A revised narrative of the Baltic Sea in Sweden

– A phenomenological reflection on the multifaceted human-sea interrelations and communication

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Abstract

Far from everyday reality and vast in size, seas and oceans are often subject to overarching narratives obscuring their reality. Natural sciences, technology, and the economic perspective exercise a dominant influence on the problem formulations that both shape our understandings of marine environments and frame marine decision-making processes. Although deficiencies of those perspectives have been criticized and the role of humanities and social science is growing, addressing human dimensions as complex and multifaceted is still poor and not seriously considered in marine social science research and management processes. Moreover, recognition of terrestrial bias across marine-related research fields reminds us of the uniqueness of marine environments and the need for distinctive approaches that define their reality.

This study argues that all those problems can be addressed from the perspective of communication. Exploring how people communicate about marine environments can help detect a variety of overarching narratives formed in the society, but also create new ones. Moreover, it can help to understand the complex and manifold human dimensions and address the recognized terrestrial bias. However, by now, marine communication-related research has been subject to a nascent field - marine conservation communication, whose instrumental approach is insufficient to address the above problems. The field of environmental communication could offer a variety of research approaches, but its focus was predominately on climate change and terrestrial environmental problems.

This study addresses such environmental communication research gap and the above-mentioned deficiencies. It brings narratives of seven people connected to the Baltic Sea in Sweden through various engaging activities. Through phenomenological analysis of narratives, the study reveals the revised narrative of the Baltic Sea. The revised narrative represents the Baltic Sea as *humanized, the ever-flowing system* with *turbulent materiality* and *fluidly known* by people. It recognizes both actors of the human-sea interrelationships, gives a voice to the Baltic Sea, and represents it as less marginalized by land-based perspectives.

Reflecting on communication challenges and opportunities, the revised narrative suggests how communicating the Baltic Sea as intertwined with the land and human context can be important in shaping more meaningful and significant understandings of the sea. However, it also shows a challenge to discern whether the representations used in communication are reflections of the lived-through experiences or external conceptualizations. Significant communication opportunity arises from the narrative when the Baltic Sea is positioned as an active communication participant, through a more-than-human perspective. In that way, representations are less oppressive and more significant. Therefore, this study suggests a more careful evaluation of environmental communication as a constitutive tool, especially in connection to marine environments. There should be attentiveness towards narratives that treat the Baltic Sea as an asocial and atemporal flat background of the Swedish society, known through static and fixed descriptions.

The revised narrative contributes to the development of the Baltic Sea literacy, but also offers methodological and theoretical suggestions in research for re-centering marine environments and a better understanding of multifaceted human-sea relations through communication. The study emphasizes the importance to recognize marine environments as unique, experienced differently from land. Thus, in a need for distinctive approaches within research and practice.

Keywords: The Baltic Sea, marine environment, narratives, phenomenology, human-sea relations, terrestrial bias, more-than-human perspective, ocean literacy, environmental communication.

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1. Introduction

1.1. Problem Formulation

"For the sea as a whole, the alternation of day and night, the passage of the seasons, the procession of the years, are lost in its vastness, obliterated in its own changeless eternity. But the surface waters are different. The face of the sea is always changing." (Carson, 1951).

In her book "The Sea Around Us", Rachel Carson mirrored patterns of thinking about the ocean at those times. By her words, the ocean was considered vast and changeless, with its surface being the only changeable part. Ocean was thought of as an unknown, uncanny place, so vast and resilient that nothing can disrupt it. Such a narrative persisted for a long time.

In the light of the global environmental crisis, the narrative about seas and oceans has shifted and people were positioned as key drivers of negative impacts. The new narrative represented marine environments as "(…) massively and fatally depleted and disrupted (…) simply too big to fix." (Lubchenco & Gaines 2019, p. 911) and left society in despair. At the same time, both the natural sciences and the economic perspective exercise a dominant influence on the problem formulations that frame marine decision-making processes (Barreto et al. 2020; Packer & Held 2020). Because seas and oceans are difficult-to-perceive environments, all of that might form a powerful overarching narrative that oppressively represents them. Consequently, that obscures people's understanding of seas and oceans and marine policy-making (Elmgren et al. 2015; Lidström et al. 2020; Lidström and Cederqvist 2020; Knowlton 2021). Such overarching narrative or any other representations are important to detect and scrutinize whether they appropriately show current scientific trends and shape the public understandings in a way that motivates marine conservation (Rozwadowski 2020; Lidström et al. 2020). By large, meanings people make about distant and vast marine environments rely on those representations.

As a response to the above problems, individuals and communities are recognized as part of the solution in tackling marine conservation challenges. There

is a growing recognition of the importance to implement human dimensions [1]in the marine management processes (Jefferson et al. 2015; Burbano & Meredith 2020). However, the inclusion of those dimensions in the national and international ocean policies remains a challenge (McKinley et al. 2020). Such a challenge goes back to the already familiar discussions about how to combine social science with natural science knowledge that dominates decision-making processes. Moreover, when it comes to marine environments, there is still a lot to understand about human dimensions before implementing them in management. As McKinley et al. (2020) said: "For society to be part of solutions there is a need to better understand the multifaceted and evolving relations between people and the sea. Consideration of the human dimensions of the sea (…) is a complex challenge." (p.86). The matter of question should not be understanding the role of human dimensions for effective marine management, but rather understanding their complexity, which is itself a demanding task. Human-sea relations are complex, multifaceted, evolving, and different from our terrestrially based non-human relations. Yet, understanding them is important for increasing public knowledge and awareness beyond science and influencing positive ocean-related behavior (Kolandai-Matchett & Armoudian 2020).

Comparing to terrestrial environments, efforts from humanistic and social sciences were largely missing in the past of marine research (Bolster 2006; Peters 2010; Anderson & Peters 2014; McKinley et al. 2020; Cederqvist et al. 2020; Pauwelussen 2020). Therefore, understanding of human dimensions with seas and oceans has been lagging behind and to large extent influenced by terrestrially oriented research. That was also recognized after a recent publication of the Manifesto for marine social sciences (Bavinck & Verrips 2020) – a field that empirically focuses on the human-sea/ocean interactions. The Manifesto was followed by a range of commentaries, some of which criticized the field's "instrumental" and predominant focus on fisheries (Pauwelussen 2020, Steins et al. 2020) and warned about the risk for its research to be terrestrially biased – guided by terrestrially based concepts and theories (Hornidge & Schlüter 2020) or defining maritime cultures as extensions of land (Pauwelussen 2020). Pauwelussen (2020) commented on the importance of marine social science research designs to "challenge basic spatial and ontological assumptions ingrained in how we approach marine reality" (p.148). That was also recognized by geographers Anderson (2012) and Steinberg & Peters (2015). They proposed "wet-ontologies" to re-imagine ways of looking at the ocean reality, often restricted by terrestrial limits. Peters (2010) mentioned how addressing such terrestrial bias across academia is already recognized within historical approaches that brought maritime worlds back in the

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[1] Human dimensions include social, cultural, economic, health, and governance considerations — of the marine and coastal environment. The term is broadly encapsulated within the social sciences and humanities and defined as complex web of human processes as they relate to non-human, natural resources (Barreto et al. 2020 see Spalding et al. 2017).

focus of the research. However, besides geography and history, there is a lack of that recognition within contemporary studies. Therefore, there is a need to reflect on the terrestrial bias present within contemporary research and on how we can approach seas and oceans - as spaces temporally and spatially distant from the land, but also as diverse human spaces beyond just fisheries perspectives.

Environmental communication, as an interdisciplinary field of study, could offer a variety of methods and theories to examine human dimensions with marine environments. Communication is our meaning-making tool for understanding the world. Such constitutive aspect suggests that the ways people communicate shapes their perception of marine reality. In turn, those perceptions inform their action with/towards seas and oceans. Exploring meaning-making through the environmental communication research methods can help us to detect narratives attached to seas and oceans, but also to look for new ones, less oppressive and overwhelming ones. Yet, research within the field has largely focused on issues related to terrestrial ecosystems and more recently, climate change within which ocean acidification and sea-level rise issues appeared (Comfort & Park 2018). The field which has focused on marine-related communication is a nascent one - marine conservation communication, whose clear goal is solely to promote conservation actions (Brown 2018, Kolandai-Matchett & Armoudian 2020; Kolandai-Matchett et al. 2020). Such an approach to communication is instrumental and focused on the effectiveness of pursuing its goal rather than considering various perspectives of looking at certain conservation issues. Since human-sea relations are complex and have not been substantially explored, instrumental communication cannot substantially inform the public and/or influence policy-making. Therefore, there is a need to reflect on the constitutive aspects of communication about marine environments and how they can be used to meaningfully inform the public and/or management. That goes in line with one of the suggested priorities mentioned in the marine social science manifesto – to improve ocean literacy[2] at a "local, regional, national and global scale" (McKinley et al. 2020, p.89). I argue that all the above problems and research gaps are connected to communication in one way or another. Therefore, a detailed examination of the constitutive aspects of marine communication could detect overarching narratives and bring new ones, help in understanding complex and multifaceted human-sea relations, and complement current instrumental approaches in marine communication.

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[2] A framework within the newly proclaimed "Decade of Ocean Science for Sustainable Development (2021-2050)" by the United Nations that aims to increase an understanding of the ocean's influence on humans and human influence on the ocean (Santoro et al. 2017)

1.2. Research Purpose and Objectives

This study will address the above-mentioned globally recognized problems and research gaps from the environmental communication point of view. I will explore narratives of people who are more explicitly connected to the Baltic Sea in Sweden through various engaging activities to see what can be learned from them. In that way, this study contributes to the development of ocean literacy from a local angle.

Reflecting phenomenologically on the Baltic Sea – as an intentional object of their experiences, I aim to reveal nuances across their representations of the sea and discover how they together reformulate the narrative of the Baltic Sea - assuming the currently dominant one is built on the above-mentioned problems. By this, I intend to reflect on the communication opportunities or challenges found within the reformulated narrative.

I will use communication as a term encompassing any means of communicating used for sharing knowledge, creating public dialogues, or influencing marine policy making. Also, problems and opportunities are seen in the light of environmental communication as a crisis discipline with an ethical duty to "change the aspects of society causing ecological damage" (Milstein et.al. 2017, p.2, see Cox 2007).

To address the aim, this study will be led by the following questions:

1. How do participants represent the Baltic Sea as an essential phenomenon of their experiences?

2. What nuances can be found across their diverse narratives about the Baltic Sea based on (1.) and how those reformulate the narrative of the Baltic Sea?

3. What communication challenges and opportunities come up from the revised narrative?

1.3. Research Significance

This study contributes by addressing the above-identified research gaps and deficiencies. Moreover, I would like to point out some additional contributions specific to the field of Environmental Communication and the emerging ocean literacy concept.

Reflecting on the ethical duty of Environmental Communication, this study offers methodological and theoretical suggestions for exploring the ways the "more-than-human world mediates communication and culture" - social constructions both developed by our lives on land. (Milstein et al. 2017, p.2). Those suggestions might open the floor for new ones and/or reflections on the need for marine-specific communication.

Moreover, this study adds to the emerging discussions related to the ocean literacy concept – already criticized by ocean historians for lacking humanists' perspectives (Rozwadowski 2020). As opportunities for ocean-related research and education projects will increase in the upcoming years, it is important to start reflecting on the concept of ocean literacy from the local angle. Looking at people's diverse ways of interacting with the Baltic Sea from the communication point of view in this study can facilitate those needs.

2. Research Design

This study explores essential meanings across people's narratives about the Baltic Sea. Therefore, a qualitative design is used for organizing my research process. In this chapter, I will elaborate on such a design by presenting the theoretical framework, research paradigm, and methodology.

2.1. Theoretical framework

To address the proposed research questions, I needed theories that profoundly consider the complexity of the experiences and essences found within them. One such theory is proposed by John Dewey, who connected the theory of experience with communication. Another theory is proposed by Merleau-Ponty, whose concept of embodiment addresses the essences of experiences.

    In the next section, I further elaborate on the choice of that theory and show how and why is it relevant for this study, and its aim. I introduce John Dewey's conception of experience and communication as a starting point and phenomenology, the main theory of this study, with a focus on Merleau-Ponty's concept of embodiment.

2.1.1. The conception of experience and communication by John Dewey

Dewey conceptualized experience as a continuous and temporal process, "the undergoing and doing of organisms-in-environments" (Hildebrand 2018). Experience arises from our embeddedness in the environment, activating thoughts that are a response to nature's "changeable, unstable aspects" (Hildebrand 2018). He believed such continuous interaction makes us deeply implicated within the world (Anton 1999). Instead of "inter-action", he used the term "trans-action" to describe inseparability between organisms and environment – observer and observed (Bentley & Dewey 1949). In an attempt to explain Dewey's "trans-actional" view, Garrison (2001) describes:

> "We do not so much inter-act with food, water, and so forth as trans-act with it. Existence is an event that flows through us as we flow through it. We cannot think in terms of lumpy substances

with simple locations in such an open and porous world; we can think only in terms of functions and events"

Such "trans-actional" point of view extends on communication. Given the fact that humans are "language-using agents", our intertwinement within the world makes our language deeply implicated within it too (Godfrey-Smith 2014). Therefore, language is not simply "pre-agreed code" that exists just within our social life, allowing to make our private thought visible to others (Anton 1999). It is developed in social interaction when the meanings are intersubjectively co-constructed. Also, language is social when being private as well – when we turn our communicative capacities within (talking with/to ourselves) (Godfrey-Smith 2014). That makes our thoughts and inner experiences independent upon extension of language, but still, part of nature's "changeable, unstable aspects" as already-above said. Either external or internal, our communication makes thoughts become active and able to change our imagination of nature as Dewey emphasized in his book *Experience and Nature*:

> "When communication occurs, all natural events are subjects to reconsideration and revision; they are re-adapted to meet requirements of conversation, whether it be public discourse or that preliminary discourse termed thinking" (Dewey 1958, p.166).

He believed such re-adaptation also changes our relationship with nature (Godfrey-Smith 2014). By reminding us of those acknowledgments, Dewey presented communication as a bridge between the "world we experience" – eventful, changing world ("existence"), and the "world we articulate" – our interpretation of the world ("essence"), instead of making a "virtual" difference between them (figure 1). Looking at it as a bridge reminds us that communication, as our human tool, can both oppress the reality which represents, but also assist in representing it legitimately (Anton 1999). The latter is possible if the bridge is acknowledged. Then, communication can even generate a new relationship between humans and the environment, one that "eventually creates a new kind of experienced objects, not more real than those which preceded but more significant, and less overwhelming and oppressive" (Dewey 1981 see Clandinin 2007, p.39). Therefore, in this study, participants' narratives are considered as a bridge between the Baltic Sea as experienced ("existence") and the representations articulated from such experiences ("essence"). Not to forget, narratives are also the product of co-constructed meaning about the Baltic Sea developed in the interaction with other people. As people who are more explicitly engaged with the Baltic Sea, participants' narratives could serve as tools to re-discover the Baltic Sea as "less overwhelming and oppressive".
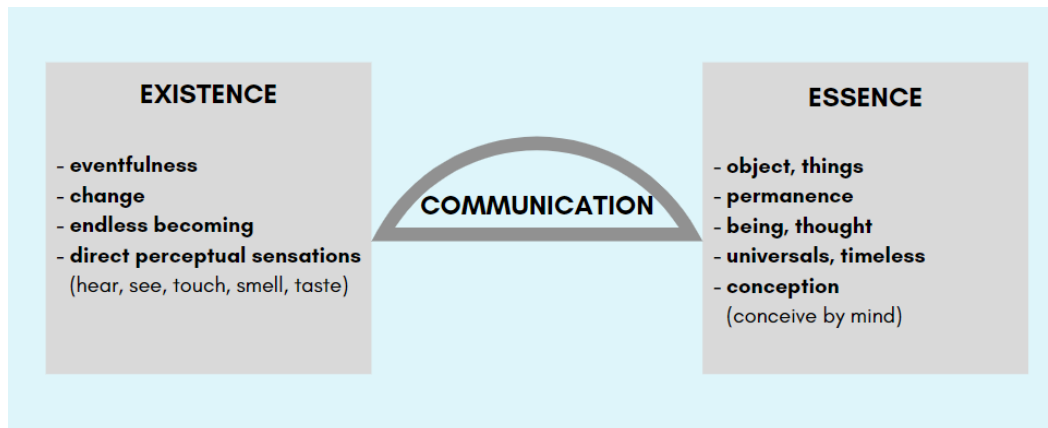
Figure 1. Dewey's view on communication as a bridge (based on Anton, 2021)

The above views on communication and experience were used as a theoretical reflection in the analysis of this study. I used them as a deeper perspective when reading and analysing participants' narratives in connection to the Baltic Sea and to reflect on the possibilities and challenges in marine-related communication later in the discussion. Considering seas and oceans as less perceptible and limiting environments for humans, grasping the reality of the Baltic Sea in this study might be a challenge. Therefore, in the next section, I introduce another concept to build my theoretical framework.

2.1.2. Phenomenology and Embodiment by Merleau-Ponty

In an attempt to find nuances across representations of the Baltic Sea and grasp the complexity of participants' experiences with the sea, I also explore the "essences" in their narratives. I combined the above theoretical reflections with the phenomenological concept of embodiment. As a disciplinary field in philosophy, phenomenology is fundamentally interested in the essential meanings of lived-through experience. Although such definition is a starting point of phenomenology, there are various streams of thoughts within the field (Woodruff Smith 2018). In this study, I used Merleau-Ponty's reflections on the phenomenology described through his concept of embodiment. Reflecting on that concept, Küpers (2005) articulated:

> "Not only do we ''know more than we can tell'' with respect to our pre-comprehension of phenomena, but also we are immersed in an embodied world of experience in which the lived is always greater than the known" (Küpers 2005, p.117 see Merleau-Ponty 1962).

Merleau-Ponty extended thinking about phenomenology by positioning humans as inseparable from the experiencing world – bodily-engaged beings who cannot know the world without being fully immersed in it (Küpers 2005). Being embodied is a

crucial way to make sense of phenomena. Such thinking is an important reminder that all forms of reflection (e.g., thinking, theorizing) come from the existence of the world "as it is perceived and the embodied subject that perceives it" (Toadvine 2008, p.22), because as Merleau-Ponty said, reflection "has a tendency" to forget its role. Meaning, sometimes we rely too much on reflections of experiences, e.g., past experiences, memories, ideas. Reflection "hides" our direct experiences of phenomena as we take them for granted. However, phenomenology brings back such pre-reflective experiences by reminding us they are part of us, as bodily-engaged beings. Therefore, I used the concept of embodiment to stay attentive to participants' reflections of their experiences with the Baltic Sea and remind them that those are coming from once lively and rich embodied experiences, reciprocal moments with the sea. In that way, I looked at their articulations as more than words, with curiosity to dig deeper into their subjective experience.

Moreover, Merleau-Ponty argued that embodiment is crucial for overcoming prejudices of rationalism if one learns to describe experiences acknowledged as once bodily engaged situations (Russon 1994). As Küpers (2005) said, "being embodied is already a way of knowing tacitly and the very base for narrative knowing" (p.115). Therefore, embodiment helped me to reflect on ways participants formed knowledge about the Baltic Sea through the lived-through experiences and specific moments in which they were immersed in its existence by reciprocating, being-with-the-sea.

2.2. Constructionist paradigm

As Mills et al. (2006) mentioned, a strong research design is one in which the researcher chooses a paradigm congruent with her set of beliefs or a worldview. Therefore, I chose the constructionist paradigm which means that the researcher can never be entirely objective as her observations are shaped by social influence and phenomenon that is being observed. The researcher is aware of those influences and thus, that the findings are not a "discovered truth" (Levers 2013). Depending on how both the researcher and participants of the study perceive and make meaning of reality, will determine how they form knowledge about the world (Moon & Blackman 2014).

2.3. Methodological approach

This study aims to find nuances across people's different representations of the Baltic Sea and reflect on the possibilities of marine-specific communication as a constitutive tool. Addressing such an aim requires a methodology that can reliably explore the complexity of people's experiences with the Baltic Sea, both

"existence" and "essence" as referred to in the theoretical framework. Therefore, this study combines hermeneutic phenomenology and narrative inquiry presented in the upcoming sections. Followed by examples of Patterson (2018) and Nigar (2019), such a methodological approach can serve to both decipher descriptions of experiences and interpret them while "acknowledging the researcher's subjectivity and deep engagement with the research process" (Nigar 2019, p. 16).

2.3.1. Narratives

Czarniawska-Joerges (2004) stated that narration is a "common mode of communication. People tell stories to entertain, to teach and to learn, to ask for an interpretation and to give one" (p.10). We think and talk in stories which makes us *Homo narrans* as Fisher proposed (Fisher 1987). Our social life consists of events and actions, it is an "enacted narrative" (Czarniawska-Joerges 2004) and as such, provides rich insights into our social world.

In the narrative inquiry, the researcher's role is listening to those narratives, retell, re-story, and put them into narrative chronology (Creswell & Creswell 2018). For narrative researchers, the story is "one if not the fundamental unit that accounts for human experience" (Clandinin 2007, p. 4, 5) and there are a variety of methods and approaches to study it. This study employs a constructionist narrative approach that correlates with the proposed research paradigm. Therefore, it focuses on the story co-construction between a participant and the researcher but is also attentive to the broader social construction of the story "within interpersonal, social and cultural relations" (Esin et al. 2014, p.4).

Moreover, in line with Dewey's view on experience, narratives in this study are not considered as finished products, but rather as "changing stream of experiences characterized by continuous interaction of human thought with the personal, social, and material environment" (Clandinin & Rosiek 2007, p.39). In this study, a narrative approach is used to interpret participants' socio-cultural contexts to gain a deeper understanding of the Baltic Sea as a phenomenon of their experiences.

2.3.2. Hermeneutic Phenomenology

Phenomenology helps the researcher to explore "the lived experiences of individuals about a phenomenon as described by participants" (Creswell and Creswell 2018, p.13). Phenomenological research attempts to analyse the conscious everyday experiences of people and disclose their tangible structures or essences (Koopman 2015). Proponents of Husserlian phenomenology believe such disclosure is possible if researchers perform phenomenological reduction or bracketing – a process where one is purifying consciousness of preconceived beliefs, ideas, and presuppositions to reach for pre-reflective experience (Toadvine 2008).

On the contrary, the hermeneutic phenomenology direction that this study employs acknowledges the impossibility to ignore such contaminations (Nigar 2019). Phenomenologists like Heidegger and Merleau-Ponty say it is not possible to entirely "stand outside the pre-understandings and historicity of one's experience" (Laverty 2003, p.27). Therefore, the phenomenological reduction should be seen rather as an effort to reflect on our engagement with the world which then itself discloses the pre-reflective dimension. As such, phenomenological attempt to turn towards essences should also be seen "in the service of better reflecting on the fact of the world's existence; it is not, as Merleau-Ponty interprets the logical positivists, an attempt to solve philosophical problems by recourse to linguistic analysis" (Toadvine 2008, p.25). Therefore, this study will help as a tool for finding nuances across participants' narratives and present the existence of the Baltic Sea less oppressively.

Hermeneutic phenomenological orientation is used to achieve consistency between my perspective on narratives and phenomenological perspective to align those with constructivist worldview. Meaning, I considered the triangle of relationships taking part in the construction of narratives – the Baltic Sea, interviewees, and the researcher. I revealed the essences across participants' lived-through experiences of the Baltic Sea by acknowledging their representations and descriptions depended both on me, as an interlocutor in the interview, but also their socio-cultural embeddedness. Instead of bracketing those influences, I rather saw them as possibilities for "rich textual descriptions of experiences" (Laverty 2003, p.12).

2.4. Data Collection

I used a semi-structured, in-depth interview method to collect the data. I had a fairly clear focus before the investigation, and an interview guide (Appendix 1) to navigate the interview process and questions. However, questions were not strictly followed, rather dependent on the answers given by interviewees. I interviewed seven people with different engagements with the Baltic Sea (Table 1). Followed by Curtin's (2006) phenomenological study, such a diverse sample was necessary to grasp multi-layered essential meanings of phenomena among complex experiences. The diversity of engagements opened up different perspectives of the Baltic Sea and allowed me to grasp its essential meaning more reliably in that way.

The participants were chosen based on the following main criteria: **a)** have lived/worked next to/on the Baltic Sea for the most of their life or have a summer house they often visit; and the additional criteria: **b)** have been for a long time in close connection to the Baltic Sea through recurrent activities; or **c)** have shown connection and interest in the Baltic Sea or activities related to it. The recruitment process started by reaching out to potential participants through Facebook groups

and personal social networks. When formulating initial messages, emphasis was put on the criteria a) to avoid attaching specific identities to potential participants (e.g., fishermen, surfer, diver) and thus, a bias in the interview. Four of the interviews were conducted in person and the rest were online. Interviewee 2 was the only participant I knew before the interview. To reach commonalities in the interview, I asked participants to bring an image that in some way presents their connection to the Baltic Sea and I also familiarized myself with them and the context they live in before the interview.

The most challenging part to reach in the interview was assumed to be participants' reflections about the Baltic Sea coming from particular lived-through moments with the sea, or "moments of reciprocity" as named in the interview guide. Therefore, I followed Høffding and Martiny's (2016) article *Framing a phenomenological interview: what, why and how* to help me reach those phenomenological dimensions. The main suggestion which helped here was to move "the focus of attention from a belief about the past experience to actual descriptions of it (…) from the "why" and "what" of experience to the "how" of its givenness" (p.550, 551). The language used was English with few participants' articulations on Swedish. After each interview, I wrote down observations and transcribed the recording verbatim by simultaneous notetaking of any interesting reflections.

Table 1. Overview of the interviewed participants

Participants	Interview situation	Connection to the Baltic Sea
Interviewee 1	In-person (Öregrund)	Lives by the sea whole life, involved in different fishing practices, works as a researcher and test-fisherman at university in Öregrund.
Interviewee 2	online	Lives by the sea whole life, works as a small-scale commercial fisherman in Luleå.
Interviewee 3	online	Lives close to the sea most of life, was engaged in sailing, works as head of the research station on the Askö.
Interviewee 4	In-person (Gräsö)	Summer vacations in childhood, lives on the Gräsö island most of the year, involved in sportfishing.
Interviewee 5	online	Lives in Husum and close to the sea most of life, engaged in surfing and photography mostly related to Baltic Sea and surfing.

	In-person (Uppsala)	Summer vacations in childhood, boating in the past, kayaking, and seaside leisure during summer.
Interviewee 6		
Interviewee 7	In-person (Uppsala)	Summer vacations in childhood, diving and technical wreck diving in the Baltic Sea for the past 30 years.

2.5. Data Analysis: Constructing meaning through Narratives and Hermeneutic Phenomenology

This study aims to find nuances across people's different representations of the Baltic Sea and reflect on the possibilities of marine-specific communication as a constitutive tool for making public and policy-related dialogues. To address such an aim, I employed both the narrative approach and phenomenology in the analysis.

I read participants' narratives from a holistic-content perspective, described in Lieblich et al. (1998), chapter four. To grasp the content of each interviewees' story and facilitate my inductive analysis, I used the elements from the *Three-Dimensional Space Narrative Structure* (figure 2) as my pre-defined codes. Each interview was color-coded focusing on personal, social, temporal, and contextual dimensions, but also commented with notes on any tensions, patterns, continuities, and discontinuities found in narratives. Such textual material I further used to retell the story and produce *interim* text – an interpreted summary of the story based on the detected patterns, tensions, and themes shaping the interview text (Clandinin & Connelly 2000, p. 131-135). That served me as a comprehensive summary of each participants' story to which I could always go back to and remind on its important aspects.

Another layer of analysis was based on phenomenology. I looked at how does the Baltic Sea becomes visible and available for individuals through the narrative. Informed by a theoretical framework, that together produced codes about the Baltic Sea which I further positioned within three dimensions as in figure 2, along with the above-mentioned narrative codes. In that way, I designed tables with participant-focused and Baltic Sea-focused codes. Furthermore, by performing phenomenological reduction and "going beyond, behind, or underneath the conventional patterns of thoughts and action in order to expose the meaning structure" (Lin 2013, p.471), I searched for the essential meanings of the Baltic Sea across those codes. Connecting everything to literature and theoretical framework, I extracted four themes based on those essential meanings. They are presented in the results as nuanced representations that together build a revised narrative of the Baltic Sea.

Interaction		Continuity			Situation/Place
Personal	Social	Past	Present	Future	
Look inward to internal conditions, feelings, hopes, aesthetic reactions, moral dispositions	Look outward to existential conditions in the environment with other people and their intentions, purposes, assumptions, and points of view	Look backward to remembered experiences, feelings, and stories from earlier times	Look at current experiences, feelings, and stories relating to actions of an event	Look forward to implied and possible experiences and plot lines	Look at context, time, and place situated in a physical landscape or setting with topological and spatial boundaries with characters' intentions, purposes, and different points of view

Figure 2. The Three-Dimensional Space Narrative Structure (Ollerenshaw & Creswell 2002 see Clandinin & Connelly 2000)

3. Results

In this section, I am addressing the first and the second research questions. I will present four themes through which meanings of the Baltic Sea appeared as relevant when analyzing participants' narratives. Focusing on the search for the nuanced narrative of the Baltic Sea I extracted these themes to show how they together build a revised narrative of the Baltic Sea.

The first theme – *"Humanized sea"* represents the Baltic Sea as intertwined with the human life on land and/or socio-cultural contexts they are embedded in. The second theme - *"Ever-flowing system": Changeable sea and changing imaginations"* represents the changeable and temporal aspects of the sea itself, as an environment different from land and their influence on the interviewees' imaginations and relations to the sea. The third theme – *"Turbulent materiality: Layers, shapes, forms, and colors"* represents the Baltic Sea as a space with its unique materiality revealing itself through the descriptions of the direct experiences of the seawater itself. Finally, the last theme – *"Fluidly known"* presents how interviewees' way of knowing the Baltic Sea challenged the knowledge coming from media and science but also deepened their connection to the sea through embodiment – reciprocal moments with the sea by sensing.

3.1. Humanized sea

"(…) sometimes it is just that you get to see this beautiful creature that is so different from us, living in a place that we cannot live in. We live all over the world, but we cannot really live in the water." - **Interviewee 1**

In this theme, I demonstrate how the Baltic Sea becomes transformed through human context. I present how the interviewees re-imagined and represented the Baltic Sea by talking and thinking about it from the land and influenced by the socio-cultural context they were embedded in. In subtheme 3.1.1., the focus is on participants' situatedness on the land, and in subtheme 3.1.2., on the values they attached to their relationship with the sea. Moreover, in the subtheme 3.1.3., I present confusing contradictions in their reflections of pollution.

3.1.1. Land-based representations: thinking "from the land"

Interviewee 1 explained the connection to his hometown where he grew up and still lives: "*I think I am the eight-generation living there and actually living by and working with the sea. So, for me it has been growing up with it. I had my first boat at age 7 and my father is a fisherman*".

Many experiences of the Baltic Sea from the **interviewee's 1** narrative were connected to that hometown which affected his meaning-making of the sea. Here, he reflected on the ways tradition of that town influences people's thinking and doings around the sea:

> "The older you get, the harder you get to change. Especially when it comes to older people there, and people that I could have been looking up on when I was young. They kind of stick with that tradition and do not go anywhere else to see whether things can be done differently or think in different way".

He pointed out his transition in thinking about the sea after starting to work as a researcher and test fisherman at the Baltic Sea for the university:

> " When you are involved in research, you kind of get bigger picture. If you just live on one place, do your stuff, you just see this little area. Now, suddenly I travel all over Sweden, coastal areas and you see that it looks different in different places and people do things in different ways, I think mostly because of tradition."

That change in thinking influenced his relationship to the sea as well:

> "When I was young and I would catch a lot of fish, I would say it was a good fishing day. Today, if I go fishing and I catch the right species and not so many of them, I would say it was a good day. So big difference"

Interviewee 6 talked about her strong connection to the old summer house and kayaking throughout her narrative. When I asked her about what pictures of the Baltic Sea first come to her mind, she replied: "*When I think of Östersjön, my summer house comes to my mind first or maybe when we are out kayaking (…) both of those pictures I like very much.*" Moreover, kayaking was often associated with her favorite places on the land. Knowing those places made her feel like part of the sea environment:

> "I feel like I am part of the environment when kayaking, maybe it it because we have some favorite, old places that we usually visit (…) because when you go to the same places, you know the islands pretty well."

Interviewee's 4 connection to the Baltic Sea was most of the time expressed through his life on the Gräsö island, where he lived with his wife for the past 30 years, four days a week: "*I have a lot of international friends as well thinking this*

is a paradise and I say yes, it is. On my Facebook (…) I noted this place as a "black creek heaven on earth." Black creek refers to the name of the place on the island where he lived, translated from Swedish. His connection with this place, his house, and friends who visited him, connected him to the sea as well. That was all part of his meaning-making of the Baltic Sea.

Interviewee 3 works on the island, as chief of the research station. She expressed one of her ways of looking at the Baltic Sea, from the perspective of her job:

> "It is connecting people the way I see it (…) We have this other field station in Finland and those researchers come here and look what we are doing, we share our research, and we can feel the connection and I think the Baltic connects people, I will say it like that."

Representing the sea as a *"connector"* makes it an active participant of her narrative and mediator of communication between distant people and places.

Another example demonstrates how land-based life and thinking "from the land" allowed for **interviewee 2** to put himself in the position of a fish and get the sense of a situation a salmon finds itself in when it gets caught in his gear:

> "I was out there clearing fishing traps from snow and I crawl in them, shook up the snow and laid down there at that place where salmon is when waiting to be thrown in the boat and so I was laying and thinking about salmon (…) all that effort for their part, just to be caught and killed by me."

The ability to perform this activity from the land allowed him to understand the fish from another perspective.

The same interviewee also expressed that "feeling deeper for the ocean" comes from having deeper "reference points" which he expresses as memories about places and social relations:

> "(…) your feelings for the ocean are deeper too, I mean like you have a deeper reference point (...) your old memories can really quickly come up when you come back to a different area, you remember, oh we were here fishing that year or, oh we were here with family 2 summers ago camping on that island or (...)"

3.1.2. "This is our heritage; this is our sea."

Here I present how some of the interviewees attached cultural values to their engagements with the Baltic Sea and the influence of that in their relations with and representations of the sea.

Interviewee 2 described the importance of the type of commercial fishing he does in the north of Sweden with few other fishermen left:

> "(…) I mean the commercial fishing I stand for and do has a more cultural history and has a value for society that may not always be measurable in pure money either so I think what's left of us, we should be more careful of that, I think. It has cultural value as well."

He added cultural value to his fishing practice and positioned himself as a "*last man standing*" in the tradition of catching salmon. Fishing gave him a "*higher purpose*" and thus reinforced his relationship to the Baltic Sea:

> "I feel like I belong there and part of the cycle when I have a mission, working with fishing…because you are partaking in that, interacting with that whole thing. It is that connection to it, it gives you the higher purpose, connects you"

The Baltic Sea through the eyes of **interviewee 7** was by itself a "*historical place*" and a "*cultural heritage*". His stories about wrecks described the sea almost like a museum where every wreck tells its story about people and mostly war history. He described one of his experiences: *"(...) you can imagine also faces of the crew members and everything when on the wreck and you out all the pieces together and very much telling the story by taking photos and video."* With this sense of a museum, he described himself and his team as "visitors" in the sea:

> "We never touch anything or bring anything up so in a way we are visitors in the sea. I could take and bring up this very beautiful compass, but I think that is a respect that you need to pay for those who maybe perished in this wreck or for our cultural heritage in general."

By adding cultural value to the discoveries underneath the sea and recognizing the Baltic Sea's brackish waters important for those discoveries, made him feel proud about the sea:

> "(…) this is our heritage, this is our sea, and we are very, very proud of it and this is very unique, and we know that and we have a very strong force of telling a story, story of something because people that live near by the salty sea, they barely can believe what they see."

Throughout the interview, he told many stories about wrecks in connection to history and WWII. One of such demonstrated a war crime in which Swedish people suffered. It was a story of a passenger steamboat, torpedoed by a Russian submarine during WWII, in which innocent people died: *"Swedish people have not been suffering much from WWII, but this was one of the absolute biggest disasters that we have experienced. So, we dived this one and it was something we felt really strong about."*

Such connections to the history and war formed his imaginations of the Baltic Sea as not a "*historically peaceful sea*":

> "Some people always talk about how it is a very peaceful place historically, but my feeling is not that (…) just near the Swedish coast, it is quiet, but Baltic is much more than that and if you go to Polish coast and all the Baltic states and the Gulf of Finland, it is really not the peaceful sea."

3.1.3. What about pollution?

Here I present participants' reflections on the pollution as part of their meaning-making about the Baltic Sea. I show their contradictions in expressing "where does the pollution come from" and how much the Baltic Sea is polluted – in general, or in the area where they live.

Interviewee 4 talked about a "*very bad bottom*" in the area close to where he lives: *"(...) it is not dead but it is a very bad bottom. If you do not disturb it, it obviously does not harm the fish or bird life because there is a lot of fish here."*

So, he was aware of the pollution embedded in sediments, but at the same time he articulated those same bottoms as "*pretty healthy*" which was influenced by the scientific discourse:

> (…) here it is shallow, depths are 0-10m max and I say that the bottoms here and flora is pretty healthy which is also said in the evaluation that was made. There were a lot of papers written about that."

His connection to the place on the island where he lives formed imaginations of the sea as "*healthy*" despite knowing the bottoms are very bad. Also, he was aware that the Baltic Sea, in general, is very polluted. When I explicitly asked him about pollution, he said:

> "Baltic Sea is very polluted still and still gets pollution basically from the eastern side of it. The worst polluters are Russia through the big rivers they have to the Finnish bay. That is the main problem."

Interviewee 7 experienced the Baltic Sea as dead by describing a smell of sulfurous during deep diving:

> "In many ways the sea is dead, the problem is that is so anoxic, you feel in the mask when you go below 70,80m. This extremely strong sulfurous smell in the mask comes in, like passing by a nasty industry (…) because it is zero oxygen and that will never change (…) the layers will never mix because the density between salty layers and freshwater are so different."

But, when I asked him explicitly about pollution, he was uncertain about what is true or not:

> "I do not know what is true or not when it comes to pollution. I mean in Sweden we have this more or less panic about doing everything we absolutely can (…) but on the other side of the Baltic, they do not really care, and Russia, they just pump the shit right out."

Interviewee 2 and **interviewee 5** both live in the northern part of Sweden and they expressed how the Baltic Sea for them is "*further south*", referring rather to Bottenviken as their "*part of the sea*" and different from the south. **Interviewee 5**

explicitly expressed that difference by distinguishing between the northern part as holding his part of the sea ok, and the Baltic Sea on the south:

> (…) it is the same sea as the Baltic Sea, but you can drink it up there and all that water comes down, flushes and in some way holds my part of the sea pretty ok but in the autumn when it starts coming more from the south, you kind of see it as the sea is not feeling that well. (…) So, if you take the Baltic Sea, it is a bit south from us, from me and all the way down to Poland I think."

On the other hand, he contradicted such distinguishment by his acknowledgment that all seas and oceans are interconnected. He said: *"The ocean does not have any borders between its parts so if something happens in the ocean wherever it rubs off on the entire seas of the world".* That formed different thinking about the pollution and the Baltic Sea as being a part of "*the same ocean*":

> "(…) I know, I can feel that it is still the same ocean, and we still have the same pollution. It is kind of like a more positive way of thinking, that my part up is where the sea feels a bit better than down."

3.2. Ever-flowing system: Changeable sea and changing imaginations.

In this theme, I present how the Baltic Sea as a place always in motion, turbulent, and constantly changing, influenced participants' experiences in different ways which formed various understandings of the sea. In subtheme 3.2.1., that is presented through the perspective of the environmental change. I show how the sea changes through time shaped participants' understandings of the Baltic Sea.

Interviewee 2 often referred to the sea as nature which he consciously expressed in the interview: *"(...) I would say nature, I do not think of it just as an isolated sea you know, it is the whole concept for me."* As such, the sea was visible in his narrative through descriptions of weather experiences. For him fish is just "*part of the package*" of experience on the sea, expressing that shifts in weather are what connects him to nature, beyond just sea:

> "(…) it is to experience the shifts in the seasons and to be there on spot, to see the rain coming, heavy rain shower in the summer just coming over the water and hits you really hard and it is not nice, pleasant good thing, but it is still a good experience to be there in the middle of it, and it passes over and then the sun comes out and it is all good and fun again. "

He looked at his fishing practice as "*working with nature*" and through that practice, he positioned himself as part of the "*ever-flowing system*" and receiver of the gifts from "*mother nature*":

"We are just a part of the circle, you just do your part in this ever-flowing system, you know. I mean, I catch the fish and I deliver it, it just passes through my hands (…) I am just the deliverer of the fish to the next man or woman who is going to eat it".

Interviewee 3 often made connections between weather changes and the sea in her narrative. Here she reflected on her childhood when she went sailing with her father:

"I was out a lot sailing with my father (…) I think the weather around when you are so close to nature and you have to feel that you know what to do in every situation even if it is raining or blowing or calm (…) I think that made me who I am. (…) I think that is the nearest to the sea and to feel nature."

From her work perspective, she talked about "*knowing sea in its different moods*", and when I asked her to define "moods", she said: *"They are the sea itself but sometimes you can include the weather also".*

Despite the ambiguity, explanation of moods quickly turned out towards descriptions of waves:

(…) you cannot really understand how big the waves can be, and you almost cannot get to the station and you wonder is this the same wave going every day (…) some days it is windy, some days it is calm, it is always something new, it will not be the same forever. It changes all the time".

When I asked **Interviewee 4** about the life on the island, near the sea and how it differs from life in Uppsala, he gave me rich descriptions of animal life around the sea:

"I want to be able to look at the water and the life around it (…) this area here has so many birds, eagles, herons… that you cannot see in the forest, there you hardly see any animal, birds just move away. At the seaside, they are not scared, they are grouped and it is always things to look at (…) This kind of thing comes with water and the sea."

Interviewee 5 described his process of taking surf pictures as being *"in collaboration with everything"*, as a process of capturing the feeling of the sea, surfer, and surrounding:

"(…) they are working together in a mixed feeling of everything. Both light and all...and actually we are part of nature and when all nature expresses itself, it is really nice but you have to capture that feeling that they are all coming together".

3.2.1. Environmental changes through time

The Baltic Sea has its temporality, it is changing through past, present, and future. Here I present some of the changes participants of this study reflected on and as events that formed their present thinking about the sea.

Interviewee 1 reflected on changeable aspects of the sea and connected those with human impact:

> "I have seen a lot of changes, you see some species of fish almost disappearing, different plants in the late 70s, beginning 80s could be spotted in some places, 20 years later it looks completely different. Not just bad, I have seen good things too. But it is changing, and a lot has to do about what we do, what we put in the water, or what we take out of the water. "

He also mentioned the "cod disappearing" event and compared it to the past when the fish could be still found in abundance. Such temporal experience changed his current relationship with the Baltic Sea to a more careful one:

> "When I was young there were people living here in Öregrund making money from fishing cod and now, you do not see a cod. So, actually seeing those things happen and knowing the causes of them, makes you think about something being a bad decision before you do it."

Interviewee 4 mentioned the same event but reflected on it more as being nostalgic of past times. Looking back at his childhood, the Baltic Sea was abundant with fish. Reflecting on that from the present perspective, the sea full of codfish seemed "unbelievable" for him:

> "My mother used to say: Can't you boys go out and catch a bit cod for your father when he comes home from work on Saturday. We could draw out our cod rods and get as many we want from Öregrundsgrepen. That was unbelievable but normal for us then, but then about 40 years ago, it became harder, and eventually we could not get any more".

He also reflected on the childhood memory about algae called blåstång (English: Bladder wrack) that he remembers from the beach on Väddö island. Today, he sees it on Gräsö as well but with the understanding that it indicates clean waters:

> "I remember that we had a lot of the good water flora because in storms they were left on the beach, black and sticky and that was 70 years ago (...) We never saw that there and we seldom saw it here 25 years ago, but now we see it. (…) at that time it was just a reflection but now I know the reason why it is good to have it"

Interviewee 2 mentioned seals as an example of the evidence which proves how "*we are moving in the right direction"*, referring to the environmental situation of the Baltic Sea. He said:

> "They almost died out in 60s/70s because of pesticides (…) and then in 80s population started to come back, (…) and by the year 2000, the fishermen around here started to complain (…) The growing of the sea population is a good thing because it shows that the sea is healthy".

Interviewee 7 reflected on the recovery of eagle populations which formed his present time thinking about the sea as a "big ecosystem" which can recover, but that takes time:

> "Eagles that we have in Sweden were basically absolutely gone in the 70s because they are on top of the food chain (…) getting high levels of toxic compounds, including seals. Now they've come back but I think the sea, in general, takes more time. I think that we are on the right track definitely but it is such a big ecosystem"

3.3. Turbulent materiality: Layers, shapes, forms, and colors

In this theme, I present how different-from-land aspects of the sea shaped the understandings of the two participants who more explicitly experienced the Baltic seawater.

Referring to its many different shapes, forms, and angles, the Baltic Sea from the eyes of **Interviewee 5** seemed more than just a flat surface, suggesting its many forms and shapes that can be seen from different angles:

> "(…) Sitting on the beach and looking at the sea, yeah everyone has done it, but have you seen it from this side, from back, from above, in this shape, this form or this angle".

Interviewee 7 mentioned different layers of the sea while diving deep in the Baltic Sea and thought of it as "plastic":

> "(…) there are also very clear layers, thermoclines and haloclines are very, very clear. Going from low salinity to high salinity and those layers do not mix and when you are just in the middle of those layers, it can be very sharp, very different so the sea it is very plastic in a way".

Some of the layers appeared to him as "crisp" and "greenish": *"(...) in the shallow part and close to the seafloor, it is very poor visibility, but the mid waters are absolutely crisp like the Mediterranean and greenish (...)* that is also magic in a way". He also reflected on the form of waves as being "rough" and making sea "aggressive":

> (...) the properties of the waves in the Baltic are different comparing to big seas with longer waves. Here the waves are shorter and little bit rougher in a way (…), so people experience it and think of it as quite aggressive, particularly if you compare it with other seas. That is my experience as well, very aggressive."

When I asked **Interviewee 5** *"What is the first picture that comes to your mind when I say Baltic Sea?"* He replied seeing it as *"all these different lights and*

possibilities of being". He looked at the sea from a perspective of the photograph, as an assemblage of waves and a surfer, forming new shapes every time the sun lights from a different angle:

> "During the morning you have sun straight in, so you get color through the water and then the sun lights up the waves and the ocean. In the afternoon, you have the sun shining out and lights up the waves and surfer from other side and make them kind of harder".

Those waves and the surfer are being shaped or dragged by the force of power, as he expressed:

> "You are out there, you hear the ocean, and you feel the power, it kind of drags you around all the way, but you are trying to get to your spot where you want to be (…) you can feel how the ocean takes hold of your legs and when the wave is starting to build up (…)

3.4. Fluidly known

How participants form the knowledge about the sea stretches across all of the previous themes and is part of the meaning-making process. However, in this theme, I emphasize how the Baltic Sea, with its changeable and different-from-land aspects, appeared as fluidly known.

In the subtheme 3.4.1., I will show how the participants' "knowing" suggests fluidity and impermanence, and challenges "knowledge" that suggests finite and definitive states of the Baltic Sea, often represented by media and science. I will also present "embodiment" as another aspect of knowing the sea through reciprocity (3.4.2).

3.4.1. Challenging the knowledge by knowing

Interviewee 3 expressed communication challenges when explaining the state of the Baltic Sea to other people:

> "The most common question I get from people is "how does the Baltic feel" and then I said ooh I do not know, it is difficult to answer it like that, in words, because the Baltic is big, it is not just Swedish side."

She also reflected on the way she and her colleagues at work describe the "death" of the Baltic Sea, often mentioned by science and media. Although she did not explain the meaning behind this saying, it was an interesting reflection showing another perspective of looking at it:

> "Actually, some of us are here saying about the death of the Baltic Sea: Östersjöns död vår att lever bröd (English: The death of the Baltic Sea gives us bread for life). We can live of it and I have something to work on."

Her colleagues at the research station are mostly researchers working with different issues around the Baltic Sea. Therefore, she is aware that efforts to improve its state have been put from all over the Baltic. That influences her way of thinking about its state as a "*work in process*":

"It is the work in process to make another picture of Österjsön (…) I know sea's variance goes in cycles and e.g., when and why cyanobacteria are coming, and I know that working on the Baltic to improve its state has been around all Baltic countries."

Interviewee 4 also reflected on the media representation of the sea as "dead" and how it frightens other people: *"(…) media is always attached to negative things, they write very little of what happens in the sea. When you read about the Baltic as it is a dead sea, of course, that frightens and what does that mean?"*

Interviewee 2 did not agree with the media news representations of the Baltic Sea. He reflected on his fishing practice and "the part of the sea he spends time with" (Bottenviken/Bothnian Bay) showing positive thoughts about the sea and its environmental state:

"I mean it is normally just the bad news, cod is dying, big fishing boats catch the fish, and it does not really comply with my view of the part of sea I spend time with. I think we are on the good road; we are moving in the right direction the way I look at it."

He also reflected on the death of the Baltic Sea from the perspective of fishing:

"Around here, that is a lot different. (…) When you are spending every day out, you realize that everything in nature goes in waves, it goes ups and downs. Populations vary over time and it is inevitable, it is the way it is (…) I do not know why, but there are several lousy years and then several very good ones (…) but in management, problem is that you want a straight line, you want to a population to be on 100% all the time and that might be utopia, it goes ups and downs."

Interviewee 7 talked about the project in which he and his diving group worked on collecting lost and drowned fishing nets found at the deep bottoms, impacting the sea environment. He reflected on the ways both media and science overreacted about the situation:

(...) there is a big, big misunderstanding in figures behind the ghost nets. There was a report some years ago and they say there are 10 000 nets lost every year in the Baltic (...) that is something very way over the real data (...) there are no floating around nets, nets are associated with something on the sea floor sticking up wrecks. People have been using these kinds of data to apply for funding".

Also, several times through the interview he challenged the image of the Baltic Sea as dark and being in a bad condition by emphasizing its good visibility from his diving perspective:

> "Swedes that should have or have a rather close relationship to the Baltic and the general population have no idea what it is about. Almost everyone believes that the Baltic Sea is what you see when you go to Fyrishov, that it looks like coffee at best and that it is just mud, so poor and bad (…) They don't know how nice and visible it is. Visibility is one of the main misunderstandings of the Baltic."

Interviewee 1 explained how reporters usually misinterpret information coming from their scientific observations:

> "If it is a warm summer, you can catch a lot of small fish that hatched in spring, (…) and this journalist hears this and says that oh, not only this year is a good year, but it is good for perch everywhere not just that area, but our numbers say it is a good year specifically for Stockholm area, rest of the country is more normal".

3.4.2. Reciprocal interaction: Knowing through being-with-the-sea.

This subtheme shows another way in which the Baltic Sea is fluidly known. Knowing through being-with-the-sea represents the ways some of the participants make meaning of the sea by being immersed in its presence and reciprocating with it and its surroundings through perceptual sensations. Such dimension of knowledge in some cases deepened participants' connection with the sea or create feelings of wanting to take care of it.

Interviewee 1 described *"the feeling"* one can get from being-with-the-sea: *"It is more the case of sitting down, looking at it, being, being in the water and getting the feeling…. for what it is"*.

When I asked him how one can get such a feeling, he described: *"With experiences, one can get and knowing what is right and wrong (...). Taking time watching it, you get another feeling. Feeling this is right not just knowing"*.

Also, he discerned *"the feeling"* from knowing and emphasized it as an important factor to care about the sea, as expressed here:

> "I think a lot of young people know they should do it (referring to: treat the sea with care), but they cannot get really that feeling without sitting there and seeing what is happening".

By mentioning technology, he made a larger distinction between "feeling" and "knowing":

> "People know that you should be careful, take care of the sea in this case, but actually everything, the land...They know, but since they do not live in it and using technology that helps you, they cannot get the same feeling".

Similarly, **Interviewee 5** described feelings formed by spending a lot of time with/in the sea and articulated how the sea "talks back" to him:

> "(…) it kind of becomes like a friend actually and at the same time, the feeling of "I want to take care of it", appears as well. Like, spending so much time with something, you get feelings for it and in some ways, it talks back to you and in that way…."

He also mentioned how taking pictures and surfing is his way of *"trying to be one with the ocean"*. When I asked him to explain that process of trying, he replied:

> "(…) it is kind of like putting all the senses together, you have the eyes, you see both the power and beauty, you see the light, the reflections, the whole movement, you have your ears, you hear this roaming thunder if it is big. (…) all these senses are also positive so they kind of engage you in just being there because it is so positive feelings in every sense".

Interviewee 3 talked about the sea changes in terms of weather: *"(…) Changes in the weather, that made me who I am"* and expressed the reciprocity between her feelings and the sea: "*the feeling in me changes every day how the sea changes".*

Interviewee 4 explained the practice of sportfishing as being "one with nature": *"It is relaxing, you are out in nature, many things to look at, you get time to think, all problems seem to just vanish, and you are one with nature and with what you are doing and expecting."*

When I asked him to reflect on a moment of being immersed in the fishing practice and to articulate those thoughts, he replied:

> "When fishing, you are thinking of things that you do not remember afterward. (…) the thoughts are more related to nature than to what has happened or what problems there are because if you are thinking about the problems, you are not relaxed (…) you have to be relaxed to be able to sit and wait for the fish to come".

4. Discussion of research results

This study aimed to find nuances across different people's narratives of the Baltic Sea and to reflect on communication challenges and possibilities in supporting better human-sea relations. In the results section, I addressed the first and the second research question. I revealed the essential meanings found across people's various experiences with the Baltic Sea and represented nuances in their representations which formed the four themes presented in the results. Together, those themes reformulate the narrative of the Baltic Sea whose aspects will be further discussed in connection to the third question.

Therefore, in this section, I will discuss the findings in relation to the literature and theory and by addressing the third research question - "What communication problems and opportunities come up from the revised narrative?" Additionally, I will reflect on the methodology and theory of this study as they were important for bringing a more-than-human perspective on communication, and thus more opportunities for marine-related communication.

4.1. Terrestrially biased communication

In this section, I discuss results from the first theme *"Humanized sea" (3.1)* by focusing on the third research question - "What communication problems and opportunities come up from the revised narrative?" I reflect on the communication as terrestrially biased – influenced by people's socio-cultural embeddedness and situatedness on the land.

The Baltic Sea as a "land-based representation" (3.1.1.) is an important nuance found across all the participants' narratives suggesting both communication challenges and opportunities. The first such challenge may seem like already written in the title *"Land-based representations: thinking "from the land",* suggesting separation between participants' life on the land and the Baltic Sea reality. However, looking more closely, their situatedness on the land did not create such boundaries. Participants' connections to e.g., islands, summer houses, or coastal hometown were all part of their experiences about/with the Baltic Sea which connected them to it. Moreover, thinking and communicating from the land allowed participants to re-imagine, connect to, and understand the Baltic Sea from another

perspective. It was, as Dewey (1958) said, "a subject to reconsideration and revision" (p.166). For example, **Interviewee's 2** short story illustrates such re-imagining (p.25). By going physically inside the big fishing traps in his backyard, he could imagine how is it like to be salmon fish caught up in the trap. That formed his understanding of the fish and his practice of fishing in a new way and was part of his meaning-making about the Baltic Sea. Although I cannot conclude the effects such re-imagining had on the Baltic Sea, Dewey's theorizing suggests that thinking is never a passive process and can transform the environment in which a person act. Therefore, looking at participants' thoughts and communication as affective on the environment creates a constant interaction between their human context on the land and the Baltic Sea in one way or another.

Such trans-actional views on communication could bring the Baltic Sea closer to society by representing it as a "social space, not simply 'used by society' but 'a space of society': connected to, experienced and practiced in specific ways by specific people" (Peters 2010 see Steinberg 2001, p.6). Emphasizing land-sea interconnection creates what Rozwadowski (2018) named, a "human ocean – a conflation of natural forces and human constructs" which she pointed out as an important understanding that can "jettison perceptions of the ocean as a timeless place, apart from humans" (p. 227). Therefore, representing the Baltic Sea as "Humanized", a connector of people and places, and part of the culture and history, brings it closer to humans and interwoven with their socio-cultural contexts. That suggests opportunities for communication as a constitutive tool in facilitating meaningful human-sea relations and possibly in motivating their ecological behaviors. Perhaps performing an educative game inside the salmon traps while telling a story about its life journey can be one example of how to use such communication through means of education.

In the subthemes *"This is our heritage; this is our sea"* (3.1.2) and *"Where does the pollution come from?"* (3.1.3), I presented more explicitly socio-cultural and historical values participants attached to the Baltic Sea and their relationship with it. The results suggest how those values created stronger connections between participants and the Baltic Sea. E.g., **interviewee 7** added historical value to the Baltic Sea through his practice of wreck diving and represented the sea as "our heritage" and "historical place" which created feelings of being proud and respecting such "unique" sea (p.26). For **interviewee 2** a cultural value he attached to his practice of fishing gave him a "higher purpose" and connection to the sea (p.26). Although I cannot comment on what outcomes those shaped relationships have on the Baltic Sea, this and other examples from subtheme 3.1.2., demonstrate the importance to reflect on the values before using them in communication about the sea because they can differently shape ecological perceptions. As Auster et al. (2009) said, "Our ultimate success in preserving and restoring the oceans depends on a more inclusive ethic for the seas" (p.235). Therefore, using communication as

an instrumental tool that educates, informs, or manages the Baltic Sea, requires a careful evaluation of its constitutive aspects that evoke certain values and compose certain understandings. If used carefully, historical perspective as in the interviewee's 7 narrative about the Baltic Sea can jettison understandings of it as timeless and apart from society.

In the subtheme 3.1.3., it was shown how socio-cultural influence of discourses in some cases brought confusing contradictions seen in participants' expressions of experiences about the Baltic Sea. E.g., **Interviewee's 7** acknowledged that the sea is anoxic because he experienced that during diving when sensing sulfurous in the mask. On the other hand, his expression of pollution, which is connected to anoxia, seemed less certainly acknowledged understanding (p.27). Expressing uncertainty about pollution in the Baltic Sea and pointing to the polluters seemed like a product of some other politically charged discourses, in contradiction with his personal experience of the anoxic sea. Similarly, confusing contradictions were expressed by **interviewee 4**. He experienced the sea-bottoms near the area he lives as very bad but confused by the scientific discourse, he described them as healthy. Moreover, he did not bring up pollution in connection to that, but rather with reference to the whole Baltic Sea and expressed by politically charged discourses, similarly as interviewee 7 (p. 27).

In those examples, contradictions are seen from the outside, but I cannot assume they exist within the minds of participants. It can be only assumed they ought to express experiences based on consistency norms when communicating thoughts about the sea to others. Therefore, they solve inner contradictions of experiences by suppressing personal reflections of lived-through experiences. Then the politically charged expressions of pollution, as the probably more consistent norm when talking about the pollution, suppresses the experience of "sulfurous smell in the mask" in reflection. The question remains whether suppressing lived-through experiences is more common for communication about the seas and oceans as distant from our everyday reality.

Merleau-Ponty emphasized how all forms of reflection are assuming the existence of the world as it is perceived, lived through our bodies (Toadvine 2008) and Dewey reminded on the importance to reflect on that when communicating. In that way, as Clandinin and Rosiek (2007) said, one can create "(…) a new kind of experienced objects, not more real than those which preceded but more significant, and less overwhelming and oppressive" (p.39). Therefore, the above examples demonstrate how reflecting to the lived-through experiences carries an important source of understanding of the Baltic Sea both for participants and others to whom those might be communicated to. Expressing the anoxia in the sea as an "extremely strong sulfurous smell in the mask, like passing by a nasty industry" might seems more significant compared to "I don't know what's true or not when it comes to pollution, in Sweden we have a panic about doing everything we can (…)"

(**Interviewee 7**, p.27). That also suggests the importance of phenomenological dialogue in marine management because reflections on lived-through experiences are also new understandings of the sea which go beyond instrumental ones. Hypothetically speaking, the **Interviewee's 7** descriptions of the experience of diving in the anoxic Baltic Sea can generate practical solutions in management more likely than his political expressions of pollution.

Understandings of the sea reflected from lived-through experiences suggest opportunities in communication to produce meanings of the sea which are not dependent on overarching narratives or other obscuring representations of the sea. Otherwise, confusing contradictions might form overarching narratives in society, representing the Baltic Sea more oppressively, obscuring its reality. Lidström et al. (2020) have already demonstrated that with the example of the fish stock decline in the 2000s. There was a strong concern about the toxins in the Baltic Sea that formed a dominant narrative that obscured the real cause of the problem – overfishing, and downplayed fishing practices, causing the even bigger fish decline.

Reflecting on the seas and oceans as "highly complex, interwoven, distant, vulnerable to multiple stressors, and hosting biota that is biologically unfamiliar to people" also suggests the unique challenges they pose to our communication (Kolandai-Matchett & Armoudian 2020, p. 2441). Comparing to terrestrial environments, seas and oceans are more susceptible to narratives arising from various discourses. Looking back at Dewey's view on communication (figure 1) suggests that when it comes to marine environments, the bridge between the "existence" and "essence" might be more prone to collapse. Communication as terrestrially biased constrains our understanding of the sea as it heavily relies on the "essence" part.

In this section, it is shown how reflections on the lived-through experiences produce understandings of the Baltic Sea that are meaningful and significant, but also how the influence of social discourses might easily create dominative and obscuring understandings of the sea if people forget to reflect on the "existence". Therefore, the risk of marine-related communication getting stuck with the "essence" part of the bridge presents a unique challenge that illustrates our terrestrial bias.

4.2.   A phenomenological perspective on communication

In this section, I address the third research question - "What communication challenges and opportunities come up from the revised narrative?" by discussing findings from the last three themes. I demonstrate how the focus on the Baltic Sea,

as an active participant in communication, overcomes the challenge of terrestrial bias discussed above. I bring the importance of phenomenology as a method and theory for bringing opportunities for marine-related communication.

In the second theme (3.2.), I focused on the changeable and material aspects of the Baltic Sea and how they influence participants' articulations of the sea. I revealed the Baltic Sea through participants' descriptions of their connectedness to nature. They represented the sea through weather changes, waves, nature, and animal life. E.g., referring to the waves, **Interviewee 3** represented the sea as "having different moods" (p.29). Moreover, in the third theme (3.3.) I revealed the Baltic Sea through vivid and rich descriptions of the seawater coming from **interviewee 5** and **7.** The sea was represented as more than a surface, having layers, shapes, forms, and colors. E.g., focusing on its colors, shapes and power **Interviewee 5** represented it as "different lights and possibilities of being" and as "the felt power that drags you around" (p.31, 32). That reminds on the Steinberg & Peters' (2015) description of the sea as hydroelemental assemblage that "allows us to rethink motion and matter and how it shapes the world as we know it." (p.250).

Representing the Baltic Sea as such goes beyond usual representations of marine environments as flat and silent backgrounds "against which people organize their social life" – as Pauwelussen (2017) mentioned and criticized. The Baltic Sea became a rather active participant in people's lives and communication. Giving it a voice, the Baltic Sea was represented as less marginalized by land-based representations. Such a more-than-human perspective suggests possibilities in communication to avoid the already above-mentioned (4.1.) obscuring overarching narratives.

In the last theme of my results - *"The Baltic Sea as known",* phenomenology as an interview method facilitated reaching taken-for-granted pre-scientific experiences of participants with the sea. By reflecting on their knowledge as embodied, tacit and implicit, I presented how their fluid and positive descriptions of the Baltic Sea and its state contrasted usually static and fixed ones presented in public by scientists and policymakers. Those are already recognized as often interpreting the Baltic Sea in overly negative ways, undermining some already achieved positive policy-making outcomes (Elmgren et al. 2015, Lidström et al. 2020). By this, it is not suggested that scientific explanations should be rejected. Phenomenology only insists that "the world as experienced is directly or indirectly the foundation for all legitimate scientific claims" (Toadvine 2008, p.22). Perhaps focusing on more positive and less fixed representations found within embodied ways knowing can together with scientific explanations serve as a better motivation for people to engage in the conservation actions around the Baltic Sea. Maybe a good start to jettison people's perception of the Baltic Sea as dark, murky, and in a bad state could be e.g., by telling the story of **interviewee 7** and how crisp and visible the sea can appear.

Lastly, the results from the final subtheme (3.4.2) show that when participants reflected on their reciprocal moments with the sea, they talked about it by expressing thoughts, feelings, and emotions coming from their connection to the sea or nature around it. Followed by Merleau-Ponty's phenomenology, those thoughts, feelings, and emotions "always bear a relation to one's dealings with the world and are not merely private states, but an orientation of one's existence" (Busch 2008, p.35). Therefore, reflecting on them through communication, reminded participants about those reciprocal moments and revealed something new about their relationship with it. E.g., **Interviewee 3** said "the feeling in me changes every day how the sea changes" and she previously said how those changes made her who she is today (p.39). In the example of **interviewee 1**, such reciprocal interaction with the sea seemed crucial in creating feelings of care towards it (p.34). Those and other results from this subtheme show how phenomenology as a method facilitated deeper thoughts participants had about the Baltic Sea or even previously never articulated ones. I could confirm the latter by observing the body language and tone of the speech. Those have shown when they struggled to tell something hard-to-reach. Also, during and after the interview, few participants expressed they had a hard time reflecting on some sub-questions as they never thought about them before.

Such reminding on the reciprocal moments points out the importance of phenomenology for marine-related communication research. As Killingsworth (2007) mentioned, phenomenology is important in fulfilling the environmental communication ethical duty because it can "combat the forgetfulness" of people about the ongoing environmental crisis and rediscover the world they are living in (p.59). Following the already-mentioned acknowledgment that marine environments are susceptible to abstractions and overarching narratives obscuring their reality, such a role comes as even more important.

4.3. More-than-human perspective on communication

In the introduction (1.1.), I mentioned the recognition of terrestrial bias within marine-related research. Addressing such bias was crucial in the design of this study for discovering the nuances across participants' narratives and build a revised narrative of the Baltic Sea. That was possible due to careful choice of theory, methods, and literature. Therefore, in this section, I show how the methodological and theoretical approaches in this study facilitated the discovery of nuances and a more-than-human perspective that opened opportunities in communication.

In an attempt to overcome terrestrial bias in the design of this study, I turned towards literature from human geography that suggests thinking "from the water" to avoid plotting the water world as a "perfect and absolute blank" (Anderson & Peters 2014, p.4). Meaning, I reflected on how to put focus on the Baltic Sea as a

space beyond just the surface and different from land. As geographers, Steinberg and Peters (2015) said, "The ocean suggests that we think with a different, nonlinear, non-measurable notion of time" (p.255). Such reflections prompted me to choose methodology and theory which can help me to put the Baltic Sea, along with the interviewees, at the center of analysis - what both Peters (2010) and Pauwelussen (2020) emphasized as important to prevail against terrestrial bias in marine research.

With this terrestrial bias in mind, I started this study with the assumption that it will be hard to grasp the complexity of experiences with the Baltic Sea. Following Dewey's communication bridge (figure 1, p.20) and his thinking that representations ("essences") are legit only if they are understood as deriving from our human implication within the world ("existence"), I recognized that "existence" part of the bridge might get easily forgotten in the case of distant seas and ocean. Thus, I also turned toward phenomenology to explore essential meanings of the experiences and make sure I grasp its complexity more deeply.

Phenomenology revealed essences of the Baltic Sea as an intentional phenomenon of participants' experiences by looking beyond their words and familiar narrative constructs. Additionally, Dewey's trans-actional view on communication and experience, enabled me to reflect on the participants' social worlds as deeply implicated within the Baltic Sea reality. I was able to reflect on the sea "beyond human construction – a physical, more-than-human space" (Peters 2014, p.178) but, at the same time entangled with human space on land and socio-cultural context. Both theories together opened a more-than-human perspective on communication. Meaning, I could show how communication mediates human-sea relations by reflecting not only on human discourse but the communicative aspects of the Baltic Sea as well, its changeable and different from land aspects and how they influence the ways participants represented the Baltic Sea. Milstein (2017) pointed out such perspective as an important part of the environmental communication ethical duty, but still lacking across the field (p.2).

5. Conclusion

This study addressed the need for a better understanding of complex human dimensions in relation to marine environments as they have been taken for granted, defined through economic interests, and terrestrially biased in the past of marine-related research and management. The study takes into consideration the complexity and multiplicity of human-sea relations and addresses terrestrial bias in its design. Therefore, it provides in-depth understanding of the nature of such relations and offers an alternative point of departure both for the research on the Baltic Sea management and the practice of environmental communication.

The study explored narratives from the people whose lives are more explicitly connected to the Baltic Sea in Sweden through the perspective of environmental communication. Looking into participants' diverse and multifaceted interrelations with the Baltic Sea generated valuable results. A phenomenological exploration of the seven narratives and lived-through experiences within those grasped the essential meanings of the Baltic Sea. Those meanings are shown as nuanced representations of the sea that stretch across four themes. Together they reveal the revised narrative representing the Baltic Sea as:

- *Humanized* - entangled and interrelated with people's socio-cultural contexts and life on land.
- *Ever-flowing system* – continuously changing, part of the space beyond the surface and the active actor that influences the social world with its different-from-land aspects.
- *Turbulent materiality* - a "three-dimensional space" with unique materiality that makes it hard for people to fully experience and understand.
- *Fluidly known* – engaging and relaxing place that cannot be known through static and permanent descriptions.

The revised narrative contrasts the old one which defines the seas and oceans as distant, flat backgrounds, whose problems can be addressed just by natural science, technology, and economy. Following the environmental communication ethical duty, the revised narrative offers several communication opportunities for shaping people's perceptions about the Baltic Sea and suppressing the overarching narratives that might obscure its reality. However, it also presents some challenges of our communication as terrestrially biased.

Opportunities for improved marine-related communication arose from theoretical and methodological approaches that address the terrestrial bias in the research design of this study. Those approaches revealed the Baltic Sea as a more-than-human mediator of communication and culture which demonstrated opportunities in communication to represent the sea as a less oppressive and marginalized space. This study suggests that the revised narrative of the Baltic Sea can be an important communicative device for society to make sense of the abstract marine reality. Based on the people's lived-through experiences with the sea, a revised narrative offers representations that respect the lively, fluid, and entangled-with-society Baltic Sea. Such representations can together with scientific ones, serve for the development of the Baltic Sea literacy in Sweden among a wider public. In that way, the study contributes from a local angle to the recently developed United Nations' ocean literacy framework.

Looking at the participants' narratives as terrestrially biased appeared both as a challenge and opportunity in marine-related communication. Representing the Baltic Sea as "humanized", interconnected with terrestrial worlds and human context, might jettison the perception of the Baltic Sea as distant from society and perhaps motivate ecological behaviors. However, terrestrially biased communication also appears as a challenge if people produce meanings of the sea, based on external conceptualizations that are not reflections of its creator's lived-through experiences. Therefore, considering the unique aspects of marine environments and arising communication challenges, this study suggests a need for more careful use of marine-related communication as a constitutive tool. Meaning, representations such as metaphors or narratives used for composing understandings of seas and oceans need to be scrutinized before implementation in e.g., education or management. Based on this study, that means there should be attentiveness towards narratives that treat the Baltic Sea as an asocial and atemporal flat background of the Swedish society, known through static and fixed descriptions.

This study emphasizes the importance to recognize marine environments as unique and experienced differently from land. Therefore, as in need for distinctive approaches within environmental communication research that investigates how communication mediates human relations with nature. With its theoretical and methodological approach, this study can serve as one example. Dewey's theorizing and phenomenology - both as a theory and method, showed great possibilities in understanding human-sea interrelations and gaining a new perspective on marine-related communication. Still, there is a need for more approaches and perhaps distinctive communication theories that could develop marine-environmental communication research and consequently, the concept of ocean literacy.

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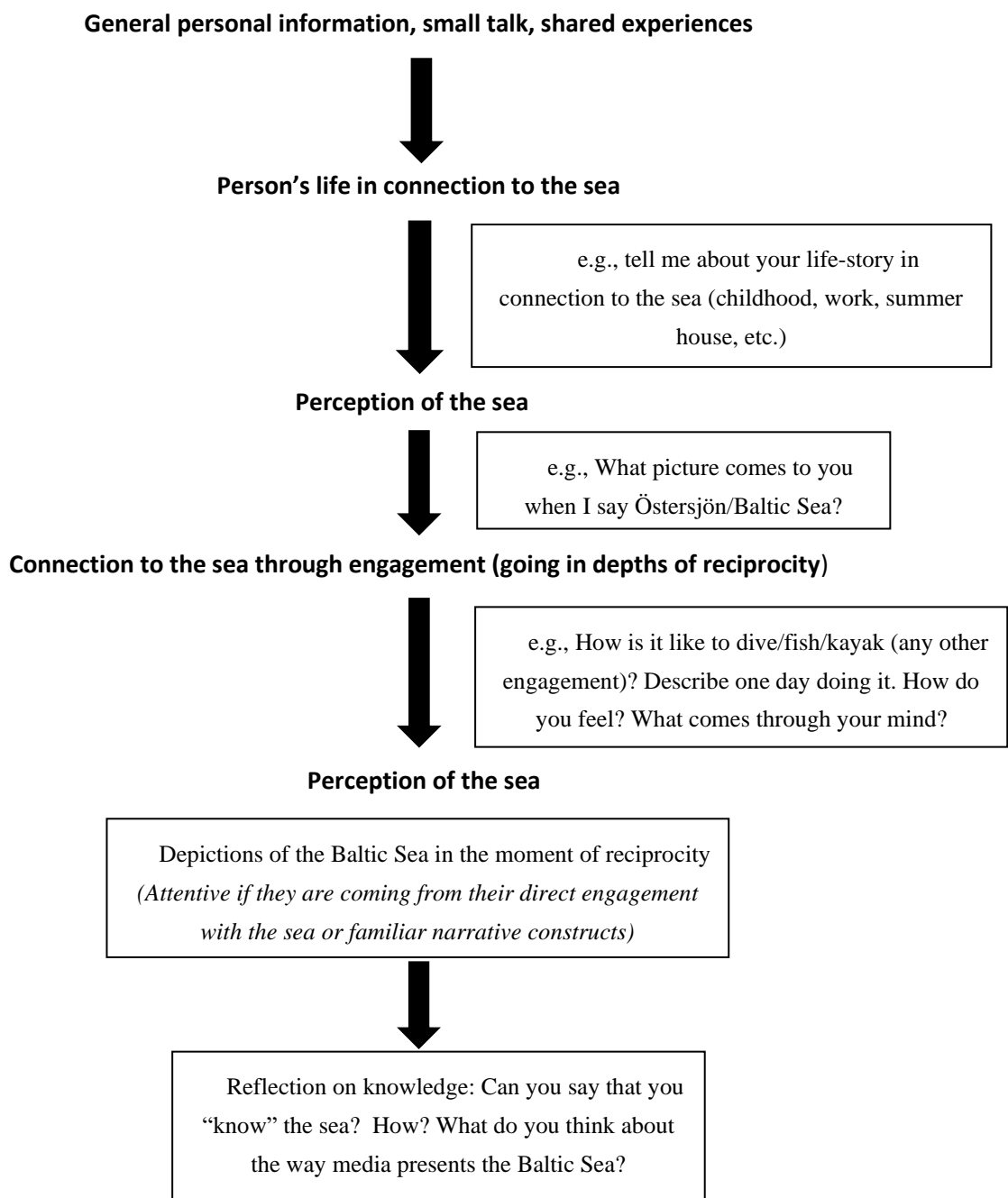
Acknowledgements

Appendix 1

Interview guide 1: Navigating the questions

General personal information, small talk, shared experiences

Person's life in connection to the sea

e.g., tell me about your life-story in
connection to the sea (childhood, work, summer
house, etc.)

Perception of the sea

e.g., What picture comes to you
when I say Östersjön/Baltic Sea?

Connection to the sea through engagement (going in depths of reciprocity)

e.g., How is it like to dive/fish/kayak (any other
engagement)? Describe one day doing it. How do
you feel? What comes through your mind?

Perception of the sea

Depictions of the Baltic Sea in the moment of reciprocity
*(Attentive if they are coming from their direct engagement
with the sea or familiar narrative constructs)*

Reflection on knowledge: Can you say that you
"know" the sea? How? What do you think about
the way media presents the Baltic Sea?

Interview guide 2: Navigating the aim

| FAMILIAR NARRATIVE CONSTRUCTS | MEANINGFUL INSIGHT INTO SUBJECTIVE VIEW |

"TOP-DOWN" NARRATIVES (E.g., depleted, disrupted sea, too-big-to-fix, we are guilty kind of narratives)

"BOTTOM-UP" NARRATIVES (meaningful personal narratives that challenge top-down one)

Essence of people's experiences with the sea and revealing something about sea or relationship that was not previously articulated in their experiences