



Master Thesis



Hiking on an Island or Just Hiking? Scientific Review on Trails and Hiking on Islands Under a
Nissological Perspective

submitted by
Rodolfo Bassani

in the framework of the
Erasmus Mundus Joint Master's Degree in Islands and Sustainability

in partial fulfillment of the requirements for the academic degree of Master of Science of the programs
Research Master in Spatial Sciences Master in Sustainable Fisheries Resources Management
University of Groningen University of Las Palmas de Gran Canaria
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Las Palmas de Gran Canaria, June 26th, 2024



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Abstract

This study deals with the scientific production regarding hiking and hiking trails on the contexts of islands. The underlying theoretical framework is provided by the concept of field, from Bourdieu's sociology of science, and by nissology, defined as 'the study of islands in their own terms'. A scoping review was performed and revealed that, regardless of the recent expansion of island studies, it has been little considered by publications on the aforementioned topics. Our discussion shows, however, that there is room for a change, since islands indeed do imprint particularities on trails networks and on the practice of hiking, such as regarding ecological and geomorphological processes, occupation patterns, imaginary and place-making. Spatial and philosophical characters of the central concept of islandness are explored, indicating possible approaches for advancing the investigation of the particularities of hiking and trails on islands under an island studies perspective.

Keywords: nissology, island studies, trails, hiking, islandness, scoping review.

Introduction

Over the past few decades, the boom of tourism has made this industry a cornerstone of several regional economies, remarkably on islands where it serves as a primary economic alternative (Graci & Maher 2018). The strong intensification of tourism, linked to the global circulation of information, technology and innovation that drive the restructuring of territories (Santos, 1996), has, however, introduced significant challenges. Environmental and sociodemographic pressures, economic dependence, the threat of cultural homogenization, among others, increasingly put the resilience of islands to test (Graci & Maher 2018), even though they are endowed with certain experience in addressing the cultural, economic, environmental, and territorial challenges brought about by the era of globalization (Hay, 2006).

In this context, and embedded in the expanded contemporary condition, the debate on sustainability is one of the main topics of island studies. For Depraetere (2008a), this is the challenge to which islands are called to contribute in the 21st century. Within the realm of tourism, practices aimed at sustainability have been developed to reduce environmental and social pressures through spatial deconcentration, incorporating new niches and areas into the tourist market, distributing benefits and impacts, and fostering new territorial arrangements. In addition, the sector has increased the offer of activities with less negative impact, such as volunteer tourism, community-based tourism and ecotourism. Ecotourism is a unifying concept for alternative tourism approaches (Theng, Qiong & Tatar 2015), and can be defined as “a panacea capable of reconciling economic development, environmental protection and the well-being of communities” (Tardif 2003). One of the practices with greatest recent interest is hiking (Geiger et al. 2023; UNWTO, 2019; Gross & Sand, 2019). Hiking’s inherently spatial nature offers multidimensional study possibilities, encompassing economic and ecological aspects, as well as historical (origin, development of networks, uses), management-related (planning, maintenance, stakeholders and governance, management of common resources), geographic (landscape, perception, production of space), philosophical (aesthetic, ethical, epistemological), psychological (satisfaction, loyalty, behavior), among others.

The field of island studies was formed around this geographic object with a view to studying it from special perspectives, adapted to its contexts; thus, being conceived as an interdisciplinary field and defined as the “study of islands on their own terms” (McCall 1994, p. 1). The particularities of island contexts, despite their infinite diversity, indicate that the multitude of factors of interest regarding trails and hiking, like those mentioned above, can be better understood if such particularities are considered, that is, if the historical, political, geographic aspects of island trails and hiking practices are considered under “islands’ own terms”. The recognition of particularities is, thus, an expression of the underlying assumption that islands are not simply the same but smaller, scaled-down version of elsewhere (Baldacchino 2008b).

Various studies have been conducted from specific island perspectives, especially in zoogeography, geography and anthropology (Baldacchino 2006), and, more recently, political organization and resilience to climate change. In well-established areas, subtopics also receive specific attention within island contexts, such as evolutionary processes and ethnographic aspects. Tourism management and sustainable development, however, only began to receive specific treatments in the last 30 years (e.g. Conlin & Baum 1995 and Biagini & Hoyle 1999; Baldacchino 2006), which raises the question about how the interaction between the themes and the scientific field in expansion are taking place, that is, whether nissology has been considered and is contributing to studies in these areas and their subareas, as well as whether it is receiving contributions for its theoretical, methodological and epistemological development.

Given the recent and growing interest in hiking as an alternative and low-impacting way of promoting sustainability and regional economic integration, and the importance of ecotourism for the islands, the question this study discuss, under a descriptive and exploratory qualitative approach, is “*what is the potential of island studies’ concepts and approaches to contribute to research on hiking and hiking trails on island contexts?*”, which is supported by two sub questions: (1) *what are the academic contexts (scientific frameworks) in which studies on hiking and trails on islands have been conducted?*, (2) *how have island studies’ approaches been incorporated on hiking and trail studies?*. The main aim is to discuss possibilities of studying hiking and trails on islands under a nissological perspective, first by scoping the current state of research on these topics and after by reflecting on opportunities for advancing the investigation of their particularities. The academic relevance of this research lies in the reflection about the development of the field of island studies, while the societal contribution is linked to the suggestion of a refined, particular approach for research, policy and practice of hiking and trails on islands, which bears the potential to support decision-making processes towards the mitigation of impacts and the enhancement of benefits.

Theoretical Framework

The theoretical framework of this research is supported by the sociology of science, in particular from applying Pierre Bourdieu’s theory of social fields to science, which can be used to help to analyze how a discipline is contributing to research on a certain topic. Bourdieu develops the notion of field to overcome the limitations of internalist and externalist perspectives in science studies, such as postmodern French semiotics, which would place its attention exclusively on the texts, and some Marxist approaches that put too much weight on social conditions as determinants for the production of knowledge (Bourdieu 2004), resolving what he called the “short-circuit error”. For Bourdieu, the field refers to a relatively autonomous

space of relationships in which “the agents and institutions that produce, reproduce or disseminate (...) science are inserted” (Bourdieu 2004, p. 20). The field has its own rules, reconfiguring social laws in a specific way within itself. The configuration of each field is given by the set of relationships established between the existing agents, according to the level of symbolic capital of each agent. Symbolic capital, that is, the intangible capital that provides recognition and influence to its holder, comes in two forms. The first concerns the power to administer the field, that is, to act directly on the rules that define the distribution of power, recognition and legitimacy, called temporal capital. The second, in turn, called specific capital, concerns the accumulation of such recognition and legitimacy among the peers (Bourdieu 2004; Scartezini 2011). These types of symbolic capital, as the rules, *habitus* and rewards assume different forms for each field, which can be delimited for any social activity.

Science, as a social practice, can also be understood from the perspective of fields. Bourdieu himself does so, as in *Le camp scientifique* (1976), theoretically, and in *Les usages sociaux de las sciences* (1997) in a practical way. The scientific field can be defined as the structure of objective relationships that is established between the agents of science, whose level of disturbance in the field, that is, of influencing the network of relationships, defining what is more or less relevant and legitimate to be studied, the creation of courses, journals, projects and application of funds is greater the greater is its symbolic capital. Positions on scientific institutions grant the temporal capital, while the capital related to specific power concerns recognition from peers, arising, for example, from citations and publications in journals with a high impact factor. The operationalization of the present study considers as agents of the network of relationships not individual researchers or scientific institutions, but disciplines and theoretical approaches. The premise is that the larger the symbolic capital of a discipline, the larger is its legitimacy, recognition and strength to define the set of objects that are considered important to be studied. Similarly, higher would be its power to define the theoretical and conceptual frameworks, methods and corpus that deserve to be known, developed and applied. In other words, the greater the scientific capital of a discipline, the more autonomous it will be in defining the objects and approaches to be developed by itself and by other agents of the network, that is, other disciplines. Physics was, perhaps, the first discipline to have a major impact on the modern scientific field, being at the foundation of modern science, in the 16th century, accompanied by Cartesian philosophy (Bicudo 2008), greatly influencing human sciences in the following centuries. In the 19th century, Biology became dominant, also expanding approaches to other areas, such as with social Darwinism in Spencer’s sociology and the *lebensraum* in Ratzel’s *Political Geography* (1897). The different levels of scientific paradigms (Kuhn, 1997), as well as important topics and perspectives at different scales are also examples of entities that greatly influence and even direct (sub)fields.

To understand the structures of objective relationships within nissology as a distinct field, or its role within the broader scientific field as a competitive arena for authority, is an enormous task beyond the scope of this research. Instead, we propose an initial examination of the relationship between this discipline and a specific research object. By exploring how nissology's concepts, theories, and references have been considered in studies on trails and hiking on islands, and to what extent these studies have contributed to its theoretical, methodological, and epistemological frameworks, we can assess the current status, limitations, and potential of island studies for further development of studies on the topics of interest.

It is also important to mention nissology itself as an essential part of the theoretical framework of this research, besides as an object, as its very possibility of realization is a subject of debate. I assume nissology as a synonym of island studies and in the terms put forward by McCall (1994, p. 1), that topics related to islands can be studied “on the islands own terms”. Depraetere (2008a, p. 3) argues for a “systematic treatment of the island phenomenon” backed up by a “substantial theoretical underpinning”, appealing for a more “in-depth nissological research and theorization” and a “more rigorous, pan-epistemic treatment of island studies” (Depraetere 2008b, p. 17). Although island studies have an increasing recognition and long scholarship tradition (Baldacchino 2006), which can be traced back to the first centuries of our time to Dyonisius of Alexandria's *Oikoumenes Periegesis* (Depraetere 2008a), it “remain[s] a largely unacknowledged field of study” (Baldacchino 2006).

The discipline is, nevertheless, not clearly defined. Actually, the own definition of what is an island is not settled (Hay 2006; Depraetere 2008b). The features that are used to characterize such an object are often contradictory. Baldacchino (2006) argues that the creation of a publishing platform, the Island Studies Journal (ISJ) in 2006, could pave the way for further developments to emerge, helping “island studies [to] deepen its roots and spread its routes” (ibidem, p. 11). It is, however, a recent enterprise in face of the rhythm that paradigms shift in science, although contents and approaches are in constant development, experimentation and revision. Grydehøj (2017), on his turn, criticizes the argument of “developing field” as an ineffective apology. For him, island studies are flawed and incomplete, but they are consolidated and should bear the responsibility of being so. A few years later, realizing that the discipline had become very plural, he revised his statement on the status of island studies and affirmed that it, “like all fields, is in a constant state of becoming” (2023, p. 296). The author argued, though, for a qualification of the debate on island sustainability research, and that the field must keep deepening its theoretical understandings and spread to subjects that have not been properly touched or addressed within island studies (Grydehøj 2017), which this study aims at contributing to.

Methodology

The methodology employed aimed at analyzing how research has been conducted on the subjects of hiking and trails on islands, identifying approximations, distancing and gaps between these publications and island studies' concepts, definitions and debates. An approach that deals specifically with such intentions is the scoping review, which is a “tool to determine the scope or coverage of a body of literature on a given topic and give clear indication of the volume of literature and studies available as well as an overview (broad or detailed) of its focus”, with the general purpose of “identify[ing] and map[ping] the available evidence” (Munn et al. 2018). Given the qualitative approach employed, an inductive content analysis took place, meaning that the studies were not approached with pre-established categories (Bass & Semetko 2021) other than the frame of nissology.

Initially, we aimed to deepen our understanding of island studies' general epistemology, focusing on key discussions, concepts, and authors. To achieve this, we analyzed papers published in the *Island Studies Journal* (ISJ), a significant platform for the field. Our focus included discussions on islands (definitions, particularities), nissology (definitions, deficiencies, demands, recommendations, perspectives, and expectations), and various concepts and debates (definitions, uses, and arguments). Some of the studied papers were written by authors such as Godfrey Baldacchino (2006; 2008), “the key touchstone and most-cited source for those setting out to study islands per se” (Grydehøj 2023), Pete Hay (2006), Christian Depraetere (2008a; 2008b), and Adam Grydehøj (2017; 2023), who are often cited as references of the field. This variety of authors and publication years provided historical insights into the development of the field before the ISJ's founding in 2006 and in the eighteen years since, highlighting future challenges and trends. Given the scope and timeframe of this research, other studied papers, specially from ISJ and from *Shima Journal*, were those which dealt with tourism, ecotourism, hiking, nature conservation, spatial philosophy and experiential landscape. Other publications, textbooks and reference works also were considered to a lesser extent.

The next stage aimed to identify studies which dealt with hiking and trails on islands. Publishing papers serves as a means of defining what is significant within a scientific field, and manifests structural mechanisms and dynamics of a complex network of collaboration (Barabási et al. 2002). It is as a process that engages researchers at both ends, from producing, submitting and assessing a study through peer review processes, to its consumption, including reading, referencing, and disseminating it in lectures, subsequent studies and further publications. In line with the theory of social fields, the publication of papers, particularly in journals indexed on relevant databases, is an element that provides and is a proxy of symbolic capital,

defining the dominant topics and approaches and what pertains or not to a field (Bourdieu 2004). Therefore, partially inspired by Lukoseviciute, Pereira & Panagopoulos' (2022) methodology to review the economic impact of recreational trails, a search on the scientific databases Scopus and Web of Science (WoS) was conducted.

In order to achieve more complete results, the keywords chosen for the search were informed by several references. It allowed the identification of synonyms or concepts whose meanings are considered similar and sometimes dealt interchangeably. The references were scientific papers and entries of the Routledge Handbook of Leisure Studies (Blackshaw 2013), the Routledge International Handbook of Walking (Hall, Ram & Shoval 2017), the International Handbook on Ecotourism (Ballantyne & Packer 2013), and the Dictionary of Leisure, Travel and Tourism (Collin 2006). Titles, keywords and abstracts were searched through the following string of keywords and Boolean syntaxes: (*island OR isle OR islet OR atoll OR archipelago*) AND (*trail OR path OR "marked path" OR "walking trail" OR ecotrail OR "walking routes" OR footpaths OR "hiking routes" OR "pilgrimage trail" OR "pilgrimage route" OR "trekking trail"*) AND (*hiking OR "strenuous walking" OR trekking OR tramping OR bushwalking OR "hut-to-hut-hiking" OR rambling OR strolling OR hillwalking OR mountaineering OR "long-distance hiking" OR "height hikes" OR scouting OR "hut hikes" OR spiking OR "sport hiking" OR "hill-walking" OR yomping OR "trail-walking" OR "backcountry hiking" OR pilgrimage OR "walking in mountains" OR "walking by lakes" OR "walking on the coast" OR "walking on islands"*).

The search resulted in 65 documents in Scopus and 77 in WoS. The results were exported to an excel file and duplicates were removed. Furthermore, papers in languages other than English, Spanish or Portuguese were dismissed due to language barriers for proper analysis. The publications were downloaded and abstracts and conclusions read to check the suitability of each study to the objectives of this research. Selected papers (18) were thoroughly read, with focus on their theoretical frameworks. These procedures allowed us to identify if and how nissology has been feeding research on trails and hiking on islands.

Finally, adding to the literature study, participant observation on the island of Gran Canaria, in the Canary Archipelago, Spain, also informed the understanding of the topics discussed here. Several hiking trails were followed between February and May 2024, covering a variety of ecological, social and territorial contexts. It allowed the observation of the landscape, the conditions and use of the trails, to experience hiking on an island context, and to encounter and interact with other walkers and with residents. Informal conversations with walkers also took place during the hikes and off-site to enrich the findings by aggregating others' perspectives specifically on the topics addressed here.

On Trails and Hiking

Hiking is an increasingly popular nature-based activity (Geiger et al. 2023) that brings together well-being, conservation of nature and economic development. As a core global tourism product (UNWTO 2019; Gross & Sand 2019), it has received increasing attention, with many destinations and operators offering practices related to hiking and other kinds of walking activities (Muhar et al. 2007; Mehmetoglu & Normann 2013). By promoting a soft, low impact contact with nature, it is expected that it would contribute to environmental education and to increase the awareness of sustainable values. Hiking trails can also work as corridors connecting protected areas, thus enlarging habitats and reducing pressure on faunal and floral species. Furthermore, it is largely known that hiking provides health benefits (Oh, Kim & Choi 2020). In general terms, simply spending time in nature is potentially health-enhancing (Lee et al. 2014). More specifically, hiking improves blood circulation, exercises the majority of the skeletal muscles, decreases the risk of cardiovascular accidents and improves respiration and metabolic processes (Geiger et al. 2023; Gatterer et al. 2015; Gutwenger et al. 2015), among other physical and mental advantages.

Besides impacts on practitioners, hiking is also an element of spatial and cultural transformation. It mitigates impacts of off-peak seasons and enables tourism all year long, providing for rural development (Kastenholz & Rodriguez 2007; Wall-Reinius & Bäck 2011). In Norway, hiking helped to build national identity and is deep rooted in Norwegian culture (Svarstad 2010; Ween & Abram 2012; Nordbø et al. 2014; Nordbø 2017). Still in the cultural sphere, two thirds of the German population use to hike during leisure time (Müller et al. 2018). In Palestine, although outdoor walking is not a popular activity in Middle Eastern countries, a culture of trail based hiking tourism and backpacking had started to develop (Isaac 2018). In South Korea it has also gained importance, with infrastructure and networks being further developed, particularly since 2007, when the Olle Trail on Jeju Island was established (Oh, Kim & Choi 2020). The eastern portion of the New Britain Island, in Papua New Guinea, has adventure tourism and hiking as the primary offers of their ecotourism strategy (Gabriel et al. 2017). Also very small islands are part of this movement, as is the case of Pitcairn. In this Pacific island, with less than 50 inhabitants, tourism started to be systematically planned only in the last 20 years, and one of the activities undertaken was the development of an eco-trail near the capital Adamstown (Amoamo 2017).

Directly associated with hiking is trail development, which is an important ecotourism management tool to promote sustainability and reduce the negative impacts of mass tourism (Lukoseviciute, Pereira & Panagopoulos, 2022). Historically, in the framework of tourism, trails were also important features for the cultural youth's practice of international traveling. The stories of the Moroccan and Indian hippie trails during the 1960s fed the counter-cultural aesthetic and the desire of leaving the technocrat world, and are

on the root of the growing international mobility for leisure from the 1990s onwards, when transportation became cheaper (Roszak 1969; Bennett 2015). Trails are very diverse, as are their uses. A first set of distinctions concerns their length (short/long), circuit (linear/circular) and status (formal/informal). The Azores Archipelago, in Portugal, for example, recognizes 94 trails as part of the official network, while a search for this region at Wikiloc, a widely used online application for trail navigation, results in more than 36 thousand entries of hiking options for the same area. Despite the duplicates and fragmentation of the same trails, these numbers can give an idea that the practice is far beyond the planned. Hugo (1999) classifies trails according to their type (walk, biking, mounted, aerial, water, underwater, vehicular), format (guided, self-guided, marked or not), and purpose (education, socializing, adventure, relaxation, therapeutic etc.). Besides individual or small groups displacement, mass events also take place on trails, such as pilgrimage and sports competition. In Gran Canaria island, for example, the annual Transgrancanaria race brought together in 2024 more than four thousand runners from 75 nationalities for a number of hikes from 12 to 126 km long. Besides the touristic perspective, they also connect settlements and sites of relevance, allowing the circulation of people and animals through the territory.

Adventure tourism is, thus, a rising research topic (Bichler & Peter 2020; Gross & Sand 2019; Varley & Semple 2015). Such a subject has significant implications for the tourism sector and associated activities, and for destination management, also providing tools and expertise for regional governance, rural development, territorial integration and distribution of revenues. It also benefits tourists by supporting the design and advertisement of experiences according to their desires and motivation (Dodds 2019). Furthermore, the studies of trails and walking practices on islands encompass and are linked to other particularities beyond tourism, such as appreciation and experience with specific landscapes, occupation patterns, territorial formation, resource exploitation, uses, circulation, connectivity and so on.

Findings

Hiking and Trails on Islands in the Scientific Literature

The intention of this section is to present if and how the papers identified discussed their topics under some kind of specific approach to island studies. It was verified through the presence of statements that overcome that specific case study (attempts of generalization at any level), the use of specific literature, and by some issues central on the nissological debate such as the concepts of islandness and insularity, hard and soft-edgedness, and the vulnerable/resilient, isolated/connected, and diversity/cohesion dualisms (Randall 2020), and other general themes in island studies. It is worth mentioning that no value judgment

on the perspectives adopted is intended. Such an attempt would be impractical and unreasonable, as it would require a multidisciplinary team of experienced researchers.

The first relevant publication dates back to 2005. From 2014 onwards, they were published every year (except 2022), and since 2017 they have become multiple. This is in line with the discussion presented above about the recent interest in the topic of nature-based tourism and of hiking as a tourism product. With the exception of one Brazilian and one Indonesian study, all others were produced by researchers based in institutions in developed countries. Except for two studies carried out by Hong Kong researchers, who dealt with Jeju Island, in South Korea, all other studies were developed by researchers based in the same countries as the islands they study. Jeju was the most researched island, followed by the Azores Archipelago, in Portugal (Table 1).

Title	Year	Country of institution	Case study	Publication platform
Underwater interpretative trail: guidance to improve education and decrease ecological damage	2005	Brazil	Anchieta Island, Brazil	International Journal of Environment and Sustainable Development
The influence of use, environmental and managerial factors on the width of recreational trails	2010	USA	Acadia National Park, (part of the) Mount Desert Island, Maine, USA	Journal of Environmental Management
Plant diversity in hiking trails crossing Natura 2000 areas in the Azores: implications for tourism and nature conservation	2014	Portugal	Natura 2000 areas in two islands in the Azores Archipelago, São Miguel and Flores, Portugal	Biodiversity Conservation
The Use of Geographic Information Systems (GIS) in Environmental Education and Awareness: The Case of Hiking Trails in the Island of Karpathos-Saria Cluster	2015	Greece	One hiking trail in the island of Karpathos, Greece	Conference proceedings
Built heritage and flash floods: hiking trails and tourism on Madeira Island	2016	Portugal	Madeira Island, Portugal	Journal of Heritage Tourism
Analysing human mobility patterns of hiking activities through complex network theory	2017	Spain	Balearic Islands (Mallorca, Menorca, Ibiza, Formentera), Spain	PLoS ONE
Rediscovering Rural Territories by Means of Religious Route Planning	2017	Italy	Five of the newly established pilgrimage routes in Sardinia, Italy	Sustainability
The efficacy of combined educational and site management actions in reducing off-trail hiking in an urban-proximate protected area	2017	USA	Bear Island, Maryland, USA	Journal of Environmental Management
Carrying capacity of Peucang Island for ecotourism management in Ujung Kulon National Park	2018	Indonesia	Peucang Island, Indonesia	LISAT 2017 IOP Publishing IOP Conf. Series: Earth and Environmental Science
Identification and Prediction of Latent Classes of Hikers Based	2018	USA and South Korea	The Olle Trail on Jeju Island, South Korea	Sustainability

on Specialization and Place Attachment				
Tourist and Sport Reform Dress, Friluftsliv, and Women's Right to Vote in Norway, 1880–1913	2018	Norway	Lofoten Archipelago, Norway	T. Gray, D. Mitten (eds.), <i>The Palgrave International Handbook of Women and Outdoor Learning</i> , Palgrave Studies in Gender and Education
Examination of benefits sought by hiking tourists: a comparison of impact-range performance analysis and impact asymmetry analysis	2019	Hong Kong and Australia	Olle Trail on Jeju Island, South Korea	Asia Pacific Journal of Tourism Research
Perceptions of Multiple Stakeholders about Environmental Issues at a Nature-Based Tourism Destination: The Case of Yakushima Island, Japan	2019	Japan	Yakushima Island, Japan	Environments
The Geographic Spread and Preferences of Tourists Revealed by User-Generated Information on Jeju Island, South Korea	2019	USA and South Korea	Jeju Island, South Korea	Land
Analyses of determinants of hiking tourism demands on the Jeju Olle hiking trail using zero-truncated negative binomial regression analysis	2020	Hong Kong	Jeju Island, South Korea	Tourism Economics
Searching for the stairway to heaven: information seeking about an illegal hiking trail in Hawai'i	2020	USA (Hawaii)	Ha'iku Stairs, in O'ahu, Hawai'i, USA	Leisure Studies
Exploring destination loyalty: Application of social media analytics in a nature-based tourism setting	2021	Canada	Jasper National Park (briefly deals with the Spirit Island), Canada	Journal of Destination Marketing & Management
Land cover along hiking trails in a nature tourism destination: the Azores as a case study	2021	Portugal	Azores Archipelago, Portugal	Environment, Development and Sustainability

Table 1: Papers on trails and hiking studies selected from the Scopus and Web of Science databases, by publication year.

Localities of Interest

Jeju Island, in South Korea, was the most studied island, being the subject of four publications. Jeju is a very touristic island located in the south of the Korean Peninsula which has been consistently receiving more than 10 million tourists a year. The island is advertised as an ecotouristic destination, and indeed research has shown that the most common reason for visiting the island is appreciation of natural scenery (Fisher et al. 2019). The Jeju Olle Trail, created in 2007, stimulated a huge development of hiking and hiking trails in the country (Oh, Kim & Choi 2020). Song et al. (2018), Oh et al. (2020) and Oh, Kim & Choi (2020) actually dealt particularly with this trail and not with Jeju Island as a whole, as was done by Fisher et al. (2019). Another case study in Asia was performed by Adewumi, Usui & Funck (2019), who studied

Yakushima Island, in the south of Japan. For Yakushima, the nature-based tourism element was also present and drove the interest of the study. Although on a smaller scale than Jeju, the tourism pressure is also relevant on this island, which receives about 20 times its population in a year (Adewumi, Usui & Funck 2019). The last case study in the continent dealt with the Peucang Island, located west of the island of Java, in the archipelagic state of Indonesia. Although not as touristic as Jeju and Yakushima, nature-based tourism was also the central topic of the study, as the area was appointed as priority for the development of ecotourism (Wiyono, Muntasib & Yulianda 2018).

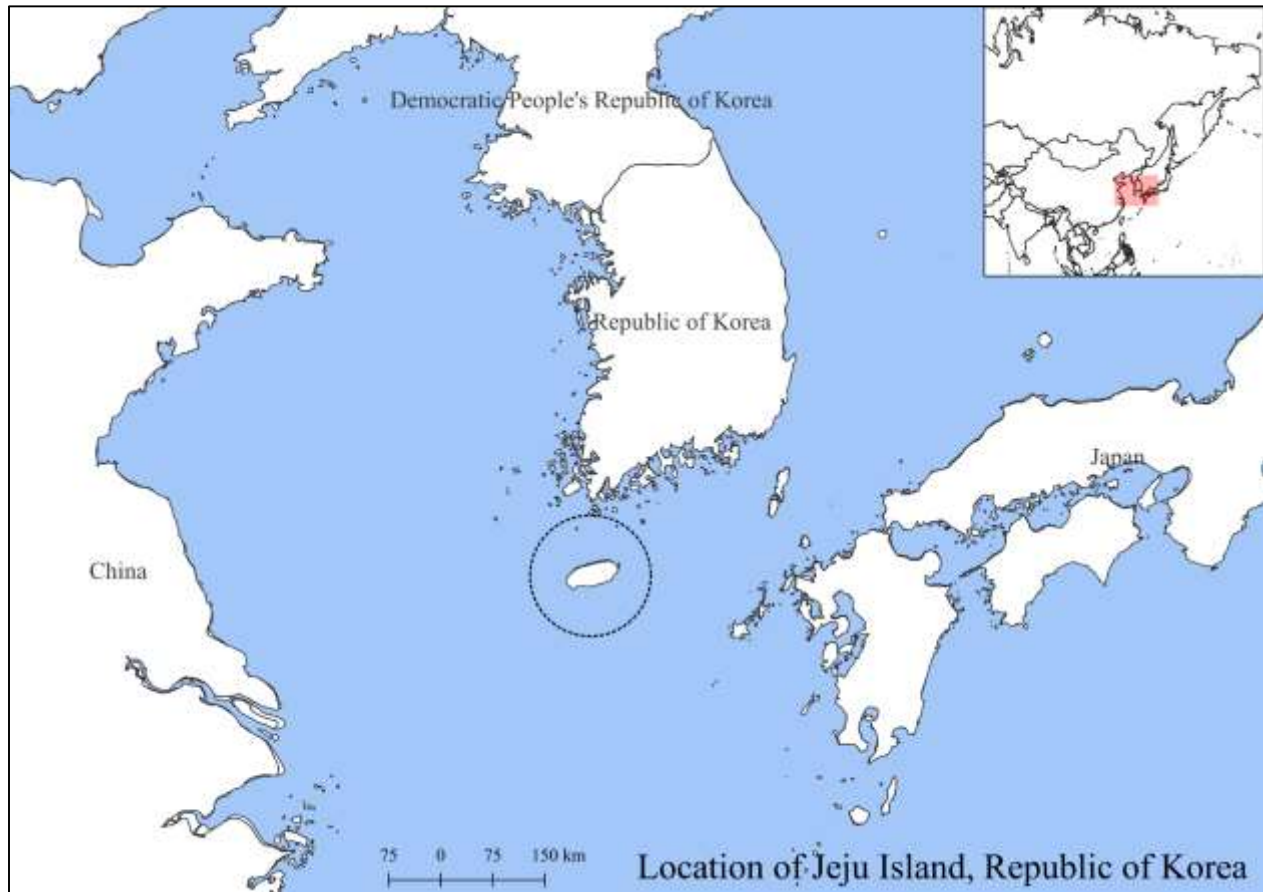


Figure 1: Location of Jeju Island, Republic of Korea.

Four studies were held for the whole American continent. Interestingly, one of them dealt with a coastal island (Mount Desert Island [USA]), one with a canal island (Bear Island [USA]), one with a lake island (Spirit Island [CA]), and one with an underwater trail in a coastal island (Anchieta Island [BR]). Similar to the majority of studies of the Jeju Olle Trail, all cases focused not on the island, but specifically on the hiking trails (in the Canadian study case, though, the focus was neither on the island nor the trail, but on the Jasper National Park). Only Wimpey & Marion's (2010) study of the width of hiking trails on the

Acadia National Park, in Maine, which spreads through half of Mount Desert Island and some small emerging lands nearby, dealt more or less with the island scale. Mount Desert is a glaciated rocky island, also very requested for tourism, with about 2 million visitors a year. A second study case in the USA regarded the Bear Island, located 25 km out of Washington D.C., between the Potomac River and the Chesapeake and Ohio National Historical Park. The study, published by Hockett, Marion & Leung, in 2017, focused exclusively on the informal trails developed off the Billy Goat Trail, and little consideration for the island as a whole was made. Similar happened to the Spirit Island, a very small island in the Maligne Lake, which is actually connected to land during drier seasons. Mirzaalian & Halpenny (2021) dedicated their study to the Jasper National Park, and the island was one in many natural attractions they approach. Finally, Berchez, Carvalhal & Robim (2005) studied a 350 meters free dive underwater trail located in the large rocky shore eastern bay of the Anchieta Island, a state park established in 1977 located off the southeastern coast of Brazil. Up to today this trail exists and can be visited, making it the only subaquatic trail in São Paulo State (Secretaria de Infraestrutura e Meio Ambiente n.d). The authors' focus was also limited to the local scale of the trail itself.

The continent with the most studies was Europe, covering somewhat well its regional diversity. Three studies dealt with Mediterranean islands (the Balearic [SPA], Sardinia [IT], and the system Karpathos-Saria [GR]), covering its western, central and eastern regions, respectively; three with oceanic islands (the Azores [2] and Madeira Archipelagos [PT]); and one with subarctic islands (Lofoten Archipelago [NO]). The Balearic Archipelago is an Autonomous Region located about 200 km from mainland Spain, and a popular tourist destination, especially for ecotourism and nightlife. Lera et al. (2017) dealt with hiking routes and points of relevance for Mallorca, Menorca, Ibiza and Formentera, the main islands of the archipelago, discussing some similarities and differences beyond the island scale. Balestrieri & Congiu (2017), on their turn, focused on the island of Sardinia, in the south of Italy, particularly on five of its newly established pilgrimage routes. In the eastern region of the Mediterranean Sea, the Karpathos-Saria cluster, a limestone-based island complex with traditional villages about 160 km from mainland Greece was researched by Fanariotis & Papathanasiou (2015). Their focus, however, was strictly on one hiking trail in the islands, for exemplifying GIS applications. There were no discussions about relations between islands or with the mainland besides a brief characterization of the cluster as populated by about 6,000 people, which had a high level of migration, currently reduced due to the growth of tourism. Gurholt's (2018) paper had its starting point on the Lofoten Archipelago, in the Arctic Circle, particularly on the Gina Trail. The Lofoten Archipelago is a glacial archipelago with a landscape dominated by mountains and fjords. Given her approach to national identity and history, she often related the trail to the country, but as a historical more than as a geographical object, and the archipelago itself was barely discussed. Differently occurred to the oceanic islands studies. Madeira and Azores Archipelagos are two Portuguese autonomous

regions with the status of outermost regions of Europe, located in the North Atlantic Ocean, about 1,000 and 1,500 km from mainland Portugal, respectively. Formed by volcanic processes related to the Atlantic range, they are part of the Macaronesian Region, together with the Spanish Canary Islands and the Cape Verde Archipelago. Azores is formed by 9 main islands, whose land cover is dominated by agriculture and pasturelands, with natural vegetation corresponding to only 10% of it (Pavão et al. 2021). The Madeira Archipelago is formed by 2 main islands, Madeira and Porto Santo. Fernandes (2016) focused on the Madeira Island *levadas*, historical hydraulic structures that became used as hiking trails connecting the coast to the higher central areas of the island. Tourism in the island accounts for about 10% of its GDP. The Azores are also a strong tourist destination, having undergone a boom in the last decades (Pavão et al. 2021). Both studies conducted in the Azores had an archipelagic perspective, with Pavão et al. (2021) dealing with the archipelago as a whole and Queiroz, Ventura & Silva (2014) focusing on the Natura 2000 areas of São Miguel and Flores Islands.

Finally, O’ahu, in the Hawaiian Archipelago (USA), was the only island researched in the Pacific Ocean. O’ahu is the main island of the State of Hawai’i, where the capital Honolulu is located and where population and tourism is concentrated. Bergstrom & Neo (2020) dedicated their research to the Ha’iku Stairs, a three thousand steps illegal hiking trail in O’ahu, also known as “Stairway to Heaven”, which has been daily visited despite being closed since 1987. Their focus was also specifically on the trail, and no island, archipelagic or other spatial scales were discussed.

Regarding the geographical distribution, no African islands were studied, and only O’ahu and the Portuguese archipelagos of Madeira and Azores represented oceanic islands, as all the others are located near or inside the continents, in fresh water. Three tropical (Anchieta, O’ahu, Peucang), one subarctic (Lofoten) and ten temperate (Mount Desert, Bear, Spirit, Azores, Madeira, Balearic, Sardinia, Karpathos-Saria, Jeju, and Yakushima) islands systems were researched, what might be an expression of the concentrated growing interest for ecotourism and hiking in developed countries. As already mentioned, only two studies dealt with underdeveloped countries, while all others focused on the global North. None of them dealt with island states, with all case studies dealing with subnational jurisdictions, which can be partially due to a limitation of the search string in using general terms instead of proper names to refer to islands and archipelagos.

Contents Addressed and Interactions with Nissology

Environmental Education

Berchez, Carvalho & Robim (2005) analyzed an implemented model of an interpretative guided underwater trail in the Brazilian coast. They explained how the trail following was performed, and measured satisfaction and the impacts it had on tourists, particularly about environmental education regarding marine ecosystems, assessed through questionnaires whose answers were statistically analyzed. No theoretical or conceptual frameworks, paradigm or philosophical or scientific backgrounds were explicitly discussed. No interaction with nissology concepts and theories was found in this paper. The study was focused on the trail itself, and not on the island or any feature besides the trail (structure, visitation, improvement). No implications of the trail being located on an island were discussed, as well as there was no discussion about island-mainland relations.

Similarly, Fanariotis & Papathanasiou (2015) study presented no specific discussion of island perspectives, nor of inter-island, archipelagic or mainland relations. The authors argued for the applicability of Geographical Information Systems (GIS) for environmental education, with the example of mapping a hiking trail in the Karpathos-Saria cluster, in the Aegean Sea. Again, no theoretical backgrounds were systematically discussed, and the main contribution this paper brought was the suggestion that environmental education tourism could be a possible alternative for the tourist market to confront the increasing seasonality and concentration in some parts of the Greek territory.

Still regarding environmental education issues, Hockett, Marion & Leung (2017) were interested in assessing how educational and management measures (signs, obstacles, monitoring) reduced off trail hiking in an island inside a park near a densely occupied urban area in the USA. For such, they applied questionnaires and observed hikers' behavior before and after measures were taken, and performed statistical analysis to check the patterns found. The authors argued that the causes and strategies that must be employed to reduce off-trail behavior are different in different contexts. An example is the profile of visitors of near urban parks, which tends to be of repeaters, whose behavior, therefore, is more difficult to shape, as they might see those parks as simply exercise areas and not as a sensitive area to be managed. The authors employed, however, a park perspective, and no island-specific approach was used. Their focus was completely on the measures and in the condition of 'urban-proximity protected area' and not in the island that shelters it.

Environmental Impact and Nature Conservation

Wimpey & Marion (2010) published a study on environmental quality, particularly on the implications of management, use and environmental factors on trail width on the formal network of trails of the Acadia National Park, on Mount Desert Island. The authors assumed that the existence of a hiking trail

system reduces the aerial impacts of hiking and that it is an essential type of infrastructure to grant access of visitors in a sustainable way to protected natural areas, therefore the relevance of trail management studies. They strictly focused, therefore, on the trails, and very slightly on the park's terrain, for example on its topography, slopes and soil characteristics, to contextualize the discussions. Once more, no island interactions with other areas were mentioned rather than the trails' immediate surroundings.

The second study of this section finally brought some specific considerations for island particularities. Changes on vegetation along eight hiking trails inside protected areas on two islands in the Azores Archipelago, São Miguel and Flores, were the focus of the study conducted by Queiroz, Ventura & Silva (2014), which showed that land use was more influential over plant diversity than the presence of a hiking trail. The study had an underlying island biogeography perspective, and specialized bibliography in oceanic island flora was used, as demonstrated when the authors attempted to generalize that "island ecosystems have certain peculiarities that make them more susceptible to unregulated tourism" (ibidem, p. 1349), as habitat fragmentation and the spread of invasive species, present in the islands since the beginning of human settlement in the 15th century. Besides, the assessed spread of anthropogenic impacts upwards show that, given the occupation and land use patterns, volcanic islands might concentrate impacts on plants in low altitudinal areas, in accordance to previous studies (Alexander et al. 2011). There was, therefore, some nissological perspective linked to biogeography, one of the foundational and consolidated areas of island studies. Furthermore, the research had an important comparative component, as São Miguel and Flores have different demographic and touristic dynamics, with the first hosting more than 50% of the Azorean population, receiving the largest flow of tourists, and having 7% of its land integrated into the Natura 2000 network, while the latter is much less populated, less visited, and has 31% of its land integrated into said network. Another distinguishable point is that the method for data collection (plot size) was adjusted to the context of the Azorean Archipelago from previous research. The authors also highlighted that non-native species account for about 70% of the archipelago flora, demonstrating the vulnerability in terms of genetic and demographic factors islands are submitted to (Fernández-Palacios et al. 2021). Finally, the study dealt with archipelagic relationships, not only in the comparisons held, but also by using "island" as a variable in the statistical analyses performed, assuming that they were possibly playing roles in the conditions observed.

Politics and Culture

Gurholt (2018) related feminism and physical culture in Norway in the end of the 19th century, linking opening trails as a metaphor to women's emancipation, national policy on outdoors activities and

democracy. One of the pioneers of the *friluftsliv* (free-air-life) movement and suffragist was Gina Krog, born in Flakstad, in the Lofoten Archipelago, in 1847. In 2013, the Gina Trail was inaugurated as an action within the celebration of a century of women's right to vote in the country. Through the study of archives and narratives, her study dealt with the history of women in outdoor sports in Norway and its political implications. In that country, hiking was valued as "part of women's social and moral emancipation" (Danielsen, Larsen & Ovesen 2013, p. 133, cited by Gurholt 2018, p. 130), attracting increasing interest from the 1880s and challenging the traditional images of women. It also challenged the male centric aspect of the Romantic walking movement. However, the social class difference was still present, with working women benefiting less from the *friluftsliv* movement. Up to today, this is a problem of hiking and outdoor leisure activities, as they are historically performed by those with higher income and education. Based on Agerholt (1937), the author also indicated the promotion of equality and healthier relationship between the genders as an outcome of outdoor activities. Thus, it pointed out to benefits of hiking not mentioned in any other study here evaluated, belonging to the political, social and moral dimensions. Despite its unique approach to hiking, relating it constantly to the national identity and the histories of feminism and democracy, Gurholt's study did little discuss island or archipelagic specific issues.

Tourism Management

This is the topic that received the most attention by the researchers, in various forms. Fernandes (2016) related built heritage, tourism and risk, discussing the use as hiking trails of the canals of Madeira known as *levadas* in the context of flash floods and climate change. As her ethnographic research indicated, coastal tourism, including hiking trails by the sea, is threatened by climate change, and routes in the interior of the island can be a safer alternative. They are, however, also submitted to risks, as shown by the constant temporary closing of trails, which affect tourism activities. The underlying perspective was that it is necessary to adapt the destinations and tourism industries to the impacts of climate change, as new geographies of tourism arise. Regarding islands theories links, although the study did not bring a comparative perspective, it had contributions from Sauter's et al. (2013) report "*Impacts of climate change on all European islands*". It is also worth mentioning that the local government officialized some of the pathways next to the *levadas* as hiking trails with the intention of providing diversity of settings (mountain, sea, mixed) and decentralization of the tourist activity from the coast (Fernandes 2016). This is a challenge for many islands which economies are based on seaside tourism, remarkably on warm waters, from low-elevated islands such as Bonaire, to volcanic, oceanic islands as the Canary Archipelago, given their

externally-driven policy in the context of their colonial history, which concentrated the occupation on the coast (Moreno-Medina 1997).

Lera et al. (2017) studied human mobility patterns in the context of hiking activities in the Balearic Archipelago through complex theory, building algorithms and models and identifying points of relevance. Differently from all other studies, this one had a physical and computational background, which reflected the authors' affiliations to physics and math sciences. Among the reasons the authors mention for the suitability of this study area for their research was that they are "small confined pieces of land", with a "human movement scale", besides the geographical variation of each of the islands, sharing the perspective of hard-edgedness and isolation that characterize the approach of "islands as laboratories". Given the spatial scale of the research, archipelagic considerations were made. Beyond that, discussions involving the island with other regions only happened regarding the differences of each island model and along the year due to inbound tourism figures.

Also Wiyono, Muntasib & Yulianda (2018) applied a quantitative approach to their study, which aimed at calculating the carrying capacity of the Indonesian island of Peucang, part of the Ujung Kulon National Park, for ecotourism development. They used Cifuentes' formula to calculate physical, real and effective carrying capacity, collected data through observation and interviews, and found out that the island's carrying capacity is higher than the current use, existing margin for tourism growth. Regarding island-specific issues, they acknowledged the access difficulties to Peucang, which is an uninhabited island, and treated the island as a unit of analysis, focusing on southern and northern beaches as well as on the trail that connects them.

Song et al. (2018) aimed at identifying typologies of hikers to predict their behavior in terms of satisfaction and intention to revisit based on place attachment and on hikers' level of specialization, so better managerial actions could be taken under a perspective of a person-centered target market. The categories formed out of the specialization criteria were behavioral, cognitive, and affective, while the place attachment categories were place identity and place dependence, resulting in three classes of hikers: novice, affection-driven, and expert. Place attachment, characterized as an affective bond between people and place, is a useful conceptual framework to study outdoors recreationist behaviors, as this relationship matters to sustainable resource management, for instance regarding environmental behavior, involvement in conservation strategies, and impacts of recreational activities (Song et al. 2018). In face of Hay's (2006) approach to islands fundamentally as places, understood as spaces with meanings attached to them, the place attachment perspective is one with great potential to approach islands. The authors' focus, however, was limited to the Jeju Olle Trail, and not to the island as a whole. To expand the comprehension of place to the island might provide interesting results about peoples' attachment and attributed meanings to hikes in Jeju.

Oh et al. (2019) compared first time and repeating visitors regarding the benefits they seek when visiting the Olle Trail on Jeju Island. They collected data through questionnaires, and analyzed them using two methods, the impact-range performance analysis and the impact asymmetry analysis. The authors strongly emphasized the benefits of ecotourism as an alternative form of tourism, in particular the variety of attractive pleasures provided by hiking activities, which was a central component of their theoretical framework. They also observed, following Kim et al. (2015), that the Jeju Olle Trail is an element that stimulates spending and longer stays of outsiders on Jeju. The Olle Trail is the most popular hiking in South Korea, inspiring the growth of slow tourism values in the country. The authors had a special reference to the fact that the site of study was an island, suggesting that specificities would be found in this setting concerning the benefits of hiking, although no further developments were presented.

Another study signed by Oh together with Kim and Choi (2020) expanded the approach to the island condition regarding hiking tourism on Jeju analyzing determinants of such demand. Previous studies showed that sociodemographic characteristics of hikers explain preferences and hiking demands, to which the authors added the facilities and services available, including the trail itself and campsites, safety, convenient roads, educational content and events. The authors did not find travel distance a relevant factor influencing their study population's decision to follow the Olle Trail, but they highlighted that for potential tourists, not considered in this study, the results might be different, suggesting that future studies on tourism demand should also assess the influence of travel distance given the particularities to access the island. Also, they mentioned seasonality as an important influence on tourism demand on islands.

A third publication on Jeju Island also dealt with tourism management. The innovation brought by this study of spatial patterns on recreationists behavior and preferences conducted by Fisher et al. (2019) is the application of a strategy to collect data through user-generated content (UGC). UGC refers mostly to online posting, as on social media, but can also relate to other information and communication technologies. The researchers collected data from the social networks Twitter and Flickr, and from a Korean telecommunications company, and found that indeed there was a correlation between UGC and on-site generated data. Their study, though, focused strictly on the geographic spread and preferences of tourists, and no particular consideration or approach to the island was taken.

Similarly to Fisher et al. (2019), Mizaalian & Halpenny (2021) applied sentiment analysis and topic modeling to user generated online data from TripAdvisor to understand destination loyalty in the Jasper National Park, in Canada. Although no discussions on islands were present besides the mention to Spirit Island as one of the several features studied, their understanding that “social media has fundamentally revolutionized the way tourists communicate, collaborate, consume, and generate information related to destinations” (Mizaalian & Halpenny 2021, p. 4) is of grave importance as social media content became a

highly relevant mean to influence touristic appeal, expectations, behavior and imagination, remarkably in nature-based destinations in island contexts.

Adewuimi, Usui & Funck (2019) discussed how different stakeholders see the conflicts between tourism and local resources on the Yakushima Island, in Japan, as, for example, in the case of the population of deer. They collected answers through a questionnaire and applied statistical checks to evaluate the significance of differences between stakeholders' answers. Their underlying approach was that "the success of nature-based tourism destinations depends on the sustainable use of common pool resources (CPRs)" (ibidem, p. 1). Sustainability debates are embedded on the common pool resource discussions, and they are particularly relevant to our topic because "environmental issues at a nature-based tourism destination are not only limited to tourism related issues, but also occur due to competition between other users of CPRs" (Adewuimi, Usui & Funck 2019, p. 12). Conflicts among stakeholders in a touristic island destination has been an issue worldwide. The poor management of the impacts caused by mass tourism on natural resources and on social aspects has become more and more serious along the years with the consolidation of tourism as a recreational activity, as exemplified by the reduction of penguins on Dama Island, in Chile, the socio-environmental pressure on the Canary Islands, and the drastic reduction of the coral reef on Bonaire. Nonetheless, spatial inequality (coast/inland), concentration of tourism revenues and public investments, and environmental impacts from mass tourism are being confronted from alternative tourism initiatives such as ecotourism and community-based tourism. The authors did not explicitly show particularities of CPR management on islands, but as their study area is given by Yakushima's territory, at least implicitly it seems to be present.

Bergstrom and Neo (2020) studied the processes and impacts of information seeking in the decision of hiking an illegal trail in O'ahu, the Ha'iku Stairs. They employed an open ended survey and qualitative coding to assess the influence of social media posts over visitors, concerning their possible effect towards the decision to follow the hiking or not, under a social cognitive theory framework. Despite the popular expectation, online content did not seem to be motivating people to engage in such hiking. However, they considered that their research was biased given the different conditions of residents and no-residents, and that mostly the first ones were reached. This is one of the few studies which had a specific observation regarding islanders and outsiders in face of the same subject.

Pavão et al. (2021) analyzed the land cover of the areas crossed by hiking trails in the Azores Archipelago. The network of hiking trails in the Azores developed very recently, in the past 40 years, and currently holds a great importance, being considered one of the main Azorean touristic assets (Pavão et al. 2021). Applying an innovative method combining geospatial and statistical tools to the official trails network, the authors concluded that the areas they cross are dominated by humanized landscape, although

tourists see the Azores as a nature destination. Management implications referred to the interest in increasing trails on biodiversity-valued regions, but, given their sensibility, the potential for cultural tourism in the currently crossed areas was pointed out as another interesting direction to be considered. Differences were found among the studied islands, though, with trails inside protected areas being more common in Flores, which could be explained due to the history of occupation of the islands, with a more intense occupation and extraction of resources occurring on those with larger populations. The Canary Islands underwent a similar process in this regard, with hiking trails and roads being built from pathways used to connect resource extraction areas inland to settlements and to the coast (Moreno-Medina 2005). Moreover, similarly to the Canary Islands and to other islands mentioned in the analyzed studies, the Azores has also recently experienced a boom in tourism, accompanied by an increasing interest in alternative tourism and in hiking activities (Pavão et al. 2021).

Regional Development

Balestrieri & Congiu (2017) studied hiking practices as vectors of regional development, more specifically pilgrimage routes in rural contexts. From literature review and interviews with experts, they proposed an analytical method to assess such potential based on an index of territorial potentiality composed by 13 variables of 4 macro-categories, namely accessibility, attractiveness, planning and management, and visibility. The authors argued for the potential of these religious walks as structural components of the local economy and territorial regeneration, as the Camino de Santiago and the Via Francigena routes in Europe. In brief, pathways are opportunities to increase accessibility and attractiveness, enhancing the competitiveness of territories (Balestrieri & Congiu 2017). For such, the authors recommended the official institution of the routes and the establishment of partnerships between the municipalities crossed by them as starting points to develop not a mainstream, mass tourism, but a niche and locally owned one. Their research discussed five of the newly established pilgrimage routes in Sardinia, within the framework of the Identity, Cultural and Religious Tourism Program of the island, created in 2012. Although the paper brought contributions about hiking and territorial development, policy and management, and human relationship with space through pilgrimage routes, no island-specific related approaches were taken.

Discussion

The publication of papers, as mentioned, is an index of symbolic capital for those interacting under the social field of science. When disciplines are taken as agents, the accumulation of such capital refers to

their power to influence the field, meaning that their approaches, concepts, references, interests in general, have their reach expanded. The analysis of the publications, above, shows that in fact nissology is little being considered for research on hiking and trails. In other words, research on hiking and trails on islands little take into consideration particularities of such settings, which is the basic premise of the own definition of the discipline of island studies. Some exceptions, though, deserve consideration. As Baldacchino (2006) reminds, nissology has historically had deep links with ecological studies. In this area, particularities of islands have been constantly observed, such as those regarding endemism and vulnerability (Fernández-Palacios et al. 2021). In hiking and trails studies, the one study focusing on vegetation (Queiroz, Ventura & Silva 2014) indeed took an island biogeography approach to assess changes in its patterns and the vulnerability of insular ecosystems. Studies on environmental education, politics and culture, and regional development did not have any nissological perspective. Concerning central elements for the islands spatiality, only Lera et al. (2017) study had an explicit reflection on the (hardness of the island) boundaries, and Bergstrom & Neo (2020) reminded of the duality of islanders' and visitors' perspectives.

In this regard, Grydehøj (2023) recognizes that island studies have become more and more plural, but also that, at the same time, they have undergone essential transformations.

“Island studies has had an increasing impact on other fields and is no longer a neglected multidisciplinary corner of academia. There are now more island studies than ever before. Or is there? I sometimes feel there is less island studies now than there was in 2017, certainly than when I first came into contact with the field back in 2007. As island studies has grown in scope and depth, as it has expanded into new disciplines and regions, it has become more difficult to identify what holds the field together” (Grydehøj 2023, p. 297).

On one hand, such transformations might reflect the interdisciplinary character of nissology, which allows a reciprocal contribution among disciplines by transferring concepts, problems and methods (Durand 1991; Pombo 2008). On the other hand, it can be a sign that what provided the field with an interdisciplinary character in the first place, that is, the focus not on a specific object and method of inquiry, but on a topic, is being treated as an object rather than an epistemic reference. When McCall (1994) defined nissology, he argued that “nissological knowledge should be multidimensional in its approach and duties” and that “we Nissologists are like the islands that we study. We come in many shapes and sizes; we have different characteristics; we are scattered across our planet Earth (...) spanning the seas and continent that might separate us, to join in our common pursuit of Nissology” (McCall 1994, pp. 6-7). He calls, thus, for a multidimensional effort not for dealing with islands only, but “islands in its own terms”.

Most of the papers had tourism management as background and little consideration about islands' particularities. As an ongoing process, the expansion and deepening of island studies' epistemological

approaches desired by Depraetere (2008a; 2008b) might have simply not reached hiking and trails studies yet because dominant disciplines, such as tourism management, have not yet been reached in depth by nissology themselves, what can be a challenge and an opportunity for island studies. The current movement of nissology identified by Grydehøj, however, suggests that an expansion process is happening, but that it is not necessarily linked to nissology, but to island as an object of inquiry, that is, that the symbolic capital that expands studies on islands across the scientific field is mostly provided by the attractiveness of island as a topic rather than the nissological approach.

Some Initial Reflections for Addressing Island Particularities on Hiking Studies

The perspective of island studies has as its core the constitution of islandness (Baldacchino 2006; Baldacchino 2008). Islandness reflects the physical characteristics of islands and their effects on human islanders (Royle & Brinklow 2018). It is a variable that is practiced (Grydehøj & Casagrande 2020) and “does not determine, but contours and conditions physical and social events in distinct, and distinctly relevant ways” (Baldacchino 2004, p. 278), Islandness has a “plausible and possible” influence over many aspects of islands, such as literature, political economy, biogeography, governance, and sustainable tourism.

The role of the edge is central to approach islandness (Hay 2006). Approaches that consider islands as hard-edged features assume the coastline as a limit, an end. For Péron (2004) and Bonnemaïson (1985), the shore defines the island and gives a sense of isolation, which would contribute to shaping island identity (Hay 2006). Others, like Baldacchino (2006) and Hau’ofa (1995), dismiss the idea of islands as hard-edged places and adopt a relational perspective, considering the borders as sites of possibility and liberation. In both, however, the coastline, given its material condition – although perpetually changing – is a link between the differences. It can be illustrated by Stratford’s et al. (2011) characterization of island spatialities through three binary pairs: land and water, island and continent, and island and island, setting difference, mutual relation and equivalence (Olsson 1992; Stratford et al. 2011). While in every coastal or marginal region of water bodies this, to a certain extent, occurs, on islands it is expressed literally on all sides.

The dominance and perception of this contact between dimensions are inversely proportional to the size of the islands, that is, they manifest themselves more predominantly the smaller the area. Baldacchino (2004) uses the concept of “geographical precision” to explain this relationship between the (re)cognition of the island spatiality and its size. This concept and this relationship are fundamental for understanding the various particularities of island regions, as the greater the geographic precision, the greater the intensity of the manifestation of islandness. One example of islandness effect related to geographical precision is the influence of the physical environment of islands over people’s sense of space. In Tikopia, a 5 km² island part of the Solomon Archipelago, in the Pacific, islanders have little conception of landmass size and wonder

if there is any land where the ocean waves cannot be heard (Tuan 1977, p. 54). Hay (2006, p. 20) accompanies Baldacchino in this discussion: “whatever islandness is, it seems likely to be quite different for islands that are unambiguously small as against those that are not”. From the dynamic dimension of islandness, an island can be defined as an “outcome of what islanders do, and in particular of how islanders move” (Vannini & Taggart 2013). Thus, the relevance of embracing movement and mobility to understand islands (Nimführ & Otto 2020; Bernardie-Tahir & Schmoll 2014), being the pathways central elements for such.

This argumentation underscores the theoretical potential of addressing island particularities in hiking and trails studies. The next pages are dedicated to discuss possible spatial and philosophical possibilities of such an approach.

Geomorphology, Occupation Patterns and Circulation Networks

The island condition can directly and indirectly affect the existence and aspects of a trail. It is a conjunction of elements that results in its particularities. Let us consider the case of Gran Canaria, an oceanic island located on the northwest coast of the African continent. Its geomorphology is dominated by a radial system of valleys and interfluves, shaped by the dissection of volcanic geology since its formation, approximately 14.6 million years ago (Rodríguez-González et al. 2018). The human occupation of the island, which began on the coast, was shaped by the geographical reality of Gran Canaria, with a predominance of coastal paths connecting larger settlements, in the more humid northside, and a less developed network of internal paths and in the south. With Spanish colonization, from the 15th century onwards, the network of roads began to follow an externally-driven logic of flow of natural resources, therefore starting to connect the extraction areas with the ports. The colonization processes and their dominant logics, focused on internal or external interests, influenced, along with the island’s geomorphology, particularities in the center-margin, land-sea and settlement-production areas relationships. This recovery of the history and geography of Gran Canaria’s pathways was carried out by Moreno-Medina (1997; 2005) and constitutes a very rich analysis for understanding territorial articulation in island contexts, especially those similar to the Canary Islands regarding the topographic profiles and the colonial history. The image below shows the historic development of the pathways and the communication schemes of three of the Canary Islands, Gran Canaria, Fuerteventura and El Hierro, after Spanish colonization. While Gran Canaria has a radial morphology, El Hierro is ridge shaped and Fuerteventura has plain morphology, conditioning in different ways how settlements and circulation routes are distributed.

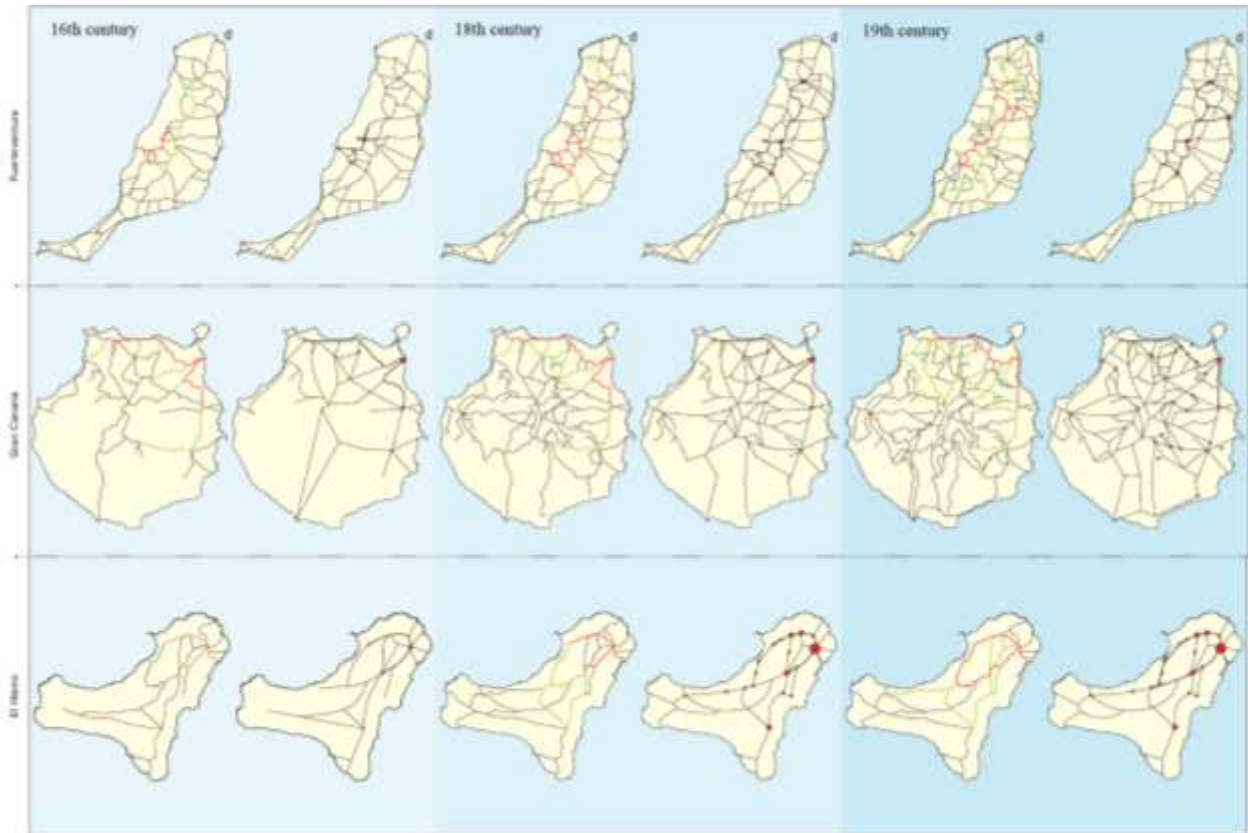


Figure 2: Networks of pathways and communications schemes of Fuerteventura, Gran Canaria and El Hierro, in the Canary Archipelago. Pathways of first, second and third orders are represented by red, green and black colors, respectively. Source: Moreno-Medina (2005, p. 425).

In the case of oceanic islands, such as the Canaries, occupation initially takes place by sea. Subsequently, a network of paths is developed so that populations can reach the island's resources. This network, thus, develops as a result of settlements established via maritime occupation (Moreno-Medina 2005, p. 59). The Rostow-Taffe growth stage system, discussed by the author, illustrates this process in four moments: 1) occupation is directed by ports, relying on a thin network of settlements that occupy spaces with more resources; 2) a coastal network develops and there is some penetration of settlements towards the interior, with few local connections; 3) the network expands, as do the connections, becoming regional; 4) the communications network occupies all available spaces. These processes result that inland areas are less densely occupied, or takes longer to be incorporated, than the perimeter of the island, for example, which affect how human populations interact and conceive those spaces. This pattern is also reflected on the road network established over the pre-existing pathways, transmitting historical integration and isolation throughout time, as it can be seen with the concentration of settlements, political power, public infrastructure, residents and visitors in island coastal areas.

For a Spatial-Philosophical Consideration of Islandness and Place-Making in Hiking Experiences

Massey (2004) questions the “universality of the meaningfulness of place” and argues, together with Latour (1993), that both local and ‘global’ phenomena are grounded and emplaced, dismissing the opposition between place as grounded and space as abstract. Tuan (1977), on his turn, considers space as more abstract than place, but he acknowledges that “in experience, the meaning of space often merges with that of place”. For this author,

“Experience is composed of feeling and thought. Human feeling is not a succession of discrete sensations; rather memory and anticipation are able to wield sensory impacts into a shifting stream of experience so that we may speak of a life of feeling as we do of a life of thought. It is a common tendency to regard feeling and thought as opposed, the one registering subjective states, the other reporting on objective reality. In fact, they lie near the two ends of an experiential continuum, and both are ways of knowing” (Tuan 1977, p. 10).

We start with direct and intimate experiences and move to those that involve a greater symbolical and conceptual apprehension (Tuan 1977, p. 136). Regarding the sensory components of experience, those related to motion (kinesthesia, sight and touch) are the ones that provide us with spatial awareness of distance, tri dimensionality and shape, centered on the self (ibidem, p. 12). We can, however, extrapolate the senses and construct a space conceptually, in mythical, pragmatic and abstract ways, which can be embodied. To feel and recognize the space, a schematic world is conceived, with names, shapes, settings. Residents of a given area, therefore, will conceive from the experiential continuum different worlds than the visitors do, as their perception and conceptualization of reality are more stabilized (Tuan 1977). Generalizations, from imagination and previous experiences, fill the conceived worlds. Concerning islands, a strong attractor of human imagination (Tuan 1974), a whole set of pre-conceptions are present.

Reis (2012) adopts a space centered approach to fund her comparative study of hunters and trampers on Stewart Island, in New Zealand. Tramping is a core activity on the island and many international tourists are attracted to live the “quintessential New Zealand experience” (Reis 2012, p. 88). Bringing together discussions on the relationship between different uses of space, interactions between nationals and internationals, place-making processes, the self, romantic philosophy as background for (non)engagement with the environment and commodification of nature in the tourist industry, it consists in a remarkable contribution for a philosophical and geographical approach to hiking on islands. She noticed that, for a set of reasons, trampers had little chance of promoting place-making. First, because of the nature of the tramping activity itself, which is dominated by moving instead of staying. This leaves little room to engage with a place, making trampers perform as “guests”, with no more than an ephemeral link occurring, which

was intensified by the fact that this group is mostly composed of internationals visiting for the first time. The lack of shared philosophical position and group identity to support an active place-making from the trampers' side is another element of detachment as trampers practice is disconnected from the environment: although nature is required, it is limited to visual engagement and idealized settings. One fundamental factor that produces such a relationship is the commodification of nature in the tourism industry, resulting in nature's value as a function of the satisfaction with the experience that was purchased. Given that on islands commodification of nature is reinforced by imagination, idealization and pre-conceptions, stimulating standardized tourism consumerism, do tourists in this setting engage even less with space than in other contexts? This is a potential particularity for further investigation.

The hunters' relationship with space is radically different, pushed by the fact that they are mostly nationals, assembled in larger groups and with longer stays in lesser sites. Their differences in place-making, especially when sharing a hut, that is, when their experience with space is inescapably shared, can lead to conflicts. Furthermore, the trampers-consumers-of-nature expectations, considering how the experience is advertised, are that they will find wilderness and isolation. Sharing structures and spaces with other, dissonant place-makers, reduces satisfactory levels as remoteness expected is not met. This can lead one to wonder about how different place-making processes of different categories of users in a larger setting takes place, for example when sharing a trail, a park, or the totality of the territory, as in overcrowded islands, where demographic pressure is permanent, and its potential associated conflicts.

Gros' (2023) criticism towards hiking and other forms of commodification of walking intersects Reis' (2012) discussions in several points. He starts his argument differentiating walking as a product and walking as a practice, and focuses on the latter, resulting that the lack of place-making and spatial interaction of hiking practices are not deeply problematized. For this author, walking provides direct contact with the world in a way that is less mediated by culture and tradition (Gros 2023). Similarly, Dardel (2019) argues that "kinesthetic perception gives us access to a certain intimacy with geographic matter (...) they reveal the nature of things without the mediation of consciousness", conforming an existentialist and phenomenological perspective of spatial interactions. The philosophical baggage of walking is long appreciated. Thoreau's *Walking* (1851) was the first philosophical treatise on the topic (Gros 2023). It was inspired to an extent by Romanticism and Idealism, remarkably by Goethe's influences on literature and on German geography in the 19th century, and on Kantian transcendental philosophy. Rousseau, before, and Nietzsche, later, also contributed to the debate and had walking as an essential element in their lives, especially in their late stages (Gros 2023). The papers dealing with hiking and trails on islands available on the scientific databases search very rarely, and superficially, present a philosophical element besides the aesthetic pleasure of natural landscapes, which strikes as an important limitation, as the spatial component

that inescapably relates islandness and hiking is barely considered. A complex, interdisciplinary and philosophically funded spatial approach to hiking practices on islands is still in its early days, but important contributions to develop the topic were brought by Reis (2012).

Spatial Perception and Experience: A Matter of Scale?

Tuan (1974) produced one of the most influential works on spatial perception. He spread the concept of topophilia, which concerns the feelings towards specific places, inspired by the perceptions and values attributed to them. On islands, as previously mentioned, the sense of place is intensified by their size and boundedness. There are, however, infinite places on an island. We can relate it back to the four natural environments that have deeply attracted the human imagination, namely the forest, the valley, the beach and the island (Tuan 1974). Although they can occur independently and in different scales, when together, the island is necessarily the broader one. Given that embodied experiences are first related to the immediate surroundings (Tuan 1977), the island effect can go to the backstage when none of its particular aspects is being presented to our senses. It, again, relates to geographical precision. When walking by the coast, the seashore reminds continuously and dominantly the island state. Further, when visual contact no longer exists, the soundscape plays a similar role, for example with the wave movements. At some point, no sensory stimuli happen anymore. In such a situation, the awareness of the island condition, though, is the element that brings it back to the lived experience.

Several tourism studies assess tourists' perception, satisfaction, well-being, attachment, and other cognitive and affective elements. Oh, Kim & Choi (2019), for instance, include in their analysis of hiking demand an assessment of psychological benefits of hiking, and find as relevant factors some like "fantastic natural landscape" and "get away from daily life". Song et al. (2018) use "I was able to get away from the usual demands of life" as a variable to assess hikers' satisfaction. Both studies were located on Jeju Island, in South Korea, but they dealt exclusively with the Olle Trail, and not with the island. To consider awareness of the island condition means to acknowledge the expansion of the perception beyond the immediacy, opening paths for such studies to take not only the trail as a spatial scale of analysis, but to enlarge it to an island magnitude, or even to develop a multiscale approach.

Final Considerations

What are the specificities of hiking and of the existence of trails on islands? This question was briefly addressed in this study, but only with an introductory reflection. As a result of our interest in this

issue, questions that proved to be more basic and fundamental and, therefore, to be previously known, arose, such as the current status of studies on hiking and trails on islands and the presence of nissological approaches in these studies, which were discussed in greater depth here.

As a first approach to the topics of hiking and trails on islands, this study makes way for further research to emerge. Unfolding the question stated above, further investigation is necessary on how islandness affects the existence and use of pathways on islands, conditioning their demand, position, morphology, technology employed and uses. A longitudinal approach could also be of great value, showing variations in time given the different periods of use of the territory. We have addressed a few elements here, such as the geomorphology and the occupation patterns related to the colonization strategy, but the nuances are many. The reflection on this question might contribute for a complex spatio-temporal view on trails instead of as static a-historic elements. Moreno-Medina works on the Canary Islands (1997; 2005) bring relevant contributions for such.

Reis (2012) has shown the difficulties of place-making of trampers in a context of commodification of tourism (and, for Gros [2023], also of walking). Taking into account that “the facts of geography are place facts” and that “their association gives rise to the concept of landscape” (Sauer 2008, p. 98), movement allows us to address the landscape as formed by a succession of places. Given the nature of hiking itself, of motion instead of permanence, although engagement with particular places finds obstacles to happen, the trail as a route and the island as its setting can be seen as places themselves in the perspective of a walker. How could walking mediate place-making between the island and the walker? Are the roles of imagination and idealization of islands determinant on hikers’ place-making processes? Or are the commodification of walking and of space dominants on experiencing trails, especially in touristic contexts? These emerged issues might guide further studies on the production of space by hiking practices on islands.

Our research showed that island studies have been little considered by studies of hiking and trails, meaning that mutual contributions barely happen. There is, however, room for a change, since islands indeed do imprint particularities on trails networks and on the practice of hiking, such as regarding ecological and geological processes, occupation patterns, imaginary and place-making. Under Bourdieu’s notion of social fields, this indicates that nissology, concerning the topics here considered, has not achieved enough symbolic capital to make itself felt by other disciplines and perspectives, which, dealing with islands, rarely bring the “islands own terms” to debate. A wide network analysis of island studies taken both as a field and as an agent in the scientific field might reveal the reasons for such, for example, the lack of internal development of specific perspectives or the existence of a lower recognition than necessary to spread its perspectives. Both sound reasonable, but this is subject for future research, as are the reasons behind the

possible findings. The same goes for the question that opened this section. A spatial-philosophical perspective on walking that encompasses the concept of islandness can contribute to this endeavor and is a challenge still to be confronted. Reis' (2012) contribution seems to be a potential starting point.

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