

Dancing with the Turquoise Waters of Mexico—Embodied Experiences and Observations for Environmental Justice

Susanna Hannus

ABSTRACT

This article explores the author's embodied experiences in and with the turquoise waters of Mexico. This journey started with an exploration of the healing potential of water through water therapy and dance. It led towards a search for ways to protect these precious water ecosystems against climate change, deforestation of waterfront ecosystems and pollution. The autoethnographic research process thus developed into a dialogue about environmental justice. Employing visual ethnography and visual arts, the author utilises photography of her dance in and with the turquoise waters of Mexico. She hopes that this article will inspire new thoughts about these precious water ecosystems and actions to protect them so they can remain pure and vivid for future generations.

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ABSTRAKTI

Tämä artikkeli tutkii kirjoittajan kehollisia kokemuksia Meksikon turkooseissa vesissä ja vesien kanssa. Tutkimusmatka alkoi veden parantavien potentiaalien tutkimisesta vesiterapien ja vesitanssin avulla. Matka johti uusien tapojen etsimiseen, joiden avulla suojella näitä arvokkaita vesiekosysteemejä ilmastonmuutokselta, vedenrantaekosysteemien hakkilta ja saastumiselta. Tämä autoetnografinen tutkimusprosessi kehittyi suhteessa ympäristöllisen oikeudenmukaisuuden käsitteeseen (environmental justice). Linjassa visuaalisen etnografian ja kuvataiteen kanssa, kirjoittaja on liittänyt artikkeliin kuvia tanssistaan Meksikon turkooseissa vesissä. Hän toivoo, että artikkeli inspiroi uusiin ajatuksiin ja tekoihin näiden arvokkaiden vesiekosysteemien suojelemiseksi, jotta ne säilyisivät yhtä puhtaina ja elävinä myös tuleville sukupolville.

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Introduction

All over the world, among people living close to nature, water is considered sacred. Mothers carry their babies in water. Water is a space for a new life to be gently born. Water can ease the pain of an exhausted body. It protects, nurtures and sustains all life. Water is always in motion. Water can help to transform an emotion. There are always small dances occurring in the water.

The brief poetic text above is intended to trigger some thoughts considering water and healing, water therapy and water and dance. Water therapy includes various physical and somatic practices performed

*Dancing in the Sian Kaan Natural Reserve in Mexico.
Photo: Mexico Wildlife Photography*

in and with water. Some are based on traditional Western medicine and physiotherapeutic practices. Water therapy has been researched in connection with, for example, fibromyalgia medical treatment (Carbonell-Beaca et al. 2012) and muscle damage (Biezen, Beakley, and Costello 2013). Swimming and exercising in water have been reported to be profound and efficient methods of recuperation and relaxation for professional dancers (see, for example, Wozny 2013). More holistic forms of water therapy, such as *WasserTänzen* (WaterDance), proposed by Peter A. Schröter and Arjana C. Brunschwiler; *Aguahara*, proposed by Alexander Siebenstein; and *Watsu*,

proposed by Harold Dull, involve dance-like movement. Holistic water therapies have not been researched and discussed in academic contexts. The forms I have studied, Aguahara and Watsu incorporate floating, relaxing, breathing, stretching and mobilising muscles in the water, with soft movement in and with the water.¹

In this article, I will focus on my embodied experiences in and with the water. Although I studied water therapy in Mexico in 2016, I do not consider myself to be a therapist. Rather, I am an artist-researcher, and this article is a continuum of my doctoral research on education (Hannus 2018) and is connected with my practice in dance and visual arts. My research was conducted from August 2016 to December 2016. I danced in and with the waters of the Mexican Caribbean ocean close to precious warm-water coral reefs in the Sian Kaan Natural Reserve in the Riviera Maya and the unique fresh water sink holes, called cenotes, in the Peninsula of Yucatan. I explored the healing potential of water via dance and movement and observed the tropical water ecosystems, how climate change affects them and the threat of pollution.

The water ecosystems in the Mexican Caribbean and Yucatan Peninsula are especially interesting since the Intergovernmental Panel for Climate Change (IPCC 2018), a group of almost 100 researchers from 40 different countries, published their meta-analyses of climate change. The panel argues that Nordic arctic zones, warm tropical areas and coral reefs are the most vulnerable ecosystems in the world. In this article, I explore tropical freshwater sink holes (cenotes), mangrove ecosystems and warm-water coral reefs and my experiences sharing their environment while moving and exploring through dance in and with the water. I also present some research findings that highlight the significance of conserving and maintaining these ecosystems for their intrinsic value for the planet and their part in overcoming climate

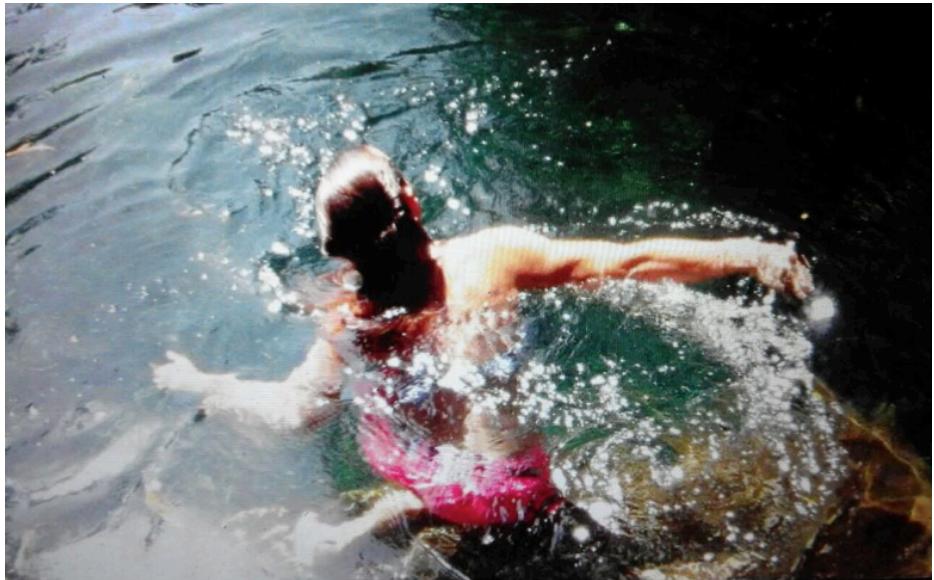
change.

With my explorations, observations and ideas, I want to bring a new perspective to the conversation about environmental justice. I will focus on Anja Nygren's (2013) research and conceptualisations of environmental ethics and justice, since she has focused on Mexico. According to Nygren (2013), environmental justice has become an important framework for scholars, activists and everyday actors who aspire to take part in dialogue about climate change, the deterioration of ecosystems, local environmental knowledge and rights concerning natural resources. In 2005, Baxter referred to environmental justice as the «socio-spatial distribution and recognition of environmental benefits and burdens within human populations» (as cited in Nygren 2013, 2). I use environmental justice as a broader frame for ethical notions and observations connected to climate change, deforestation of topical ecosystems, pollution and people's equal/unequal possibility to interact with precious water ecosystems. My embodied experiences and explorations in and with the water offer one perspective on environmental justice in the specific context of the Mexican Caribbean and Yucatan Peninsula.

Autoethnography in and with the water and artistic expression

In my research process, I used an autoethnographic approach to embodied experiences (e.g. Anttila 2003; Guttorm 2014, 2018; Pelias 2004). Water therapy, dance and movement in and with the water, which employ embodied methods developed within Finnish dance research community (see, e.g., Anttila 2003; Valkeemäki 2017; Mäkinen 2018), have been the context for my research.

During my time by the waters of Mexico in the Yucatan Peninsula, I journaled every day, in line with my training as an ethnographic researcher (e.g.



Dance in a fresh water cenote. Photo: Susanna Hannus

Emerson et al. 1995; Gordon et al. 2000; Hammersley and Atkinson 1995; Hannus 2018). When journaling, I focused on my embodied experiences dancing and moving in and with the water, on my emotions and bodily sensations and my observations and relation to the water and nature. Pelias (2004, 1) writes that a researcher's body is part of autoethnographic research; it is a «body that is but on behalf of others, a body that invites identification and empathic connection.» I write from the standpoint of love for the land, nature and precious waters.

In addition to my journal and field notes, I produced visual material. According to Amy Stich (2011), the dense description that is essential for ethnography is missing in many ethnographic studies. Stich (2011) asks what happens to everyday life, which is full of colour and cultural meanings, in academic writing. Employing visual ethnography (Pink 2007; Ruby 1996; Turner and Turner 2004) and visual arts, I recorded visual material in the form of video of the water and my dance every time I visited the location. In the spirit of participatory research, I often asked guides, local people or tourists that could dive to film

my dance. I told them that I may use them in my project. Afterwards, I obtained images from the videos to obtain photography capturing my dance.²

The notes in my diary, most of which are poetic in form, photography and video serve as research data for this article. The photography also has an artistic intention. I want to create an aesthetic image that even slightly captures the mesmerising water-world in which this research journey took place. I utilise other kinds of references, such as policy documents about climate change and ecological research published in magazines, to tap into literature on the topic and relate it to my observations and scientific publications (for more on this justification, see Hannula, Suoranta, and Vaden 2013).

Small dances in and with freshwater cenotes

In 2016, I travelled to the Riviera Maya in Mexico in order to continue the studies on water therapy that I started in Finland and Latin America. I studied water

therapy for almost three weeks near a village called Bacalaar in a large freshwater lake in Mexico. This lake is called *Laguna de siete colores*, or the Lake of Seven Colours, and it has a unique turquoise appearance. After water therapy studies I found freshwater sink holes—cenotes—which had crystal-clear waters with energising minerals.

In the Yucatan Peninsula, there are over 6,000 freshwater cenote fountains connected by an underwater cave system. This network of cenotes is unique in the world. The local Mayan people believe that the special combination of minerals and characteristics of fresh fountain water allows the cenotes to help heal some physical injuries and remove pain. Thus, swimming in freshwater cenotes is important for the local people for healing purposes as well as overcoming the tropical heat. At all the cenotes I visited, I met both local people and tourists enjoying and swimming in the water.

My method of dancing in the cenotes was adapted from the Aguahara course but was distinctly my own. I

explored by moving and dancing in and with the water, investigating the types of movement that made me feel relaxed and refreshed. I identified three such types of movement. The first was a therapeutic movement. I floated for long time and relaxed my breathing. I tried moving softly, allowing every vertebra to move slightly. Finally, I gently rotated my spine in order to make my energy move and my spine get soft. The second type of movement I call «small underwater dance.» I was inside the water with my eyes closed, feeling my interior, how good it felt under the water and the soft movement that followed my breathing in other parts of my body. Sometimes I somersaulted, and my hands moved in accordance with my interior feelings.

A similar practice called «small dance» was developed by the American dance artist Steve Paxton. In his practice, the dancer is in a vertical position. However, my position in the water in relation to the ground varied. Small dance is intended to relax all

*Dance inside the water of a cenote.
Photo: Susanna Hannus*





muscular tension by bending the knees, which alters the dancer's balance. The dancer focuses on sensing this alteration in balance and allows him- or herself to move freely. Balancing creates small, subtle bodily movements, and when the mind is focused on this movement, it can become fluid and continue in new ways (Mäkinen 2018). In a similar way, I was floating in the water, balancing and trying to relax all my muscles. This created subtle movements inside my body, which led to fluid movements of other parts of my body in the water and in relation to the movement of the water. Meditative focus and sensitivity were associated with these subtle bodily movements. As Mäkinen (2018) and Klemola (2013) describe, this a mindful practice in which one focuses on small sensations and flow inside the body.

Third, inspired by the life inside the water—the vivid turquoise and blue colours, underwater plants, small fish and mangrove roots—I improvised a dance. The following is a quote from my autoethnographic diary on August 28th, 2016. With this quote, I want to demonstrate the positive corporal feelings of joy that

A cenote in which my body was strengthened.

Photo: Susanna Hannus

arose in the water and strengthened my body.

I go to a cenote. The cenote is again so beautiful it is hard to understand, and the water is endlessly blue and crystal clear. I perform somersaults under the water. It makes me feel empowered, strengthened. I feel myself being me and almost overwhelming joy. It starts to rain. Downpour and thunder. The whole world is just magic, and I dance in the rain. The water purifies, renews and makes me feel so alive, softly.

According to bell hooks (2003), in order be a complete person, feel peace and feel whole, we need to transcend hierarchies of mind over heart and body and acknowledge the unity of our heart, body and mind. We need a pedagogy that creates this unity instead of creating the hierarchies that are typical in society, including schools (see Hannus 2018, 248). When I was in the cenotes, there were moments in which I felt



unison of my whole being. It was like I was one with this world; I felt healing, unconditional love and unity with nature. This sharpened my observation of how water was treated by people. The water has so much potential to relieve stress and pain, symptoms that so many people suffer from in the contemporary world. I thought about how people who have pain or stress would benefit from access to this kind of water.

In a cenote that was surrounded by mangroves, some of the first plants that arose on our precious earth, I felt in unison with the waters and the mangrove ecosystem, as I recorded in my diary on September 18th, 2016:

I am in a mangrove cenote. Here, I feel as though I am at the beginning of life. Sparkling green water, singing birds, mangroves, small fishes. I feel unconditional, healing love.

When I went to the freshwater cenotes, I took time to observe their conditions—how the surroundings were taken care of and how the visitors acted around

Dancing at Sian Kaan.
Photo: Mexico Wildlife Photography

and treated nature. If I found garbage around the cenote, I picked it up. In my heart and mind, I gave thanks for my ability to move, dance and spend time around these cenotes. The cenotes that are most visited by tourists have an entrance fee, some of which are quite high. The fee is used to support the guides and clean the areas around the cenotes and the water. Thus, they bring resources to local people who have cenotes on their property and serve as an important source of income. However, ownership of the land is not equally distributed because not all local people can afford to go to the priciest cenotes. Thus, there has been discussion about social inequality in this context. This issue is related to Nygren's (2013, 2016) notion of environmental justice and the rights of people with less resources to visit natural wonders.

Water dances, tropical water ecosystems and climate change

The IPCC (2018) report claims that Northern arctic

zones and warm-water coral reefs seem to be especially sensitive to climate change. The Riviera Maya and Sian Kaan Natural Reserve in the Mexican Caribbean are exquisite coral reef and marine life zones that are endangered by climate change. According to Smith (2018), on the Mexican Caribbean coast, 80 percent of the living coral has been lost or degraded since 1980 due to pollution, disease, overfishing and storms. This phenomenon can be observed around the world. Coral reefs, especially those near uncontrolled land development and the pollution it causes, are in great danger. But there is hope; coral reefs can be surprisingly resilient, especially with human help. Smith (2018) claims that they can be repaired and even strengthened after damage.

Sian Kaan (in Spanish, *La Puerta de Cielo en Donde Naci el Cielo*) means the gate of heaven, or the place where heaven was born. Sian Kaan is open for people to visit, but it is difficult to access because visitors must follow a long road that is difficult to drive down. One day, I decided to go there with a group of people,

two guides and a photographer. Sian Kaan lies within the Mesoamerican coral reef area, one of the largest and most diverse coral reefs still in existence. The wildlife is very special as well, as I mention in the next note in my diary from December 1st, 2016 (the version below is slightly abridged). The note also describes a powerful moment of connection in and with the water.

We are driving a beautiful road towards Punta Allen. We arrive at a mesmerising beach. Dance. Dolphins. Turtles. We stop for the first time before Punta Allen at a natural, hidden beach. I dance in the wind and with the ocean. It really feels like I am in a place where heaven was born. We arrive at a lagoon. There, we see mesmerising, free dolphins. They come very close to us. Then, I see a big turtle with a white back. We are allowed to snorkel and free dive in the coral reef. Sweet, glorious, violet corals stay forever

Dancing with the wind and the Caribbean Ocean at the Sian Kaan Natural Reserve.

Photo: Mexico Wildlife Photography





in my mind and heart. Blue fish and big rays fly in the water. The boat trip takes us close to the mangroves, one the first living creatures, in the turquoise water, in the arms of the open sky. This is a journey into my heart, and it is a gift to me. Euphoria, miracle, beauty unforeseen. . . At Sian Kaan, I was where the oceanic wildlife live free and one can feel reborn in the water.

The biggest threat to this kind of peaceful experience with the wildlife in tropical waters and coral reefs seems to be climate change. The warming of water affects marine life in many ways. The IPCC (2018) report argues that limiting global warming to 1.5 °C is projected to reduce the risks to marine biodiversity, fisheries and ecosystems. However, coral reefs are projected to shrink by 70–90% even if climate change stops at 1.5 °C, and more if the global temperature rises further.

Although reports about climate change provide a picture of the world that may seem completely hopeless, I remain hopeful. Everything can make a

Dancing in the Caribbean Ocean.

Photo: Susanna Hannus

difference. One small act can have a positive butterfly effect (see Hannus 2018); in other words, when many people in different parts of the world act at the same time, unexpected positive chain reactions can happen. In the photograph above, I am dancing in the Mexican Caribbean close to the coral reefs near the town of Tulum. I am floating and softly dancing inside the transparent water. Below me is sea grass. I respect it, giving it space. Sea grasses are important inhabitants of the oceans. They feed sea turtles and effectively capture carbon (see Taillardad 2018). This means that plants such as sea grass, and maybe others that are currently unknown, can help to work as carbon sinks, like forests, and in this way work against climate change.

In Sian Kaan on December 1st, 2016 the special quality of the pure and clean water and magical wildlife allowed me to feel much joy. I was energised by the beautiful mangrove jungles in and around the water. In the cenotes and the Sian Kaan Natural Reserve, there are places where mangrove jungles

are conserved. However, local people told me that in Puerto Morelos and Tulum, mangrove jungles are cut in order to make more space for hotels. Mumby et al. (2004) claim that mangrove jungles are one of the world's most threatened tropical ecosystems; the global loss of these jungles has exceeded 35%. Deforestation of mangroves has a strong effect on the wildlife in coral reefs near these ecosystems (Mumby et al. 2004).

Mangroves can work to mitigate the harmful effects of fossil fuel emissions. Researchers suggest that countries with a large amount of coastal mangrove ecosystems should conserve these ecosystems and pay attention to how they can work as carbon sinks (Taillardad 2018), absorbing carbon and helping slow down climate change. In addition, mangroves play an important role in cleaning and maintaining the crystal-clear turquoise waters around them. This makes me wonder how artists, researchers, educators and protectors of nature could make the ecological value of these kinds of tropical ecosystems more visible and help ensure their conservation.

Pollution and turquoise waters

At the end of December 2016, I visited Bacalar and the Lake of the Seven Colours, where I studied water therapy again. I participated in a ferry tour to a place where layers of crystal-clear water flowed from rapids. When we arrived there, the water was low and there were several tourist boats. I dove into the water as I had before, and as the others did as well. This time, however, I did not feel joy or unconditional love in the water. I felt gasoline enter my body through my nose and a pain in my head. The water was not well; it was polluted. The next day, I got a respiratory infection. Since I was connected with the water, when the water was affected, I became affected.

I had gone there on a boat that used gasoline, and therefore I was part of the problem. Being able to live close by nature and refresh ourselves in it without harming it is our birth right. Furthermore, tourism

is not bad as such; it brings important income to the local people. However, I thought about how different ecosystems can adapt to tourism, especially areas with shallow water, where the water does not constantly move. Could there be diverse ways of accessing these kinds of places and more ecologically friendly energy sources that would cause less pollution?

The Riviera Maya and its precious ecosystem has changed a lot during last 15 years. The local Mayan people told me that towns such as Tulum and Playa del Carmen used to be jungles and bare beaches full of marine life. During the last 15 years, cities called Cancun and Playa del Carmen have been established. Big hotels and lots of restaurants and bars have been built, while the jungle has been cut. There has been a lot of discussion about how these hotels are processing their waste water and whether this is affecting the water ecosystem of the Mexican coasts. According to the local people, there are some challenges related to water recycling in the local infrastructure as well. The Mexican Caribbean used to be guided and protected by the local people, who lived in strong connection with nature. Now, the land is divided among different shareholders, hotel owners and private people with different economic interests. In these circumstances, how can the land and water in this special ecosystem be holistically cared for? These problems exist in other countries in the Tropical South as well (see Nygren 2013). This raises questions about the ethical and ecological responsibility of hotel owners, new inhabitants, travellers and local people, about how more ecologically sustainable tourism can be developed and about how we can live in stronger harmony with nature and overcome the negative effects of our impact that are visible in some parts of the planet.

Embodied inquiry and environmental justice

Nygren (2013) analysed how the concept of

environmental justice has been used as a framework to describe social and political movements as well as indigenous mobilisation in different parts of the world. She states, 'In regard to environmental justice, both academic and public attention has focused often on those movements that have achieved media exposure or that have been successful in confronting the environmental threats affecting them' (Nygren 2013, 12–13). In this article, I have not intended to use the notion of environmental justice to refer to or create a social or political movement limited to a certain group of people. Instead, I have used it as a broad framework that is connected with phenomena related to the environment and nature that affect us all, such as climate change, deforestation and water pollution. I am interested in ensuring environmental justice regarding phenomena that will affect future generations and their connection with nature.

I think that every traveller and local person can perform little acts to help nature recuperate and maintain its balance. For example, we can pick up trash on a beach, support local people in taking care of their environment, pay attention to the kinds of energy sources that water tourism companies utilise, ask hotels how they process their waste water and where it will go and pay attention to how animals are treated near tourist areas. In addition, volunteer groups could be created to help places affected by storms or flooding. There are plenty of small ways to work towards the balance of nature and the planet. In Finland, there has been a lot of discussion about how forests function as important carbon sinks and how we should limit cutting in forests. In this article, I have paid attention to the potential of oceans and tropical ecosystems to slow down climate change in addition to their ecological value.

The IPCC (2018) reports that natural crises such as hurricanes, floods and fires may become more common if the global temperature continues to rise. When I worked in New York in 2012, Hurricane

Sandy destroyed houses close to Long Beach and Manhattan. The people who lived in the affected area needed concrete help to recover their homes and lives, but some artists also wanted to process this natural crisis with people through art. In Mexico, after the earthquake in 2017, I worked as a volunteer to organise painting workshops and dances for children and their families in affected villages. Many parents told me that it was important for their children to feel joy. This was a meaningful moment of co-creation in which local people could engage in creative activities.

I am inspired to contemplate how dancers, teachers and researchers from diverse fields could work together to organise respectful projects that create new understandings, tools and shared ways to help the world and its ecosystems regain balance. To conclude my exploration, I will present ideas based on my embodied artistic research on environmental justice. I believe embodied research and art could bring together researchers, artists, pedagogues, children and local people living in diverse conditions and ecosystems. In addition, possibilities to use water for therapeutic purposes could be important to investigate more and combine with embodied research on environmental justice. Below, I present three ideas for projects that could complement each other:

1) Site- or ecosystem-specific embodied inquiry in an ecologically valuable location: This kind of embodied inquiry could investigate, for example, the effects of small dances in and with water on wellbeing and health. The findings could be shared through visual art and dance. Embodied inquiry could be performed in other pristine areas of nature as well. Artist-researchers could explore the value of nature and safe and ethical ways that nature can recuperate and stay in balance. If an area has been affected by a natural crisis, artist-researchers could organise creative activities with the local community as well.

2) Bridging the Arctic North and Tropical South by encouraging collaboration via embodied inquiry in



For future generations.

Photo: Susanna Hannus

several locations that are sensitive to or recuperating from climate change or pollution: Artist–researchers in the Arctic North and Tropical South investigating and creating in specific locations could form networks of dialogue to share their methods of embodied inquiry and creating art. They could also share their findings regarding ecosystems and the possibilities of working towards balance of the earth as well as their methods of collaboration with local people. In this way, they can have a good impact on the future in different ways.

3) Children as transformation agents: Children could act as embodied investigators with the assistance of artist–researchers and educators in safe and ethical settings monitored by adults. The children could explore the state of the water and the possibilities of nature becoming balanced in the face of climate change and pollution. With adults, they could organise dances, theatre performances and perhaps visual art exhibitions of their explorations. As they grow, they could spread their findings and have a good impact on the future.

These ideas, which may be a bit utopic, need ethical planning. The projects could bring people

together from different fields, including art, pedagogy and research, and strengthen the agency of local people and children. Even small embodied inquiry projects can be meaningful and have a positive butterfly effect.

Finally, I return to my experience. When it was time to leave the water, it was almost like leaving a loved one. The waters and their natural surroundings had become my home. From the perspective of environmental justice, with all my heart I hope that, in the future, children can dive into these fountains and the turquoise ocean, dance in the water and feel the joy, connection and unconditional love I felt while in nature.

Notes

- 1 According to Siebenstein, when practicing Aguahara, one is supposed to hold another person in the water, help her to float and relax with silence and perform soft dance-like movements on the surface of the water and in the water. Watsu was developed in the 1980s in the Harbin Hot Springs in California. It combines Zen Shiatsu and movements in warm water with deep relaxation (for more, see Brunschwiler 2018).
- 2 This is why I credit myself for the photos. In Sian Kaan, I was filmed by a professional photographer while I danced.

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BIOGRAPHY

Susanna Hannus finalized her PhD in educational sciences in the University of Helsinki in 2018. Her research explored possibilities to unravel hierarchies in schools through creative, artistic practices and pedagogy. In 2011 Hannus started working with visual ethnography during scholarly exchange in the Catholic University of Santiago in Chile. In 2012 she was a visiting scholar and artist in Brooklyn College, New York. She has presented her

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