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UNIVERSITY OF TURKU

ECOLOGIES OF WILDLIFE MODES

Envisioning More-than-human Environments in Documentary Moving Image Aesthetics

Heidi Mikkola

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University of Turku

Faculty of Humanities
School of History, Culture and Arts Studies
Media Studies
Doctoral programme in History, Culture and Arts Studies (Juno)

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ABSTRACT

Wildlife documentaries have long been popular cultural products and important tools for environmental communication, yet their aesthetic dimensions have received comparatively little academic attention in the field of film studies. This dissertation addresses that gap by asking how wildlife modes bring forth environments and entanglements between humans, nonhuman animals, and cinematic technologies. The focus is particularly on the aesthetics of contemporary wildlife documentaries. The study is situated within the historical context of a paradigmatic shift in the wildlife documentary genre, especially from the early 2000s onward—a period marked by a growing prominence of environmental issues and climate change in public discourse and media representations.

Positioned within ecocinema studies and posthumanist theory, the dissertation critically interrogates the anthropocentric tendencies of wildlife documentaries while emphasizing their potential to foster more-than-human encounters. By conceptualizing wildlife documentaries as cinematic assemblages, the study highlights how these films and series do more than simply represent nature—they actively participate in world-making processes and visualize environments that extend beyond everyday human perception. The study introduces the concept of *wildlife modes*, an analytical approach that explores how wildlife documentaries construct perceptual and affective engagements with nonhuman life in an audiovisual manner. This concept enables a more nuanced understanding of how wildlife documentaries mediate multispecies relations.

This article-based dissertation consists of a thematic summary section and four peer-reviewed articles, each contributing to an understanding of wildlife documentaries as assemblages of human and nonhuman agencies. The research material comprises eight European wildlife documentaries, many of which are British productions—particularly by the BBC. The selected documentaries were produced between 1996 and 2019. Although the material includes widely distributed and popular works, the focus is on documentaries that depict environments beyond everyday human perception—spaces and processes made visible only through technological mediation.

Each article offers a distinct case study that illuminates the cinematic techniques and aesthetic strategies employed in contemporary wildlife documentary filmmaking. The research engages with diverse themes such as underwater aesthetics

and knowledge production, aerial perspectives and nonhuman agencies, microcinematographic representations that explore scale and interspecies encounters, as well as ecological temporalities and the visualization of climate change. Together, these case studies examine different wildlife modes that bring forth specific assemblages negotiating between humans, nonhuman wild animals, cinematic technologies, and specific environments, forming ecologies of wildlife modes. This conceptual assemblage reconfigures how wildlife documentaries visualize environments as entangled, multiperspective, and ethically charged spaces.

This research contributes to film and media studies and the environmental humanities by offering a new conceptual framework for analyzing the role of aesthetics in wildlife documentaries. The dissertation contends that attending to the aesthetic and affective dimensions of wildlife documentaries is crucial for understanding their epistemic and ethical implications in a time of ecological uncertainty.

KEYWORDS: Wildlife documentary, ecocinema, posthumanism, cinematic technologies, multispecies relations, nonhuman agency, cinematic aesthetics, knowledge production

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TIIVISTELMÄ

Luontodokumentit ovat jo pitkään olleet suosittuja populaarikulttuurin tuotteita ja keskeisiä välineitä ympäristöviestinnässä, mutta niiden esteettisiä ulottuvuuksia on tutkittu elokuvantutkimuksessa varsin vähän. Tämä väitöskirja paikkaa tätä tutkimuksellista aukkoa tarkastelemalla, miten luontodokumentit tuottavat ympäristöjä sekä kietovat yhteen ihmisten, ei-inhimillisten eläinten ja elokuvateknologioiden välisiä suhteita. Keskeisenä tutkimuskohteena ovat nimenomaan nykyaikaisten luontodokumenttien audiovisuaaliset estetiikat. Tutkimus keskittyy luontodokumenttien lajityypin murrosvaiheeseen, joka ajoittuu erityisesti 2000-luvun alkuun ja siitä eteenpäin—aikaan, jolloin ympäristökysymykset ja ilmastonmuutos nousivat vahvasti esiin julkisessa keskustelussa ja mediassa.

Teoreettisesti väitöskirja sijoittuu ekoelokuvan tutkimuksen ja posthumanistisen teorian kentälle. Se tarkastelee kriittisesti luontodokumenttien antroposentrisyyttä, mutta tuo samalla esiin niiden mahdollisuudet rakentaa ihmiskeskeisyyden ylittäviä kohtaamisia, suhteita ja maailmoja. Ymmärtämällä luontodokumentit elokuvallisina koosteina tutkimus osoittaa, kuinka nämä dokumentit ja sarjat eivät ainoastaan esitä luontoa, vaan osallistuvat aktiivisesti maailmojen rakentamiseen ja visualisoivat ympäristöjä, jotka ylittävät arkipäiväisen ihmishavainnon rajat. Tutkimuksessa kehitetään luontomoodin käsitettä, jonka avulla analysoidaan luontodokumenttien tapoja tuottaa havaintoja ja affektiivisia suhteita ei-inhimillisten toimijoiden kanssa audiovisuaalisin keinoin. Tämä käsite tarjoaa välineen tarkastella, miten luontodokumentit muovaavat ja rakentavat monilajisia kytköksiä audiovisuaalisesti.

Väitöskirja on artikkelimuotoinen ja koostuu neljästä vertaisarvioidusta artikkelista sekä niitä kokoavasta yhteenvetoluvusta. Tutkimusaineisto muodostuu kahdeksasta eurooppalaisesta luontodokumentista ja -sarjasta, joista suurin osa on brittiläisiä tuotantoja – erityisesti BBC:n tekemiä. Valitut dokumentit ovat olleet laajassa levityksessä, ja ne on tuotettu vuosien 1996 ja 2019 välillä. Tutkimuksen painopiste on dokumenteissa, jotka tuovat esiin ympäristöjä ihmisen arkihavainnon ulkopuolelta – tiloja ja prosesseja, jotka tulevat näkyviksi vain teknologian välityksellä.

Jokainen artikkeli tarkastelee eri tapaustutkimuksen kautta, millaisia esteettisiä strategioita ja elokuvallisia keinoja dokumenteissa käytetään. Tutkimus käsittelee teemoja, kuten vedenalaista estetiikkaa ja tiedontuotantoa, ilmakuvausta ja ei-inhimillisiä toimijuuksia, mittasuhteita ja lajienvälisiä kohtaamisia käsitteleviä mikroskooppisia esitystapoja sekä ekologisia aikakäsityksiä ja ilmastonmuutoksen

visualisointia. Yhdessä nämä tapaustutkimukset hahmottavat erilaisia luontomoodeja, jotka rakentavat yhteyksiä ihmisten, ei-inhimillisten eläinten, teknologioiden ja ympäristöjen välille muodostaen luontomoodin ekologioita. Tämä käsitteellinen kokonaisuus tarkastelee, miten luontodokumentit visualisoivat ympäristöjä, jotka ovat yhteen kietoutuneita, moninäkökulmaisia ja eettisesti latautuneita.

Väitöstutkimus tarjoaa uuden käsitteellisen viitekehyksen luontodokumenttien estetiikan tarkasteluun ja laajentaa elokuva- ja mediatutkimuksen sekä ympäristöhumanistisen tutkimuksen teoreettisia näkökulmia. Väitöskirja osoittaa, että esteettisten ja affektiivisten ulottuvuuksien huomioiminen on keskeistä, mikäli haluamme ymmärtää luontodokumenttien tiedollisia ja eettisiä merkityksiä ekologisen epävarmuuden aikakaudella.

ASIASANAT: Luontodokumentti, ekoelokuva, posthumanismi, elokuvalliset teknologiat, monilajiset suhteet, ei-inhimillinen toimijuus, elokuvallinen estetiikka, tiedontuotanto

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It turns out that writing a dissertation has quite a bit in common with genre cinema: stretches of quiet suspense, unexpected twists, and long periods where nothing seems to happen—until, suddenly, everything does. This particular production—otherwise known as my dissertation—has had a strange plot, a few budget issues, and an unpredictable release schedule. But it also came with a loyal audience, sharp editors, and brilliant co-stars. Here's to all of you who stuck with me through the weird parts.

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So here we are, at the end of this long, weird, wonderful process. Thank you to everyone who helped me make it through.

In Turku, May 2025
Heidi Mikkola

Table of Contents

List of Original Publications

This dissertation is based on the following original publications, which are referred to in the text by their Roman numerals:

I Mikkola, Heidi. "Movements beyond human: ecological aesthetics and knowledges in underwater wildlife documentaries". *Trace: Finnish Journal for Human-Animal Studies Vol. 4 (2018)* https://doi.org/10.23984/fjhas.59505

II Mikkola, Heidi. "In the wings of the dove: bird-eye-view and more-than-human gaze in wildlife documentary series *Earthflight*". *Studies in Documentary Film Vol 14 (2020): 202–215.* https://doi.org/10.1080/17503280.2019.1651481

III Mikkola, Heidi. **"**Scalar vicissitudes and minute creatures: Reexamining insects as cinematic subjects in *Microcosmos* and *Life in the Undergrowth*". *New Review of Film and Television Studies* (Accepted)

IV Mikkola, Heidi. "Care and ecological temporalities in the wildlife mode: Framing climate change and polar regions in *Our Planet* and *Frozen Planet*". Undergoing peer review in *Environmental Communication*

1 Introduction

The mid-2000s has been highlighted as a crucial turning point and paradigmatic shift in nature films and wildlife documentaries (Mitman 2009; Richards 2013a; Smaill 2016). Documentary films such as *Winged Migration* (2001), *March of the Penguins* (2005), *Grizzly Man* (2005), and *An Inconvenient Truth* (2006) brought nature to the big screen, achieving significant success in the 2000s. Historian and filmmaker Gregg Mitman (2009) referred to this boom in presenting nature on the silver screen as the "green wave." Awareness of climate change, environmental issues, and relationships with nature experienced a revival, becoming evident in mainstream visual culture starting from the mid-2000s in advertising and news (Cottle 2009). What unfolded on the big screen also transpired on television. Morgan Richards (2013a) noted a similar trend in the wildlife genre on television in the mid-2000s, especially in the BBC's productions. These "green chip" documentaries mark a pivotal moment in the wildlife genre's involvement with climate change science and environmental advocacy (Richards 2013a).

Historically, wildlife films have often presented a "pristine nature" untouched by human activity, reinforcing the idea of nature as separate from culture and human intervention. This division perpetuated a vision of the natural world as something pure, distant, and beyond human influence, both excluding the effects of human actions and being untouched by modernization. However, as Chris (2016) and others have pointed out, wildlife documentaries have always reflected cultural values, from the early travelogues to the more commercial wildlife films of the 1990s. These films not only documented animals and their behavior but also conveyed the human values and societal norms of the time through their depictions of nature. In the context of the current ecological crisis and climate change, wildlife documentaries continue to reflect contemporary culture and its evolving attitudes toward animals and environments.

Rooted in the tradition of natural history, wildlife documentaries represent a genre that blends entertainment with education. These films are consumed by vast global audiences and have been claimed to act as key interfaces between humans and nature in Western culture. For example, the first episode of BBC's *Planet Earth III* (2023) gained 10.6 million views after only 28 days after its release, being among

the highest rated programs of the year across all genres in the UK (BBC 2023). Scholars have debated the role of wildlife films in shaping perceptions of animals, critiquing how they legitimize dominant cultural values through anthropomorphism or scientific inaccuracies (Bousé 1998; 2000; Jeffries 2003; Chris 2006). Wildlife documentaries are argued to be in line with natural history and its tradition of depicting animals and nature as spectacle with a sense of awe and wonder (Goyuon 2009; Louson 2018). As science and technology scholar Eleanora Louson (2018) has pointed out, scholars have overly focused on criticizing the spectacle of wildlife as being against the educational view of wildlife documentaries. This critique of wildlife documentaries is driven by and reinforces the distinction between entertainment and education. However, Louson emphasized the significance of spectacle in these films, arguing that awe and wonder are central to both their educational and emotional impact, having their roots in natural history displays. Spectacle is not just entertainment but essential to the genre's identity and purpose, enhancing both education and affective engagement (Louson 2018). Although my study does not engage with the concept of spectacle, I find this as an important entry point into the aesthetics of wildlife documentaries and their knowledge production. In this way, wildlife documentaries can be seen as contributing to environmental knowledge not only by conveying scientific facts but also by enabling affective encounters with nonhumans and environments in aesthetic ways that are an epistemic entry point in and of themselves. As such, aesthetics and spectacle do not merely entertain but actively participate in the epistemological process, fostering new understandings of ecological relations and more-than-human worlds.

In this dissertation, through the lens of ecocinema studies, I examine the production of visibility in wildlife documentaries and how they depict more-than-human environments. My aim is to explore the potential of wildlife documentaries to move beyond anthropocentrism by attending to the agencies and relations they draw between humans, nonhuman animals, and technologies. I focus on the specific aesthetic expressions and the negotiation of multispecies relations in these documentaries, which together constitute what I call "wildlife modes." I also challenge the commonly held view (explored later in more detail) that wildlife documentaries form a rigid genre that places "nature" outside of culture. Yet wildlife documentaries tend to lean toward certain biases, such as focusing on large mammals and terrestrial ecosystems (cf. Howlett et al. 2023). This bias also reflects scholarly works that have predominantly focused on these documentaries while neglecting those that, for example, feature invertebrates or the deep sea. My research highlights the variety within wildlife mode in the Western context while paying particular attention to animals and environments often overlooked in previous research, such as underwater and aerial environments, or insects and other small creatures.

The current dissertation is article format and composed of a thematic summary section (Chapters 1–7) and four peer-reviewed journal articles. The thematic summary section outlines the main themes and context of the research, defines the objectives of this research, presents the research articles, explains the theoretical and methodological frameworks, and discusses the findings. The field and context of the research are presented in chapter 2, where I also introduce the research problem and the four research articles the dissertation is based on. Chapter 3 contextualizes the wildlife mode in previous research and discussions surrounding wildlife documentary films. Chapter 4 presents the theoretical background, giving a summary of the development of ecocinema studies and contextualizing my research in "animal turn" and posthumanities to approaches that question human exceptionality and anthropocentrism. Chapter 5 discusses the research design and methodologies applied in the research as well as the materials analyzed. I also reflect on ethical considerations emerging from the context of the research. Chapter 6 presents the findings and reflections on the field of research in wildlife documentary and ecocinema and media studies. Chapter 7 concludes and ties together the arguments, and I also consider the limits and merits of the research and reflect on the possibilities for future research emerging from this dissertation.

2 Field of Research and Research Questions

In this chapter, I provide an overview of the background and context of my research, introducing the field where the research questions emerge. Figure 1 (page 14) presents the research problem, which is divided into four distinct research questions. Additionally, I offer a summary of the peer-reviewed research articles on which the present dissertation is based.

2.1 Background and context

During the 2000s, environmental documentaries, alongside eco-disaster films, such as *The Day After Tomorrow* (2004), led to the emergence and growth of ecocinema studies as an academic field (Chu 2016). Combining ecocriticism and film studies, the new paradigm was first framed as Western scholarship (Ingram 2000; MacDonald 2001; Brereton 2005; Cubitt 2005; Willoquet-Maricondi, ed. 2010; Rust, Monani, and Cubitt, eds. 2013; Ivakhiv 2008, 2013; Weik von Mossner 2014). According to Richards (2013a, 2), the emergence of environmentally conscious themes in wildlife documentaries coincided with the publication of a report by the International Panel on Climate Change (IPCC) in early 2007, which reflected an agreement among scientists regarding the causes and probable impacts of anthropogenic global warming. In the wildlife genre, this change in paradigm, as Belinda Smaill (2016) called it, started to explicitly recognize the interconnectedness of the human and nonhuman worlds, acknowledge environmental problems, and imply that viewers can have a role in addressing these issues.

Stephen Rust, Salma Monani, and Seán Cubitt pointed out in the introduction in *Ecocinema Theory and Practice 2* that ecocritical thinking moves beyond binary oppositions while ecocinema studies emphasize how films mediate the entanglements between humans and nature: “We understand that films can themselves be critical of these entanglements. As events, films participate in but also bear witness to local and planetary ecological crises, as well as to the care that such crises instill in filmmakers, their filmed subjects, and their audiences” (Rust et al. 2023, 7). They viewed cinema as a collective practice where nonhumans are partners

in cultural making. While not excluding nonhumans, they argued that this also brings in new aesthetics (Rust et al. 2023). As Pick and Narraway (2022) noted, although cinema has varied entanglements with the worlds, "film screens nonhuman nature as both revelation and concealment. The ambivalence of the screen and of the act of screening, whether as projecting and exhibiting or as filtering and veiling, comes to define film's relationship to its own materiality: its locations, onscreen lives, mise-en-scène, narrative structures, spectators, exhibition spaces, its carbon footprint and chemical building blocks, from celluloid to silicon. All of these are part of cinema's diverse ecologies" (Pick & Narraway 2022, 2–3). Here, Pick and Narraway described the possible entry points to cinema's ecologies in a wide range and emphasize that cinema is not just a medium that represents reality but an active process that involves complex interactions and entanglements between various elements—both human and nonhuman.

In this dissertation, I further explore these ecologies—defining them as relations and makings of filmic assemblages – and how they have world-making potentials. I introduce and develop an approach that conceptualizes wildlife documentaries as assemblages. This reframes how wildlife documentaries are understood, moving away from a static, object-centered approach to one that emphasizes the dynamic interactions between multiple elements—such as animals, environments, technology, and human perception—that come together in the filmic event. Through the lens of assemblage, I argue that these films are not simply visual representations of nature but complex systems where various forces converge, actively shaping the production of knowledge, aesthetics, and the viewer's experience—by both revelation and concealment, as Pick and Narraway pointed out regarding the ambivalence of the screen. Approaching wildlife documentaries as assemblages challenges anthropocentric narratives and highlights the cocreation of cinematic worlds by both human and nonhuman agencies.

I follow Inga Pollman's notion, in the path of previous film theorists like Jean Epstein, of queering perception "to cross-breed human, animal, and technological perceptions" while drawing from Walter Benjamin's conceptualizations that cinema presents "simultaneously of this world and a world." (Pollman 2013, 781–782.) As Pollman suggested, cinema is an important technological medium that can "evoke a world of its own, with the capacity to question or tear at the seams of our 'natural' world" by visualizing previously imperceptible details and movements, thus queering the anthropocentric perspective (Pollman 2013, 804). Following Benjamin, cinema can be seen as a medium that presents a reality that is both familiar and different from our everyday world. Rather than just a photographic representation of reality, every film—whether realistic, abstract, or animated—engages viewers' senses and creates a new environment or experience. In this process, the viewer

encounters the world through the camera's perspective, which differs from human perception (Pollman 2013).

Janet Harbord (2016) conceptualized cinema as a laboratory, understanding it as a space where experiments on perception, time, and movement can take place. Harbord suggested that the moving image, like a laboratory, allows for adjustments to human perception. By manipulating time and movement in films, cinema can reveal those details that would otherwise go unnoticed. Harbord (2016) used the metaphor of a fly in a laboratory to illustrate this idea. The fly acts as a messenger or translator, bridging connections between the human world, the technological realm, and the insect world. In the context of cinema, this means that the technologies used to film insects must cater to the insects' capabilities and movements, essentially making the cinema adapt to the fly's world. Elizabeth Grosz (2006, 198–199) similarly challenges the dominance of the human gaze, calling for a "topology of looking" that expands beyond fixed points of view and allows for a plurality of possible visions— that "dictates how objects are seen and even which ones are seen." This suggests a mode of perception that is not exclusively human but rather more-than-human, forming sensory and affective connections (or prehensions) with the world and making visible processes and relations otherwise beyond human reach. As I aim to show, instead of just being objects to be looked at, nonhuman animals are a vital part of filmic assemblages, and I approach *animals as proper cinematic subjects*, as proposed by Pick and Narraway (2022). Haraway suggested that "animals are everywhere full partners in worlding, in becoming with" (2008, 301) while Rose (2011, 51) has raised the question of how to engage in world-making across species. These ecologies and worlding processes do not emerge only in fiction or avant-garde films, but as I aim to show, also in wildlife documentary, while nonhumans, animals, and technologies along with humans bring forth environments or milieus.

Most of my material in the present dissertation was produced during the early 2000s. Not all the documentaries I am addressing explicitly convey an environmentalist tone or delve into environmental problems. However, I align with Smaill (2016) in emphasizing the significance of examining various nonfictional moving images and their connections to environments and the nonhuman worlds—such as television wildlife documentaries. Scott MacDonald (2009) has pointed out that wildlife documentaries—what he calls nature film—has been largely ignored by film historians. When the wildlife genre has been the focus of academic interest, wildlife films have been examined in the context of scientific communication and natural history (Gouyon 2009; Jeffries 2003), productions and institutions (Richards 2013a, 2013b; Cottle 2004) as well as histories and narratives (Mitman 2009; Chris 2006; Bousé 2000). However, examinations of the cinematic aesthetics of wildlife mode have stayed at the margins of conceptualization of wildlife films' development

of the genre and depictions of natural history. MacDonald (2006) emphasized the aesthetics of the genre and argues that wildlife films should be re-examined *as cinema.* What I wish to do here is scrutinize how the analyzed documentaries and their aesthetic expressions bring forth worldings and environments beyond anthropocentrism, their cinematic potentials, or capacities. I reflect on world-making and cinematic events more in chapter IV. Belinda Smaill (2016) also examined the notion of animal in documentary moving images and focused on cinematic aesthetics in the documentaries while conceptualizing animal images beyond anthropocentrism. She emphasized the specificity and importance of documentary form in producing knowledge of the (nonhuman) world and shaping audience expectations (Smaill 2016, 7). These expectations are closely tied to the documentary expression's alignment with reality. Cowie (2007) argued that documentaries shape our perception of reality by selecting and presenting information in a way that makes the world seem knowable and comprehensible. This process engages the viewer as a subject of knowledge as "the desire to see is allied with the desire to know through seeing what cannot normally be seen, that is, what is normally veiled or hidden from sight" (Cowie 2007, 13). This is connected to cinema's capacities to worlding and enable perceptions of invisible processes, which have already been examined by early film theorists, as shown by Pollman (2013). What I aim to show here is how the wildlife documentaries examined in the present dissertation bring forth environments or processes that otherwise would be imperceivable. This is a question of cinematic aesthetics, and knowledge of (nonhuman) world that is a specific, yet nuanced way of assembling relations between humans, nonhuman animals, and technology in documentary expression that I explore further here as ecologies of wildlife mode.

Ilona Hongisto (2015) proposed the concept of the "aesthetics of the frame" as ontology for documentaries. Unlike the Griersonian tradition, which emphasizes the documentary's role in representing reality, the aesthetics of the frame highlights two intertwined levels of expression: the act of showcasing the real world and the documentary's interpretation of it. These two levels are immanent in the filmmaking process. This interconnectedness shifts the focus of documentaries from simply explaining or depicting what already exists to actively participating in the dynamic and ongoing becoming of the real in its many forms (ibid., 17). Goyon (2016, 96–97) pointed out how merging of the imagination in knowledge production in wildlife films, for example, filming practices in *Winged Migration* where domesticated geese played the role of their wild counterparts, reveal "aspects of the natural world that would have remained invisible within the boundaries of observational realism" while also dissolving distinctions between wild and tame. I engage with Hongisto's understanding of documentaries' ontology as a process of two immanent levels as I focus on wildlife mode as documentary expression and assemblage. What I mean by

this is that I do not see the knowledge production and aesthetic expression as distinct; rather, they both form documentary knowledge that does not only rely on natural history or representational thinking of observational realism.

Although wildlife documentaries are mostly conceptualized in the context of natural history and scientific depicting, the films' imaginative potential is mostly ignored (cf. Koskinen 2022). This might be seen as a symptom of the genre's natural history paradigm and Western tradition of knowledge production separating the imaginative and factual. However, by bringing forth assemblages beyond humans, the wildlife mode also visualizes and imagines milieus that are not visible or thinkable without such assemblages. For example, *article III* focuses on microscopic visualization of the "insect world," a world-making that imagines milieus that have a long intersecting history with the technology of microscopes and tiny creatures.

In the Finnish context, there has been very little academic interest in wildlife documentaries (exc. Aaltola 2000). However, more recently, within the field of artistic research, Kristiina Koskinen (2022) explored the conceptions of nature in wildlife documentary narration through the lens of ecocriticism, methodologically mimicking the screenwriting process to closely align with the perspectives of professionals working in audiovisual narration. In addition, the special issue of the Finnish journal for audiovisual culture *Lähikuva* (2022) brought together perspectives on relations between humans and nature: Antti-Ville Kärjä (2022) scrutinized smells in wildlife documentaries, and art historian Johanna Frigård (2022) explored the use of colors in an early Finnish nature film. In the same issue, Pinja Mustajoki (2022) presented a review article examining wildlife documentaries together with videos made by animal rights movements, focusing on analysis of their contradictions as representing human–animal relations. However, alongside Koskinen's research on narration and screenwriting, my dissertation is one of the first in Finland to address wildlife documentaries to this extent. A*rticles I* and *II,* which are part of my dissertation*,* were the first studies in Finland to have a posthumanist approach to wildlife documentaries within the field of film studies.

2.2 Research objectives

The objective of this research has been to find out the ways wildlife documentaries produce more-than-human environments and relations between humans, nonhuman animals, and technologies. The focus has been particularly on the aesthetics of contemporary wildlife documentaries, as the aesthetic developments of these films and series have not yet received significant academic attention. The current dissertation suggests through the four case studies (*articles I, II, III,* and *IV*) that wildlife documentaries bring forth worldings; more specifically, they envision multispecies environments that would be imperceivable without cinematic

technologies. By envisioning these environments, the documentaries do it in manners that I wish to conceptualize further in this summary section as "wildlife mode."

My research is situated at the intersection of film and media studies, human–animal studies, and environmental humanities. Theoretically, my research engages with posthumanism (Haraway[1] 2003, 2008; Braidotti 2013, 2016, 2018; Wolfe 2010; Lummaa & Rojola 2014; Ginn 2018) by challenging anthropocentric thinking and the hierarchical relationship between humans and nonhuman animals. Because I see humans as animals, in the level of language, I do not repeat "nonhuman" every time I refer to other species. In terms of its material, my study is also linked to ecocriticism (Garrard 2012; Lummaa 2012), which involves research on the representation of nature and criticism of the concepts of nature and culture. The theoretical framework, which is reflected throughout in chapter IV, allows for thinking about humans, nonhuman animals, and technology in an affective, interactive relationship, fostering an ecologically oriented way of thinking beyond dichotomies. Encounters between various bodies create connections and interfaces, which I delve into using the conceptual framework. I explore both the "in-between" of aesthetic-expressive solutions and tangible interactions occurring between humans, animals, and technology. In-betweenness is a unifying term in my research, referring to the issues opened up by the theoretical framework I use and characterized by a certain intermediate nature as well as the dialogue within my material, such as between humans and animals.

Based on posthumanist theory, the aim of my research is to examine the possibilities to contest anthropocentrism while exploring nonhuman agencies. This perspective challenges cinematic forms that merely reinforce human exceptionalism (Pick & Narraway 2013, 6), fostering a re-evaluation of the role cinema plays in shaping our understanding of the nonhuman. I explore the three decentering modes outlined by Franklin Ginn (2018) within posthuman theory: vitalist, technological, and planetary. The vitalist mode envisions humans existing along a continuum with other animals. In the technological decentering mode, technology is not merely an accessory, but rather, it is a fundamental aspect that molds both us and our perceptions. The third decentering perspective is planetary, highlighting the profound impact of human activities on Earth systems and the heightened awareness

[1] However, Haraway stated that she is not a posthumanist but "compostist" (2016, 97). Yet elsewhere, Haraway (2008, 309) viewed the term "posthumanities" as useful for "tracking scholarly conversations" that address relationships between the human and nonhuman, culture and nature, and technology and the body (cf. Åsberg & Braidotti 2018, 11). Braidotti (2016) has emphasized Haraway as "the most prominent contemporary postanthropocentric thinker" whose approach intersects with the project of the critical posthumanities.

of our planetary interconnectedness, which can be termed the Anthropocene (Ginn 2018, 413–414).

By examining the ecologies of the wildlife mode, I want to conceptualize documentaries as an assemblage that brings together the viewer, nonhuman animals, environments, technologies, and images. The concept of assemblage is further reflected in chapter IV. I address the viewer as implicitly part of the assemblage, yet in most cases, I do not employ explicit theories concerning the viewer, such as phenomenology or cognitive theory[2]. An ecocritical reading of films could also include an exploration of the production of wildlife documentaries and their potential ecological impacts. However, what I wish to approach here with the expression "ecologies" is the relations in the cinematic event that might rethink through particular examples how wildlife mode visualizes and imagines environments beyond the human. By cinematic or filmic event, I mean the process and relation that takes place between the film, the viewer, and cinematic subjects. I draw on Deleuze's (2006) framework, in which perception itself can be understood as an event. It is not merely the passive reception of sensory data but an active process of engaging with both the virtual and actual (Deleuze, 2006). Films can create events within perception as they manipulate time, space, and movement to generate new events in the viewer's perception, making one aware of the virtual potentialities that lie beneath the surface of the actual images on the screen. Cinematic events, then, exemplify how perception can be an event that opens up new worlds of possibility. (Deleuze (1986; 1989.)

In the articles, I have used the term "wildlife mode" as a synonym for wildlife documentaries, yet in this summary section, I aim to conceptualize "wildlife mode" more as mode around wildlife rather than just a synonym for wildlife documentary. In documentary film studies, "mode" refers to a distinct way of organizing or structuring a documentary film, reflecting both the filmmaker's approach to the

[2] I follow Deleuzian line of though; e.g., Laura U. Marks (2000, 150) has pointed out that Deleuze's cinema theory does not explicitly reflect the viewer than as a part of cinematic event, and therefore, there would a need for phenomenology to reflect experience of the viewer. However, for example Patricia Pisters (2003) and Patricia MacCormack (2008) have reflected viewer experience within Deleuzian approach without applying phenomenology. Yet how I understand the viewer here can be drawn from theories of Vivian Sobchack (1992) and Laura U. Marks (2000). In the phenomenological approach of perception (Merleau-Ponty 2012; Sobchack 1990, 1992; Marks 2000), the body is central to how we experience the world. Phenomenologist Vivian Sobchack (1990) argued that vision is an active, dynamic process of communication, where perception and expression are inherently intertwined. This act of seeing is a process of becoming that creates both the viewer and visible world. For both human and cinematic vision, material embodiment is essential, as vision is realized through the body's interaction with the world.

subject matter and methods used to present reality to the audience. The concept of modes of documentary was popularized by the film theorist Bill Nichols (1991), who categorized documentaries into different "modes" based on their stylistic and rhetorical strategies. However, departing from Nichols' understanding of mode, I conceptualize wildlife mode rather as negotiations of expressions and aesthetics in relations between humans, animals, and technologies rather than resemblance of a genre.

I prefer the term "wildlife" over "nature" to challenge the artificial separation of nature from culture entrenched in Western philosophical traditions. The choice of "documentary" and "film" here is influenced by discussions about the relationship of wildlife mode to reality and documentary traditions. However, the term "wildlife" encompasses life forms and animals that are not considered pets or production animals. Nevertheless, as demonstrated, particularly in *article II* but also in *article I*, the animals featured on the screen in wildlife mode are not necessarily "wild." Instead, tame birds and dolphins are performing and blurring the conventional distinctions associated with the term "wild." The conceptualization of wildlife is discussed more deeply in chapter IV.

My research consists of four original articles and a summary section. I am interested in how wildlife documentary moving images visualize and imagine environments out of ordinary human experience and the relations between humans, nonhuman animals, and technologies in cinematic forms. The articles tackle this task by examining the underwater environment by means of the deterritorialization of land-biased aesthetics (*article I*), exploring the embodied "more-than-human gaze" in aerial cinematography (*article II*), scales and microcinematography as depicting insects as cinematic subjects (*article III*), and viewer encounters with visualizations of climate change (*article IV*). In this summary section, I take a closer look at themes that bind the articles together: that is, visualizing and imagining environments with the nonhumans and the conceptualization of wildlife mode.

2.3 Research questions

To analyze relations in wildlife documentaries, the main research question is as follows: ***How do wildlife modes bring forth environments and entanglements between humans, nonhuman animals, and cinematic technologies?*** I have further divided the research problem into four research questions (Q1, Q2, Q3, and Q4) that guide through specificities of encounters with wildlife documentaries and their cinematic aesthetics (Figure 1). Q1 is based on the research question in *article I*, Q2 in *article II*, Q3 in *article III*, and Q4 in *article IV*. However, the general research questions presented in this summary section overlap in the articles, and they are more

specifically addressed based on the research materials and cases of different environments in the articles.

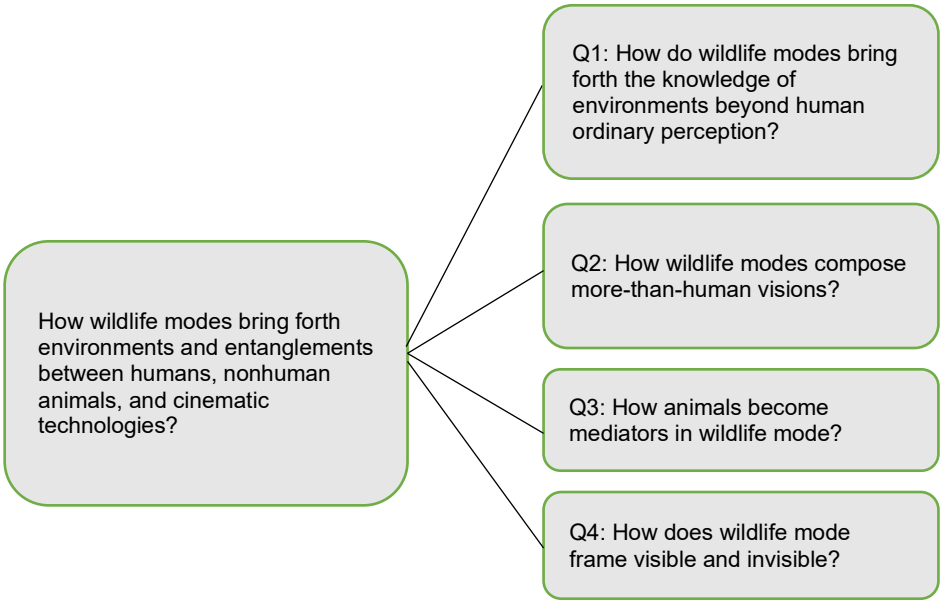

Figure 1. The research problem is divided into four specific research questions (Q1, Q2, Q3, Q4) that are further specified in the articles.

I argue that, through these questions, it is possible to examine the ways wildlife mode brings forth relations between humans, animals, and technology in cinematic assemblages and the speculative ways the films visualize different environments and viewpoints that are imperceptible for the viewers without technology, such as deep sea, aerial view, micro- and macrocinematic perception as well as temporally slow processes like climate change. These research questions also elaborate on the nonhuman and human agencies in the documentaries as well as the implicit viewer engagement, guiding us to think in ways that emphasize the films' affectivity and what the moving image can do rather than just analyzing cinematic representations.

2.4 Research articles

The present dissertation comprises the thematic introductory section along with four journal articles, of which two are published in peer-reviewed journals, the third is accepted for publication, and the fourth is currently under peer review. Each article is written as independent research and to stand on its own. I provide a brief overview of the articles in this section, while the full articles can be found appended to the end

of the dissertation; all the articles and their findings are discussed more thoroughly in the chapter findings.

Article I, "Movements Beyond Human: Ecological Aesthetics and Knowledges in Underwater Wildlife Documentaries," analyzes three different wildlife documentary series focusing on marine environments (*Planet Earth* (2006), *Dolphins – Spy in the Pod* (2014) and *Oceans* (2008)). Although conceptions of underwater spaces are primarily based on images, these images significantly influence how Western audiences perceive the environment. I analyze the interactions between humans, animals, and technology in documentary knowledge production and underwater aesthetics. The approach emphasizes animals as well as the underwater environment as active agents in the filming process and in the production of aesthetics and knowledge, not just as passive objects to be filmed and observed. The article outlines how knowledge is produced in the three documentaries while questioning anthropocentrism and mapping the relation between cinematic features, the oceanic environment, and the aesthetic possibilities of perceiving more-than-human space. Besides analyzing the visualization and imagining underwater environments, *article I* demonstrates the variety of what can be considered "wildlife mode" in three visually very different documentary series. *Article I* is published in *Trace: Finnish Journal for Human–Animal Studies*.

Article II, "In the Wings of the Dove: Bird's-Eye View and More-Than-Human Gaze in the Wildlife Documentary Series *Earthflight*," explores what occurs when the camera follows birds in the air along their flyways and movements. I argue that the imagery of the bird camera diverges from the detached vision typically associated with aerial views and distant observation, constituting an affective assemblage involving birds, technology, and humans. By suggesting that this aerial view functions more as a territory than an identifiable gaze and by conceiving of it as an assemblage, we can rethink of anthropocentric perceptions of environments and landscapes. The imagery produced by the bird camera fosters a more-than-human gaze—embodied and material—that is intricately connected to its surrounding environment. This assembled gaze transforms the environment from a distant landscape into a lived, tangible space coinhabited by birds. *Articles I* and *II* both rethink the assumed terrestrial bias of how environments are visualized and known. *Article II* is published in *Studies in Documentary Film*.

Article III, "Scalar Vicissitudes and Minute Creatures: Re-examining Insects as Cinematic Subjects in *Microcosmos* and *Life in the Undergrowth,"* delves into the portrayal of insects as cinematic subjects and explores the shifts in scale in two wildlife documentaries: *Life in the Undergrowth* (2005) and *Microcosmos* (1996). Although the visual scales of cinema have usually been discussed in relation to the human body, the recent theorization of scale has contested the centrality of the human as a point of measurement. In this article, I examine and combine the

depictions of insects in microscopic illustrations and early cinematic representations with contemporary documentaries about insects. I argue that, although the early cinematic depictions of insects isolated their subjects from their natural habitat, representing them within specimen logic and observations about their movements, contemporary documentaries, on the other hand, can film insects in relation to their surrounding environment. Although the wildlife documentary genre traditionally spotlights larger animals by examining insects as cinematic subjects and mediators of different environments, I argue that this questions the mammalian bias, rethinks the cinematic scales, anthropocentric perception, and relations to environments as well as contemplation of the ethical dimensions of scale within the human–insect relationship. *Article III* is accepted for publication in *New Review of Film and Television Studies*.

Article IV, "Care and Ecological Temporalities in the Wildlife Mode: Framing Climate Change and Polar Regions in *Our Planet* and *Frozen Planet,*" explores how two episodes from the documentary series *Frozen Planet* (2011) and *Our Planet* (2019) engage viewers with climate change through their audiovisuality. By focusing on the polar regions, the article examines how these documentaries visualize climate change and ecological temporalities, often reflecting Western biases and overlooking underlying social and economic processes. The article discusses how the documentaries' images and narrations prompt viewers to form connections and understandings, highlighting the selective mode of attention in care and the implications for nonhuman and human agencies. "On Thin Ice" employs various witnesses, including scientists, Indigenous people, and technologies to foster affective witnessing while "Frozen Worlds" uses traditional narration to show climate change's impact on animal lives. The article also examines the depiction of violence, noting that "Frozen Worlds" includes scenes of visible and sudden violence, challenging viewers' perceptions and emphasizing the need for broader ecological perspectives and ethical engagement with environmental issues. *Article IV* is currently under peer review in *Environmental Communication.*

3 Perspectives on Wildlife Documentary and towards Wildlife Modes

In this chapter, I introduce discussions and conceptualizations around wildlife documentaries that I have found as grounding work for my research. There have been ongoing debates over the past few decades on whether wildlife documentaries should be classified as documentary or film. Central to this discussion are questions about its potential to promote environmental values and educate viewers or being merely entertainment in the form of animal narratives. In addition, how animals are anthropomorphized has been a key point of scholarly discussion in the past decade. Although my research takes a part in discussions of wildlife documentaries through ecocinema studies, instead of narrative structures or the history of the genre, my focus has been more on cinematic and documentary aesthetics and on what kind of relations these aesthetics produce, especially in how they bring forth more-than-human environments.

Scott MacDonald stated that **"**[p]robably no substantial dimension of film history that is so widely admired by a public audience and so frequently utilized in academic contexts has been so thoroughly ignored by film critics, historians, and theorists as the nature film […]: those films and videos that purport to reveal the lives of other species" (2006, 4). The same notion was made by others (Bousé 1998; Chris 2006). Since MacDonald's (2006) article, wildlife films have garnered increasing attention. However, they still seem to remain at the margins of documentary film theory and film aesthetics in general. Their absence in documentary theory, as I see it, is rooted in their ambivalent position as a genre situated between fact and fiction and, in terms of their aesthetics, their place between big-screen cinema and popular television series. Until scholars such as Gregg Mitman (2009, orig. 1999) and Derek Bousé (2000), there had been no comprehensive efforts to trace the evolution of nature filmmaking or identify its significant milestones and contributions. This lack of scholarly attention contributed to the perception that nature films are not worthy of serious investigation within the field of film studies. MacDonald (2006) suggested that, without an understanding of nature films as a genre, it becomes challenging to analyze and appreciate them within the context of film studies. This is something I

suggest with the concept of wildlife mode. Yet I do not conceptualize wildlife mode as a synonym for genre but rather as a certain way of engaging with documentary knowledge and aesthetics that become expressions of relations between humans, animals, and technologies.

3.1 Blue-chip tradition

Bousé (1998) suggested that, over time, audiences have developed specific anticipations about how animals are portrayed and how wildlife filmmakers balance entertainment and information in wildlife films. Therefore, this implies the presence of a distinct film genre characterized by its own recognizable patterns, conventions, and codes. In other words, wildlife films have evolved to adhere to a set of established norms and practices dictated by audience preferences and filmmakers' perceived obligations. These conventions form the foundation of the genre, shaping the way wildlife documentaries are produced and consumed (Bousé 1998, 130). The definition of wildlife films that is almost always referred to in discussions about them is Bousé's (2000, 14–15) criticism of the representation of nature and animals in wildlife films as the so-called blue-chip tradition. These documentaries depict mega-fauna like big mammals or other identifiable animals; use visual splendor of unspoiled wilderness; there is a dramatic storyline that might follow a single animal; absence of science; absence of politics like environmental problems or explicit conservational issues; absence of historical reference points as nature is depicted as timeless—mostly for sake of long-term market value; absence of people—depicting nature as uncorrupted by civilization. These elements defining the wildlife documentary genre are not rigid or static, and they have not necessarily existed together throughout history. However, the commercial success of the blue-chip format, first found in Disney's *True-Life Adventure* films (1948–1960), established a pattern that placed environmental films in the margins of the genre. Bousé contended that Disney played a pivotal role in establishing and defining the wildlife genre by effectively standardizing its conventions. However, as Mitman noted, though Disney films did not have explicit conservational or environmentalist issues, they "established film as an important propaganda tool in the enlisting of public support for environmental causes" by bringing nature into living rooms (2009, 130).

Karen Scott (2003, 30) added some descriptive terms that further classify traditional wildlife documentary and the role the viewer: Documentaries have didactic voice-over, and the films tend to be "closed" in meaning so that there is no room for different interpretations. This gives the viewer the role of a passive observer rather than an active interpreter. This is a very important point, yet I doubt if any text be closed from different interpretations if the viewer refuses to

"play along" with the suggested meaning. Both Bousé and Scott relied on representational thinking in their readings, examining images in relation to something external (cf. Hongisto & Kurikka 2016). However, I focus on the relationships within the films as unfolding events and processes. For example, as *article IV* shows, the voice-over and images are not necessarily synchronized, and images can imply more than the narration, unfolding space for different interpretations for the viewer. I have used the definition of blue-chip mode as a shorthand for traditional wildlife documentary and methodological point of entry in understanding the aesthetical variations of the films. However, blue-chip tradition can become somewhat a strawman what other films are compared against, some kind of bad and abstract example of the genre. However, Bousé's list is useful to get a sense of the genre, yet it gives quite a pessimistic understanding of the films and does not recognize variations. As with any cultural product, wildlife documentaries change over time and place, which is also recognized by Bousé, as we will see later. I suggest the concept of wildlife mode here as a way to recognize the wide variations in the genre and across the genres that are not necessarily considered as blue-chip documentaries, yet what binds them as wildlife mode is negotiations of expressions in relations between humans, animals, and technologies, whether it is ways of expressions of revealing or concealing them.

3.2 Toward "green chip"

Although Bousé, Mitman, and Chris all mainly focused on American wildlife films, others, such as Morgan Richards (2013a; 2013b; 2014) and Jean-Baptiste Gouyon (2009; 2019), studied British wildlife documentaries and their history. The British tradition of wildlife documentaries has sometimes emerged from a different path than the American one of Disneyfied animal stories (Bousé 1998; Davis & Smaill 2018). However, Disney's *True-Life Adventure* films and the blue-chip tradition they established had an impact on the BBC's wildlife productions as well, as noted by Richards (2013a). By blending the British more scientific tradition with the blue-chip format in the late 1960s, the blue-chip documentaries produced by the BBC were characterized by their combination of spectacular cinematography with scientifically grounded narratives, which incorporated elements of drama and suspense. The success of the BBC's blue-chip documentaries was attributed in part to the close association between the BBC's Natural History Unit (NHU) and scientists and amateur naturalists. This collaboration had been cultivated since the NHU's inception, allowing the documentaries to benefit from scientific expertise while still delivering compelling and entertaining content to audiences (Richards

2013a). Richards (2013b) studied the BBC's so-called landmark series[3] and scrutinized their connections to blue-chip format. According to her, David Attenborough's *Life on Earth* (1979), *The Living Planet* (1984), *The Trials of Life* (1990), and *Frozen Planet* (2011) represent the BBC's typical version of the blue-chip format. These series distinguished themselves from conventional blue-chip programs by featuring more complex scientific ideas that were narrativized and went beyond merely showcasing wildlife or ecosystems while Attenborough's presence added a layer of credibility and trustworthiness to the documentaries. Richards (2013a) noted that, despite the BBC's commitment to a "scientific" approach in wildlife programming, the emergence of the blue-chip format became "the industry standard" of the natural world on television, one that was largely apolitical, avoiding any aspects of human culture and environmental issues while focusing solely on showcasing the beauty and wonder of the natural world. This approach made blue-chip programs easily adaptable for sale in various television markets. Although blue-chip programming and its variations became dominant, the complexities of environmental politics seldom appeared in the wildlife genre.

Despite the tradition of the absence of environmental issues in wildlife documentaries, as noted in the beginning of this dissertation, the BBC's wildlife documentaries have taken a new approach during the 2000s. Morgan Richards' historical conceptualization of the "green chip" has been important for my research as establishing a timeline and context because I have mainly focused on British documentaries produced after 2005 (exception for this is a French documentary *Microcosmos* from 1996). At the beginning of my research, while I was still outlining it in 2014 and watching numerous documentaries, I noticed a shift in wildlife documentaries during the 2000s (cf. Howlett et al. 2023). These films began addressing environmental issues and became more self-conscious about framing human influence. Therefore, Richards' conceptualization of wildlife documentaries during this time frame confirmed my remark. Richards (2013a) named the shift to engage with environmental and climatic issues a "green chip." As Richards suggested, this challenges the notion that the dynamics of international television have made environmental messages incompatible with high-budget documentary series. The shift toward green chip programming was influenced by several factors, including changes in international news media's coverage of climate change, the rise of cable and satellite channels specializing in wildlife programming, and

[3] "Landmarks" refer to multipart documentary series that delve into academic subjects, guided by a knowledgeable presenter featured on-screen. The first of Attenborough's landmarks is considered to be *Life on Earth* (1979). Series like *The Blue Planet* (2001) and *Planet Earth* (2006) are counted as variations of landmark format by featuring Attenborough's narration but not his on-screen presence (Richards 2013a).

advancements in technology and storytelling techniques. The way international news media started to treat climate change was transformed during the 2000s, when it started to be depicted as a global threat after the publication of a report by the IPCC in early 2007 (Cottle 2009, Lester and Cottle 2009). This report, which drew on a near consensus of scientific opinion, provided alarming projections regarding anthropogenic global warming, including predictions of rising sea levels, increasingly extreme weather patterns, and soaring temperatures. Similar to its impact on climate change coverage in the news media, Richards (2013a, 106) argued that the IPCC report served as a pivotal moment for the wildlife genre, prompting a significant shift in how environmental issues were addressed and portrayed. *The State of the Planet* (2000) was a first landmark series, though on a smaller scale with just three episodes, where Attenborough brought up global environmental issues. Yet Richards (2013a) saw the year 2006 as a turning point when "primetime, big budget programming," BBC's series such as *The Truth About Climate Change* (2006), *Planet Earth: The Future* (2006) finally decisively addressed climate change. As climate science became more solid, this enabled the documentaries to present information about climate issues more clearly. Richards pointed out two distinct strategies employed by the BBC in its landmark wildlife series to address environmental issues. The first strategy, as seen in *Planet Earth* (2006), involved avoiding environmental topics until David Attenborough's final statements. However, the series was accompanied by a separate three-part series called *Planet Earth: The Future* (2006), which focused on conservation issues and featured interviews with scientists and conservationists. This secondary series was broadcast on BBC4, reaching a smaller audience compared with the main series on BBC1. This approach maintained the separation between showcasing pristine wilderness and addressing environmental concerns, likely with financial considerations in mind, while still promoting environmental awareness. The second strategy, exemplified by *Frozen Planet* (2011), was more inclusive. Following the precedent set by *The Living Planet* (1984), which addressed ecosystem destruction in its final episode (ibid., 13), *Frozen Planet* dedicated an entire episode to exploring the effects of climate change on polar regions. The final episode gained as much of an audience as the other parts of series, with an average audience figure of 8.2 million (ibid., 112). I focus on this episode in *article IV*.

This shift signifies a notable change in how environmental topics are approached and framed within wildlife documentaries by presenting conservation efforts in a positive light, here by using celebrity endorsements and dedicating specific episodes or series to environmental issues. However, as Richards pointed out, framing environmental issues "as problems that could be solved though concerted local, national, and global action. Problems, in other words, that could be recast as upbeat, feel good, solutions" helps avoid doom-and-gloom narratives and appeals to

audiences, yet in more cynical light, they can be viewed as "riding on the popularity of eco-consciousness" (Richards 2013a, 112).

3.3 Wildlife films or documentaries?

Many elements of wildlife filmmaking were established either concurrently or before significant milestones in documentary filmmaking. Bousé noted that wildlife film did not originate from documentary filmmaking; it evolved alongside it with its own separate tradition and history. The term "wildlife film" emerged later, but the concept of "natural history film," still preferred in the UK, was already in use by 1913 in both the United States and the UK (Bousé 1998, 125). According to Bousé, there are two traditions emerged from the early depictions of nonhuman animals by the early twentieth century: American and British models, even though they were not strictly confined to geographical boundaries. The British tradition prioritized scientific inquiry and detailed observations of the natural world, leaning more toward "nature documentary" than "wildlife film." In contrast, the American tradition, closer to what is referred to as "classic" wildlife film, placed greater emphasis on dramatic storytelling and character development, often resorting to controlled filming conditions and staged events for added drama. These differences highlight distinct approaches to wildlife filmmaking and its relationship with documentary filmmaking. However, as Richards (2013a) noted, the two traditions started to blend during the 1960s, as seen in the section about green chips.

As already has come up, wildlife documentaries are called by many names: wildlife or nature films, wildlife or nature documentaries, or natural history films. MacDonald (2006, 19) preferred (in his "particular context" as he emphasizes the choice) "nature film" because, according to him, "wildlife" refers to "relatively large, terrestrial animals" while he wanted to include insects and sea organisms in his study as well, which Bousé (2000) and Mitman (2009) had excluded from their research. Gouyon (2009) used the term "natural history documentary" in his dissertation about British tradition and its tendencies to approach nonhuman nature through the natural history paradigm. Bousé, Mitman, and Chris all used "wildlife film" by placing their studies in the context of American wildlife films, and in doing so, Bousé criticized the conceptualizations of Disneyfied tradition as documentaries. The debate has been whether these films count as documentaries or whether they are something else. I take a short look at this discussion, yet I want to emphasize that, in my research, I am more interested in what the films can *do* rather what they *are.* However, I think it is important to bring forth conceptualizations about their status as nonfiction genre as their special relation to the world they depict and produce, not so much through their essence but rather how their epistemic position is perceived. Richards, who has focused on the BBC's documentaries, used the term "wildlife

documentaries." I follow her in use the term throughout the articles included in the present dissertation, yet in the articles—and in the topic of the whole dissertation—I have used synonyms like wildlife documentary moving image, which is used by Smaill (2016) to conceptualize the wider context of different nonfiction films, including YouTube videos. By wildlife documentary, I refer to the films that are my material. In *articles III* and *IV*, however, I use the term wildlife mode. "Wildlife mode" was used by Smaill (2016), although she applied it only once as a kind of a synonym to wildlife documentary, which I took as referencing Nichols' (2001) conceptualizations about different documentary modes. Here, I understand wildlife mode as a broader concept and instead as assemblage of perceptions, practices, relations, and attunings around wildlife and documentary knowledge. Wildlife mode can also be understood as technical refinement in this assemblage while some photographic cameras even have a "wildlife mode" for shooting in nature, focusing on lightning and depth in expectations of certain compose to capture animal movement (Suomen luontokuvaajat 2012). I propose wildlife mode as a (Western) cultural attunement around wildlife. As seen in the definition of the formation of the genre described by Bousé (2000), the viewers and makers of the wildlife documentaries recognize the expectations, which can be understood as affective mode.

Bousé (1998, 119) argued that wildlife films do not fit neatly into established documentary models such as direct cinema, ethnographic film, cinema verité, or observational cinema, which might be referred to, here following Nichols (2001), as different "modes" or subgenres of documentary. However, these models are typically defined by their filmmaking techniques and approaches rather than by the content they depict. Bousé connected wildlife films exclusively to their content—nonhuman animals. In Bousé's (1998, 123) view, although many wildlife and natural history films can be considered documentaries, there are unique ethical considerations when the subjects are living, feeling beings that cannot comprehend the implications of being filmed. This distinction leads to a different dynamic between the filmmaker and subject as well as different responsibilities on the part of the filmmaker. However, Bousé emphasized that this does not mean that there cannot be documentaries about nature and wildlife. Rather, he suggested that careful distinctions should be made to ensure meaningful definitions and categories. He noted that there have been wildlife films that fit into categories such as television science documentary or align with the Griersonian model, which focuses on social advancement, such as environmental advocacy films. These films address the relationship between humans and the natural world and advocate for environmental policy reform and conservation efforts. Yet Bousé did not fully acknowledge wildlife films as cultural products or situate them within the broader context of nonfictional modes, especially on television. For example, Gregg Mitman pointed out that

watching animals on screen does not equate to understanding them in nature. However, as Bousé (1998) noted, his conceptualization of "wildlife film" is in the context of American Disneyfied animal films rather than British natural history documentaries.

Bill Nichols (2001) categorized different modes of documentary filmmaking, each with distinct characteristics and aims. These modes help in understanding how filmmakers represent reality, convey information, and engage with audiences in a way that comes close to the conception of genres. Yet these modes describe the documentary's style, approach, and rhetoric while genre is a broader term about the film's content and theme. The *poetic mode* focuses on aesthetics, rhythms, and subjective impressions, often disregarding continuity editing (2001, 102–105). The *expository mode* addresses the viewer directly, presenting information or advancing arguments through titles or narration. This is associated with television documentaries and "voice-of-god" narration (ibid. 105). In *observational mode,* the filmmaker acts as an observer, recording events as they unfold without interference (ibid., 105). The *participatory mode* is similar to the observational mode, but the filmmaker actively participates in the lives of others, reflecting on this experience and making the viewer aware of their presence (ibid., 115). The *reflexive mode* shifts the focus to the negotiation between filmmaker and viewer, emphasizing documentary as a construct or representation (ibid.,125). The *performative mode* raises questions about knowledge, emphasizes subjective qualities of experience, and focuses on embodied knowledge rather than formal aesthetics (ibid., 130–131). Nichols suggested that a documentary film may contain multiple modes, but usually one mode is dominant, and also suggested modes as a sort of genealogy for documentary films. Yet this genealogy has gained criticism (e.g., Bruzzi 2000). Regarding Nichols' definitions of the documentary modes, wildlife documentaries can be seen as having many features of Nichols' modes. Although most wildlife films tend to fall into the expository mode, there can be varied modes within a same documentary, even in wildlife films. However, although Nichols considered modes as "modes of representations," in which mode arises from dissatisfaction from a previous mode as historical continuum, I treat wildlife mode not as a representation but as attunement and expression that the films bring forth between humans, animals, and technologies. Wildlife mode does not have to be a conscious choice of film makers or producers: it can be a way of framing and negotiating these relations and ecologies. As I conceptualize wildlife mode, every wildlife documentary brings forth a wildlife mode because they deal with nonhuman animals as well as humans and technologies—whether through showing or concealing—yet a wildlife documentary can have many wildlife modes, like documentary film can fall in different modes in Nichols' terms.

Building on this rethinking of wildlife mode as attunement and expression rather than mere representation, it is important to recognize how wildlife documentaries align not only with broader documentary traditions but how they have been categorized within wildlife documentary traditions. MacDonald (2006, 19) acknowledged the nature films he studied as documentaries while referring to Painelevé's (2000, orig. 1951, 39) definition: A documentary is "any film that documents real phenomena or their honest and justified reconstruction to consciously increase human knowledge through rational or emotional means and to expose problems and offer solutions from an economic, social, or cultural point of view." Although Bousé saw American and British wildlife films as loosely distinct traditions, MacDonald made a difference between Disney's *True-Life Adventures* entertainment and commercially driven films and Painlevé's short, experimental films that "were an attempt to demonstrate the value of cinema for science (a highly controversial idea for French scientists of the 1920s), and to produce both good science and good cinema" (MacDonald 2006, 8). Although the American and British traditions have often been recognized, there is also something that could be called French (or maybe continental) tradition emerging from Painlevé's work and might be seen as more auteuristic than the commercial Disneyfied films and productions of public service television of BBC. Jacque Cousteau's films and more recent French films like *Microcosmos* and *Winged Migration* (both co-works by Jacques Perrin) are examples of this. Added to this could be films by Austrian filmmaker and biologist Hans Hass, Swedish Arne Sucksdorf, and Werner Herzog's *Grizzly Man*, who all fell out of Anglo-American traditions. These theorizations demonstrate that what today might be called wildlife mode does not have a single tradition but instead many. I suggest that the wildlife mode is a unifying concept that all these documentary films and traditions have in common. They do not fall under the category of blue-chip wildlife films, yet they all negotiate relations between humans, animals, and technologies in a different manner. In my dissertation, I primarily address these traditions through the British one. As *article I* aims to demonstrate, even within British productions, that there can be significant variation between documentaries. However, as noted by Richards (2013a), Anglo-American traditions have blended through global circulation and coproductions, making it unwise to treat them as entirely distinct. Additionally, I examine *Microcosmos*, which stems from French wildlife filmmaking.

This exploration of the wildlife mode highlights the diversity of traditions and approaches within wildlife documentaries, illustrating how they all share a common thread in negotiating the relationship between humans, (wild) animals, and cinematic technologies. Building on this, Jamie Lorimer's (2015) concept of "affective logics" in conservation science provides a valuable framework for deepening the understanding of how these films engage viewers. He offered a "more-than-

representational" account of human perception and knowledge production, emphasizing the role of affect in the encounters between technologies, human, and nonhuman bodies and their specific environments. Lorimer comprehended affective logic as "a particular mode of engaging with, knowing, and feeling toward wildlife" (2015, 39). Because I comprehend documentaries as assemblages that have affective capabilities, my conceptualization of wildlife mode comes close to Lorimer's description of affective logics as ways of engaging, knowing, and feeling. Wildlife mode(s) functions as fluid, molecular, and situated rather than wildlife genre that might be considered as more rigid and molar.[4] The variety of wildlife modes brings forth different perspectives and possibilities to think beyond anthropocentrism but also different biases of wildlife documentaries. Wildlife mode goes through different approaches to knowledge and aesthetics. I understand wildlife mode not as something tied to any specific type of wildlife documentary but rather as the variety of modes that can exist within a single wildlife documentary or across different documentaries. These modes can represent different conditions, feelings, or affects related to aesthetics and knowledge. For example, the same documentary can simultaneously exhibit both a poetic mode and natural history approach. Yet documentary modes rely on certain *expressions* that emphasize their wording capabilities that are not tied to natural history knowledge or blue-chip tradition. I understand wildlife mode as a depiction of nonhuman animals that appear nondomesticated and their interactions with species and ecosystems because the film brings forth expressions of relations between these animals, humans, and cinematic technologies. Wildlife mode explores not just the animals themselves but the complex relationships between wildlife, environments, and human perception through technological means.

[4] Molar segmentarity is typically organized and hierarchical, here referring to larger, more rigid structures that are associated with wholes, bodies, individuals, and realms of perception and representation. Molar segmentarity is characterized by clear delineations and stability. In contrast, molecular entities are more fluid, supple, and concerned with processes that resist representation. Molecular segmentarity reflects a kind of micro-politics involving affects, desires, and movements and refers to multiplicity rather than rigid categories. Yet molar and molecular forms coexist and presuppose one another; they are not merely oppositional but are intertwined in a complex interplay (Deleuze and Guattari 2004, 235–237).

4 Theoretical Framework and Key Concepts

Drawing from the conceptualizations of wildlife films presented in the previous chapter, I started to ponder whether there were any "spaces in-between" in the wildlife documentary genre that have gained much criticism in representing animals. I was confused that wildlife documentary aesthetics was mainly overlooked and documentaries were interpreted in relation to natural history while their representations were compared with actual experiences of nature and animals. Like the directors of *Microcosmos*, Claude Nuridsany and Marie Pérennou, both of whom are biologists, expressed in the interview (MacDonald 2009), the natural historical bias was not how they perceived animals, and they wanted to make something different. This was something that I had experienced as well—animals were there on the screen not just to know and look at: There was something else. What this "something" was might be what Anat Pick (2011) called "creaturely poetics," emphasizing the vulnerability and corporeality of animals as well as the aesthetics and form in cinema to question anthropocentrism. What I wanted to do in the present dissertation was to re-view animals not as mere objects to be gazed at by the human subject and that nature would be something that is outside culture—or that wildlife mode would be just an observational tool recording reality and would not have imaginative potentials. In this dissertation, I engage with ecocritism and ecocinema studies because I look past the distinction between nature and culture as well as "two cultures" (Lorimer 2015; Åsberg & Braidotti 2018) of natural sciences and humanities. My approach to studying films is posthumanist in the sense that I want to scrutinize the possibilities to go beyond anthropocentrism and human exceptionalism.

This chapter starts with an overview of ecocinema studies and how the field has evolved, along with how different approaches have been applied to nonhumans in the film. It highlights the scholarship that has been significant for my thinking about relationships of nonhuman animals, technologies, humans, and environments. In discussing animal turn and posthumanities, the chapter introduces a theoretical framework in thinking beyond human and possibilities to approach more-than-human agencies. It moves to introduce conceptualizations of ecologies,

environments and wildlife that all might seem like metaphors borrowed from natural sciences, yet they are intensively applied in ecocinema studies.

4.1 Perspectives on ecocinema studies

During the 2000s, the period characterized by Mittman (2019) as the "green wave" and by Richards (2013a) as the emergence of the "green chip," ecological and environmental issues began capturing the attention of both film scholars and audiences. This led to the convergence of ecocriticism and film studies, giving rise to a new field of ecocinema studies (Chu 2016). Although ecocriticism as a field of literary study emerged in the 1970s, coinciding with growing environmental awareness, Rachel Carson's *Silent Spring* (1962) has often been cited as a key catalyst for both the cultural and academic aspects of the movement. Ecomedia and ecocinema studies, however, represent a new paradigm. As environmental studies scholar Salma Monani noted in a 2016 interview, these are young fields of study that have gained prominence in the twenty-first century (Alex & Deborah 2016). Ecocinema studies have encompassed subjects such as environmental ethics and aesthetics, environmental justice studies, animal studies, discourses on pollution and toxicity, considerations of health, food, and sustainability, and explorations into posthumanism, among others (Chu 2016, 12). In addition, transnational ecocinema (Kääpä & Gustafsson 2013), affects, and emotions (von Mossner 2014) as well as materiality and ecological footprint of the film industry (Bozak 2011; Vaugham 2019) have been studied.

Ecocinema can be categorized under the scope of environmental humanities, yet it possesses distinct interests and objectives that are more aligned with its inherent domain of film and cinema studies (López et al. 2023, 3). The emergence of "ecocinema" was comprehended as a *type* of cinema, for example, avant-garde and experimental films that had approaches to the nonhuman, like slow cinema (MacDonald 2004) or explicitly environmentally oriented films that can take an activist stand (Willoquet-Marcondi 2010). However, as the field has evolved, ecocinema is not associated with just films that have an environmental political agenda but an understanding of ecocinema has widened, and any kind of film can be read through the framework of ecocinema and ecocritical perspective (Alex & Deborah 2016). Ecocinema studies have examined a wide range of cinematic works, not just those with explicit environmental messages. It focuses on the intersections of cinema, ecology, and the environment but can extend beyond analyzing film content while under scrutiny can be the filmmaking process itself and its environmental impact (Rust et al. 2013). Monani suggested that ecocinema studies and ecomedia studies seem to be founded on the conceptual notion of the swift developments in media technologies from the latter half of the twentieth to the

twenty-first centuries resulting "media a formidable ecological presence – materially and symbolically" (Alex & Deborah 2016). The manner in which this engagement with ecological presence has been undertaken has been the driving force behind both fields of research, marked by a vibrant interplay of theoretical and practical approaches (Alex & Deborah 2016).

The editors of *The Routledge Handbook of Ecomedia Studies* noted that ecomedia scholars engage in diverse topics "the tangible and abstract ecological conditions of media," like technoscience studies, feminist new materialism, affect studies, Indigenous ecocriticism, to name a few. Therefore, today, ecomedia studies is rather a "sphere" than a "field" (López et al. 2023, 3). Ecomedia studies can be seen as a broader term, while ecocinema studies specifically focus on moving images. López et al. recognized three main perspectives within ecomedia. The first was identified with Rust, Monani, and Cubitt (2013; 2016), who understood it as media that is of and about environment, a perspective focusing on media addressing ecological issues, frameworks, and approaches. The second perspective is about conceptualization of the expanded and revised meaning of media that "moves beyond conventional views of media" and rather sees "ecomedia as energetic and material exchanges that comprise, encompass, and produce environments, milieus, objects (texts, gadgets, platforms), and infrastructures" (López et al 2023, 3). The third is the circuits of ecomedia and ways it takes place and has impacts; this perspective looks at the ecological impacts of media itself (López et al. 2023). Rust et al. wrote in the new volume of *Ecocinema: Theory and Practice* (2022) that cinema "has become unthinkable apart from its dependence on mining, electricity generation, and fabrication with their attendant pollution, on global logistical operations and supply chains with massive ecological footprints, on material and technical infrastructures with direct consequences in the physical world, and on the problem of waste" (Rust et al 2022, 1–2). My research focuses mostly on the first category—the films that grapple with relations in human and nonhuman worlds and environments in wildlife documentary—yet my approach also takes a part in examining how the studied material produces environments, or milieus. I focus on the filmic event, however, I do not take a closer look at the ecological impacts of the films, which, in the case of many wildlife documentary productions, while shooting across the globe, are undoubtedly massive. Rust, Monani, and Cubitt's *Ecocinema: Theory and Practice* (2013) has been a valuable inspiration and source for my research, which follows their path in understanding relations between film and environments. However, I agree with López et al. (2023, 3) when they emphasized that, in combining these perspectives, "We can conceive ecomedia as an ensemble of technologies, mediating apparatuses, and critical interpretive approaches that activate, coordinate, and help us make sense of how media entangle the world".

For my dissertation, important works have been Gregg Mitman's *Reel Nature* (2009, orig. 1999) and Derek Bousé's *Wildlife Films* (2000), which engaged with wildlife films. Both were mentioned as early works of ecocritical and ecocinema studies, though neither Mitman or Bousé counted their work as such. In addition, Cynthia Chris' *Watching Wildlife* (2006) helped me comprehend the history of wildlife films and programming. In *Reel Nature*, Mitman mapped the history of nature film, focusing on the context of the United States and the genre's tension between educational values and functions in entertainment. Much like Mitman, Bousé examined the history of the wildlife films genre that he did not count as documentaries. He argued that wildlife films represent nature that is "molded to fit the medium" (Bousé 2000, 4) and analyzed the genre's narratives. Both Mitman and Bousé evaluated the filmic medium in relation to reality and nature, here based on the representational comprehension of cinema. I will dwell into these comprehensions in relation to my approach later in the methodological section.

Other early works that took part in building the field of ecocinema, were David Ingram's *Green Screen: Environmentalism and Hollywood Film* (2000), which scrutinized Hollywood films through cultural studies perspectives, focusing on representations of environmentalism in popular fiction films, and Scott MacDonald's *The Garden in the Machine: A Field Guide to Independent Films About Place* (2001), which explored depictions about place and focuses on American avant-garde films. In his other work, like in the article "Toward an Eco-cinema" (2004), MacDonald explored ecocinema in relation to experimental and slow cinema, and in the chapter 'The Ecocinema Experience' (2012), MacDonald emphasized the aesthetics of avant-garde and other experimental cinemas to alter perception in relation to environmental approaches. I have taken inspiration from MacDonald's approach to emphasize aesthetics and perception, yet instead of experimental cinema, I focus on popular wildlife documentaries. I also draw from his insights of nature films, which I look closer at in the section about wildlife documentaries.

One of the most influential studies, especially when it comes to comprehensions of technologies in relation to the environmental though and nonhuman world, has been Sean Cubitt's *EcoMedia* (2005), which has a wide approach to different media forms. Cubitt conceptualized approaches to the relations between humans, technology, and nature through examples mostly of popular culture, such as the BBC's wildlife series *Blue Planet* (2001). I follow Cubitt's line of thought in understanding technology not just as mastery over nature but as its potentialities to bring forth new relations.

The question of the animal has also been raised in film studies (Lippit 2000; Burt 2004; Pick 2011; McMahon & Lawrence 2014), and ecocinema studies have mapped traits "beyond the human" (Pick and Narraway 2013; Ivakhiv 2013; McMahon & Lawrence 2014; Smaill 2016). This has been an important trait for me to follow

during my research as I formulate the possibilities to reach beyond anthropocentrism within the studied films. Adrian Ivakhiv's (2013) thinking about cinema's anthropomorphism but also its zoomorphism and geomorphism has been formulations I have built on regarding the conceptualizations in environments and relations between the viewer and nonhumans. Ivakhiv (2012; 2013) examined cinema's capabilities of "worlding" and how filmic worlds interact with the extra-cinematic world. His approach was rooted in process-relational philosophy, while he conceptualized a framework for cinematic relationships consisting of the film world, the film experience, and the film–earth relationship (Ivakhiv 2012, 89).

Relationships with the film, environment, and nonhuman animals were also the core of Pick and Narraway's conceptualizations in *Screening Nature; Cinema beyond the Human* (2022, orig. 2013), where they emphasized that cinema is "ecologically oriented and zoomorphic: it expresses the interconnectedness of human and other life forms, our implication in and filtering through material networks that enable and bind us" (Pick & Narraway 2022, 5). This has been a crucial approach to my research in understanding that the aesthetics of films are inseparable from the material and formal possibilities in nature. As Pick and Narraway suggested, bringing together film studies, animal studies, and ecocritisism as an assemblage can be called "posthuman" in terms of "looking beyond, queering or contesting cinematic forms that simply corroborate human exceptionalism, both in terms of what the films address and the ways in which they address it" (Pick & Narraway 2022, 6). My dissertation aims to contest anthropocentrism by focusing on nonhuman agency and ecological relationships in the analyzed documentaries. For instance, in my exploration of underwater and aerial perspectives (*articles I* and *II*), I emphasize the active role of environments and animals in shaping cinematic aesthetics, challenging the notion of animals as mere objects of human observation.

In *Regarding Life. Animals and the Documentary Moving Image* (2016), Belinda Smaill traced the relations between documentary films and animal life, including wildlife films in her analysis in conceptualizing relations between documentary mode and nonhuman animals and environments, not as a "bad example" as wildlife films often tend to be approached, but as focusing on their nuanced aesthetics about nonhuman life and environments. Smaill paid attention to the "specificity and importance of the documentary form, how it powerfully shapes audience expectation and produces knowledge of the (nonhuman) world" (2016, 7). Smaill's treatment of wildlife films as part of documentary aesthetics has been very important for my study as well as her affective approach to think beyond anthropocentrism within documentary films and nonfiction moving image in general (Smaill 2017; 2018; Davis & Smaill 2018).

4.2 Undoing hierarchies: "Animal turn" and posthumanities

The "animal turn" has recently emerged as a significant shift in the humanities and social sciences, reflecting a growing interest in nonhuman animals and human–animal relationships across various disciplines. Harriet Ritvo (2007) noted that the "animal turn" suggests new relationships between scholars and their subjects. At the core of the "animal turn" lies a departure from traditional anthropocentric perspectives toward a relational and embodied understanding of the human–animal and nature–culture continuum and multifaceted re-evaluation of the human as being one among other species. Animal research has challenged dominant narratives of human exceptionalism, species hierarchy, and knowledge productions. As Andersson Cederholm et al. suggested, the "animal turn" "brings along an alternative outlook on knowledge production that does not only include animals but places them center stage as key actors in the innumerable modes of *being in*, and *making sense of*, the world" (Andersson Cederholm et al. 2014, 6). By decentering the human subject and foregrounding the perspectives of nonhuman animals, this paradigm shift encourages a re-evaluation of ethical frameworks, environmental policies, and cultural practices and, often, especially in the context of art studies, engages in more-than-human matters like posthumanism and new materialism. Instead of viewing animals merely as research objects, scholars have advocated for a shift toward "looking with" rather than "looking at" animals, acknowledging their subjectivity and agency. This shift toward interspecies relationality fosters new modes of knowledge production that privilege collaboration, empathy, and multispecies ethnography.

Many of the scholarly works in the fields of (documentary) film studies concerning animal turn or rather human–animal studies have already been introduced in chapter III and earlier in this chapter about ecocinema studies (Bousé 2000; Mitman 2009; Chris 2006; Lippit 2000; Burt 2004; Pick 2011; Pick and Narraway 2013; Ivakhiv 2013; McMahon & Lawrence 2014; Smaill 2016). Jonathan Burt's *Animals in Film* (2002) was one of the first to conceptualize animals within film studies with consideration of animals, ethics, and different genres within the history of cinema. For example, John Berger's essay from 1980 "Why Look at Animals?" is grounding work to conceptualize animals in modernity. He argued that, since industrialization and modernization, animals have disappeared and been marginalized while displaced by spectacle and signs. In addition, Akira Mizuta Lippit argued in *Electric Animal* (2000) that wildlife has disappeared from daily life but reappeared, for example, in film and other media and technologies. However, as Belinda Smaill (2016, 12) pointed out, both Lippit's and Berger's groundbreaking studies primarily regarded animals as metaphors or epistemological objects. In contrast, Smaill followed Pick (2011), who emphasized animal vulnerability and

materiality, arguing that "notions of embodiment – the material, the anonymous, and the elemental – provide a powerful antidote to anthropocentrism" (Pick 2011, 6). I align with both Smaill (2016) and Pick (2011), who examined documentary examples that highlight animals as embodied, material beings, suggesting that cinematic aesthetics can reshape our relationships with animals.

The conceptualizations of "beyond human" have been the entrance point in my research. By understanding films as assemblages that the viewers are a part of, this questions the position of the human and relations between nonhumans, whether living or technological. I understand what Pick and Narraway referred to as "posthuman" in the context of posthumanism, emphasizing the importance of thinking with others and focusing on the relationships they form as quests for post-anthropocentrism and post-dualism. As Åsberg and Braidotti noted, "posthumanities work recognizes the role of the nonhuman for the humans of the humanities" (2018, 11). As the influence of human activities on the planet becomes more apparent, there has been a shift toward integrating nonhumans and "nature" into humanities research. This can be seen as a paradigm shift (Åsberg & Braidotti 2018). Posthumanities challenge the traditional focus on the singular idea of the human subject as the central figure in humanistic inquiry and dualisms like nature–culture and mind–body. As Åsberg and Braidotti (2018, 2) noted, "[W]e simply can no longer stand for the modern divide of nonhuman and human, nature, and culture, and we can no longer up-hold the division of labour where 'nature' is left to science and 'culture' to the humanities." By doing so, the posthumanities decenter humanity from the humanities, and instead, they imagine humans as interconnected with other species and entities within multispecies relations. This perspective allows for a more inclusive understanding of ethics as more-than-human ethics that considers not only human interests but also the well-being of other beings and the environment (Fredengren & Åsberg 2021, 63).

Approaches grounded in ecocriticism and posthumanism frequently complement each other, as they converge not only in the selection of materials but also in their theoretical and methodological frameworks. Both ecocriticism and posthumanism share the common goal of questioning and reevaluating conventional understandings of what constitutes the nonhuman and relationships between nature and culture. However, ecocriticism and posthumanism differ in how they approach materials and theory because of their historical development. Literature scholars Lummaa and Rojola (2013, 22) pointed out that ecocriticism, emerging from the reinterpretation of classic nature writing, is deeply rooted in ecological principles and tends to be critical of postmodernist theories. It is primarily focused on analyzing and interpreting works or texts within the context of environmental concerns. On the other hand, posthumanism, which draws from continental philosophy and cybernetics, is more concerned with conceptualization, imagining future

possibilities, and engaging in theoretical discourse. Instead of analyzing specific works, posthumanism often uses various works and texts as starting points for broader discussions rather than subjects of detailed analysis and interpretation. However, today, scholars with posthumanist approaches have engaged with specific "case studies," whether text, art, and environmental processes, to have a dialogue—or to think with the topics (see Ginn 2018; Fredengren & Åsberg 2021). In this way, posthumanist approaches stress nonhuman agencies, materialities, and relations.

Lummaa and Rojola (2013) tended to see a difference between posthumanists who are concerned about nonhuman animals and "nature" and those who engage with technologies. However, in my research, I engage with nonhumans and their agencies, along with technologies and their relations in way what Franklin Ginn (2018) described as three decenterings, as mentioned in chapter II. In the vitalist mode, humans are in a continuum with other animals, while animals are seen as proper subjects of study in the humanities and human exceptionalism is stripped away. Although the second mode Ginn mentions is technology, it is not perceived in the transhumanist sense as a solution to ecological problems or as overcoming embodied and lived materiality, but rather, "technology is not something added to an already-existing human, but is a defining part of what makes humans, an originary technicity" (Ginn 2018, 413). It is not just the human who emerges in relation to technology. In addition, technologies in human–animal relations have been scrutinized in animal studies, whether these encounters are in audiovisual forms like critter cam and zoological databases or animals whose existence is built through technical systems, such as production animals or animal experiments. Besides the vitalist and technological modes, Ginn added the more recent decentering—the planetary, which highlights the recognition that human activities have immense global implications. The unprecedented scale of environmental change, both in terms of time and space, underscores the profound impact that human actions have on the Earth. This shift implies that humans must consider the planetary consequences of their actions and recognize their responsibility for shaping the future of the planet (Ginn 2018, 413–14). In my research, I engage in all three decenterings, while I take nonhuman animals and environment as proper cinematic subjects that, together with the human filmmakers and viewers, become filmic assemblages. In addition, my research questions imply the understanding of technology, as Ginn put it, not as simple add-on but something that constitutes worlds and relations. With the third decentering, the planetary, I engage with this in the framing of my research as situated in the ecocinema and the period of time when ecological issues have become part of wildlife documentaries.

4.3 World-making and cinematic event

By worlding or world-making, I refer to cinematic potentialities as not only representing pre-existing worlds but also bringing forth connections, meanings and making things visible. This can be obvious in genres like science fiction and fantasy, yet wildlife documentaries also make worlding as they assemble nonhuman agencies, film makers, images, technologies, aesthetics, viewers, knowledges, and so forth. In fact, this assembling becomes a form of world-making. In doing so, films become "more-than-representational" media that actively participate in the creation of new ontologies and ways of perceiving the world. The term "world" refers not to something that already exists but to the context or backdrop within which specific things emerge and gain meaning—a fluid yet relatively stable collection of practices, interactions, relationships, capacities, tendencies, and possibilities (Anderson & Harrison 2010). The concept of "worlding" refers to nonrepresentational theory and offers a perspective for understanding the entangled processes between humans and nonhumans (Palmer & Hunter 2018). Yet worlding is "an ongoing process and worlds are always becoming. A world is more-than-human in as much as it is comprised of myriad agents, and worlds are multiple as they are inhabited, sensed, and enacted by a range of actors […]" (Lorimer 2024, 5). Thus, worlding is shaped by attention to a particular experience, place, or encounter, along with our active engagement with the materiality and context in which events and interactions unfold (Palmer & Hunter 2018).

The term "event" in Deleuze's philosophy closely aligns with the concept of worlding because both are dynamic processes of becoming rather than fixed representations of reality. For Deleuze (2006), an event is not simply an occurrence but part of the process of becoming and differentiation that opens up new possibilities, connecting different moments and forces. Events, like worlds, are not static but emerge from a multiplicity of interactions—affective, material, and virtual. In this way, the cinematic event reshapes perception, drawing attention to the ways in which films manipulate time, space, and movement. Deleuzian events are rhizomatic, always in flux, continually unfolding and differentiating, never forming a unified whole. This resonates with the notion of world-making in cinema, where the assemblage of various human and nonhuman agents, technologies, and aesthetic choices generate becomings. Therefore, the cinematic event is not confined to representation but instead engages the virtual potential of images to create new forms of understanding and being, much like the process of worlding itself. The present dissertation explores how wildlife documentaries make worldings, particularly by assembling nonhuman actors like animals and environments into cinematic events that reshape perception and meaning. This approach aligns with the Deleuzian notion of events as dynamic processes, challenging traditional representational frameworks and emphasizing becoming, movement, and relationality.

4.4 Ecologies, environments and wildlife "after Nature"

Theorizations "after Nature" (Morton 2007; Demos 2016; Lorimer 2015) have been a driving force in posthumanities and ecocinema at the age of climate change and other anthropogenic ecological problems that are often referred to as the Anthropocene. If I have used the words "nature," in most cases, it has been inside quotations to refer to its ambiguousness. However, for example, Demos (2016) argued that "rejecting term nature is not an option" because of its significance for Indigenous and environmental activism. Yet Demos (2016, 20–21) called for conceptual reorientation to dissolve "nature's objectification and ontological isolation."

Instead of calling the films nature documentaries, I have referred to them as wildlife documentaries. Unlike MacDonald (2006), I understand "wildlife" to also include smaller organisms, such as insects. Term "wildlife" may have traditionally excluded what are often considered nonsentient life, like trees, plants, microbes, and fungus. Although my research has not especially focused on these lifeforms, they still might be called *wild*life as an unruly categorization. Lorimer (2015, 7) argued that even if a common assumption is that the end of *Nature* means the end of the wildness as well, this is only true if "we accept the mapping of wildlife to wilderness, to places defined by human absence." Instead, wildlife lives among us in urban settings, and in us as microbes (Lorimer 2015). This expanded understanding of wildlife challenges the conventional dichotomy between "nature" and "culture," recognizing the intricate connections they make. Even if term wildlife might seem as "a rather antiquated word associated with prebiodiversity natural history,"[5] Lorimer suggested reworking with the term as "[r]isky, endearing, charismatic, and unknown, wildlife persists in our post-Natural world. Unlike nature, wildlife also suggests processes. It describes ecologies of becomings, not fixed beings, with movements of differing intensity, duration, and rhythm. Wildlife is discordant, with multiple stable states. It is not in any permanent balance. It is shaped by, but divergent from, the past, multinatural in its potential to become otherwise" (Lorimer 2015, 7).

Instead of referring to "nature," I have leaned toward "environment" when referring to surroundings that also include humans. However, the use of the environment has also been criticized for excluding humans. Rust, Monani, and Cubit (2022) dove into a conceptualization of "environment" and "ecology" and the

[5] The term "biodiversity" was coined by conservation biologists in the mid-1980s. It gained widespread attention during the 1992 United Nations Earth Summit in Rio de Janeiro, where 155 countries signed the Convention on Biological Diversity (CBD). (Lorimer 2015,57).

implications for how we perceive the world. They conceived of the environment as something that materially environs: "It is constructed in a historical moment – endlessly repeated – of exclusion. Like 'nature,' the word 'environment' appears as the negative of a positive term" (Rust et al. 2023, 2). They saw no radical difference between nature and environment that, according to them, exclude social and technical from physical and less-than-humans. Ivakhiv (2023, 35) argued that the concept of "*the* environment" is defined in opposition to humanity, creating a binary division between humans and the rest of the natural world. Yet he challenged the notion of a *singular*, monolithic environment by highlighting its inherent relational nature. Ivakhiv proposed a more nuanced understanding of environment*s* as diverse and multifaceted, rejecting the idea of a passive environment acted upon by active humanity, arguing that both humans and environments are complex aggregates of interacting forces.

However, when it comes to the term environment, it can have different meanings, and I do not take it as synonym for nature. For example, in legislation (at least in Finland), there are differences between "nature conservation" and "environmental protection," while the first is connected to natural parks and nature reserves, the latter is understood to include human infrastructures as well (Nature conservation act 9/2023; Environmental protection act 527/2014). As I understand the term environment, we cannot be separated from that environment. As Silke Panse put it, "We cannot make images of a burning nuclear reactor from nearby without being affected by its radioactivity. Documentary images are not separated from what is depicted in them, as they are part of the world. The immanence of the world to the work and the artist is an ethical and ecological issue. Images are not just visual. The image and the filmmaker are parts of 'the environment' that is not only around us, but goes through us" (Panse 2022, 44). This is also true in the filmic event when watching a film. The cinematic environment does not just environ us but goes through as affects and sensations (Massumi 2002; Deleuze 2006). This understanding of filmic assemblage is closely connected to "ecologies." Assemblages are further discussed in the Methodologies section.

Ecology, on the other hand, has been offered as a term that encompasses all interactions between humans and other-than-humans, including both living and nonliving components, from natural elements like oxygen to complex human-made structures (Rust et al. 2022). This definition emphasizes the interconnectedness of all phenomena on the planet, highlighting the impossibility of isolating any aspect of the environment from its broader context. Initially, ecology was conceived primarily as a scientific discipline focused on the study of interactions between living organisms and their environments. However, since the 1960s, ecological thinking has significantly influenced broader notions of ecology, giving rise to political ecology, deep ecology, social ecology, and feminist ecology (Ivakhiv 2023).

For Ivakhiv (2023, 37), ecology is "the study of relational systems that are dynamic, changing, and processual. They can be studied as unities consisting of mutually adapting elements, even as they are recognized to never be fully closed systems." He drew from Félix Guattari's *The Three Ecologies* (1989) in his conceptualization of a three-ecology approach that combines the physical, social, and mental environments. For Ivakhiv, the first ecology is ecology of science, which has traditionally focused on studying observable and measurable phenomena, such as organisms and their interactions with their environments. This material ecology, called the *ecology of objects*, involves examining the material and energetic relations present in the observable world. The second ecology is named *ecology of subjects*: "an ecology of agency, and the negotiation of recognition. Who will get to qualify as a subject […]." This social ecology encompasses not only human interactions but also relationships with nonhuman entities that many humans have historically included in their social ecologies. The third ecology is framed as an ecology of the "hows" that constitute the world, emphasizing the ways in which subjects respond to objects and reshape both themselves and objects in the process. This perceptual ecology, which Ivakhiv called *ecology of mediation*, to avoid body/mind dichotomy, and mediation underscores how thigs, like bodies and technical media, shape subjective perception and affect the materiality of the world (Ivakhiv 2023, 38–39). Ivakhiv (2023, 39) suggested that "[p]rocess-relationality is mediation; it is interaction, intra-action (to use Karen Barad's [2007] term), and transformation involving the sensory, perceptual, and technical modalities available to bodies […]" Mediation then happens "via the shaping of perceptual and responsive capacities. Mediation is *how the world works."* Therefore, as Ivakhiv argued, media ecology is not just a biological metaphor brought to the social or media world, but he emphasized that this is a two-way process: "Media constitute ecosystems and environments built by their constituent members, but so does biology itself. Both conceptions—of media and of biology—are radically constructivist in that both are understood to be constituted by the actions and processes that make them up" (Ivakhiv 2023, 40). Ivakhiv's three-ecology framework resonates with what Latour (2004) conceptualized as "matters of facts," science's objective stance to what it studies (things to discover) and "matters of concern" when things around an "objective" stance start to unfold and become relational as holding things together in a specific moment. As *article IV* shows, Maria Puig de la Bellacasa (2017) added here "matters of care," when paying attention to the ethico-politics of possible and becoming in the world.

These three ecologies take holdings in the process of wildlife mode and comprehending it. Although the film frames the objects of what is shown, it positions these as objects of knowledge (or in relation to knowledge). Yet following the ecology of subjects, these objects are not mere objects but focus moves on *relations*

between objects and subjects, along with how they are constituted. Attentions and framings bring in mediation as the third ecology that produces environments together with the subject-objects of filmic event. However, I understand ecology as a broader, relational, rhizomatic concept (Deleuze & Guattari 2004) and not necessary referencing Ivakhiv's tree-ecology framework, yet I find the framework very rigorous in pointing out that ecology is not just a metaphor from natural sciences.

The present dissertation explores environments and ecologies that the wildlife mode of documentary film brings forth. In this summary section, I suggest the conceptualizations applied in the articles as ecologies of wildlife mode as they bring forth the relations between humans, animals, technologies, and environments. I understand them as functioning within Ivakhiv's conceptualization of three ecologies in ways relations are produced in the documentaries. *Article I* explores underwater environments and the reterritorialization of land-based aesthetics, while also examining the ecologies of knowledge production in the studied documentaries*Article II* is interested in the aerial environment and the potentialities to perceive air as embodied while questioning the tradition of aerial view focusing on ecologies of gaze. *Article II* also briefly discusses the wildness of wildlife and its relation to technologies in the context of tame birds. *Article III* explores ecologies of scale and analyzes microscopic environments and insects that most scholarly work (Bousé 2000; Mitman 2009; Chris 2006; cf. MacDonald 2006) on wildlife documentaries has ignored, yet *article III* includes bugs as part of discussions about wildlife and examines mammalian bias of wildlife documentaries. *Article III* discusses how microscopic environments are brought forth while examining insects as cinematic subjects that mediate different scales to perceive ecological relations. *Article IV* discusses ecologies of care in framing climate change and ecological temporalities in wildlife mode in polar regions. *Article IV* also explores what kinds of wildlife are focused on in visualizations of climate change in wildlife mode.

5 Research Design: Methodological Considerations

I have already introduced ecocinema as my theoretical context, yet it can be understood as the methodological approach "critical intervention" (Monani in Alex & Deborah 2016) as well while focusing on nonhumans on and of the screens that often were ignored in film scholarship (cf. Past 2019). There have been comparisons with the ecocinematic approach to feminist studies (e.g., Cubitt 2012) while early feminist film studies paid attention to things like gender representations on the film and constructions of gaze(s), ecocinema studies bring environments, nonhuman animals, and relations to them under academic conceptualizations. As I see it, ecocinema studies has converging objects and interests with feminist studies, like rethinking binary distinctions and power relations, among others. Even if all films can be studied with the lens of ecocinema, other films might be more relevant than others. As Solomon (2023) noted, "[O]bserving the local differences between film genres, styles, eras and regions of production can help us to test the possibilities and limits of ecocinema as a methodology." He also suggested that ecocinema can encourage us to make "evaluative comparisons" beyond just films. We can compare cinema with other media, extractive technologies, and the natural world. These comparative approaches might examine the differences between films, the human/nonhuman dynamic, fossil fuels, and renewable energies or how documentaries and fictional works articulate the climate crisis (Solomon 2023). In the articles, I have compared the films with each other and/or with used concepts that often emerge from the films in question. Even if my approach is not to evaluate the films against other films, in a sense to make order of preferences, the comparative approach brings forth different perspectives for the specific research problems in the articles. Methodologically, each of the four articles applies a different concept or term: *Article I* de/reterritorialization and movement in understanding underwater environments; *article II* gaze and de/reterritorializations in aerial environments; *article III* scale on microscopic and grassroot environments; *Article IV* care and temporalities in polar regions as environments of climate change.

5.1 Examining in-between relations

I do not consider the films as objects or texts that I read but rather as an active part of the research process. As already noted, epistemically, I am not so much interested in what the films *are* but rather what they can *do* and what kind or relations they form (cf. Hongisto 2011). My analysis of the films is affirmative, paying attention to aesthetics and affective processes in the filmic event. As a research methodology, the concept of affect draws attention to what moves us and, thus, what might be registered as change (Hickey-Moony 2013; Coleman & Ringrose 2013; Massumi 2002). These changes in visual and affective registers become important when considering relations and aesthetics beyond anthropocentrism. As Hickey-Moony (2013, 79) suggested, "aesthetics teach us by changing how we feel," considering the ways in which "this awareness can be brought into research." Like the theoretical conceptualizations of animal turn and posthumanities, affective methodologies also question the binary distinctions of object–subject and nature–culture.

In Deleuzian terms, affect is a connection, a linkage that involves multidirectional influence, opening worlds between immanent entities. The body is understood through its capacities and affective potentials—that is, how it can form connections with the world. For example, Brian Massumi understood affect as matter-energy and intensity, which should not be confused with subjective feelings or social meanings (2002, 30). For Deleuze, affect is a mediating concept that operates in the relationships between subjects or singularities. Affective approaches also aim to challenge representational thinking. According to a semiotic understanding, images are static, symbolic components of representational constructs. Representationalism views phenomena (events, objects, etc.) in relation to something external, meaning that they are often defined or understood by comparison to an outside reference point. For example, images are examined in relation to something external. However, when emphasizing immanence, the focus shifts to understanding phenomena as they are in themselves and through their interconnectedness (Hongisto & Kurikka 2016). Instead of seeking external reference points, this approach examines how things relate to and influence each other within a system or context. It emphasizes being within or part of something rather than outside or separate from it. I follow here the Deleuzian approach to the materiality of filmic medium (cf. Powell 2005, 115) by focusing on the aesthetics of the studied films, their framings and expressions. Instead of interpreting signs semiotically as representations, for Deleuze, they are objects of an experiential encounter. We encounter moving images not by extracting their symbolic meanings but by perceiving their dynamic movements (Powell 2005, 115). At the beginning of my research project, I was heavily influenced by Deleuze's theories because they were what I delved into in my master's thesis. Although they have since moved to

the background of my writing, they still serve as the framework from which my thinking originated.

5.1.1 Films as assemblages

I understand the cinema and films studied here as assemblages, a temporary grouping of relations. Assemblage theory, as developed by Gilles Deleuze and Félix Guattari (2004) and Manuel Delanda (2006), provides a dynamic framework for understanding the interconnectedness and fluidity of various elements. An assemblage is a contextual arrangement where multiple bodies, temporalities, spaces, and modes of operation are connected temporarily, emphasizing the relations between these elements rather than the elements themselves, while the focus shifts to "in between" spaces where the elements interact. These interactions are characterized as becomings, constantly in flux, evolving, and never fully complete. For Deleuze and Guattari (2004, 556), an assemblage comprises content and expression along with processes of territoriality and deterritorialization; they conceptualized assemblage as rhizomatic structures that produce and dissolve dichotomies, such as nature/culture and human/nonhuman. These concepts are intertwined with each other and cannot be seen as distinctive but rather as including each other. In this inclusive process, deterritorialization refers to the creation of new encounters and assemblages that challenge and transform these binary distinctions. For Deleuze and Guattari, territory represents an order or system, while deterritorialization is the act of breaking away or expanding a territory. Reterritorialization, in turn, involves the formation of a new territory where elements come together to create a new composition. This perspective challenges static and binary ways of thinking, promoting a view that sees the world as a series of interconnected and evolving processes (Deleuze & Parnet 2002).

Deleuze's and Guattari's concepts do not refer to the essence of things but emphasize movement and change, thus being useful for conceptualizing ecological connections (Herzogenrath 2008). Thus, assemblages form territories, yet they are constantly in the process of creating and dismantling, reterritorializing, and deterritorializing compositions of agencies (Nikolić 2018). This is methodologically important for my study because it brings multiple agencies at play in cinematic events, emphasizing processes rather than the essence of things. As Coleman and Ringrose (2013, 9) pointed out, "[T]he methodological task is thus to enter the middle, the between; to relate." The methodological disposition here stresses the open-endedness of assemblage. Anna Tsing (2015, 22) offered an understanding of assemblage as interspecies gathering as "[a]ssemblages are open-ended gatherings. They allow us to ask about communal effects without assuming them. They show us potential histories in the making". Since I understand films as assemblages, this

allows for the examination of multiple agencies and their relationships, rather than viewing films as mere representations of what remains transcendent to the images. Therefore, nonhumans also start to appear as agencies in the knowledge production and aesthetic processes of the film. The assemblages I examine consist of multiple components that interact within the cinematic event, shaping both aesthetic and knowledge-production processes. These assemblages include nonhuman agents, such as animals and environments, which actively contribute to the film's visual and narrative structures. Human interventions, including filmmakers and their methods as well as technological mediations like drones and microscopic lenses, also play key roles. Additionally, viewer perceptions and affects, along with film aesthetics, such as cuts, compositions, and framings, are crucial. These combined agencies create relational dynamics that challenge anthropocentric perspectives and foster a complex understanding of ecological connections and nonhuman agency.

5.1.2 More-than-human visual analysis

During the current dissertation project, I have found alliances from diverse disciplines. While thinking about environments and more-than-human agencies, I have found many like minds, especially in geography whose approaches to environments, nonhumans, and films have been influential for me. Geographer Jamie Lorimer (2013) conceptualized the practice of methodology combining a Deleuzian understanding of cinema with more-than-human approaches. He emphasized the importance of paying attention to nonhumans in visual methodologies: "The category 'more-than-human' describes the embodied, affective, and skillful dimensions of our multispecies worlds that often elude research methodologies preoccupied with human representations" (Lorimer 2013, 61). A more-than-human research methodology consists of the theoretical conceptualizations introduced earlier in this summary section. First, it draws attention to the agencies and continuous examinations of modern binaries. This challenges humanistic ontology, highlighting the variety of objects, organisms, forces, and materials that exist in the world and interact between bodies. For example, categories like "the animal" and "the nature" need to be recognized as diverse and changing. As Lorimer pointed out, such threads have epistemological consequences, while "attention has turned from cognition and representation to issues of embodiment, performance, skill and affect, understood as relational and distributed forces and competencies" (2013, 62). All this passes through the distinctions and boundaries between humans and nonhumans. Third, since the focus is on nonhuman agencies and material connections, as well as relational and affirmative ethics and politics which are open to difference as a dynamic process, this addresses the ways in which humans and animals can live together (Lorimer 2013, 61–62). Lorimer pointed out that more-than-human

approaches in visual analysis are a poor fit with representational methodologies that aim to interpret and critique texts: "Such approaches can produce 'dead' accounts that struggle to appreciate the multisensory energies and intelligences of human and nonhuman bodies, gestures, and events (as well as of images and texts themselves)" (Lorimer 2012, 63). However, as a geographer, Lorimer understood film as a visual tool to witness and interpret these interactions and relations. My approach differs from Lorimer's treatment of the films themselves. I understand films as *cinema* in their own right, not so much as tools to examine these human–nonhuman relations. As a media researcher, I want to understand the processes of mediation more deeply, which Lorimer did not focus on as much.

5.1.3 Milieu-specificity and toward comparative zoological media studies

I have found that both the films and their subjects influence the writing process, creating new territorializations as I shift my focus and attend to some aspects while ignoring others (cf. Bellacasa 2017). Writing serves as a method for making things visible in my research. When I began watching the films, I had a general idea of what I wanted to write about, which also influenced my selection of the films. However, the themes have taken form in writing, reveling themselves. These have not always been conscious choices that I, as a researcher, have made, but the process of writing has brought forth these themes, connections, and thoughts. I would say that, rather than looking *at* animals and environments on film, I have rather looked *with* them. The writing process has been written *with* films and other nonhumans.

What I have engaged here—and through which I have engaged with and analyzed the documentary films and series—is the concept of *situated knowledge* (Haraway 1988). Haraway argued that all knowledge is produced from a specific standpoint, being influenced by the positionality of the knower. This contrasts with the traditional view of science, which seeks to achieve a "god's-eye view," that is, an objective perspective that is detached from any particular context or perspective. Haraway's situated knowledges emphasize the importance of acknowledging the partial, contextual, and embodied nature of all knowledge: "We do not seek partiality for its own sake but for the sake of the connections and unexpected openings situated knowledges make possible. Situated knowledge is about communities, not about isolated individuals. The only way to find a larger vision is to be somewhere in particular" (Haraway 1988, 590). Important for me here is the "somewhere" as a specific environment that is brought forth in specific cinematic assemblages that make worldings. Melody Jue has thought of these specific environments in her book *Wild Blue Media* (2020). She pointed out the importance of *milieu specificity "*that addresses the situated nature of all knowledge production for specific observers.

Objectivity is to be found not in a universal perspective (what Haraway calls the 'view from nowhere') but in the particularities of embodied knowledge in milieu-specific conditions that stretch us to think through the ocean—or the sky, high-altitude mountains, or low-gravity environments, such as the moon and Mars" (Jue 2020, 13). Jue (2020) also brought up the milieu where research is most often conducted: indoors next to a table. She asked how this affects the research of different environments and what is our situatedness there? As Jue noted, it is very terrestrial bias. However, she continued that this can be understood as a form of situated knowledge rather than a flaw (Jue 2020).

Milieu-specific analysis focuses on understanding how perception and mediation are made possible within a particular environment. Jue called after not only to consider representations of specific environments in literature and media but also to attend to them as "an *environment of interpretation*" (2020, 17), acknowledging that "specific thought forms emerge in relation to different environments, and that these environments are significant for how we form questions about the world, and how we imagine communication within it" (2020, 3). Following Peters (2015), Jue brought up *species-specificity* alongside milieu-specificity, suggesting that *zoological comparative media studies* drew attention to questions of perception and narratives "not only differences in media materiality and form but also the species specificity of media under particular environmental conditions" (Jue 2020, 26, 27).

I have engaged with milieu- and species-specific analysis in the articles, yet at the time of the writing, I was not aware of Jue's conceptualizations because I found them while writing this summary section. Yet these methodological conceptualizations have been most helpful and enabled me to articulate the original aims of this research journey more clearly. *Article I* questions the terrestrial bias of wildlife documentaries compared with the underwater environment and its specificities in aesthetics of filming under pressure and materiality of water. *Article II* focuses on birds and air as environments that technologies of aerial filming bring fort that without species specificity of birds could not be understood without. This also addresses the questions of terrestrial biases. *Article III* studies microscopic environments that are mediated through visual technologies of microcinematography that enable the perception of miniature creatures and their relations to their specific habitats. This engages the examination of scale, environment, and mammalian bias of wildlife documentaries, which are the very questions of species specificity. All these articles question human access and relation to these environments and question anthropocentric views as well as terrestrial aesthetic bias. *Article IV* focuses on climate change as a perceptual environment through which polar regions are perceived. Specific animals (including humans) are, though, mediators of climate change in the polar regions and the ways they may bring forth different relations between climate change and the viewer in their specific environment.

5.2 Research material

In choosing the research material, I have made decisions to focus on newer wildlife documentaries around the 2000 onwards. The earliest documentary is from 1996 to 2019. My initial time frame was to focus on documentaries produced on and after 2005 because it is referred kind of change in paradigm in wildlife documentaries and how they discuss environmental problems. However, not all the documentaries I chose explicitly deal with such problems, yet by representing animals and environments, they can still be seen as commenting relations between humans, animals, and technologies in the new millennium. Besides the extensible time frame, I have chosen to focus on European wildlife documentaries. In the case of the present research, many of them are BBC productions or British[6]. Britain has a long history in wildlife and natural history filmmaking, and it is even institutionalized, unlike in other European countries (Gouyon 2009). The BBC's documentaries have a wide audience because of their global circulation and, therefore, have shaped the ways in which wildlife documentaries are perceived and understood by public. Therefore, contemporary wildlife documentaries made outside of Britain are often compared against the productions of BBC's NHU, which has also served as "a template" for television productions elsewhere (Gouyon 2009, 36). In addition, many of the films I have selected feature David Attenborough as a narrator. Attenborough has been a central figure in postwar natural history television in the West (Gouyon 2009; 2019). Even though I focus on widely circulated, commercially successful wildlife documentaries with high production value, I argue that these films and series are more complex and ambiguous than their commercial status might suggest. While they can certainly be analyzed as part of a profit-driven media industry, like any cultural product, they invite *both–and* readings rather than being reducible to a single interpretation (Paasonen 2023). Through my focus on BBC productions and other widely circulated documentaries, such as *Microcosmos*, I observed a notable gap: although these works are highly popular, the specificities of their aesthetics have received surprisingly little academic attention. Especially noteworthy is their use of cinematic technologies, which creates aesthetic variation, and their use of visual and affective strategies offers a productive ground for examining how these documentaries engage audiences and make environments and processes visible that would otherwise remain imperceptible to the human eye.

[6] I have focused on the British versions of the documentaries that feature an original voice-over. *Microcosmos* is an exception, as it is a French documentary; I watched the version with an English voice-over, which appears only at the very beginning and end of the film.There is a tradition to dub wildlife documentaries; for example, in Finland, they are the only programs—apart from children's' programs—on television that are dubbed.

However, even if my material consists of popular wildlife documentaries, I wanted to focus on documentaries that might bring forth environments beyond everyday perception and that need to be mediated by technology. Therefore, I have not studied documentaries that might first come to mind, such as documentaries about African wildlife or big mammals. I also wanted to focus on documentaries that might challenge anthropocentric perceptions. The documentaries, especially the whole series, do not necessarily have any radically new or nonanthropocentric approaches in the sense that some more experimental films might have. However, I have wanted to see if the popular wildlife documentaries might offer some "spaces in-between," in Deleuzian terms line-of-flights from molar to molecular, that might go beyond human-centric ways of looking. My methodology for choosing the specific films has been affective, as I have chosen films that I enjoyed watching and where I felt an affective encounter with the images, animals, and environments. Gouyon (2009, 39) emphasized the pleasure of watching as the basis for choosing the studied natural history documentaries: "films chosen as topics for the case studies […] were first and foremost guided by the pleasure I took in watching them over and over again." I find Gouyon's notion of the pleasure of watching wildlife documentaries interesting in the context of affects within the wildlife mode, as it aligns with MacDonald's (2006, 4) notion that wildlife films are "admired by public audience" yet ignored by scholars –who, as it seems, have also ignored the film's affectivity and the pleasure of watching them. Anna Powell (2005, 119) made similar methodological remarks in choosing the material for studying horror films, noting that it is what "turns on" and both academic and personal interests that affect these choices. Hence, I have chosen films that I find intriguing and, at least at some level, have taken the pleasure of watching them many times. I have not written about films I could not stand to watch—there is lot of them in wildlife genre as well.

Following the research plan, in which I outlined the specific articles, I have selected the material one article at a time. The material also varies across the articles. This approach has allowed me to make different decisions, such as determining the number of documentaries discussed in each article, as well as responding to newly released documentaries.

The material consists of case studies of eight different documentaries. *Article I* focuses on three different documentary series: *Planet Earth*'s episode "Ocean Deep" (2006), *Dolphins – Spy in the Pod* (2014), and *Oceans* (2008). Here, I have chosen to analyze one episode from a BBC's series *Planet Earth* (2006), *Ocean Deep*, which is the only episode of the series that focuses on the deep sea. *Planet Earth* has 11 episodes, each about 50 minutes long. I wanted to focus on that episode because of its depictions about deep sea that are not that common, and I wanted to have discussions about deep sea alongside the shallower waters and surface to possibly find differences in how different underwater depths are depicted. *Dolphins – Spy in*

the Pod, a two-part series produced by John Downer Productions and distributed by BBC One. I chose the series because of its interesting depictions of technology. The series uses footage from an animal camera carried by a dolphin as well as cameras shaped like a turtle, a dolphin, a puffer fish and a squid, which encourages the interaction between dolphins and technology. The third documentary series selected here is *Oceans* (2008), an eight-part series produced by the BBC and Discovery Channel. The series is like a travelogue with a strong environmentalist tone, and it engages with a marine environment as seen through human action. All these documentaries bring forth different approaches to the underwater environment as elaborated in the research questions: animals, technologies, and humans.

The material in *article II* consists of one documentary series: *Earthflight* (2011). The series focuses on birds and follows, for example, birds' migration, while in some of the sequences, the visual narration takes perspective in the air in very similar ways than in more experimental French documentary *Winged Migration* (2001). In the case of *article II*, I saw *Earthflight* and wanted to write about its approach to air and aerial filming, which I found very intriguing. I tried to find another film that I could do some comparison with or tease out some other perspectives, but it was hard to find any other film that would have a "sense of air." However, images of the bird camera were used in some other documentaries as well yet not in the excessive way it was in *Earthflight.* Therefore, I ended up with just one documentary for the material in *article II*. I also framed out more traditional scenes where birds were filmed from the ground, out of my analysis as well some drone shots that were intriguing but for the clarity of the argument ended up not using them in the final version. In *article II*, I examine the possibilities for a more-than-human gaze, an argument that emerges from the visual material and assemblages of birds, technologies, and humans.

In *article III*, I have focused on documentaries about insects, BBC's *Life in the Undergrowth* (2005), and French full-length documentary *Microcosmos* (1996). In the process of choosing the films for this study, I wanted to find two different wildlife documentaries focusing on insects and invertebrates. Compared with the number of films made about mammals or other bigger animals, there were much fewer insect documentaries made during the time period I wanted to focus on. Therefore, I chose to include *Microcosmos,* which otherwise differs from my other material as a full-length documentary made for big screen, while the other materials are television documentary series. However, I find that *Microcosmos* makes a nuanced contribution to the dissertation and the conceptualization of the varied aesthetics within wildlife mode because it is a more experimental documentary and is without a voice-over. Both *Microcosmos* and *Life in the Undergrowth* present unique characteristics and approaches to depicting insects. Although in *Microcosmos* there are no humans visible in the framing, *Life in the Undergrowth* is a presenter-led

series with the visual appearance of David Attenborough. This gave me a chance to have different kinds of discussions around scales and framings while a human figure was present alongside insects.

Article IV analyzes two episodes from two different wildlife documentary series. These episodes are from the documentary series BBC's *Frozen Planet* (2011) and *Our Planet* (2019), Netflix's first wildlife documentary series. *Frozen Planet* is a seven-part series that exclusively focuses on the polar regions, while *Our Planet* covers a wide range of different environments around the globe. I focus on the last episode of *Frozen Planet* called "On Thin Ice" because it explicitly engages with climate change and its visuals differ from blue-chip mode, while there are "talking heads" and other visualizations of human action in the polar regions. The episode "Frozen Worlds" from Netflix's eight-part series *Our Planet* focuses on the polar regions as well but has more traditional visualization of the wildlife mode; however, the voice-over explicitly engages with climate change and how it affects the polar regions. When I began outlining *article IV*, I wanted to focus on the polar regions, but I had not yet chosen my approach. I watched many documentaries and wildlife documentaries about the regions. However, when *Our Planet* was released on Netflix and the discussion around the series focused on climate change—since it was marketed as the first wildlife documentary series to explicitly address the issue—I decided to focus on that one. However, the same kind of discussions about climate change had emerged around *Frozen Planet* eight years earlier, which was marked as a paradigm change in wildlife documentaries because it also explicitly addressed climate change yet only in its last episode. Emerging from these materials, in *article IV,* I chose to focus on climate change visualizations in the documentaries about polar regions, and the roles given in different agencies of humans, animals, and technologies in these visualizations.

5.3 Ethical considerations

My research has focused on film materials that are widely circulated on television, the internet, streaming services, and movie theaters. I have accessed my material by watching DVDs or legal streaming services. Therefore, there are no ethical considerations regarding the materials themselves. What I need to consider as a researcher is positioning and how I use language to communicate the research. In *articles I* and *II,* I use "we" not only for addressing the implied reader but sometimes as a kind of generalized humanity. As I have become more aware during my research on reflecting nonhuman animals and environmental issues on screen through the lens of ecocinema studies, I find that the way I have generalized "we" can be problematic and needs more reflection.

In the context of my work, using “we” assumes a universal human perspective that can unintentionally reinforce exclusionary and anthropocentric views. This tendency is especially problematic given the urgent need to challenge the simplistic and often misleading notions of a unified humanity, particularly in the face of posthumanist critiques and the complex realities of the Anthropocene. Rosi Braidotti (2020) pointed out that appeals to a common humanity can be misleading because they often mask structural injustices and reinforce a narrow, exclusionary view of what it means to be human. This view typically aligns with the Eurocentric ideal, excluding diverse human and nonhuman perspectives. Furthermore, the use of “we” in the academic discourse can obscure the differential politics of location and varying impacts of environmental and animal issues on different communities. It risks collapsing the multiplicity of experiences and perspectives into a single, homogenized narrative that fails to account for the nuances and complexities inherent in global, technologically mediated, and ethnically diverse contexts. In addition, it is essential to recognize that the binary distinctions between nature and culture and humans and nonhumans, which have been foundational to European thought since the Enlightenment, are largely absent in many other cultures around the world. (Braidotti 2020.) Instead of fostering a nuanced understanding, this generalization might unintentionally reaffirm the dominant power structures and marginalize alternative viewpoints. Reflecting on these critiques, I recognize the importance of moving away from a generic “we” and toward a more complex and differentiated understanding of subjectivity and agency.

However, the generic term ”animal” often groups together all living beings, and although humans are part of that category, other species are labeled as “nonhuman animals.” As Derrida (2008, 47) argued “[w]e have to envisage the existence of living creatures, whose plurality cannot be assembled within the single figure of an animality that is simply opposed to humanity.” In this dissertation, I have aimed to focus on the specificities of different species and emphasize their embodiment and agency rather than viewing them as metaphors or symbolic objects. Marisol de la Cadena (2019) proposed the concept of a “complex we,” which acknowledges the heterogeneity and interconnectedness of various beings and entities without erasing their distinctiveness. This approach aligns with the ethical imperative to also consider nonhuman perspectives and the intricate web of relations that constitute shared worlds.

6 Findings

In this dissertation, I have explored *how wildlife modes bring forth environments and entanglements between humans, nonhuman animals, and cinematic technologies*. To answer this question, I have analyzed the four case studies introduced in the summary section by examining the affective audiovisions of the documentaries, the agencies the films bring forth, and the relations between humans, nonhuman animals, and technologies. In this chapter, I introduce the findings of the research. Each subchapter concentrates on a specific research question, emphasizing the article that discusses it in depth. However, because all four articles address every question to some extent, the subchapters also refer to the other three articles.

Ecomedia studies span the epistemological biases between human and nonhuman, technology and nature, and material and immaterial, highlighting that these categories are not distinct entities but rather interconnected and defined in relation to one another (López et al. 2023, 2). Although the documentaries selected for the present dissertation, particularly the segments scrutinized closely, explore environments or processes that cannot be encountered directly by humans, this raises methodological, ontological, and epistemic questions (cf. Alaimo 2019). These inquiries address anthropocentrism and the various biases in filming other species and environments. My dissertation aims to unravel these complexities one article at a time by examining different perspectives on the topic.

6.1 Plurality of aesthetics and multispecies perspectives beyond terrestrial bias

To answer the question of *how wildlife modes bring forth knowledges of environments beyond human ordinary perception,* is addressed alongside the notion of the plurality of wildlife modes in the documentaries analyzed in *article I.* As Ivakhiv (2023, 35) proposed, a perspective on environments suggests that environments are varied and complex instead of being merely passive settings for human activities and that both humans and environments consist of intricate networks of interacting elements. *Article I* explores how documentaries shape perceptions of underwater spaces through their audiovisual aesthetics by drawing on

the resemblance between the oceanic environment and cinema through the term "movement."

As *article I* shows, the studied wildlife documentaries take different approaches to documentary knowledge, and their aesthetics assemblages make de/reterritorializations of terrestrial bias. The aesthetics of the underwater environment are not generic but appear very differently depending on whether they depict the abyssal zone of the deep sea or shallower waters near the coaster zone. *Planet Earth*'s episode "Ocean Deep" primarily uses spectacular imagery to create perceptions of the marine environment but often ignores the human impact on the oceans. The deep sea and abyssal zone are depicted as an alien environment of outer space. As a result, the knowledge conveyed about the deep underwater world is primarily linked to the animals in the framing rather than to the broader environment, while these animals can be viewed as *ecologies of objects* (Ivakhiv 2023). However, the creatures of the deep sea do not appear necessarily in relation to natural history knowledge because they can be left uncategorized. The animals are seen but not necessarily known, leaving the abyssal zone as a place of alien mystery. The visuality of *Dolphins – Spy in the Pod* differs drastically from *Planet Earth's* "Ocean Deep" because it highlights the underwater environment through the interplay between technologies and dolphins as *ecologies of subjects* (Ivakhiv 2023). *Dolphins – Spy in the Pod* integrates technology to produce a more haptic and sensation of the "reality" in the underwater world, following animal protagonists and different camera technologies that animals are in contact with, such as dolphin cameras. These rhizomatic images, with random framing and no clear focus, capture marginal elements moving into focus, encouraging viewers to shift their terrestrial perspectives. The imagery presents the underwater environment as a lived and embodied space, with knowledge depicted as something the dolphins share. The series emphasizes nonhuman agencies and their interactions with each other and technology, decentering humans from knowledge production, while the underwater environment becomes a lived environment rather than an object of human knowledge. In turn, *Oceans* adopts a paradigm of change and challenge (Jeffries 2005) as a form of a travelogue with an environmentalist tone as *ecologies of mediation* (Ivakhiv 2023). Ocean and underwater environments become an assemblage involving human action, animal agency, and marine technologies when it comes to facing environmental and social problems. The series portrays the land and sea as being interconnected, particularly in coastal zones, which question the binary between the land and ocean (Steinberg 2013). The marine environment is further defined by its position above or below the surface, acting as a threshold for human activity that can only take place underwater through the help of technologies.

By analyzing the relationships between humans, animals, and technology in these diverse films, I argue that oceanic environments are not merely stages where

action takes place in front of the camera. Instead, the underwater environment, where the camera is immersed and constantly in motion—rather than set up in a fixed 180° mise-en-scène—becomes an integral part of the aesthetics. The materiality of the ocean shapes the possibilities for filming underwater, bringing forth assemblages that challenge and move beyond the terrestrial bias. The aesthetic assemblages of these documentaries are closely tied to the material movements of water and animals. I suggest that animals and underwater environments are active participants in the filmmaking process, contributing to the creation of aesthetics and knowledge rather than being passive subjects or mere backdrops. Yet even if animals are active agents, the impact of human and animal actions is unbalanced (Haraway 2008). This approach challenges traditional anthropocentric views by emphasizing the active roles of nonhuman agents in the production of visual knowledge; this also contests the land-based aesthetics of filming, which I call a terrestrial bias.

What the article does not include is the historical context of the marine environment on films, which I have reflected elsewhere—following Starosielski's (2012) historical insights about underwater films—in a popular article I have written in Finnish and at the time in a conference presentation at The Annual Conference of the Finnish Society for Human–Animal Studies. I had the historical contextualization in the first draft of the article. However, because of the focus of the journal in human–animal studies, not environmental studies, this section did not end up in published version, yet I think *article I* would have benefit from historical context and given opportunity to reflect the visuality of the analyzed films more deeply.

Article I contributes to the main research question by showing ecologies between knowledge production and plurality of aesthetics by focusing on assemblages of wildlife mode that take place in and bring forth underwater environments. *Article I* pays attention to the milieu-specificity and species-specificity of the underwater environment, emphasizing how aesthetics are shaped by the particularities of underwater filming. Additionally, the underwater environment challenges the terrestrial bias. The surface especially becomes a liminal zone that is easily penetrated by other animals, but for humans, it is a question of technologies to be able to access the underwater environment.

6.2 From objects of observation toward lived and embodied environments

Article II continues the discussions about terrestrial bias in wildlife mode following *article I*. As *article I* shows the underwater aesthetics that go beyond the human, *article II* asks *how wildlife mode composes more-than-human visions* by reflecting more deeply what more-than-human vision might be and by problematizing the

anthropocentric gaze. The analysis shows how the documentary produces knowledge about the aerial environment by questioning anthropocentrism, mapping the aesthetic possibilities of imagining more-than-human spaces. Although the documentaries' visual styles can challenge anthropocentric perspectives, they also tend to anthropomorphize by framing imagery in ways that are comprehensible to human viewers (cf. Cahill 2013; Daston & Mitman 2005). I suggest that the more-than-human gaze is connected to the embodiment of animals, technology, and environments and that this kind of aerial perspective functions more as a territory than identification, and by framing it as an assemblage, there is the potential to reassess anthropocentric perceptions of environments and landscapes.

Article II focuses on the aerial view in the wildlife documentary series *Earthflight*. Wildlife documentaries tend to represent animals in a way that imitates human vision, while the anthropocentric gaze produces speciesed animals. However, in some sequences, the series produces a perspective of a bird's-eye view through small cameras attached to birds' backs or drones or paraglides flying among a flock, providing images of flying in close proximity to birds' movements and bodies. The bird's point of view, when the camera is gliding through the air or in the middle of a flock, beside the birds, emphasizes affective motion in relation to the environment. This also brings forth questions of the terrestrial bias of filming birds and other creatures that habit air. The images offer glimpses of "avimorphism," a subjectivity of birds (Ivakhiv 2013, 11), while the haptic flow of air currents and landscapes are not defined by human needs. This challenges the aerial view as an unattached vision like it is usually comprehended (Warner 2013). The footage of the "critter cam" can bring forth resistance to human interpretations (Smaill 2016). I outline the more-than-human gaze as the counter gaze to the human(ist)-centered vision of wildlife documentaries and the tradition of an aerial view. I argue that, with the concept of the "more-than-human gaze," it is possible to examine a perspective that binds together technology, nonhuman animals, and human viewers while showing that birds are not just objects to be gazed at but rather subjects to *look with*. This kind of assembled gaze produces unfoldings of the environment, perceived not merely as a distant landscape to be admired but as a lived, material environment shared with other nonhuman animals.

However, *article II* also brings forth the importance of milieu specificity when footage from a bird camera is compared with the dolphin camera underwater in *article I*. This also underscores the materiality of technology and its connections to particular environments, making these reterritorializations visible. Although both footages can challenge the terrestrial bias and bring forth the materiality of their environment, the underwater footage (*article I*) made little sense without a voice-over narration, while the images of camera carried by a bird, on the other hand, offer very different perceptions of air and landscapes by visualizing the air as a lived

environment. Here, the same technology, a camera that is carried by an animal, produces very different kinds of perceptions depending on the environments and species that carry them, which emphasizes the agencies of the nonhumans and environments. This aesthetic assemblage is what I suggest as a certain kind of wildlife mode that negotiates relations and ecologies in specific ways for the animals, environments, and technologies in question in the context of the film, yet the same film has other modes as well that are not discussed here. By considering embodiment, which allows for a broader understanding beyond anthropocentrism (cf. Pick 2011), *article II* raises the notion that framing from bird camera footage also serves as a close-up, capturing the shivering feathers of the birds tightly within the frame. However, the image retains the surrounding environment without cutting it off, even though the tight, randomly framed image also includes horizontal lines and the landscape. This rethinking of how nonhumans challenge framing at cinematic scales is something I explore more in *article III*.

6.3 Mediating ecologies of scales

Recent conceptualizations of scale have challenged the traditional notion of humans as the primary reference point, emphasizing nonhuman dynamics in mediation of scalar access and the significance of scalar difference (Horton 2021) as well as potentials of scalar vicissitudes to dislocate the viewer (Doane 2021). The question of *how animals become mediators in wildlife mode* can be addressed by delving into the intersection of cinematic aesthetics with scales and the portrayal of insects in wildlife modes. Although cinematic scales have mostly been defined in relation to the human body (Doane 2021; Horton 2021), *article III* rethinks these scales in relation to insects through microscopic imageries. *Article III* delves into the portrayal of insects as cinematic subjects (as mediators) and explores shifts in scales. The theorization of wildlife documentary has mostly ignored its relation to insects (Macdonald 2006; cf. Bousé 2000; Mitman 2009; Chris 2006), while focusing on mega-fauna. I show how questioning the mammalian bias of wildlife documentaries can go beyond anthropocentric scales in cinematic aesthetics as well as rethinking relations between insects and humans by bringing in different wildlife modes.

Depicting insects in documentary mode originates from scientific, microscopic illustrations as well as early cinematic experiments with nonhuman movements. However, because these small creatures have been hard to record in their natural environment before advanced filming techniques, they were shot in cinematic laboratories (Harbord 2016) or in studio environments that isolated insects from their natural habitats, here following specimen logic, while the viewer of the images perceived them as isolated objects. I show that scalar vicissitudes in filming insects in environments that they can have meaningful contact with can also bring forth

perceptions to environments that go beyond anthropocentrism while visualizing them within scalar difference. Microscopic depictions of insects bring forth "world-making" that engages with scales, ways of looking, and thinking with insects. I show how, in both documentaries, insects and technologies bring forth an "insect world" (cf. Dodd 2012; also Mikkola 2024) that does not easily accommodate humans because of the scalar difference. Although this "insect world" serves as a spatial metaphor for our understanding of insects, it encourages viewers to adjust their perceptions to encompass different scales and durations.

Through the scrutiny of insects as cinematic subjects, I contend that it prompts a re-evaluation of cinematic scales, inviting reflection on the ethical dimensions of scale within the human–insect relationship. The examination of close-up shots and slow-motion sequences in films has shown how insects impact cinematic techniques, both technically and visually. These challenges traditional ideas of what a close-up entails and prompt us to rethink how scale is represented in cinema. Unlike close-ups of mammals, which typically focus on their heads (Bousé 2000), close-ups of insects often highlight other parts of their bodies. However, when we consider these insect close-ups in relation to the surrounding images, they help illustrate the precise relationship between the insect and its environment. Therefore, the close-up of an insect's body acts as a mediator, connecting the viewer to the environment in which the insect habituates. Instead of being isolated, these close-ups enable an engagement with specific environments and evoke a sense of proximity and closeness, while it becomes evident that insects can altern cinematic scales. This challenges the idea that scale in cinema should always be in relation to the human body. This shift away from anthropocentrism opens up new perspectives on ecological relations within films. By acknowledging the temporalities of nonhuman beings and different durations, insect documentaries can also reveal the temporal scales of the world in various ways. These visual manipulations of time contribute to a deeper understanding of scale beyond human-centric viewpoints.

Regarding the main research question, *article III* contributes by showing how scalar differences, both spatial and temporal, can bring forth relations to environments and, on the other hand, make imageries of them that otherwise would be invisible. In addition, I show the importance of acknowledging species specificity in aesthetics and scales on film, along with how they bring forth a wildlife mode that differs from mammalian bias. In this wildlife mode around insects, instead of perceiving nonhumans as isolated objects to be looked at, they become mediators of different scales and environments. Wildlife mode might provide a space to perceive differently, including small organisms that, on the screen, may be associated with familiar mammals yet are utterly different. It leads to questions of ethics and attention, and when scales shift, previously unnoticed details become matters of care (Bellacasa 2017).

6.4 Aesthetics of selective mode of attention

Building on the idea that the paradigmatic shift in popular wildlife documentaries toward explicitly representing environmental problems, such as climate change, also provides viewers with the opportunity to engage in addressing these issues (Richards 2013; Smaill 2016), the present dissertation explores *how wildlife mode frames the visible and the invisible*. *Article IV* aims to answer this question with the case of the visualization of polar regions and climate change. Climate change is often described as difficult to visually represent because of its temporal and spatial fluidity (cf. Nixon 2011; Chakrabarty 2018). By focusing on documentary aesthetics, I demonstrate how wildlife modes and documentary expressions visualize the processes and temporalities that are not necessarily visible in the present moment. However, these visualizations often reflect a Western bias in depicting the polar regions as well as consequential biases in climate science (Moore 2017). The documentary mode instills an expectation of a coherent, verifiable realm of knowledge, engaging the viewer as the subject of that knowledge (Smaill 2017). Viewing becomes an assemblage of care within the filmic event, which entails recognizing nonhuman entities as part of a network of care. However, these aspects are not always explicitly discussed in the documentaries, highlighting the framing of climate issues and the politics of wildlife modes, particularly regarding what is shown and what is omitted as well as what remains unsaid and unseen (Blewit 2010). This connects to the idea that care is a "selective mode of attention" (Martin et al. 2015), where fostering certain lives and events inherently excludes others.

By examining viewer encounters with wildlife documentary expressions through the concept of care (Bellacasa 2017), this approach invites viewers to move beyond passive observation, instead focusing on the affective relationships they form in the filmic event. Through the two case studies in *article IV*, I suggest that viewer engagement with environmental problems occurs through witnessing and negotiations of violence. Affective witnessing (Richardson & Schankweiler 2019) draws focus to the complex temporalities, where witnessing an event surpasses the immediate moment. This aligns with cinematic temporalities, where the timelines of narration, filming, and viewing merge, unfolding diverse durations in the filmic event. Affective witnessing is not merely a passive observation but an active engagement that strives for a deeper connection with the subject. Thinking about the viewer's encounters with the wildlife mode through affective witnessing differs drastically from what Scott (2003), extending Bousé's (2000) conceptualization of blue-chip tradition, suggests – that the wildlife film's meaning would be closed because of voice-over narration. I propose that viewer engagement is affective, active, and not always relying on voice-over narration because the images might suggest more ethical approaches than the narration.

In wildlife mode, animals themselves become witnesses to their changing environments. Flagship species, such as the polar bear, are commonly used symbols to represent climate change in conservation efforts (Yusoff 2010; Heise 2016; O'Neill 2022). However, because care is a selective mode of attention, flagship species often monopolize attention as established symbols of climate change. Yet I suggest that there could be value in directing attention toward less visually striking creatures, which may provide fresh perspectives and new avenues for networks of care. The conservation discourse often highlights the interconnectedness and care between humans and nonhumans, but it omits the complex aspects of loss and violence from the images while addressing suffering and harm within biodiversity loss remains a significant challenge (Yusoff 2012). On the one hand, I show that, in the absence of explicit depictions of animal suffering or death, the scenes evoke speculative violence, invoking sentiments of melancholy and lament. On the other hand, including violence into the visual framework, thereby changing both the aesthetic and conceptual elements, allows us to recognize the indirect harm inflicted on nonhuman populations while considering the connections exposed through violence as well as those formed through care. When violence is visualized as part of the frame, it shapes the perceptions and relationships with nonhumans and environments (Yusoff 2012). I suggest that showing the explicit violence caused by anthropogenetic climate change changes the realm of aesthetics and expectations in wildlife mode. The viewer's engagement through affective witnessing and negations of violence prompts the viewer to reflect on their own position and relationships to the images.

Article IV's contribution to the main research question examines how the seen and unseen are negotiated in wildlife mode through the assemblage of nonhuman and human agencies. I demonstrate how the wildlife mode negotiates the concept of care, positioning the viewer as the subject of documentary knowledge, while also raising questions about whose narratives are being made visible. In addition, it highlights the prominence of flagship species in climate narratives, while other species, which may hold greater ecological importance but are less visually striking, remain inadequately represented. This leads to a critical reflection on *whose*—human or nonhuman—polar regions are envisioned in the aesthetics of climate change, along with how this affects the portrayal of different environments.

The collective insights from the articles reveal a variety of interconnections among humans, animals, and technology, which are framed within diverse environmental contexts. Each article contributes to understanding the wildlife mode as an aesthetic assemblage, and its plurality is evident in the way wildlife documentaries engage with different nonhuman agency and ecosystems—whether marine, aerial, or terrestrial—and how they address and reflect traditional biases in wildlife documentaries. Together, they form a cohesive body of work that can be

comprehended as an elemental approach to environments in wildlife documentaries, which has not been studied in this extension before. As case studies, each article also engages different wildlife modes that bring forth specific assemblages that negotiate between humans, nonhuman (wild) animals, (cinematic) technologies, and specific environments, forming ecologies of wildlife mode. In addition, my research forms a conceptual assemblage, while each article focuses on different concepts that emerge from the specific documentaries examined. The concept of deterritorialization (*article I*) explores how the spaces in wildlife documentaries are reshaped and redefined, shifting from fixed human-centered geographies to fluid, interconnected environments. Through the concept of perspective, or gaze (*article II*), it is possible to examine possibilities to challenge anthropocentric ways of seeing, while the concept of scale (*article III*) investigates how changing perspectives on space and temporalities can influence understandings of environments and species interactions. The concept of care (*article IV*) examines the ethics and affective entanglements in relationships with animals and environments in these documentaries. This conceptual assemblage reconfigures how wildlife documentaries bring forth environments as entangled, multiperspective, and ethically charged spaces. My research introduces a framework that integrates these elements and proposes a shift from anthropocentric, detached views toward a more embodied and relational understanding, pushing the boundaries of how to approach the role of wildlife modes in mediating human–nonhuman relations and technology.

7 Conclusions

The aim of this dissertation has been to examine how wildlife documentaries produce visibilities and envision more-than-human environments within the context of ecocinema and ecomedia studies.I have approached these films from a posthumanist perspective, which is a new approach in wildlife documentary scholarship, to explore the kinds of relationships that documentary aesthetics and the wildlife mode entail. Through the notion of *ecologies of the wildlife mode*, I have analyzed four case studies, investigating the relationships between humans, nonhuman animals, and technologies, focusing on the affective aesthetics presented in these documentaries and the agencies they depict. In addition, although the focus has been on the audiovisual analysis of the specific films and their aesthetics, the present dissertation has taken the challenge of analyzing wildlife documentaries as cinema (Macdonald 2006) and comprehending them as assemblage. Following the work of film scholars such as Pollman (2013), Smaill (2016), and Harbord (2016), who viewed cinematic aesthetics as a way to challenge human perception, I have examined wildlife documentaries' potentialities to go beyond anthropocentrism.

My research is situated within a specific timeframe, around the 2000s, during the "green wave" and "green chip" periods, which have been recognized as times of paradigmatic change in wildlife documentaries (Mitman 2009; Richards 2013a; Smaill 2016), following the cultural atmosphere of acknowledging climate change and environmental problems as a crucial challenge of our time in Western culture. Although popular wildlife documentaries started to reflect these problems more and depict human impacts in their narration, the present dissertation dove deeper into how and what kind of more-than-human environments and ecologies wildlife modes bring forth. My focus has been on the aesthetics of the wildlife mode and its world-making capabilities, which could be considered "fictional" elements of documentary films (cf. Hongisto 2015). However, I interpreted these elements as part of documentary knowledge production, emphasizing the imaginative aspects often overlooked in Western scholarship, particularly in studies on wildlife documentaries that have typically focused on natural history knowledge or narrative structures. My analysis has focused on how cinematic aesthetics brought forth environments and the relationships between humans and nonhumans, rather than merely representing

nature and animals, the history of the genre, or the narratives of wildlife films (cf. Bousé 2000; Mitman 2009; Chris 2006).

This dissertation was structured around four articles, each addressing specific research questions related to the broader theme. The themes have addressed a variety of different approaches to environments or processes that are not perceivable without technology. The topics of individual studies vary from underwater documentaries as knowledge production, and aerial filming contesting anthropocentric conception of environments, microscopic cinematography, and insects as mediators of scalar differences to conceptualizing climate change and of polar regions through care. The dissertation points toward the many ways wildlife modes can address relations between humans, animals, and technologies, making worldings that bring forth more-than-human environments. Comprehending the nonhuman agency in the filmic assemblage, animals do not appear as objects to be looked at but rather as mediators to seeing with. The findings provide insights into the epistemological biases of wildlife documentaries as well as the possibilities of undoing them. I have comprehended the concepts I have worked in the articles, such as deterritorialization, gaze, scale, and care as ecologies of wildlife mode, which all bring forth different aspects and relations of the cinematic and documentary aesthetics concerning environments and nonhumans.

I have suggested the concept of the *wildlife mode* to comprehend cinematic expressions in wildlife documentaries and knowledge productions. The wildlife mode emerges as a framework for understanding wildlife documentaries as dynamic assemblages that forge intricate relationships between humans, nonhuman animals, and technologies. Rather than merely categorizing as a genre, the wildlife mode highlights the active negotiations of expressions that shape viewer engagement with more-than-humans. This mode encompasses various aesthetic strategies inviting viewers to feel, know, and think with the nonhuman cinematic world. Although a certain wildlife documentary can have different documentary modes (Nichols 2001), the wildlife mode is something that can move across very different kinds of documentaries, as seen especially in *article I*, because these documentaries bring forth relations between humans and nonhumans. In proposing the concept of the wildlife mode, I have aimed to emphasize the plurality of aesthetics that can extend beyond anthropocentrism, challenging the conventional demand for observational realism in wildlife documentaries. Much like how MacDonald (2012) highlighted the potential of experimental cinema to train viewers' perceptions, I suggest that a diverse range of aesthetics—beyond the typical blue-chip mode—can shift viewer expectations, which is central to the conceptualization of any genre. If the visuality of the wildlife genre is understood in more nuanced varieties, wildlife documentaries might not be seen as a fixed representation of human–animal relations, as they often are. For example, BBC's *Alien Empire* (1996), a series about insects that I have

examined elsewhere (Mikkola, 2024), blends natural history depictions with aesthetics and even references from other genres like thrillers and sci-fi, utilizing techniques such as montage and an animated fly that serve as a kind of narrator. This raises questions about the boundaries of genres and how far they can be stretched. This is where the wildlife mode can function as a conceptual framework—it moves within and across genres, assembling different aesthetics. In doing so, the concept of wildlife mode enriches the discussions about wildlife documentary within ecocinema and ecomedia studies, offering pathways for understanding how documentary aesthetics can contribute to knowledge production about nonhuman agency and ecologies by fostering examinations of how wildlife mode engages in the creation of new ontologies and worldings.

I have stayed with rather Western thinking in my dissertation, while ecocinema and ecomedia studies have started to become more aware of the other epistemologies like Indigenous knowledges; this might be considered a shortcoming. However, I specifically wanted to focus on the tradition of Western (more specific European) wildlife filmmaking and on the relations these documentaries bring forth between humans, animals, and technologies within a typical epistemology of wildlife documentaries, that of natural history, and to see if there are other documentary expressions beside this. I have rather "stayed with the trouble" (Haraway 2016) of Western thought, and I follow Bellacasa's (2017, 171) line of thought as she has phrased it: "This is where I am situated, and where my research is still at the time of writing. […] I'm not looking to create a space for care outside present predicaments and hegemonies, but within." Although wildlife documentaries can be seen as very part of the hegemony of how wildlife is comprehended in Western culture, I find it important not only to study them but also how there might be possibilities for different comprehensions and alterations even within the tradition of wildlife documentaries. Reflecting on my choices of material for the present dissertation, four of the eight documentaries are BBC productions, two are from John Downer Production, one from Netflix, and one more independent production. The choice of the material can be considered as favoring BBC and big productions and, therefore, a bit narrow regarding the wildlife genre. However, I especially wanted to focus on popular wildlife documentaries and their aesthetics. As the dissertation has shown, there is a great variety of wildlife modes even among the popular documentaries and even within a single documentary.

Yet I find it would be important to study wildlife modes beyond Anglo-American tradition and the delicate canon where those films going beyond popular wildlife films, like Painleve's, Cousteau's, and Suckdorf's, for example, could be counted. Wildlife modes in small nations and non-Western traditions are hardly studied or their different nuances explored. In the scholarship I read for the present dissertation, Blewitt (2010) was the only one who reflected even shortly on wildlife

documentaries in other than Western countries. Another topic for future research would be the use of wildlife documentaries in media education, which is becoming even more important because of climate change and climate anxiety among youth and adults as well. Some documentaries, like *Our Planet*, even offer pedagogical material on their webpage, and the whole series was released freely on YouTube for pedagogical purposes during the COVID-19 pandemic, reaching audiences beyond the documentary expressions.

The present dissertation has explored the complex relationship between aesthetics, agency, and relationality in wildlife documentaries through the concept of wildlife modes. By examining how these films create more-than-human environments, I have demonstrated that they both shape and expand understandings of shared worlds. Although recognizing the limitations posed by a largely Western perspective, I have aimed to highlight the potential for varied expressions within this genre that might rethink the aesthetics associated with it. This underscores the necessity of investigating alternative epistemologies and practices in future research endeavors.

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