the moment (e.g., Call et al., 2014; Dambrun, 2016; Dambrun et al., 2019; Farb et al., 2007). The Headless Way techniques by contrast focus on being mindful of an absence of visually perceived objects or features, particularly coinciding with the spot one seems to be looking from (i.e., coinciding with one's "viewpoint" in the subjective visual perspective).

The overall goal of the study was to test if participants would describe their experience in ways that are consistent with some contemplative experiences, outside of a spiritual context and when they are not supplied with this language. Twelve out of 20 participants described a content-involving void experience and 5 out of 20 described an experience of awareness itself/featureless observer. This is a significant finding, given the usual rarity with which these types of experiences are reported. Even though we categorized the former reports as content-involving void experiences, we are not claiming that they are the same as previous reports of "inner silence" at the same time as other contents such as described by Robert Forman and Bernadette Roberts above (Forman, 1999). For example, the inner silence/stillness described by Forman and Roberts seems to be mental in nature, while the current reports are more perceptual in nature. However, we claim that the current reports are similar enough to belong to the same category or family of contemplative experience that is content-involving void experiences.

A novel finding of this study was the report of experiences consistent with contemplative practices outside of traditional meditation settings, including in non-meditators. Another salient finding was the real-time reporting of void-like and awareness itself experiences. This is the only study we know of investigating the relationship between void-like experiences and the experience of awareness and closely related experiences. The most consistent report, which all 20 participants agreed to when doing the exercises, was that they could not see their own faces. That is, there is an absence of visual experience in this location from the first-person subjective perspective. Although the fact that one cannot see one's own face without a mirror is a rather

obvious observation, noticing and actually attending to this “blind spot” was often remarked upon for its novelty and strangeness. Furthermore, such perceptual absences could be considered to be a closely related to void-like experiences, and void-like experiences were in fact coded as a type of perceptual absence. We also hypothesized that the sense of not being person-like was closely related to awareness itself experiences, and the awareness experiences were coded as a subset of the sense of not being-like. Figure 3 depicts the relations between these varieties of phenomenal experience. It shows a hierarchy from the most general at the top (Perceptual Absence and Sense of Self/Awareness) to the most specific at the bottom (General Absence, Awareness Itself/Featureless Observer). While not all participants reported self-transcending experiences, the data suggests that the basic experience (or absence of experience) was so simple and obvious that they all had it. Our hypothesis about the relation between the reports is that all of the participants were having fundamentally the same experience, but that some recognized further subtleties such as the “voidness” of the experience and the sense that the void itself is aware.

An unexpected finding was that eight participants described a sense of depersonalization, in particular in which the face in the mirror did not seem to be their own, rather it seemed “plastic” and “disconnected,” “the other face wasn’t me,” or seemed “a separate person or thing looking back you.” The participants did not report being distressed by this but rather described it as a temporary “weird” and “strange” effect, though Participant 1 described it as “alienating your own self in a way.” Although we did not explicitly predict the occurrence of this type of experience, depersonalization has been associated with a detachment from the self in various meditation traditions (Castillo, 1990; Lindahl & Britton, 2019). Although we cannot draw conclusions about the causal mechanisms underlying this experience, it is suggestive that in a clinical context, mirror staring has been used to deliberately invoke a sense of depersonalization as part of interoceptive exposure therapy. This allows subjects suffering from anxiety disorders to habituate to the sensation (Lickel et al. 2008; Miller et al., 1994). Relatedly, intense meditation practice can have long-term effects of depersonalization (such as the sense that you are the outside observer of your thoughts or body) which can range from an experience of contented detachment (the goal of some spiritual practices), and other long-term mild effects, to clinical levels of depersonalization (Castillo, 1990; Lindahl & Britton, 2019).

The present methods focused on sensory experience (particularly its absence). The findings suggest that some contemplative experiences, rather than being particularly mystical, may be closely related to noticing perceptual absences and the limits of our perception. We hypothesize that by systematically focusing attention inwards, the HW techniques

can bring about a perceptual change akin to a Gestalt shift. For example, rather than looking out of a head (and hence separate from the world), the experience shifts to seeming to look out of an open space for the world (Ramm, 2021). Discussing the mechanism in detail behind why this shift is so significant for some people goes beyond the current paper. Briefly, however, one possibility is that given that common sense experience is that the “I” is located in one’s head (or behind one’s eyes) (Alsmith & Longo, 2014; Bertossa et al., 2008), the direct experience that one’s head does not actually show up in first-person visual experience (but is only present in the form of concepts, imagination, or vague sensations) is a revelation and may erase their usual sense of separation from the world. This may for some subjects short-circuit their identification with being a just person in their present experience. Rather they temporarily suspend their self-concept and just see what it is like to be themselves in their present moment first-person experience. Recall for example the amazement of Participant 20 on doing the pointing experiment: “It’s almost like it’s shooting right through me. There’s nothing to even point at.” Similarly, Participant 16 described: “It’s just as though there’s nothing here really in a funny way. It doesn’t seem to be a ‘me’ there.” Of course, the Headless Way is a meditation practice, so it is not about noticing this just once, but in bringing one’s attention back again and again to the “gap” until experiencing one’s (purportedly) original void-like nature/openness to the world is stabilized in everyday life. By contrast, other participants, for which there was no sense of self-transcendence, were often more focused on the somatic experience of their face and bodies, as well as imagining them (Participants 5 and 6 above). This is, of course, an equally valid experience.

Baars (2013) has suggested that the repetitive nature of many contemplative practices (e.g., chanting, staring at a wall) makes use of perceptual redundancy to reduce or even eliminate sensory content (see also Castillo, 1990; Piggins & Morgan, 1977). Hence, these practices seem to make use of well-studied perceptual mechanisms. The current study suggests that another “non-esoteric” means of eliciting self-transcendence is to ask participants to attend to the visual “blind spot” in their perceptual field. Experiences of awareness itself and void-like experiences are commonly experienced as an underlying “silence” (Forman, 1999; Travis & Pearson, 2000; Woods et al., 2020, p. 11). One novel aspect of the HW approach is the use of vision as a means of recognizing awareness itself and a void-like aspect of the mind. Vision provides the opportunity for apparatus, such as a pointing finger, to be used to direct attention inwards which is not available to other sensory modalities.

Although references to the void and pure awareness is common in contemplative traditions, it can be questioned whether the experiences reported here, in a non-spiritual context, really deserve to be categorized as

contemplative-like experiences. In answer to this objection, we prefer to let the participants' descriptions speak for themselves. Contemplative experiences are of course highly diverse and contemplative traditions are also embedded in diverse cultures with their own unique language and beliefs which color their reports, and it is controversial to what extent mystical experiences are driven by prior beliefs, let alone refer to a universal experience (Katz, 1978). Far from being a mystical experience, the present study asked participants to focus on their subjective sensory experience as much as possible, while setting aside pre-conceptions, memory, and imagination. For a more mystical version of the "headless" experience, see Harding (1986, pp. 1–2).

There is also a question as to whether participants were actually referring to the same experience when they used similar terminology. The language used to describe a general absence varied from void, to emptiness, to nothing, to not anything, while two participants used the term "dark" interchangeably with "void." It can be argued, however, that the underlying experience is phenomenologically identical. Describing a void-like experience of absence could in fact be thought to be far more reliable and communicable than other experiences because there are no qualities to vary in such an experience. There is no way that I can know the exact shade of red that someone else is experiencing, but how can absence experiences differ? Steven Katz argues that what mystics in the Buddhist tradition mean by "nothingness," differs significantly to what mystics in the Christian tradition mean by "nothingness" (Katz, 1978). However, in the present study, as all of the participants carried out the same exercises in a non-spiritual context, there was little reason to hold that they attributed culturally or religious divergent meanings to the words such as "void" and "emptiness." This being said, Participant 14 stated they were using a Buddhist notion of "emptiness" (which was excluded from the analysis) and Participant 16 explicitly distinguished between their experience of "emptiness" and the Zen use of the term.

The way in which awareness itself was described was more variable, with some participants referring to an observer without any qualities and others referring to a non-bodily consciousness. We take it to be a question for future research whether awareness itself and the sense of being a pure observer refer to exactly the same phenomenon. The most interesting reports were ones in which the experience of emptiness coincided with the experience of awareness. As an example, Participant 15 when asked "what's the contrast between the two ends?" of the tube, replied "Well, this end is blank. There's no face to it. It's like there's no solid at this end." When asked if either end seems more awake or aware than the other, they further qualified that their end seemed more awake and aware and "the other end seems dead, to tell you the truth. It's just an object." Later in the dialogue, when asked to describe their end further, they stated "I think

you asked what was more alive or what have you, was definitely this end, even though there was nothing actually... It felt like there was nothing, no body sort of thing. It still felt more vibrant." The sense that there is a vibrancy or aliveness to the void is consistent with the Tibetan Buddhist tradition which refers to a "luminous emptiness" not just a mere nothing (Fremantle, 2001). As it is described in the Tibetan Book of the Dead:

This brilliant emptiness is the radiant essence of your own awareness. It is beyond substance, beyond characteristics, beyond color... The instant of your own presence is empty, yet it is not a nihilistic emptiness, but unimpeded radiance, brilliant and vibrant. (Padmasambhava et al., 2006, p. 14).

While the void-like experiences we investigated should not be conflated with contentless experiences as the text above describes, the two types of experience at least appear to share some features. The reports of subjects in our study could be interpreted as consistent with reports of "glimpses" of the luminous mind for practitioners in the Dzogchen tradition when guided through the pointing-out instruction (Rinpoche, 2003). The vibrancy of clear awareness also agrees with first-person reports given by a contemporary Buddhist lama, Tilmann Lhundrup Borghardt, who described objectless pure awareness, as not just nothingness but as alive and vital:

No thought emerges, no sensory perception, there is only a clear experience of one's own liveliness. Vitality can also be taken as a quality. Basically, we are talking about the non-dualistic, basic experience of being alive. It is alive. You know how you say you're alive in dualistic language. But how do you know? Vital awareness! It is the alert, vital potential of being able to perceive and be active at any time. (Costines et al., 2021, p. 10).

That there is a quality of vibrancy or vitality to the "emptiness" is consistent or at least analogous between these reports, albeit in a dualistic/content-involving context. Experiences like this are usually reserved for centuries-old esoteric texts or meditation experts with decades of intense meditation training. It is remarkable then that, in 1 to 2 hr of active experimentation, participants who were naïve to the exercises and even with no meditation experience describe experiences that at least appear to share features with these experiences. The experiences are of course not the same, and whether or not they share essential features is a question for further investigation. Our proposal is that void-like experiences during everyday activities and absolute void experiences (without any contents) are different modes of recognizing the same fundamental void-like awareness, so they would be expected to share features. If this is the case,

then these different types of experience should converge and can mutually inform each other.

A strength of the present study was the short period between the participants having the experience and describing it. Most phenomenological investigations of contemplative experiences, including pure awareness experiences, proceed by asking a participant to recall the experience from long-term memory (e.g., Gamma & Metzinger, 2021; Woods et al., 2023). In another popular approach, micro-phenomenology, previous experiences are “evoked” in the present (Petitmengin et al., 2017, 2019). Are the experiences sensorily re-activated as claimed in this approach? A challenge for such methods is the evidence that episodic memory recall involves construction (Conway, 2005; Conway & Loveday, 2015; Hassabis & Maguire, 2007). How can we hence judge whether these recalled/evoked experiences are accurate or not? (Sparby et al., 2020, p. 776). One possibility is using third-person measures to validate first-person reports (e.g., Petitmengin et al., 2013). The present methods, by contrast, attempted to minimize the likelihood of construction (particularly as leveled against contemplative experiences recalled from long-term memory) by asking participants to describe their experiences immediately after having them. In a number of cases, participants also repeated the exercises to check what their experience was. Some participants also described their experience in real time. Significantly, Participant 15 described an experience of awareness itself and Participant 10 described a void-like experience as they were having it. This is the first study we know of to include real-time reports of awareness itself experiences and content-involving void experiences. One weakness of reporting real-time experiences is that the act of reporting may interfere with the experience, which is one potential advantage of recalling an experience afterwards (retrospection) (Petitmengin et al., 2013). However, if awareness itself is the unchanging background to all conscious episodes, then thoughts and other activities could only interfere by distracting one from this conscious presence, not by changing its qualities. In any case, as the present study involved both recall and real-time descriptions of awareness and a void-like aspect to experience, each type of report can be used to compensate for the other’s potential weaknesses. The fact that both contemporaneous and non-contemporaneous reports converged on similar descriptions is further support for the reliability of the reports.

Another question was whether participants were biased by their experience in meditation or knowledge of spiritual traditions in reporting their experiences. There was no indication that more meditation experience was associated with more instances of reports of void-like experiences (Fig. 4). In fact, there was an indication that previous meditation experience could represent a counter-bias. In particular, Participant 10 (who was a Zen practitioner) showed a reluctance

to use this term: “I hate to use the word, but it feels like it’s like emptiness, it feels like it’s open and ah space, it’s like, there’s nothing in it.” Their reluctance was presumably because of the exalted status that “emptiness” is afforded in the Zen Buddhist tradition. Participant 16, another Zen practitioner, went as far as distancing their use of the term “emptiness” from the way the term is used in Zen: “It’s a kind of an emptiness. Not in the Zen understanding of emptiness, really.” Another Zen practitioner, Participant 15, also indicated that the techniques could be helpful in their practice, which suggests that the experience was a novel one for them, rather than something arising from their practice. Not having the terminology to describe their experience is an opposite kind of response bias, which could have hindered participants in noticing their experience. As well as their evident curiosity and openness, that some participants showed awareness of their potential biases was another indication that they were high-quality phenomenological participants. The extent to which participants succeeded in overcoming their biases and preconceptions and to what extent the terminology assists in noticing their experience is a question for further study.

The current study advances the field by identifying and analyzing varieties of contemplative-like experiences using a rigorous phenomenological approach. The current approach suggests that the recognition of awareness itself and void-like experiences can be elicited and investigated outside of a spiritual context/practice. Traditional descriptions face limitations in that they may restrict themselves to describing a state as ineffable, or rely on normative or dogmatic accounts of what the characteristics of the state should be. It is hence difficult to tease apart religious/spiritual influences from the actual experiences (Katz, 1978). The current approach goes beyond traditional approaches by being a phenomenological method in which participants’ instructed goal was to describe experience, rather than reach a particular pre-defined state (samadhi, selflessness, etc.) (for another phenomenological approach to contemplative states see Sparby, 2019). It also identifies more refined categories of these contemplative-like experiences by identifying closely related varieties and precursors of these experiences.

Limitations and Future Research

A limitation to this study is the possibility that some of the interviewer’s questions could have led participants’ responses. A question is leading when its wording suggests a particular answer and so could bias responses in a particular direction. A potential example was asking participants whether their experience was like a hole or gap (e.g., in the Card and Tube Exercises). Is this too close to void-like experiences under investigation? Another potential example was

when Participant 1 was asked to clarify whether their end of the tube was “not like a thing?” Fortunately, most reports of void-like experiences were made in the absence of these questions. Similarly, the question arises whether participants should be directly asked about the sense of being “awake” or “aware” or is this too close to the phenomena under investigation? We felt that as the terms “awake” and “aware” are a part of everyday vernacular; they were general enough that they do not directly indicate contemplative experiences such an experience of “awareness itself.” We also believe that providing such terms may actually help participants to notice subtle aspects of their experience. For example, future qualitative studies could also ask participants more probing questions, such as do they feel identified with the “emptiness”? Does the “emptiness” itself seem to be awake or aware? Of course, this study is only a first step and we take the effect on participant’s reports of providing more, less, or different terminology/probing questions to be an empirical question for further investigation. The current methods could also be productively used in conjunction with a micro-phenomenological approach (Petitmengin et al., 2017, 2019) to add additional rigor to the interview process and investigate the experiences in more depth.

Given the preliminary nature of the current findings, it goes beyond the scope of the current paper to justify the hypothesis that experiences described here are in the same family as some of the experiences reported by contemplatives from their diverse traditions. We did however highlight intriguing similarities between the experiences reported in this study and experiences described by meditation practitioners. These methods potentially open up a class of contemplative experiences to more rigorous empirical investigation, which may help us to further understand the mystical dimension of human experience. In particular, by verifying (or least converging on) contemplative claims that the nature of the mind is void-like, these findings can arguably provide an independent phenomenological motivation for these religious claims (Ramm, 2021, 2023). Another salient finding was changes to subjects’ sense of self when doing the exercises. In particular, some participants reported a dropping away or disappearance of the bodily self (at least temporarily). Similar shifts in consciousness have also been found to be associated with increases in well-being and happiness, including in a meditation program which incorporated the HW exercises (Martin et al., 2023). Given this and many anecdotal reports of the benefits of the Headless Way approach (Lang, 2012), investigating the potential therapeutic benefits of regularly practicing these techniques is another important avenue for future studies.

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Data Availability The quantitative data and definitions of the codes are available in the document Supplementary Materials 2. The availability of the raw qualitative data which supports the findings of this study is restricted to protect participant privacy. Requests to access the data can be made to the Witten/Herdecke University Ethics Committee.

Declarations

Conflict of Interest The authors declare no competing interests.

Ethics Statement This study was approved for human participants by the Witten/Herdecke University Ethics Committee.

Informed Consent All participants gave their informed written consent before participating in the study.

Use of Artificial Intelligence Statement AI was not used in the writing of this manuscript.

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References

- Albahari, M. (2009). Witness-consciousness: Its definition, appearance and reality. *Journal of Consciousness Studies*, 16(1), 62–84.
- Alcaraz-Sanchez, A. (2021). Awareness in the void: A micro-phenomenological exploration of conscious dreamless sleep. *Phenomenology and the Cognitive Sciences*, 22(4), 867–905. <https://doi.org/10.1007/s11097-021-09743-0>
- Alsmith, A. J., & Longo, M. R. (2014). Where exactly am I? Self-location judgements distribute between head and torso. *Consciousness and Cognition*, 24, 70–74. <https://doi.org/10.1016/j.concog.2013.12.005>
- Austin, J. H. (1998). *Zen and the brain*. MIT Press.
- Baars, B. J. (2013). A scientific approach to silent consciousness. *Frontiers in Psychology*, 4, 66146. <https://doi.org/10.3389/fpsyg.2013.00678>

- Bertossa, F., Besa, M., Ferrari, R., & Ferri, F. (2008). Point zero: A phenomenological inquiry into the seat of consciousness. *Perceptual and Motor Skills*, 107(2), 323–335. <https://doi.org/10.2466/pms.107.2.323-335>
- Bitbol, M., & Petitmengin, C. (2013). A defense of introspection from within. *Constructivist Foundations*, 8(3), 269–279.
- Blanck, P., Perleth, S., Heidenreich, T., Kröger, P., Ditzen, B., Bents, H., & Mander, J. (2018). Effects of mindfulness exercises as stand-alone intervention on symptoms of anxiety and depression: Systematic review and meta-analysis. *Behaviour Research and Therapy*, 102, 25–35. <https://doi.org/10.1016/j.brat.2017.12.002>
- Block, N. (2014). Seeing-as in the light of vision science. *Philosophy and Phenomenological Research*, 89(3), 560–572.
- Bradbury-Jones, C., Sambrook, S., & Irvine, F. (2009). The phenomenological focus group: An oxymoron? *Journal of Advanced Nursing*, 65(3), 663–671. <https://doi.org/10.1111/j.1365-2648.2008.04922.x>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Call, D., Miron, L., & Orcutt, H. (2014). Effectiveness of brief mindfulness techniques in reducing symptoms of anxiety and stress. *Mindfulness*, 5(5), 658–668. <https://doi.org/10.1007/s12671-013-0218-6>
- Castillo, R. J. (1990). Depersonalization and meditation. *Psychiatry*, 53(2), 158–168. <https://doi.org/10.1080/00332747.1990.11024497>
- Conway, M. A. (2005). Memory and the self. *Journal of Memory and Language*, 53(4), 594–628. <https://doi.org/10.1016/j.jml.2005.08.005>
- Conway, M. A., & Loveday, C. (2015). Remembering, imagining, false memories & personal meanings. *Consciousness and Cognition*, 33, 574–581. <https://doi.org/10.1016/j.concog.2014.12.002>
- Costines, C., Borghardt, T. L., & Wittmann, M. (2021). The phenomenology of “pure” consciousness as reported by an experienced meditator of the Tibetan Buddhist Karma Kagyu tradition Analysis of interview content concerning different meditative states. *Philosophies*, 6(2), 50. <https://doi.org/10.3390/philosophies6020050>
- Dambrun, M. (2016). When the dissolution of perceived body boundaries elicits happiness: The effect of selflessness induced by a body scan meditation. *Consciousness and Cognition*, 46, 89–98. <https://doi.org/10.1016/j.concog.2016.09.013>
- Dambrun, M., Berniard, A., Didelot, T., Chaulet, M., Droit-Volet, S., Corman, M., Juneau, C., & Martinon, L. M. (2019). Unified consciousness and the effect of body scan meditation on happiness: Alteration of inner-body experience and feeling of harmony as central processes. *Mindfulness*, 10(8), 1530–1544. <https://doi.org/10.1007/s12671-019-01104-y>
- Depraz, N., Varela, F., & Vermersch, P. (2000). The gesture of awareness: An account of its structural dynamics. In M. Velmans (Ed.), *Investigating Phenomenal Consciousness* (pp. 121–136). John Benjamins Press.
- Farb, N. A., Segal, Z. V., Mayberg, H., Bean, J., McKeon, D., Fatima, Z., & Anderson, A. K. (2007). Attending to the present: Mindfulness meditation reveals distinct neural modes of self-reference. *Social Cognitive and Affective Neuroscience*, 2(4), 313–322. <https://doi.org/10.1093/scan/nsm030>
- Forman, R. K. C. (1999). *Mysticism, mind, consciousness*. State University of New York Press.
- Fremantle, F. (2001). *Luminous emptiness: A guide to the Tibetan Book of the Dead*. Shambhala Publications.
- Frank, P., & Marken, M. (2022). Developments in qualitative mindfulness practice research: A pilot scoping review. *Mindfulness*, 13(1), 17–36. <https://doi.org/10.1007/s12671-021-01748-9>
- Gamma, A., & Metzinger, T. (2021). The Minimal Phenomenal Experience questionnaire (MPE-92M): Towards a phenomenological profile of “pure awareness” experiences in meditators. *PLoS ONE*, 16(7), e0253694. <https://doi.org/10.1371/journal.pone.0253694>
- Gupta, B. (1998). *The disinterested witness: A fragment of the Advaita Vedanta phenomenology*. Northwestern University Press.
- Gyatso, K. T. (2001). *Progressive stages of meditation on emptiness* (S. Hookham, Trans.). Zhiyi Chokyi Ghatsal Publications.
- Harding, D. E. (1986). *On having no head: Zen and the rediscovery of the obvious*. London: Arkana.
- Harding, D. E. (1999). *Head off stress*. The Shollond Trust.
- Hassabis, D., & Maguire, E. A. (2007). Deconstructing episodic memory with construction. *Trends in Cognitive Sciences*, 11(7), 299–306. <https://doi.org/10.1016/j.tics.2007.05.001>
- Huynh, T., Hatton-Bowers, H., & Howell Smith, M. (2019). A critical methodological review of mixed methods designs used in mindfulness research. *Mindfulness*, 10(5), 786–798. <https://doi.org/10.1007/s12671-018-1038-5>
- Josipovic, Z. (2014). Neural correlates of nondual awareness in meditation. *Annals of the New York Academy of Sciences*, 1307(1), 9–18. <https://doi.org/10.1111/nyas.12261>
- Katz, S. T. (1978). Language, epistemology, and mysticism. In S. T. Katz (Ed.), *Mysticism and philosophical analysis* (pp. 22–74). Oxford University Press.
- Kelly, L. (2015). *Shift into freedom: The science and practice of open-hearted awareness*. Sounds True.
- Khoury, B., Sharma, M., Rush, S. E., & Fournier, C. (2015). Mindfulness-based stress reduction for healthy individuals: A meta-analysis. *Journal of psychosomatic research*, 78(6), 519–528. <https://doi.org/10.1016/j.jpsychores.2015.03.009>
- Lang, R. (2012). *Seeing who you really are*. Shollond Trust.
- Lickel, J., Nelson, E., Lickel, A. H., & Deacon, B. (2008). Interoceptive exposure exercises for evoking depersonalization and derealization: A pilot study. *Journal of Cognitive Psychotherapy*, 22(4), 321–330. <https://doi.org/10.1891/0889-8391.22.4.321>
- Lindahl, J. R., & Britton, W. B. (2019). “I have this feeling of not really being here”: Buddhist meditation and changes in sense of self. *Journal of Consciousness Studies*, 26(7–8), 157–183.
- Lomas, T., Cartwright, T., Edginton, T., & Ridge, D. (2015). A qualitative analysis of experiential challenges associated with meditation practice. *Mindfulness*, 6(4), 848–860. <https://doi.org/10.1007/s12671-014-0329-8>
- Lumma, A.-L., & Weger, U. (2021). Looking from within: Comparing first-person approaches to studying experience. *Current Psychology*, 42(12), 10437–53. <https://doi.org/10.1007/s12144-021-02277-3>
- Lutz, A., & Thompson, E. (2003). Neurophenomenology: Integrating subjective experience and brain dynamics in the neuroscience of consciousness. *Journal of Consciousness Studies*, 10(9–10), 31–52.
- Martin, J. A., Ericson, M., Berwaldt, A., Stephens, E. D., & Briner, L. (2023). Effects of two online positive psychology and meditation programs on persistent self-transcendence. *Psychology of Consciousness: Theory, Research, and Practice*, 10(3), 225–253. <https://doi.org/10.1037/cns0000286>
- Metzinger, T. (2020). Minimal phenomenal experience: Meditation, tonic alertness, and the phenomenology of “pure” consciousness. *Philosophy and the Mind Sciences*, 1, 1–44. <https://doi.org/10.33735/phimisci.2020.1.46>
- Miller, P. P., Brown, T. A., DiNardo, P. A., & Barlow, D. H. (1994). The experimental induction of depersonalization and derealization in panic disorder and nonanxious subjects. *Behaviour Research and Therapy*, 32(5), 511–519. [https://doi.org/10.1016/0005-7967\(94\)90138-4](https://doi.org/10.1016/0005-7967(94)90138-4)
- Millière, R. (2017). Looking for the self: Phenomenology, neurophysiology and philosophical significance of drug-induced ego dissolution. *Frontiers in Human Neuroscience*, 11, 245. <https://doi.org/10.3389/fnhum.2017.00245>

- Padmasambhava, Coleman, G., & Jinpa, T. (2006). *The Tibetan book of the dead*. (G. Dorje, Trans.). Penguin Books.
- Petitmengin, C., Remillieux, A., Cahour, B., & Carter-Thomas, S. (2013). A gap in Nisbett and Wilson's findings? A first-person access to our cognitive processes. *Consciousness and Cognition*, 22(2), 654–669.
- Petitmengin, C., Van Beek, M., Bitbol, M., & Nissou, J.-M. (2017). What is it like to meditate?: Methods and issues for a micro-phenomenological description of meditative experience. *Journal of Consciousness Studies*, 24(5–6), 170–198.
- Petitmengin, C., Van Beek, M., Bitbol, M., Nissou, J.-M., & Roepstorff, A. (2019). Studying the experience of meditation through micro-phenomenology. *Current Opinion in Psychology*, 28, 54–59. <https://doi.org/10.1016/j.copsyc.2018.10.009>
- Piggins, D., & Morgan, D. (1977). Note upon steady visual fixation and repeated auditory stimulation in meditation and the laboratory. *Perceptual and Motor Skills*, 44(2), 357–358. <https://doi.org/10.2466/pms.1977.44.2.357>
- Ramm, B. J. (2017). Self-experience. *Journal of Consciousness Studies*, 24(11–12), 142–166.
- Ramm, B. J. (2018). First-person experiments: A characterisation and defence. *Review of Philosophy and Psychology*, 9, 449–467. <https://doi.org/10.1007/s13164-018-0388-1>
- Ramm, B. J. (2021). The technology of awakening: Experiments in Zen phenomenology. *Religions*, 12(3), 192. <https://doi.org/10.3390/rel12030192>
- Ramm, B. J. (2023). Pure awareness experience. *Inquiry*, 66(3), 394–416. <https://doi.org/10.1080/0020174X.2019.1592704>
- Rinpoche, D. P. (2003). *Wild awakening: The heart of Mahamudra and Dzogchen*. Shambhala.
- Shear, J. (2011). Eastern approaches to altered states of consciousness. In E. Cardeña & M. Winkelmann (Eds.), *Altering consciousness: Multidisciplinary perspectives* (pp. 139–158). ABC-CLIO.
- Shear, J. (2014). *The inner dimension: Philosophy and the experience of consciousness*. Harmonia Books.
- Shear, J., & Jevning, R. (1999). Pure consciousness: Scientific exploration of meditation techniques. *Journal of Consciousness Studies*, 6(2–3), 189–209.
- Siegel, S. (2007). How can we discover the contents of experience? *The Southern Journal of Philosophy*, 45(S1), 127–142. <https://doi.org/10.1111/j.2041-6962.2007.tb00118.x>
- Sparby, T. (2019). Phenomenology and contemplative universals: The meditative experience of dhyana, coalescence, or access concentration. *Journal of Consciousness Studies*, 26(7–8), 130–156.
- Sparby, T., Edelhäuser, F., & Weger, U. W. (2020). The sense of certainty and the reliability of first person reports: An investigation using micro-phenomenological self-inquiry. *Scandinavian Journal of Psychology*, 61(6), 775–783.
- Teasdale, J. D., & Chaskalson, M. (2013). How does mindfulness transform suffering? I: The nature and origins of dukkha. In J. M. Williams & J. Kabat-Zinn (Eds.), *Mindfulness: Diverse perspectives on its meaning, origins and applications* (pp. 89–102). Routledge.
- Thompson, E. (2014). *Waking, dreaming, being: Self and consciousness in neuroscience, meditation, and philosophy*. Columbia University Press.
- Travis, F., & Pearson, C. (2000). Pure consciousness: Distinct phenomenological and physiological correlates of “consciousness itself.” *International Journal of Neuroscience*, 100(1–4), 77–89. <https://doi.org/10.3109/00207450008999678>
- Wallace, B. A. (2011). *Stilling the mind: Shamatha teachings from Dūdjom Lingpa's Vajra Essence*. Wisdom Publications.
- Weger, U., Meyer, A., & Wagemann, J. (2016). Exploring the behavioral, experiential, and conceptual dimensions of the self. *European Psychologist*, 21(3), 180–194. <https://doi.org/10.1027/1016-9040/a000263>
- Windt, J. M. (2015). Just in time—Dreamless sleep experience as pure subjective temporality. *Open MIND*, 37(C). <https://doi.org/10.15502/9783958571174>
- Winter, U., LeVan, P., Borghardt, T. L., Akin, B., Wittmann, M., Leyens, Y., & Schmidt, S. (2020). Content-free awareness: EEG-fMRI correlates of consciousness as such in an expert meditator. *Frontiers in Psychology*, 10, 3064. <https://doi.org/10.3389/fpsyg.2019.03064>
- Woods, T. J., Windt, J. M., Brown, L., Carter, O., & Van Dam, N. T. (2023). Subjective experiences of committed meditators across practices aiming for contentless states. *Mindfulness*, 14(6), 1457–1478. <https://doi.org/10.1007/s12671-023-02145-0>
- Woods, T. J., Windt, J. M., & Carter, O. (2020). Silence in Shamatha, Transcendental, and Stillness meditation: An evidence synthesis based on expert texts. *Frontiers in Psychology*, 11, 1259. <https://doi.org/10.3389/fpsyg.2020.01259>
- Woods, T. J., Windt, J. M., & Carter, O. (2024). Evidence synthesis indicates contentless experiences in meditation are neither truly contentless nor identical. *Phenomenology and the Cognitive Sciences*, 23, 253–304. <https://doi.org/10.1007/s11097-022-09811-z>

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