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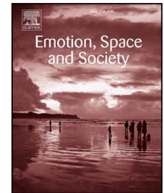

Under water and into yourself: Emotional experiences of freediving contact information

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"When you lie at the surface breathing my heart beats really fast: bum-bum-bum-bum-bum [sound of fast heart beating]. Okay, okay, relax. But once you are going down I think my mind gets blank, like, I don't think about anything. And I just relax. When I came here I thought I was gonna be really scared of the darkness because I've done it in places where it's really light and at -60 m you are like in the surface, and here it's not like that. But I think that helps you feel more relaxed. So, when you are at like -70 m you feel peace. I have, my mind tries to chase peace, tranquillity, love and blue. That's what I see when I go down." (Interview with Vertical Blue, 2015 participant, informant S).

Holding your breath for as long as possible under water. Swimming under water in a pool as far as possible while holding your breath. Diving deep into the sea and getting back up on a single breath. Classic challenges, known from children's play and tests of manhood, outlining the basic disciplines in the sport of freediving where divers explore how long or deep they can go underwater without assisting air. Current world records are static breath hold for 11 min and 35 s, 300 m underwater in pool with monofin, and -129 m into the deep (and back up) with monofin. Because of the obvious risk of drowning that arises when the human body is submerged into the aquatic world, freediving is often categorized as an extreme sport. However, in contrast to most other extreme sports that are defined by adrenaline rushes and acceleration of speed (Breivik, 2010), freediving is about the opposite: avoiding adrenaline because it consumes oxygen, and instead generating a calm, meditative, almost sleep-like state of being to be able to perform. Freedivers describe their experiences as a movement into a blissful, stress-free state of mind. In a famous quote, legendary Italian freediver Umberto Pelizzari suggests that: "The scuba diver dives to look around. The freediver dives to look inside." (Pelizzari and Tovaglieri, 2004: 137). With this statement, Pelizzari emphasizes that freediving is not a tour into the aquatic to see life under water. On the contrary, freediving is a bodily experience of travelling into yourself in the water, sensing how you feel when you are detached from life on land immersed into the aquatic element. As the international rule- and record-keeping body of freediving, AIDA, describes the sport on their homepage: "The true appeal of freediving is in the silence and calm it brings to people's hectic lives" (AIDA, 2016). For the post-modern practitioner freediving provides a sense of serenity and balance rarely experienced otherwise.

In this paper I look into freedivers' experiences of being under water. Similar to other water-based activities, freediving involves pleasures generated from the immersion into water, being in direct contact with this natural element, constituting water-human relationships (Anderson and Peters, 2014; Brown and Humberstone, 2015; France and Lawrence, 2003). Yet, for freedivers, diving is moreover about diving into yourself. In line with the findings of human geographer Elizabeth Straughan's study of scuba divers' sensuous experiences of water (2012), freedivers' haptic sensations of being immersed into water are coupled with meditative practices. Moreover, I will suggest that in the case of freediving, the meditative experiences of diving become intensified and can develop into spiritual oceanic feelings (Molchanova in Whelan, 2015; Parsons, 1998).

Recurently, freedivers emphasize the mental aspect of their sport, by which they mean two different things: a mentally meditative experience is the most pleasurable outcome of the activity, and mental control is a paramount requirement to perform well and diving safely. Hence, to make the underwater become a space of enjoyment, relaxation and also achievements; to become able to experiencing "the antithesis of terrestrial living" (Straughan, 2012: 24; see also Merchant, 2011, 2014), freedivers have to learn to act contrary to nature, not getting scared when situated under water unable to breathe, instead learning to enjoy underwater breath-holding. Inspired by sociologist Karen Throsby's study of becoming a marathon swimmer (Throsby, 2013, 2015, 2016; see also Becker, 1953), in this paper I trace how freedivers train to become able to generate pleasant experiences and become conditioned to enjoying the unpleasant and fearful. Learning to handle anxiety and moving beyond boundaries that you thought restricted the body allows for freedivers to experience the liminal, having potentially life-transforming experiences in the deep. By describing freedivers' experiences and how these are brought about, the paper contributes to the "new wave of thalassography" (Steinberg, 2014), challenging land-based thinking with stories of ocean encounters, thinking from the water, in this case from the underwater where humans strive to push their limits to experience a sense of harmony.

1. Freediving as a leisure activity

Spearfishing and freediving to gather food has been known since ancient times. For example, the Ama women of Japan, the Haenyeo

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women of Korea as well as the Bajan people of Malaysia have been picking shells and seaweeds, thus living from the sea for centuries (Rider, 2015). Yet, the sport of freediving is a recent phenomenon, which is often said to date from 1949 when an Italian fighter pilot announced that he would dive to 30 m and completed the task. From the outset, freediving became an extreme sport discipline par excellence, a task of daring to go deeper. During the 1950s and 1960s only a few men in the world competed to pursue greater depths, most famously the Italian Enzo Maiorca (1931-2016) and the French Jacques Mayol (1927-2001), whose rivalry was portrayed and turned into fiction in Luc Bessons legendary film *Le Grand Bleu* (1988). In 1962, Maiorca was the first to reach 50 m, disproving what scientists of the time had predicted would make the human lungs collapse from pressure. In 1968, the American US Navy diving instructor Robert Croft reached 70 m, collaborating with scientists to understand the physiology of freediving, discovering 'the mammal dive reflex' (that the heart rate slows down to conserve oxygen when humans are submerged in water) and the 'blood shift' (that blood vessels in the extremities contract, leaving a higher percentage of blood volume in the torso to protect lungs, heart and brain, when humans are submerged in water).

Mayol became the first to breach 100 m, diving on a sledge. Moreover, Mayol who was born in Shanghai, became a pioneer as he introduced Eastern techniques of yoga and meditation in freediving, which have since become central elements of the sport. Whereas freedivers had previously often been hyperventilating before diving, Mayol employed Pranayama yoga to relax through controlled breathing. With these techniques, freedivers became better equipped to avoid the most common reason for disqualification in competitive freediving: hypoxia and loss of consciousness during the last part of the dive or immediately after (Kurra et al., 2013: 120).

In the last decades, freediving records have taken a quantum leap and while the sport is still a minority sport it is growing steadily. AIDA informs that 2.382 freedivers were enrolled in educational activities under their organization in 2011, in 2015 the number was 6.883, and this growth is continuing. Today, freediving competitions are held somewhere in the world every week, equipment is produced specifically for freediving, and the sport is being used for promotion of different products (e.g. commercials for Nicorette and broadband in 2016). In line with this development, the number of freediving schools and operators have increased significantly, and the two globally leading commercial scuba diving providers SSI and PADI have launched freediving branches of their companies (SSI in 2010 and PADI in 2015). What this development underlines, is that freediving has become an economically profitable adventure tourist activity, which is starting to take a bite of the scuba diving market. Scuba diving composes a global leisure and tourist industry, which "is now a multibillion dollar industry and one of the world's fastest growing recreational sports" (Musa and Dimmock, 2012: 1). Whereas freediving is nowhere near these numbers, the development clearly reflects the general tendency for action sports to have a potential for commercialization (Wheaton, 2010).

In recent years, the spectacular and dangerous nature of freediving has also been portrayed by journalists in sensational accounts (Nestor, 2014; Skolnick, 2016), as well as in the series *Ultimate Rush* by Red Bull TV. Freediving constitutes an extreme sport of immediate fascination associated with mythological storytelling that resonates well with the discourse on heroism (Throsby, 2015: 158). Yet, stories of freediving also very often hint at daredevilry, echoing the well-known discourse on extreme sports as unnecessary, voluntary and self-indulgent high-risk activities (Obrador-Pons, 2007; Breivik, 2010).

In contrast to sponge fishers, shellfish divers and others making a living from freediving to collect and hunt, freedivers make the dive itself the primary aim of their activity. With this focus on the dive itself follows an absorbing focus on sensations during diving and attendance to ways of improving the dive, whereas sponge fishers and shellfish divers have traditionally maintained a routine of diving and have put up with the injuries this may entail (Allen, 1972; Bernard, 1967; Plath and Hill, 1987). As a leisure activity, freediving may be characterized as a serious leisure pursuit that is based on specialist knowledge, skills, and training, which participants acquire, develop and progress over time in a manner that resembles building a career (Stebbins, 2007). Yet, for some participants, the pursuit of freediving creates a continuum of activities that are continued into paid work, converting the hobby of freediving into making a living, most often by working as an instructor. For these freedivers who work to provide safety for others as well as instructing them and documenting their dives, freediving begins to compose a routine activity where attention is not on inner sensations of diving, but turned outwards towards the affairs of facilitating other peoples' dives.

2. Theorizing freedivers' experiences

In recent years, a growing number of studies within the fields of anthropology and human geography have turned attention to water, particularly seawater, as a specific element which humans explore and interact with (Anderson and Peters, 2014; Brown and Humberstone, 2015; Helmreich, 2007, 2011; Mack, 2011; Merchant, 2011; Straughan, 2012). By turning attention to human-water interactions, these studies go beyond theorizing about the abstract concept of water, advocating for an empirical approach pushed into the sea.

As anthropologist John Mack argues in *The Sea: A Cultural History*: "Much writing about the sea, of course, employs the idea of the sea as a metaphor" (2011: 25). Similarly, anthropologist Stephan Helmreich illustrates how water has been mobilized as a theory machine, first romantically in early ethnography, then as a crucial materiality in maritime anthropology, and finally, in today's social theory, as a figure of globalization highlighting fluidity, flow and circulation (2011). In making these readings, Mack and Helmreich suggest doing something more than using water metaphorically, which often reduces it to a uniform category. When outlining an alternative strategy, they both suggest concentrating on empirical investigations of the multiple meanings of the sea.

In emphasizing an empirical approach to studying the sea, Mack and Helmreich propose moving to the sea – not just standing on the shore gazing at the sea, but literally getting onto or into the sea. As Mack writes, ethnography "has rarely reported on the experience of being on the seas; instead, to the extent that reference is made to the sea at all, it has almost always focused on the implications of being close to the sea, of having a relationship to it, not actually of being *on* it" (2011: 23, emphasis in original). Doing what Mack advocates, Helmreich's fieldwork has been carried out amongst marine microbiologists, tacking between the web, the lab and the sea (2009: 19). In the article "An anthropologist underwater", Helmreich delivers a first-hand report on a dive in a three-person submersible, focusing on his experiences, particularly the immersive soundscapes of being underwater, describing himself as "probably the first anthropologist to join the research submersible *Alvin* on a dive to the ocean floor" (2007: 621).

While Helmreich is probably still the only anthropologist who has been submerged to the seabed, a number of human geographers have paralleled him in going to the sea and writing about their encounters with water. Particularly two recent collected volumes illustrate this trend: *Water Worlds: Human Geographies of the Ocean* (Anderson and Peters, 2014) and *Seascapes: Shaped by the Sea. Embodied Narratives and Fluid Geographies* (Brown and Humberstone, 2015). Both volumes put emphasis on the lived experiences of interacting with water and suggest addressing the sea as a place with "character, agency and personality" (Anderson and Peters, 2014: 9). *Water Worlds* begins from the premise that our everyday life is entwined with the oceans, even though often in ways which are invisible to most of us. Accordingly, the authors suggest that human geography should begin challenging land-based thinking and "start thinking *from* the water" (Anderson and Peters, 2014: 4, emphasis in original). To do so, some of the contributions in the volume depict the authors' own experiences of being on and in water: driving

on frozen water (Vannini and Taggart, 2014), surfing as well as kayaking on wavy water (Anderson, 2014a, 2014b), and scuba diving to see a world-famous ship wreck (Merchant, 2014).

Continuing the itinerary of *Water Worlds* (Anderson and Peters, 2014), the edited volume *Seascapes* (Brown and Humbserstone, 2015) focuses specifically on human-water interactions, seeking to address the question about how "lived experiences with the sea shape who we are" (Brown and Humberstone, 2015: 2). By turning attention to humans' encounters with the sea, the volume accentuates the embodied experiences of engaging with water. To produce such embodied accounts, all contributions are based in auto-ethnography and present different stories of the sea as lived reality. For the agenda of this paper, particularly sociologist Karen Throsby's chapter on marathon swimming makes a comparable case to freediving (2015).

Taking Howard Becker's classic work on "Becoming a marihuana user" as a framework (Becker, 1953), Throsby describes her own process of learning to love swimming long distances in the sea (2015). Following Becker, Throsby starts by accounting for the skills and techniques that are necessary to acquire to stay in the cold seawater for longer periods of time. Secondly, she reports on learning to recognize the effects of marathon swimming and becoming able to differentiate between different kinds of effects and their nuances. Finally, learning to enjoy those effects is what makes Throsby stay in the sport.

Although freediving has been included in some academic listings of extreme sports (Obrador-Pons, 2007; Saayman, 2012; Steinberg, 2014), the sport is only considered in detail in one study: an article in the field of philosophy of sport where the case of freediving is employed to illustrate the relevance of Dewey's pragmatist philosophy in relation to sport with particular focus on self-cultivation (Ilundáin-Agurruza, 2014; see also Lally, 2013).

Dewey portrays the self as constantly involved in transactions with the environment, proposing that these interactions are creating new desires, instigating new modes of endeavour, thus the subject is always becoming (Lally, 2013: 177; Dewey, 1932: 340). Since Dewey emphasizes that individuation happens as a process of actualizing latent potentiality, philosophers of sport have taken this to mean that self-cultivation is about the individual's actualization of potential, suggesting that power of will orchestrates the developing self, for example in the case of the endurance athlete (Lally, 2013). With the illustrative case of freediving, philosopher of sport Jesús Ilundáin-Agurruza shows how willpower and training of the mind enables athletes to overcome one of our strongest instincts: the urge to breathe:

"Common wisdom has it that no person can wilfully drown herself because the fear of drowning and death are powerful, and the urge to breathe proves too strong for anyone over a sufficient time. However, it is not rare for freedivers, who train themselves to withstand diaphragmatic pain, to actually hold their breath underwater long enough to pass out, which is long past the point where others give into the urge to breathe" (2014: 278).

According to Ilundáin-Agurruza, freeedivers manage to sublimate the survival drive by will, deliberately cultivating the body to stay under water, sublimating pain into motivation. Thus, it becomes a habit to endure long breath-holds under water. Freediving becomes an activity of mechanization, a physiologically ingrained action. During the learning process of training freediving to making it a habit, body and mind become inseparable. With Dewey's concept of "body-mind", Ilundáin-Agurruza concludes that freedivers experience a psychophysical unity of body and mind, suggesting that freediving becomes a psycho-physical process, honing bodily functions by habit, creating mindful bodily functions (ibid: 281).

Making a parallel argument to reject the body-mind dualism, Throsby suggests that to understand marathon swimming it is necessary to refuse the repeated claim that the sport is a question of mind over matter. Rather, she turns attention to how the practice of swimming becomes autotelic; an end in itself, rather than telic; oriented towards a particular goal (2013: 7). Investigating how training changes the way the body feels, Throsby suggests that pain and discomfort may come to feel differently as the body becomes cultivated and transformed physiologically, functionally and sensorially (ibid: 14).

Comparable to Dewey's notion of body-mind, Throsby illustrates how the two are inseparable, in fact she moreover suggests that the continued rhetoric of a body-mind split hinders a full understanding of embodied experience (2013). Thus, whereas Ilundáin-Agurruza's employment of Dewey's pragmatist thinking results in the proposition that self-cultivation composes an act of will whereby mind and body becomes united serving the purpose of skilful strivings, Throsby is rejecting such accounts that reinstall the dualism of mind over matter. As an alternative, Throsby suggests turning attention to sensorial experiences of doing sport, locating the body as a subject rather than object of knowledge, proposing that activities become purposeful in themselves. To make this argument, Throsby applies the notion of a "shifted sensorium", inspired by ethnographer of modern dance Caroline Porter who illustrates how the classic five senses do not adequately account for the sensorial experiences of dancing where kinaesthesia; feeling one's body moving, becomes critically important (Potter, 2008). Likewise, Throsby proposes that marathon swimmers have a heightened sense of constantly shifting the body in space and this kinaesthetic relationship with the sea generates pleasures of marathon swimming (2013).

To consider the sensorial experiences of the underwater Straughan's piece "Touched by water" about scuba diving provides a useful frame of reference (2012). Scuba divers "are supported, suspended, moved and compressed by the water that encompasses them", Straughan writes (ibid: 22). Thus, kinaesthesia is always combined with hapticality in the case of divers since the body is in direct contact with the element of water and this enables movements differently than on land. Moreover, Straughan reports that these sensations of being touched by water are connected to positive emotional responses in divers; the haptic system plays a central role in the constitution of feelings. To grasp these experiences of being calm underwater, Straughan compares diving to active meditation. Concluding, she proposes that the aquatic world may, for some divers, be considered as a "therapeutic landscape" that possesses healing qualities (2012: 25).

Straughan's depiction of diving as active meditation and the underwater as a therapeutic landscape provides an accurate description of freediving where participants consider their sport a mental journey and sometimes claim that it has provided them with life-transforming experiences. Hence, in the case of freediving, the underwater may be considered not only a therapeutic landscape, but also a liminal landscape (Andrews and Roberts, 2012), particularly in open-water depth disciplines where the sea constitutes a liminal space per excellence, providing access into unknown states of being (Preston-Whyte, 2004; Thomassen, 2012). Whereas other studies of jumping into the abyss have claimed that such experiences are void rather than liminal (Thomassen and Balle, 2012; Cater and Dash, 2013), I will propose that freedivers may indeed gain transformative experiences in the deep. For some, diving deep into the ocean may be experienced as an otherworldly encounter that alters your sense of self.

3. A study of freediving

According to freedivers, all of us are capable of doing the seemingly impossible, transgressing what we think are the limits of our bodily abilities. In line with this proposition, most accounts of freediving are fuelled by stories about being surprised with yourself and your own abilities (e.g. Nestor, 2014; Skolnick, 2016). Newcomers to the sport instantly make progressions beyond what they thought possible.

Proponents of freediving not only suggest that all of us can transgress what we think are the limitations of our bodily abilities. Furthermore, advocates of the sport suggest that freediving will bring humans closer to our nature. As the authors state in the thorough and most well-known guide to freediving, *Manual of Freediving*:

"In the moment we dive beneath the surface, we apply that which is

defined as a ‘deep regression’, a capacity to return the psyche to a state of calm. In water we joyously reclaim that dimension (which is a return to Eden, in its original purpose) of relief from tension, of comfortable security, of the peace that we knew in the womb” (Pelizzari and Tovaglieri, 2004: 73).

Based on the observations that the fetus lives in liquid and newborn babies are capable of diving and comfortable in warm water, the *Manual of Freediving* suggests that we experience an extraordinary calmness and feeling of security and relief from tensions underwater..

To investigate how freediving is carried out and experienced, this paper builds not only on desk research but also auto-ethnography from a freediving beginner class in Denmark in 2015 and interviews with twenty-four of the most experienced freedivers in the world, carried out during the renowned depth competition Vertical Blue on Long Island in the Bahamas in April-May 2015.

In contrast to sensational accounts of extreme endeavours of record-seeking elite freedivers, I will seek to provide a balanced account of freediving. For that reason, I will look into both beginners' experiences and also experiences of accomplished freedivers. Similar to the studies of marathon swimming and scuba diving by Throsby (2013, 2015, 2016), Straughan (2012) and Merchant (2011, 2014) I will start from my own learning experience of becoming a novice freediver and the emotions that were generated in me during this training. Yet, this starting point will be supplemented with skilled freedivers’ accounts, which entail descriptions of experiences that I have been nowhere near (see Fig. 1)

3.1. Calmness and pleasant surprises

On a Wednesday night in March 2015 I bike to the blue-collar suburb of Herlev just outside Copenhagen to start a freediving introductory course at the local dive club. Entering the room where the first theoretical introduction is held, I am certain that a mistake has been made: the small room is getting more and more packed and not only with young adults, about half of the participants are middle-aged and one man is in his early 80s. It turns out we are all here for the freediving class. I am astonished by the wide appeal of the class and ashamed of my prejudice that the participants would all be adventure-seeking young men (Lyng and Matthews, 2007). Out of the eighteen participants most are scuba divers, many are spear-fishers, some are swimmers, and the youngest participant is training for a military entrance exam. Over the next four weeks we meet two evenings per week to learn the basics of freediving.

Fig 1. The author standing on the edge of Deans Blue Hole, Long Island, Bahamas looking into the deep where freedivers compete during Vertical Blue 2015. Picture by Stig Severinsen.

Having been an underwater rugby player for a decade creates a point of entry for me and makes the training accessible. Also, it means that I associate underwater swimming with fast pace, high pulse, physical contact, paying attention to an ongoing ball game and collaboration with teammates. Freediving differs on all parameters. For me the most difficult part during the introductory course is slowing down. Moreover, I am asked to pay attention to bodily sensations that I am used to ignoring (for example being a bit dizzy after a long dive). Our instructors inform us about the physiological explanations of such bodily reactions, suggesting that we register our sensations and discuss them after diving, maybe even keeping a diary. To me this is very different from just being oriented towards scoring a goal.

When I finally manage to slow down I obtain pleasant sensations of being calm underwater. On a training night in the pool we do dynamic o2 tables (to increase breath-hold) with 2-min breaks that force us to slow down between each short dive (25–35 m). In my notes from that night it says:

“It feels good and I go slowly, as slow as I can. It feels different [from underwater rugby]: very relaxed, meditative, effortless, gliding, as something you could do forever, relaxing, mind-pausing” (Notes from training, April 7, 2015).

My classmates from the introductory course have similar experiences: That freediving gets them into a state of mind of relaxation, de-stress, and calmness. To explain this state of being it is put in contrast to everyday hassle. Some suggest that they experience harmony, spirituality and euphoria while freediving. These experiences correspond with Straughan's findings in her study of scuba divers' emotions where calmness and wellbeing constituted dominant feelings, making diving comparable to meditation (2012).

During the introductory course, we also experience moments not of calmness but of ecstatic joy, namely when surprising ourselves with our abilities. For example, on a training night we do static breath-hold for the second time:

“I team up with the young guy who is training for the ‘frogman’ recruit test [Danish equivalent of US Navy SEAL]. First, we do rounds of 2 min (…) Last exercise is a long dive (…) I do 3 min (…) I don't know if this is too long for me, and what will happen next. So, I get up at 3 and feel good and start talking, and is actually quite ecstatic – and really happy, and so surprised with myself and my performance – just like everyone else have told me they have been” (notes from training, April 22, 2015).

Being happily surprised and invigorated by discovering your own bodily abilities seems to be a common feature for freediving beginners. In particular static breath-hold provides an easy access to learning how your physiological limits can be pushed. With breathing exercises, freediving instructors teach beginners to calm down and relax, using inspiration from pranayama yoga to breathe slowly and diaphragmatically. Once breathing is controlled and the body is relaxed, the diver is able to stay underwater much longer than if stressed and having shallow breathing. In that way, beginners not only experience calmness and relaxation but also become happily surprised with their abilities.

3.2. Closed eyes and freefalling

A few weeks later I arrive at Long Island, an outer island in the

Caribbean, where I have gained access to studying the depth-competition Vertical Blue 2015. Held at Dean's Blue Hole, the world's deepest blue hole (-202 m), located right by the shore and protected by rocks to three sides, the setting is serene and undisturbed. Yet, contestants have their eyes closed when preparing for their dives, which seems striking given the beautiful and peaceful site. Asking divers about this, it turns out that contestants not only have their eyes closed when preparing and breathing up before their dive, but also during most of the dive. As a contestant explains:

"I don't worry about visibility so I don't wear my goggles, I have my eyes closed the entire dive, so I don't care whether the hole is dark or whether it's cloudy and sound doesn't matter because you can't hear anything so I'm completely shut off (…) I'm completely zoned out pretty much from the time I start my dive (…) [my dive is] devoid of sound and sight and colour." (Interview with Vertical Blue, 2015 participant, informant R).

Describing his sensations of diving, this informant elucidates that he has his eyes closed throughout the dive and the underwater furthermore provides a muffled soundscape (Helmreich, 2007). With these sensorial restrictions, competitive freediving differs significantly from recreational scuba diving where the purpose of the activity is to see aquatic life and the rhythm of the dive is constituted by the sound of hearing one's own body breathing (Merchant, 2011; Straughan, 2012). In contrast, the underwater is silent in freediving and when you close your eyes it moreover becomes a space where visibility and colours are deprived of importance, making the dive an activity closed off from sensations of sound and sight.

In a study of nudist beach culture, haptic pleasures were found to be more important than the visual: "Being naked on the beach is a matter of feeling rather than seeing" (Obrador-Pons, 2007: 134). In other words, nudism composes a pursuit of making the world touch us. Likewise, competitive freediving is not about paying attention to what can be seen underwater. Rather, freedivers work to enable their bodies to come under the influence of the water. Closing their eyes, freedivers turn attention to equalization of the ears and bodily sensations of the water's increasing pressure when diving deep. Hence, their exploration of the aquatic world is not a visual but haptic encounter.

At around -30 m in the salt water of Dean's Blue Hole, the human body becomes negatively buoyant. From here on, the diver experiences what is called the "freefall": the body falls towards the seabed. In the words of an informant: "So you're just falling and having this silence. And I guess it's to do with the pressure, but you're sinking and your relaxation just increases" (Interview with Vertical Blue, 2015 participant, informant K). During this part of the dive, freedivers aim to shut the body down, relaxing and sinking. According to the freedivers in this study, freefalling composes the most pleasurable and desired component of the dive. As one informant describes the descent:

"This is the nicest part to the dive, when it works, you are in the freefall and the equalization is going really well and you can feel, you can hear the lanyard running down the rope and you know 'yes, I'm nice, falling deep and it's going well'. And then at the bottom you stop. You know, you've made your dive, you've gone to the depth you wanted to go and it feels great and then you gotta get back up again." (Interview with Vertical Blue 2015 participant, informant T).

Hearing no sound but the safety device of the lanyard connecting the diver to the descent rope cooing faintly as it moves downwards, the diver freefalls until reaching the desired depth where a bottom plate is connected to the rope. Touching the bottom plate, grabbing a tag to prove the depth, the diver turns and begins the ascent.

While the descent is portrayed as a relaxing and pleasurable, when equalization works, freedivers depict the ascent as hard work. Answering my question about how diving deep feels, a contestant gives an illustration:

"That depends on the dive. (…) yesterday I came up from 90 m still screaming internally [laughs] and that's happened before, you know, that's part of the game. (…) Where you think 'fuck, what I am doing? I'm not enjoying it at all' (…) the urge to breathe, the feeling of moving very slowly, the feeling of being potentially vulnerable, given that you only have, you know, you have nothing on to help propel you, you can't grab the line to help propel you, you know, just those feelings" (Interview with VB15 participant, informant D).

As this example illustrates, freedivers not always have "super dives" (Interview with VB15 participant, informant B). Sometimes, they have a hard time, sensing all too clearly the urge to breathe and feeling an impaired sense of movement. In other words, freediving may entail unpleasant sensations which are necessary to become conditioned to, turning them into "you know, just those feelings" (Interview with VB15 participant, informant D).

3.3. The dark and scary

After returning from Vertical Blue in the Bahamas, I continue my auto-ethnography of freediving in Denmark particularly to try open water freediving. In Denmark, lake Furesøen provides the best place for freediving with a depth of -35 m and a location close to Copenhagen. Yet, the lake is also notoriously muddy and green in contrast to the clear blue sea of the Caribbean (which made Danish freedivers launch a depth competition called Vertical Green here in 2016, in humorous reference to Vertical Blue).

Dressed in an old and unfitting 7 mm neoprene wetsuit, neoprene socks, neoprene hood, neoprene gloves, fins, mask, snorkel, and with lead weights put on a yoga strap used as belt, I get in the water. We swim out to the place of the diving and set up a small buoy from where a rope with a few kilos of lead as bottom weight is put into the water. We take turns, safetying each other, relaxing and diving. However, on my first dive I get scared:

"I cannot see my feet (…) Water is green, murky, and filled with plankton (…) At a very short distance, maybe around -2-3 m, the water gets a lot colder and a lot darker (…) I instantly get closed off from the world; the surface and the others. I feel very alone and far away, even though I'm only a few meters away from them. As soon as I cannot see the surface and the conditions change I feel as if I don't have any more air. I do a few dives to around -4 m (…) then I go a little deeper and get to around -7-8 m. It's dark and cold and it scares me. (…) At one of these dives I see the plate. Next dive I decide to go to the plate and I do that" (notes from training, July 1, 2015).

Being scared creates stress and means that oxygen is spent faster. Hence it becomes difficult to dive and impossible to experience the pleasant sensations of freediving. In other words, fear has to be overcome, and my instructors and fellow freedivers tell me to go slowly and set a modest goal of -10 m. Next time at the lake, I try employing this advice to calm myself:

"I will do -10 m again, but this time slowly (…) I don't push myself and I feel good. After a while I start going near the plate, and then to the plate. Also, I start experiencing freefalling from around -8 m [because of the freshwater]. I hold my hand hollow around the rope and see how it moves through my hand. The first time I'm surprised and wondering about if this is happening, and if it will stop (…) Flemming [the instructor] asks if I want to try free falling a few more meters and I say OK. He puts three more meters on the line, so it's now -13 m. I go there and it feels really good. I experience the freefall and it's not hard work getting there. Quite the opposite: it feels easy, nice, enjoyable" (notes from training, July 8, 2015).

As this example illustrates, obtaining pleasurable effects of freediving requires techniques (Becker, 1953; Throsby, 2015). In my case, it is not until using the skills and techniques of breathing consciously, going slowly and not pushing for it that I become able to gain the sensation of freefalling. In other words, this particular sensation was only produced and registered because I was relaxed. Until then I had just been swimming forcefully down and up, which does not provide freefalling to happen. Also, identification of sensations has to be learned. During my first freefall I was wondering if it was really

happening. Yet, as I sensed gliding and had been looking out for this effect. I discussed it with the instructor when I came to the surface, and he confirmed that is was indeed freefalling that I was experiencing. Furthermore, in line with the stories I had heard about the great sensation of freefalling, the instructor suggested that it felt good, which framed my experience. Thus, learning to enjoy this sensation follows from recognizing it. When discussing my experience of freefalling it became more profound. Finally, the instructor also outlined a route of enhancing this pleasant sensation by lowering the line and letting the fall become longer and thus more intense. In these ways, freedivers work on the effects of their sport, actively seeking to produce sensations, identifying and enjoying them.

As the example of my lake diving illustrates, pleasurable effects of freediving seems to be interwoven with the unpleasant and upsetting. An uncanny affect arises when following the dive-rope straight down into the dark, and yet this uncanniness becomes combined with relaxation, comfort and joy.

In her study of scuba divers' emotions Straughan identifies a similar tendency, suggesting that the potentially dangerous also constitute the most valued experiences (2012). To make this point, Straughan employs the case of "nitrogen narcosis": that in deep diving (below -30 m in scuba diving/below -60 m in freediving) the partial pressure of nitrogen increases and more nitrogen becomes dissolved in the blood, which impairs the conduction of nerve impulses and produces a state similar to alcohol intoxication or nitrous oxide inhalation. As Straughan points out, some divers favour deep diving and enjoys nitrogen narcosis which creates a "paradoxical character of diving, where those elements that have the potential to enhance experience, can also simultaneously harm the body" (2012: 23).

In freediving, this tendency of intertwining the potentially dangerous and experience enhancing is also observed.

As effects of freediving have a two-sided character, offering potential danger and fright on the one hand and pleasure and enhancement on the other, freedivers' self-cultivation consists in changing unpleasant sensations into pleasantness and translating worrisome thinking into positive thoughts (Throsby, 2015).

In interviews, divers illustrate how they train themselves to alter the unpleasant and frightening. One freediver explains about his most basic learning: "feeling you think you are going to die (…) was not running out of oxygen (…) and that quelled the fear" (Interview with VB15 participant, informant G). Another example concerns the experience of blood shift: "The feeling of not having blood in your legs is not such a negative sensation; it's kind of nice because it's almost ghostlike" (Interview with VB15 participant, informant D). A third freediver explains about substituting sensations of cold and dark with thoughts of getting back up into the warm and light: "You are in a place that is very dark and very cold and as you swim up things get warmer and lighter (…) It's a very, very nice feeling" (Interview with VB15 participant, informant J).

Answering my question about if he experiences any negative sensations when diving deep, an informant frankly declares: "The dark and scary doesn't affect me." (Interview with VB15 participant, informant P). Experienced freedivers have conditioned themselves to not panicking underwater, making it a habit to dive into the deep, mechanizing every element of the dive and focusing on the positive.

Experiencing the antithesis of terrestrial living in freediving is not an uncanny sensation of the familiar that has become strange, but learning to have this strange sensation of feeling at home in the unfamiliar aquatic environment. Whereas falling into the deep is potentially dangerous and upsetting it may also generate a feeling of liberation. Diving into the dark and scary unknown creates an opportunity for exploring our own human uncanniness, discovering the strangeness and potentials of being human (Withy, 2015).

3.4. *Liminal experiences*

As I talk to freedivers in the Bahamas and Denmark it becomes increasingly clear that they see their sport as more than a sport. For example, a contestant explains:

"For me it's a mental journey. I'm feeling good, I'm feeling the pressure in my body, a little bit narcosis (…) for me it's good, good sensation (…) for me it's an amazing travel into myself" (Interview with VB15 participant, informant F).

As this quote illustrates, although they compete, freedivers emphasize the mental experience of travelling into yourself while enjoying effects of the water on the body. In blog posts, freedivers use Csikszentmihalyi's concept of flow to explain the happy mental state that diving generates (FreedivingHQ, 2016; Gibson, 2014), and legendary freediver Natalia Molchanova (1962-2015) suggested describing freediving along the lines of the concept of oceanic feeling, a sensation of being one with the universe, the source of religious feelings (Parsons, 1998; Whelan, 2015). With this emphasis on inner journeys and spiritual emotions in connection to haptic sensations, freediving may be considered as an example of what sociologists of sport have called "post-sport physical cultures" (Atkinson, 2010). In opposition to modernist sport practices where bodies are disciplined to obtain external goals, post-sport physical cultures value "human spiritual, physical and emotional experiences" (Atkinson, 2016: 109). Illustrated with the case of fell running, moments of panic, suffering and letting go can become the primary focus of the activity, which is similar to Throsby's findings in her study of marathon swimming (2013), that athletic sufferings become not only bearable but valuable.

One of the ways in which freedivers obtain spiritual experiences from enduring suffering is when they feel nitrogen narcosis. On very deep dives, freedivers may get narcked and start hallucinating. As an informant describes it:

"My personal experience is, to have like visual hallucinations. [I ask: Of colours?] Colours, yeah. Especially when there are uniform colours whether it's dark or whether it's blue like in the Mediterranean, there's nothing for your eyes to fixate on and it's like, if you really close your eyes everything gets really pixelated [shows me by almost closing his eyes] so it goes like that. And, except for the pixels get bigger and for me they almost turn into a kaleidoscope of colours and you can even see things sort of start moving around. So that's something that I get. [I ask: Do you have your eyes closed?] Doesn't matter if they are closed or open (…) And I've also had, I know it sounds like an outer body experience, I've also had where I've been looking at myself doing the dive" (Interview with VB15 participant, informant K).

Because of the nitrogen narcosis some freedivers hallucinate when diving very deep. Whether or not they have their eyes open, they see colours and pixelations and may see themselves from the outside, like this freediver reports. Other freedivers speak of seeing fractals, figures and faces (interviews with VB15 participants, informant A, C, F and T). Hallucinations constitutes a personal and peculiar experience. As an informant comments, freediving is probably the only sport where athletes get intoxicated during the most crucial part of their performance (interview with VB15 participant, informant X).

Handling and valuing experiences such as nitrogen narcosis makes freediving an activity that can be described as edgework. In his famous piece on skydiving sociologist of risk Stephen Lyng develops the notion of edgework to describe voluntary risk-taking activities that are about exploring edges: "life versus death, consciousness versus unconsciousness, sanity versus insanity, an ordered sense of self and environment versus a disordered self and environment" (Lyng, 1990: 857). Borrowed from the journalist Hunter S. Thompson, the term edgework was originally used to portray certain kinds of drug use, but Lyng employs the term to consider high-risk sports, making the point that these activities produce intense sensual experiences and feelings of being in control of one's life. Handling life-threatening challenges make the edgeworker feel exhilarated and omnipotent, stimulating a heightened sense of self

and mental control.

Freediving may be considered as edgework as divers maintain control in dangerous situations where their faculties become altered, for example by nitrogen narcosis. Hence, the emotional intensity of feeling in control of the uncontrollable makes a powerful outcome of free-diving. Freedivers hold that the sport has changed their lives. In line with Straughan's proposition that for some scuba divers underwater constitutes a therapeutic landscape (2012), freedivers speak of the healing qualities of diving. In some cases, informants report that the sport has helped them overcome severe illnesses (psoriasis arthritis, an autoimmune disease and depression). In this way, the therapeutic landscape of the underwater not only provides divers with sensations of well-being, but also sometimes experiences of radical changes. As an informant explains:

"There's something about depth that, once you have been there you want to go back, because something happens there, and especially the feeling afterwards, it feels like you had a life-changing experience, because something happens to you at depth, when you are, you are so alone down there, and you meet yourself in a different way. And it is really like a meditative experience, for me, the deep (…) everything slows down, and then there is the narcosis (…) I know it's different for everyone, but for me it's something very soft and comforting and like euphoric feeling, the narcosis" (Interview with VB15 participant, informant C).

In this description of the emotional experiences of deep diving, the underwater is portrayed as a liminal space where something life-changing happens. Nitrogen narcosis provides the diver with sensations of euphoria, comfort and lost ability to gauge time. In this state of being and alone in the deep, the diver may experience an altered sense of self. On return to the surface, this experience becomes even more profound. Hence, deep freediving seems to provide divers with liminal experiences of being on a threshold where identities can change.

In a couple of studies of bungy jumping, the voluntary risk-seeing leisure activity of jumping into the abyss has been depicted as a momentary and thrilling play with death that does not constitute a real life-changing experience, in fact quite the opposite. One study suggests that bungy jumping can be seen as an example of false consciousness as practitioners feel liberated when jumping but actually buy into a highly commodified and manipulated activity (Cater and Dash, 2013). A second study suggests that voluntary liminal experiences that are sought after and paid for in post-industrial societies, such as bungy jumping and other forms of extreme sports, can best be described as "limivoid" activities: "a jump into the void – and that is it. (…) then back to normality." (Thomassen and Balle, 2012: 87). Instead of following this critical line of thinking, I suggest that the case of freediving may rather be understood along the lines of the edgework approach to action sports. When freedivers suggest that diving into the abyss, emptying the mind and letting go, does not compose a void experience but an intense and life-changing encounter with oneself, they may be right. Perhaps something does really change in the deep.

4. Concluding remarks

To start thinking from the sea and developing a thalassography, freedivers' experiences provide an acute example of how water comes to be sensed and provoke emotional responses in divers. Holding your breath and diving into the deep seems to compose an act contrary to human nature and yet freedivers suggest that this endeavour provides sensations of relaxation and comfort; diving into the deep constitutes an encounter with the uncanny which at the same time is enjoyable and provides the diver with sensations of calmness, a meditative state of mind and potentially spiritual emotions.

By learning to freedive and becoming able to transgress the limits of terrestrial living, divers are enabled to experience an ultimate freedom for the duration of one breath. In that way, the two meanings of the mental aspect of the sport become intertwined: mental control in the sense of self-cultivation is necessary to produce a body-mind that reacts as it has been trained to, which allows for a meditative state of mind to occur. Hence, freediving becomes an encounter with water where diving into this natural element becomes a dive into yourself, making the sport not so much a question of mind over matter but rather an activity of letting matter create mindful experiences in the diver.

Yet, these emotional sensations of feeling at one with the universe while diving are reserved for divers who are making an effort to obtain them. In other words, it is possible to dive without experiencing these sensations. On Long Island during Vertical Blue 2015, the local sponge divers did not participate in the freediving competition, they are not schooled in the same techniques as the competitive freedivers and they explained about their work in terms that did not centre around the emotional experiences of diving but focused on catch (see also Plath and Hill, 1987). Hence, the underwater world lure, but for different reasons.

For freedivers participating in the contemporary leisure activity of challenging oneself to go as deep as possible, a set-up of coaching and safety is provided that allows for this to happen. In other words, the emotional experiences of freediving are not only produced by techniques and training that the individual acquire, but also by assistance of people around the diver who are freediving with a different purpose than inward attention, namely to give another diver a great experience of overcoming one's own limits. Thus, the apparently self-indulgent and heroic act of freediving, based in individual self-cultivation, is facilitated by the invisible work carried out by other divers who are making the sport possible by letting the diver turn attention towards the sensations of diving.

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This paper is dedicated to the memory of Stephen Keenan, much loved freediver, chief of safety at Vertical Blue 2015, and one of the informants of this study, who tragically lost his life on July 22, 2017, while providing safety for a freediver in Dahab, Egypt.

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