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Ambassadors, stewards, advocates—Is engagement of polar tourists in conservation symbolic or substantive? A scoping review

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The continued growth of polar tourism is causing increasing concerns about its potential environmental effects, invigorating the current discourse about tourism's role in the sustainable future of the Polar Regions. These concerns are often met with the industry's narratives on purported positive impacts of polar tourists who would become ambassadors, stewards or advocates. However, the extent to, and the ways in which these three seemingly interchangeable 'ambassador' terms have been used or examined in the scientific literature are largely unknown. To address this gap, we traced the definitions of these terms and identified 16 peer-reviewed studies that incorporated the terms in two types of study design: (1) discussing the terms in the context of investigating relationship and influential factors of tourists' motivations, experiences, behavior intentions, and behavior; and (2) examining the terms as ethical imperatives or normative concepts. Results of this scoping review provides a clearer picture of how the "ambassador" terms are defined and utilized in polar tourism research, and points to the needs for further understanding, conceptualization, and operationalization of the related concepts beyond focusing on tourists themselves as ambassadors.

KEYWORDS

ambassadorship, stewardship, advocacy, Antarctica, arctic, polar regions, tourism

1 Introduction

Our society is living in the Anthropocene, an era in which human activities are making lasting impacts across the globe, including their contributions to the climate crisis (Tempelhoff, 2021). Tourism is one of the major contemporary human activities that can have both positive and negative economic, environmental, and social impacts (McCool and Bosak, 2016; Leung et al., 2018). Tourism impacts are of particular concern in the highly sensitive and increasingly visited polar regions of the Arctic North: Canada, the Nordic Countries (Denmark, Finland, Iceland, Norway, Sweden, Greenland) (Jóhannesson et al., 2022; The Nordic Council and the Nordic Council of Ministers, 2023), Russia, and USA-Alaska, and the South: Antarctica (Hall and Saarinen, 2010; Stewart et al., 2010; Vila et al., 2016, p. 451).

Human impacts within the polar regions, including those associated with tourism activities, are often cumulative, both on local, ecosystem-specific vegetation and wildlife and globally, contributing to carbon emissions that are linked to the increased pace at which the glaciers, ice caps, and sea ice in these regions melt (Dawson et al., 2007). Due to the remote nature of these destinations, tourists' often travel on long-haul flights over the standard

international round-trip distance of 4,100 km, releasing about 3.2 tons of carbon dioxide (CO₂) per passenger, per flight (Amelung and Lamers, 2007). Additionally, visiting polar regions generally involves cruising for long periods of time, a week or more, which releases the “highest per capita CO₂ emissions in tourism” (Amelung and Lamers, 2007; Eijgelaar et al., 2010, p. 340; Farreny et al., 2011). Black carbon and other air pollutants that are released by vessels, airplanes, helicopters, diesel power plants, and generators can accelerate melting of ice by reducing the albedo of snow-covered, polar environments (Cordero et al., 2022, p. 2).

Polar tourism has found itself in a positive feedback loop with climate change impacts. The rise of polar tourism can be attributed to several factors, including decreased airfare costs, more information available to prospective tourists, and a trend of “last chance tourism” (Snyder, 2007; Vila et al., 2016). A motivation consistently cited in the polar tourism literature that references visiting a climate-change vulnerable location before it drastically changes or disappears (Abrahams et al., 2022). Visitation data to the Arctic is not centrally collected, making accurate counts difficult. The following estimates come pre-COVID from 2017 to 2019 from Maher et al. (2021). The most visitation was reported among the Nordic countries, Finland with 3 million in 2019, Sweden 2.9 million in 2018, and Norway 2.7 million in 2017, with 158,000 of those visitors in Svalbard in 2018. Alaska recorded 2.4 million in 2019 (Alaska Department of Commerce, Community, and Economic Development, 2022) and Iceland with 2.2 million in 2017. Whereas, destinations like Canada had around 500,000 and Greenland only 90,000 in 2017 (Maher et al., 2021). The first commercial tourism in Antarctica may have officially begun in the early 1960s, but substantial growth in visitation occurred in the mid-90’s, early 2000s, and is now expected again, post-pandemic (IAATO, 2022). At the beginning of the millennium, an estimated 12,248 visitors traveled to Antarctica (IAATO, 2001). During the 2019–20 season, 74,401 tourists traveled to the continent by a combination of air-cruises and cruises (IAATO, 2020b). After a two-year halt due to the COVID-19 pandemic, Antarctic tourism is returning in full force, reaching 104,897 visitors in 2022–23 season (IAATO, 2023b). How tens of thousands or even more tourists interact with these environments is an important factor in managing the environmental impacts of tourism and generating long-lasting awareness among tourists.

Tourism activities in the Arctic regions span multiple sovereign nations that all have their own policies and regulations (Taylor et al., 2020). The fragmentation of tourism management in the Arctic means that each country is individually responsible for managing tourism and not only its environmental, but social impacts on the local and indigenous communities, additional challenges that Antarctica does not have (Kerber, 2022). In contrast, Antarctica, a singular land without a resident population or a sovereign body, relegates governance decisions to the Antarctic Treaty Consultative Parties (ATCPs) and their instruments, especially the Protocol on Environmental Protection to the Antarctic Treaty, or the Madrid Protocol (Cajiao et al., 2021). Though directives for tourism regulation are not directly laid out in the Treaty itself, the ATCPs can choose to implement binding or non-binding, tourism policy through national legislation (Abdullah et al., 2015). In the absence of sweeping policy, the International Association of Antarctica Tour Operators (IAATO) formed to self-regulate the industry

through guidelines (Verbitsky, 2013). IAATO formed in 1991 to “advocate, promote, and practice safe and environmentally responsible, private-sector travel in Antarctica” (IAATO, 2020a). The complex nature of tourism in the polar regions has sparked debate and curiosity among researchers and industry to determine how this specialized form of tourism can contribute to the conservation and protection of these places.

Polar tourists are often provided with unique opportunities to connect to the environment through immersive educational experiences and first-hand interactions with wilderness and wildlife. These experiences and education provided either on-site or on cruises can influence a tourist’s intention to behave in a way that benefits the environment, better known as their pro-environmental behavior intentions (Kollmuss and Agyeman, 2002). Educational and interpretive experiences have long been utilized to facilitate visitor behavior change, especially in protected area settings (Ham and Krumpal, 1996; Larson et al., 2015; Backman et al., 2018). In the polar context, the discussion around this potential for behavior change revolves around the “ambassadorship” concept, which has been questioned about its accuracy and effectiveness in this context. Ambassadorship is widely utilized in the promotion, messaging, and educational experiences of Antarctic tourism to describe representatives who enact behavior that protect or sustains the place (IAATO, 2023a). Lindblad linked the term of ambassadorship to the positive benefits of experiencing an educational expedition in the Antarctic in the 1960s, and when IAATO formed in 1991, they continued to promote the program (Manley et al., 2017; IAATO, 2020a). The concept and specific term usage focusing on tourists are clearly present within the Antarctic industry and research narratives, which might result from a lack of resident Antarctic population who could serve as ambassadors. In contrast, official Arctic Ambassadors exist in most Arctic countries who are political appointees with defined responsibilities for the area, and who may or may not come from the local population (Sølli et al., 2013). As the Arctic region shares similar challenges with tourism, it is less clear whether or how this concept or term has permeated geographical boundaries to be used by researchers to examine tourist behavior change in other polar environments. This paper seeks to first identify and define common terminology related to the ambassadorship concept, and then present results from a scoping review to explore the identified terms’ usage, boundaries, implications, and differences within the scope of polar tourism research. This work is intended to serve as the initial step toward more in-depth examination of these terms with respect to their conceptual commonalities and differences.

1.1 Defining the terms

Ambassadorship, advocacy, and stewardship seem to be commonly used terms across polar tourism research to describe responsibilities expected of someone who aims to protect something or some place. The term advocacy or advocation derives its meaning from the French, “*advocacie*,” meaning “(legal) pleading,” now an “action of pleading for or support for” (Merriam-Webster, 2022a; Oxford English Dictionary Online, 2023a). The original definition of steward, derived from Old English “*stiward*,”

defines the job duties of one managing a household or estate (Oxford English Dictionary Online, 2023c); however, the word has evolved and can also broadly mean “the careful and responsible management of something entrusted to one’s care (i.e., of natural resources) (Peçanha Enqvist et al., 2018; Merriam-Webster, 2022b). The word ‘ambassador’ was first used in the fourteenth century, derived from Medieval Latin “*ambasciator*,” for “to communicate” and late Latin “*ambascia*” meaning “mission, task, journey” (Merriam-Webster, 2021). Through etymological variations from Latin to modern English, the word has largely kept its meaning as “an envoy,” usually describing diplomats or appointed persons serving as “resident representatives” (Oxford English Dictionary Online, 2023b).

Ambassadorship has been defined by the industry. As per IAATO, ambassadors are people who, “love and respect the region, educate others by sharing their experiences, advocate for Antarctica, and protect the region by making positive changes at home” (IAATO, 2020a). By this definition, Antarctic Ambassadors are supposed to serve as representatives of a place (Antarctica) by having some connection to and local knowledge of that place, and they must practice advocacy for and stewardship of, or on behalf of that place. The broad definition of the term gave way to many iterations used to create organization-specific programs and designations (Braun et al., 2013; Uchinaka et al., 2019). For example, ambassadors have also been categorized as: destination ambassadors, volunteer ambassadors, citizen brand ambassadors, place ambassadors, tourism ambassadors, and STEM (Science, Technology, Engineering, and Mathematics) ambassadors (Chancellor et al., 2021). Place ambassadorship may be the most closely related to polar ambassadorship as the assumption here is that polar travelers who enjoy and are inspired by their trip would promote their destination once home. The application of ambassadorship to Antarctica, however, seems inconsistent with the traditionally defined place ambassadorship as Antarctica does not have a local population from which ambassadors emerge to represent their place and the resources on which they depend (De Nisco et al., 2017; Chancellor et al., 2021). Alexander et al. (2019) offers a definition of Antarctic Ambassadors based on a Delphi study with more specific parameters, “An Antarctic ambassador is someone (i.e., individual or group) who has a connection to, knowledge of and passion for the Antarctic (as a space, place or idea), who represents and champions Antarctica and its values, and who supports Antarctica through communication and behavior” (p. 502). In the Arctic, Stewart and Draper (2006) and Wilson (2019) explored the ambassadorship concept through the lens of cruise tourism and last chance tourism, respectively. While they found similar applicability of this concept as for Antarctica, they noted the consequence of using the term for tourism marketing which could result in more visitation and resultant environmental impacts.

The above few studies explored the connection of the ambassadorship concept with the polar regions, but what does it truly mean to be an ambassador? A better understanding of this and related terminology as currently used can stimulate research on these concepts and the measurements of them. It could also have implications for tour operators in understanding whether

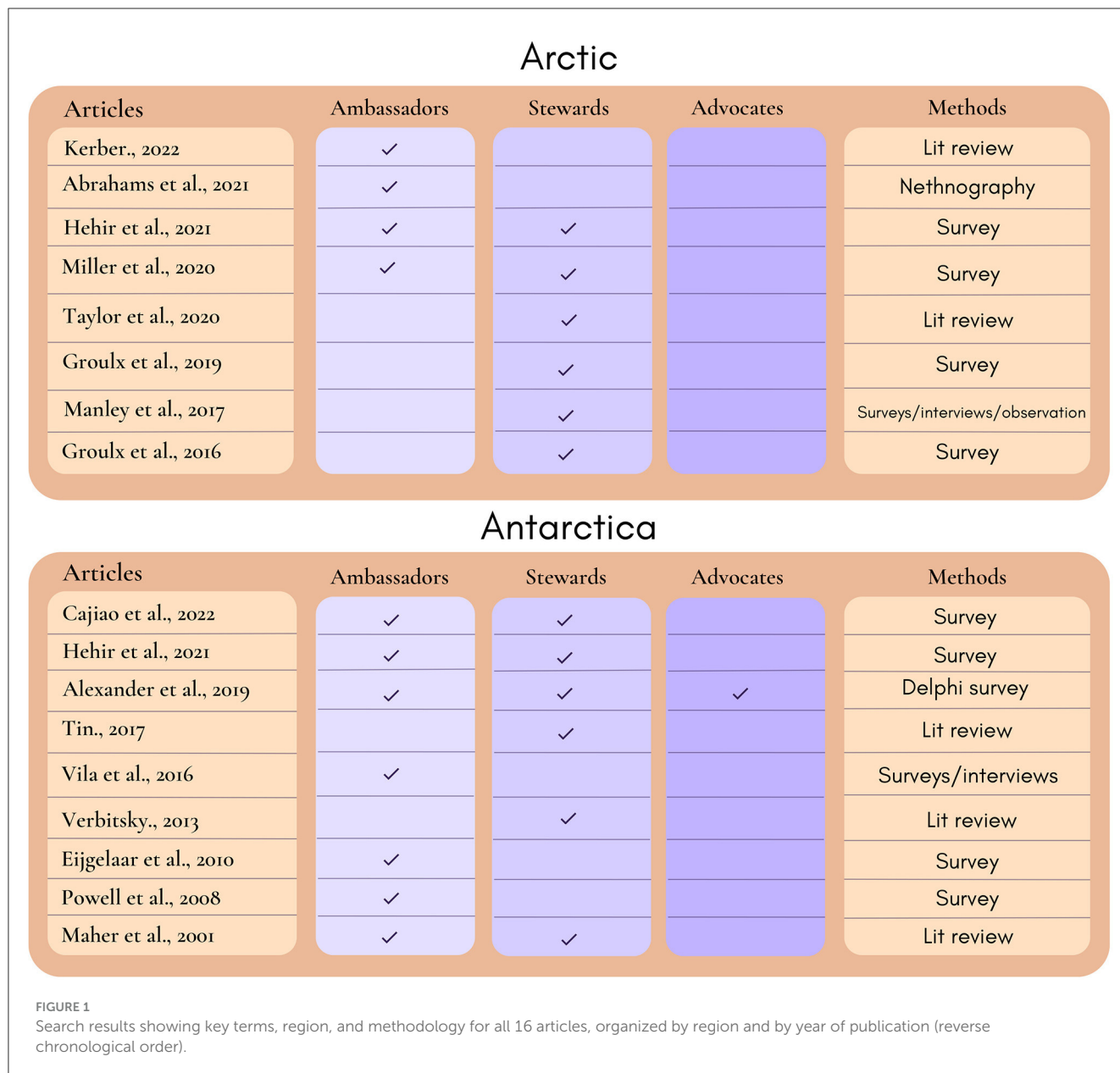
they are achieving their educational or experiential goals. More broadly, this review helps inform the discourse of polar tourism by providing a concise summary of how the terminology is applied in the research literature.

2 Methods

We conducted a scoping review for its usefulness in identifying the boundaries of a topic in the peer-reviewed literature, using inclusion and exclusion criteria and matrices to organize and present results (Paré and Kitsiou, 2017; Xiao and Watson, 2019, p. 99). The search was conducted using Web of Science, EBSCOhost, Google Scholar, and ERIC databases, which included references published in English. We chose to examine the language in scientific literature, rather than tourism marketing materials, as we are interested in how such language is defined and utilized in the published academic work. Researchers studying polar tourism not only provide insights into the programs and language used by the industry, but also empirical analyses. Due to the similarity of *advocacy* and *stewardship* to *ambassadorship* in associating with pro-environmental behavioral outcomes of tourists (Maher et al., 2001; Bennett et al., 2018), these three terms were all included in the searches for articles that discuss tourists’ outcomes. Specifically, we identified articles based on the following search criteria:

- Keyword terms included: Antarctic*, ambassador*, ambassadorship*, touris*, arctic, arctic tourism, steward*, polar, advoca*. A precursory search including all of the possible keywords provided articles about tourism in those regions but not about tourism outcomes. To limit irrelevant search results, fewer keywords were included and were swapped out to see which terminology produced different results (see Figure 1).
- Articles that focused on tourism in a polar region: Antarctica, the Arctic region (high, low, and sub-Arctic were included), specifically: Kaktovik, Alaska; Churchill and Nunavut, Canada; western Greenland; and Iceland. Climate-threatened, “last chance” tourism destination term included, which produced 2 articles that included both Arctic and non-Arctic study areas. These were included due to the Arctic study area and the meeting of other criteria.
- Articles that mentioned ambassador(ship), steward(ship), or advocate(cy) or pro-environmental behavior.
- Articles must focus on polar tourism including: tourism impacts, tourist outcomes, tourist motivations.

A combination of the above keywords was entered to find relevant articles. The search was conducted for all time periods. Results were screened for relevance to the research topic based on the stated criteria. A matrix was utilized to extract important data from each article, including authors, research questions, methodology, findings, terminology, and geographic location (Goldman and Schmalz, 2004). The matrix allowed for a simple analysis of similarities and differences between the studies.



3 Results and discussion

After screening for results that fit into our selection criteria, the search produced only 16 articles (Figure 1). Selected articles were all published from 2001 through 2022. Antarctica was the most prevalent study destination ($n = 8$). Arctic study areas were more diverse given that the region can be categorized into high, low, or sub-Arctic regions (United Nations Environment Programme, 2013). Some ($n = 2$) focused on the Arctic region in general, the majority were conducted in sub to low Arctic destinations ($n = 4$), and one in the high Arctic. One study focused on both poles. The main research methods were surveys ($n = 10$) and literature reviews ($n = 5$), with one study that conducted a Nethnography (method for studying online cultures). Surveys included knowledge tests, connection to nature scales, and questions about attitudes, environmental behaviors, and future behavior intentions. Keyword

search for articles revealed the overlapping nature of terms, where four articles were found using both ambassador and steward, and one article was found with all three. Although advocacy as a keyword produced only one relevant, repeated result, the term was used in five of the articles, although only in reference to action from ambassadors. Ambassador and steward appeared in studies conducted in both Arctic and Antarctica, and Figure 1 below shows the presence of the terms across region.

There were two distinct study designs in which the researchers explored the concepts: (1) research that was related to understanding either tourist motivations, perceptions, knowledge and/or behavior, with the intention that measuring some combination of those could transfer to management action to promote ambassadorship, stewardship, or advocacy, and (2) research in which the author(s) developed conceptual pieces (Delphi study, literature reviews, research notes) to analyze

the meaning and implications of term concepts on tourism, or tourism directly.

3.1 Type 1 study design: understanding tourists through the use of terms

The majority of articles ($n = 10$), including: Powell et al. (2008), Eijgelaar et al. (2010), Groulx et al. (2016, 2019), Manley et al. (2017), Vila et al. (2016), Miller et al. (2020), Hehir et al. (2021), Abrahams et al. (2022), and Cajiao et al. (2022) can be categorized into the first study design. Ambassadorship was the favored term for studies conducted in Antarctica ($n = 5$) with one study that analyzed data from both poles and used only ambassadorship (Hehir et al., 2021), and one used both (Cajiao et al., 2022). Terminology within Arctic studies remains more split between stewardship ($n = 3$) and ambassadorship ($n = 1$), and one (Miller et al., 2020) used both. Researchers set out to understand the experiences of visitors, including their motivations for engaging in polar tourism, perceptions, knowledge, and other factors (e.g., type of tour, length, educational offerings, location, demographics), and how these factors impact the development of ambassadorship, commonly measured as pro-environmental attitudes or pro-environmental behaviors (PEB). PEB was measured by pre/post general and Antarctica-specific environmental concerns, management preferences, and public/private sphere behavioral intentions; for example, concern about overfishing, and support for tourism regulations (p. 5). Manley et al. (2017) found alignment between the motivation to learn on an expedition cruise and an increase in post-trip, Arctic-specific knowledge and self-reported public sphere (donating, voting), pro-environmental behaviors (Manley et al., 2017). Powell et al. (2008) found similar motivations and positive increases in Antarctic-specific knowledge 3 months after a trip, but “general environmental behavior intentions,” remained stable after increasing immediately after the trip (p. 236). As also reflected in Miller et al. (2020), the relationship between visitor motivations and their actual experiences, especially emotional experiences on a tour, can be predictors of PEB. Groulx et al. (2016, 2019) found further evidence that the emotional component of experience, specifically nature connection and place identity in these cases, can mediate the decision to engage in carbon offsetting. Evidence from Hehir et al. (2021) may further point to a relationship between emotional connection and ambassadorship. As longitudinal data from an Arctic and Antarctic “Students on Ice” program found, social identity, which is mediated by a strong human-nature relationship (Inclusion of Nature in Self) can influence pro-environmental behavior (p. 1647). More recently, Cajiao et al. (2022) found that different motivation types of Antarctic tourists and trip characteristics were associated with different strengths of PEB intentions, which could be mediated by experiential outputs such as learning and satisfaction.

While the majority of authors did collect data on both motivations and behavioral outcomes, some focused more on measuring the existence of ambassadorship through behavior. General environmental behavior measured in many surveys typically encompassed public and private sphere behaviors,

ranging from “joining environmental organizations, donating money, voting, and supporting location-specific, management and conservation action, to avoiding environmentally harmful products,” (Stern, 2000; Powell et al., 2008, p. 236; Manley et al., 2017). There seemed to be a connection between how much the researchers explored the concept of ambassadorship and how extensive their PEB measures were. Abrahams et al. (2022) conducted a Nethnography of TripAdvisor reviews for evidence of a “last chance tourism” motivation and post-trip perceptions of the glacier destinations. They concluded that motivations were much more varied than only LCT, and that visitor reviews did not reflect an increase in ambassadorship attitudes or behaviors, by nature of visitors still encouraging more travel to the glaciers. Similarly, Eijgelaar et al. (2010) directly measured a very specific facet of ambassadorship behavior, which they defined in this study as reducing or offsetting travel emissions, future travel intentions, and climate change awareness. In the case of Miller et al. (2020), the authors dedicated a large portion of the discussion to defining the concept of ambassadorship, settling on the definition of “a representative or promoter” (p. 1704). They collected survey responses on a variety of conservation behaviors that required “passion, care, and knowledge” of the Arctic environment (Miller et al., 2020). These behaviors ranged from social media information sharing to advocating for specific laws and policies (p. 1715). Contrarily, Vila et al. (2016) conducted in-depth interviews and *in situ* surveys and found “little spontaneous confidence in the ambassadorship effect,” in relation to the creation of ecological orientations (p. 455). The authors seem to recognize the connection between place, education, and subsequent conservation behaviors; however, there is very little discussion about whether those behaviors are all that goes into ambassadorship, stewardship, or advocacy, or whether these concepts mean more than specific behaviors in these contexts.

This category seems to make clear the ubiquity of an ambassadorship concept across the polar regions, as these studies sought to understand the factors influencing polar tourists’ efficacy in facilitating “ambassadorship,” “stewardship,” or “advocacy” behavior. Despite the interchangeability of stewardship with ambassadorship, specifically in the Arctic, the narrative in each of these studies reinforces that it is worth understanding visitor experiences because of the stated potential for positive change in environmental behavior. The approach to understanding an “ambassadorship” effect varies (Figure 2), but the end goal is the same. Motivations, behavior, and the related components that are commonly measured, function as contributing factors (i.e., perceptions, knowledge, trip characteristics) (Powell et al., 2008; Miller et al., 2020), allowing researchers to see gaps in the real-world ambassadorship effect, and to suggest solutions to operators on how to create programming that will promote ambassadorship behavior (Manley et al., 2017; Miller et al., 2020).

3.2 Type 2 study design: ethical and conceptual explorations of the terms

The second type of study design was more conceptual in nature, facilitating ethical discussions and dissecting meaning

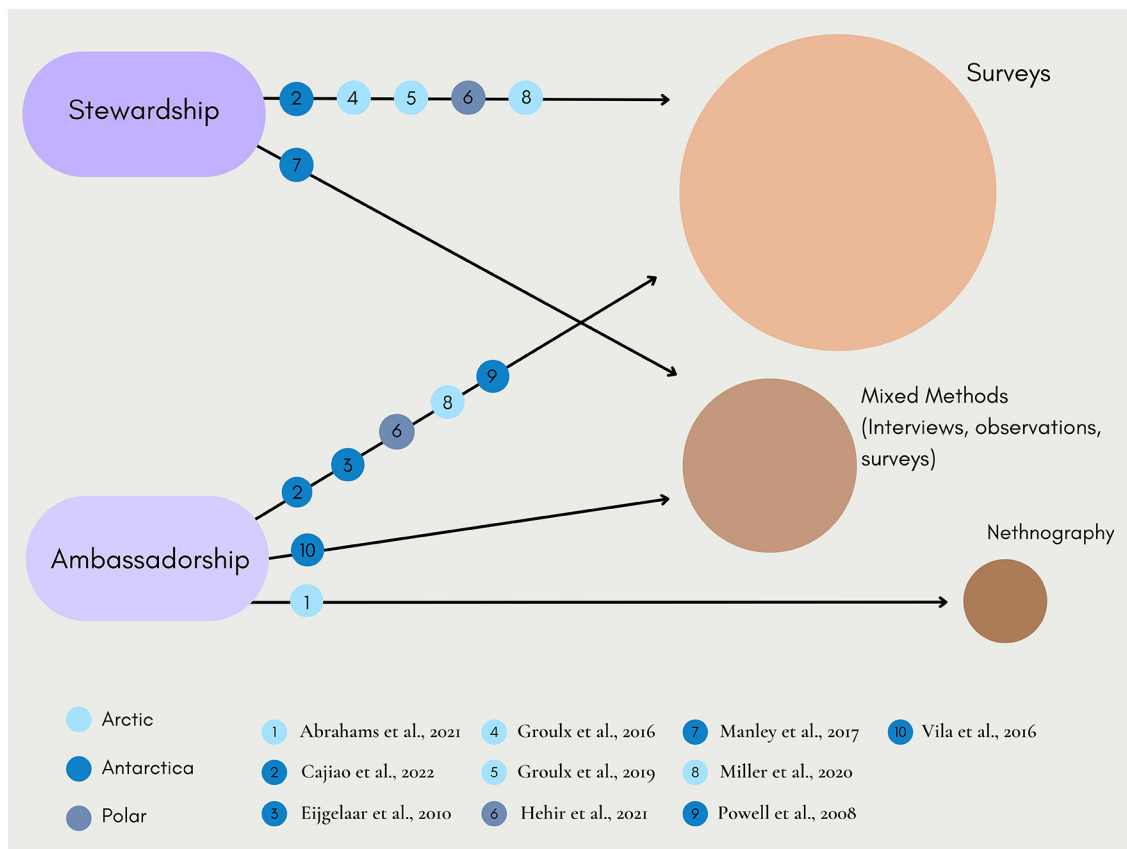


FIGURE 2 Visual representation of relationships between terms used in type 1 study design and methodology, as well as the region in which the study was conducted.

from terms. Out of these six studies: Maher et al. (2001), Verbitsky (2013), Tin (2017), Alexander et al. (2019), Taylor et al. (2020), and Kerber (2022), four focused on Antarctica and two on the Arctic. Interestingly, four studies utilized both ambassadorship and stewardship interchangeably, one article only used ambassador and one the same with steward, both in Antarctica. Although the majority of these conceptual papers were focused on Antarctica, topics held true across the polar regions. Three main themes emerged from this group of publications: the meaning of stewardship in relation to regulating tourism, how narratives surrounding tourism could be used to promote ambassadorship and defining ambassadorship itself. There was general recognition that in both regions, the changing climate has opened up new potential for tourism, and this should prompt more regulation, action, or consideration. As reduced sea ice in the Arctic has already increased tourist mobility in the Northwest Passage, Kerber (2022) leads a fascinating discussion around the ethical and social justice ramifications of tourism in that region. In short, companies marketing Arctic cruises rely on out-of-touch narratives about pristine and unexplored landscapes that ignore the realities of changing a climate and the impact on Arctic Native populations. Kerber (2022) advocates that visitors may be more positively influenced to become ambassadors if they were exposed to more realistic narratives. This idea is echoed by Taylor et al.

(2020) who explores how incorporating citizen science into polar cruises may increase visitor awareness of interconnected systems and inspire ambassadorship attitudes or behaviors.

Another key discussion present in multiple articles centered around what is meant by stewardship. In Antarctica specifically, stewardship is often used in relation to the responsibilities of the Antarctic Treaty System and Consultative Parties when it comes to tourism. Tin (2017) pushes for the incorporation of environmental ethics in how we determine the use and management of Antarctica based on its intrinsic value as an intact wilderness ecosystem rather than by its economic opportunity. Within this discussion, Tin (2017) notes that the ATCPs have accepted a stewards' responsibility to preserve Antarctica for the "interest of all mankind" and future generations (p. 62). Maher et al. (2001) and Verbitsky (2013) echo the sentiment that tourism is a significant activity in Antarctica that the ATCPs are responsible for as stewards of the continent.

Despite the pervasiveness of the ambassadorship idea, very few studies explore the conceptual meaning of the term. Maher et al. (2001) examines existing literature up until the early 2000s and notes the interchangeability with stewardship and advocacy already present across regions. Additionally, authors suggest research objectives that analyze the whole visitor experience to understand the cyclical nature of ambassadorship, reflecting the first type of

articles examined in this review. [Alexander et al. \(2019\)](#) offers a more in-depth and empirical look at the concept through a Delphi study with Antarctic experts. Experts define conceptual boundaries of ambassadorship, explaining that ambassadors should hold a significant amount of “passion, care and knowledge” in order to “defend and advance Antarctic values, raise awareness of Antarctic issues and promote an understanding of Antarctica as a place and a culture” (p. 502). While other articles assume truth in the concept and precision in its description, [Alexander et al. \(2019\)](#) challenges the status quo and explores what it means to truly be an ambassador.

4 Implications and conclusions

This review synthesized the usage, boundaries, implications, and differences of terminology related to ambassadorship within polar tourism research. Despite the formal and colloquial association of ambassadorship with Antarctic tourism, researchers have applied the concept to analyze potential pro-environmental behavior outcomes in the Arctic as well. Within the Arctic, and occasionally in the Antarctic, stewardship is used interchangeably to explain the same concept. Unlike IAATO in the Antarctic, the Arctic tourism industry does not put forth cohesive language about creating ambassadors, stewards, or advocates from their tourism experiences. However, with the prevalence of the idea that polar experiences can influence tourists’ pro-environmental behaviors, application of the ambassadorship concept to Arctic tourists both by professionals and researchers may be beneficial in creating a more complete picture of polar tourism. Tour operators that wish to keep utilizing this term should clearly define expectations, and researchers should keep pushing to understand the outcomes associated with this type of tourism and to better define the use of the terms. As the term Arctic Ambassadors is already established for official representatives from Arctic countries, extending it to tourists in the Arctic should be done judiciously so it does not create confusion with the official Arctic Ambassadors.

Experiences in polar regions are primarily educational through nature encounters, and many factors influence how tourists perceive their experience and whether that contributes to attitude or behavior change around conservation. An established connection to nature and a desire to learn about natural environments or the effects of climate change can motivate visitation ([Groulx et al., 2016](#)). Visiting polar regions provide tourists with an opportunity to witness the effects of climate change first-hand; however, evidence also shows that without proper on-site interpretation, visitors can misinterpret the information in front of them ([Miller et al., 2020](#)). This point is echoed by [van Soest \(2023\)](#)’s recent critique of the value of Arctic Expedition despite the use of “science ambassadors” for its tourist participants. Limited longitudinal research suggests that visitors can retain practical knowledge at least 3 months after a journey, and certain factors, such as occurrence of epiphanies, length of experience, and total minutes educated, can increase the likelihood of engagement in pro-environmental behaviors ([Powell et al., 2008](#); [Miller et al., 2020](#)). Additional research on the different factors involved in polar tourist experiences and which factors are most influential in facilitating that connection could help operators create more

effective programming to facilitate pro-environmental outcomes. The effectiveness of providing specific actions or behavior tourists could engage in to contribute to conservation produced mixed results depending on other factors influencing tourists’ attitudes, beliefs, and experiences. Contributing to concept exploration may need to involve questions that [Alexander et al. \(2019\)](#) posed, “what then might such behavior look like? Is it conservation behaviors in a person’s daily life such as supporting an environmental organization, reducing waste, walking to work, or is it enough to share photos of a trip on Facebook and tell your friends?” (p. 503).

We recommend researchers continue to advance the understanding, conceptualization, and operationalization of these terms, as well as to extend the scope of examination to include non-English scientific literature, such as Norwegian and Russian references in which these terms also appeared. Our methods may have led to search results that focused on the environmental aspects of ambassadorship, even in the Arctic. Changes in keywords and selection criteria may be needed if the social and community aspects of ambassadorship are of interest in future studies. Future research is also encouraged to apply citation impact analysis to examine how the terms and concepts introduced by seminal publications (e.g., [Eijgelaar et al., 2010](#)) evolve in, and impact on, the scientific literature across disciplinary boundaries.

Ambassadorship, stewardship, and advocacy can be all sides of the same coin, subject to similar research seeking to prove their validity and efficacy within polar tourism. An understanding of the state of knowledge and academic discourse of these terms should inform the industry on how consistent or deviant it is in using these terms in its marketing and education programs, prompting debates about the implications and potential consequences if significant discrepancies exist. Despite the main focus of these studies being on measuring tourist outcomes, [Tin \(2017\)](#) starts to expand that boundary by labeling the Antarctic Treaty Consultative Parties as stewards themselves. While tourists are an important population to foster ambassadorship, this inclusion of the ATCPs prompts questions about who else in the polar tourism industry could function as ambassadors. Further research on developing and expanding the ambassadorship concept may open up the field to new perspectives on who could be considered an ambassador, which may help validate the accuracy of the concept in these contexts.

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JR: Conceptualization, Methodology, Formal analysis, Investigation, Writing—original draft. Y-FL: Conceptualization, Methodology, Writing—review and editing. DC: Writing—review and editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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