The role of long-distance walking routes in fostering post-experience Environmentally Responsible Behaviours

Giulia Melilli*

Abstract

A pervasive narrative about long-distance walking routes focuses on the transformative potential that this simple yet powerful experience has for many. It is no longer considered an activity of leisure tourism but rather an inner walk that deeply influences a person. In this optic, tourism has the opportunity to play a positive role in helping to solve global environmental problems by providing experiences that promote a fundamental change in people's everyday behaviour and lifestyle.

On these premises, this research aims to investigate the potential of Walking Tourism (WT) in fostering post-experience Environmentally Responsible Behaviours (ERBs). Firstly, a multidisciplinary research framework was composed to describe an outdoor recreation experience and its behavioural influence. The case study of the Cultural Route of the Council of Europe "Via Francigena" in Italy was analysed through the quantitative and qualitative data from 140 online surveys.

Then, three hypotheses were tested using Spearman's partial correlation analysis, excluding the influence of the variables of age, gender and importance of contact with nature. The

* Environmental Planning graduate at Technische Universität, Berlin, Germany. Co-founder C.A. FuoriVia, Padua, Italy.

results showed that satisfaction, measured by the intention to repeat the experience, is the only variable with significant influence on ERBs. Instead, the length of the experience, in kilometres, and companionship have no significant correlation with them.
The research concludes by providing suggestions for public administrations, associations, tourism providers, academia etc., to increase tourists' perceived value and satisfaction. This would allow them to exploit the transformative potential of experiences on long-distance walking routes and create positive feedback between tourism and nature conservation.

Keywords

Walking Tourism; Environmentally Responsible Behaviours; Nature conservation; Via Francigena; Transformative experience

Introduction

Tourism is one of the biggest industries in the world, thus producing significant environmental impacts: between 2009 and 2013, its global carbon footprint increased from 3.9 to 4.5 GtCO2e, four times more than previously estimated, accounting for about 8% of global greenhouse gas emissions (Lenzen et al., 2018). Nevertheless, reflecting societal transformations, tourism trends also demonstrated that Alternative Tourism (AT) has grown in the last decades in response to the adverse impacts of mass tourism (Moira et al., 2017).
In this framework, Walking Tourism (WT), evoked as an interception concept between different types of AT, has seen

a rapid increase in its popularity all over the world for its capacity to fulfil novel recreational needs such as contact with nature and the pursuit of intimacy (Kim et al., 2015). WT was previously analysed in the literature from different perspectives: quantification of its environmental impacts, description of the tourist experience, implications for sustainable landscape management and relation with health issues (Nordbø et al., 2014). This research seeks to bring the conversation further in exploring the experience of Walking Tourism as a catalyst for change in visitors' behaviour.

A definition attempt

The Norwegian Trekking Association (DNT) has been instrumental in defining what is understood as "correct" hiking (Ween and Abram, 2012), which focuses on values and practices related to simplicity, authenticity, and challenge. Exploring the literature from related fields (e.g. Svarstad, 2010; Nordbø et al., 2014; UNWTO, 2019), the definition of walking tourism has consolidated on a few fundamental characteristics:

- Based on the use of the human body enacted without motorised vehicles;
- Could be short or long, lasting from a few hours to several weeks;
- Not requiring special skills or physical strength;
- Taking place mostly on unpaved roads, in natural and cultural landscapes, and often in rural areas, through forests or mountain areas.

As Nordbø and Prebensen (2015) noted, the word "hiking" can be referred to in different ways, such as walking, trekking, rambling, strolling, bushwalking, etc., each used in different geographical regions with slight dissimilarities. In this research, the terms "walking" and "hiking" have been used interchangeably, as per most of the literature references considered.

Eventually, WT can be understood as an alternative form of tourism, or simply Alternative Tourism (AT), a generic term that encompasses a range of other tourism approaches (Table 1) that emerged between the 1970s and early 1980s as an antidote to the undesired consequences of mass tourism (Moira et al., 2017).

Alternative Tourism	Interpretation	Reference
Sustainable tourism	The more accurate term in describing the "new" forms of tourism.	Triarchi and Karamani, 2016
	An approach to tourism.	Cater et al., 2015
	Tourism cannot be sustainable per se but may contribute to sustainable development.	Moscardo, 2008
Slow Tourism	i) doing things at the right speed; ii) changing attitudes towards time and its use; iii) seeking quality over quantity.	Petrini, 2003
Cultural tourism/ Cultural Routes	Physical infrastructure for supporting the sustainable and slow form of tourism involving walking across territories.	Fistola and La Rocca, 2018
Nature-based Tourism (e.g. Wildlife T.)	Encompasses all forms of tourism using natural resources in a wild or undeveloped form.	Goodwin, 1996
Eco-Tourism	Responsible nature-based tourism, which conserves the environment and improves the welfare of local people.	Western, 1993

Table 1 – Interpretations of some of the Alternative Forms of Tourism associated with WT.

Walking Tourism develo8Tpments and trends

The genesis of WT can be traced back to ancient pilgrim and trade routes, especially during medieval times, when very long trips, mainly on foot, were made with religious and

spiritual motivations (Hayes and MacLeod, 2007). The idea of undertaking a walk through the countryside for pleasure developed in the 18th century in Europe in the awakening of the Romantic movement and changing attitudes to landscape and nature (Ween and Abram, 2012). Just at the beginning of the 1990s, contextually with the emergence and consolidation of alternative forms of tourism (Pearce, 1992), hiking stopped being just an activity enjoyed by minority and elitist groups and became a form of tourism and leisure for many (Gómez-Martín, 2019).
In the last two decades, WT has rapidly increased worldwide popularity (Kim et al., 2015), as shown in Table 2.

Country	Statistics	Reference
Norway, Denmark, Sweden, Finland	Between 81% and 95% of the adult population enjoyed hiking in 2008. It is part of the Norwegian cultural *friluftsliv* ("free air life").	Svarstad, 2010 Nordbø et al., 2014
UK	22% of the adult population walk recreationally for at least 30 minutes every four weeks in England, 30% in Scotland and 31.6% in Wales.	Davies et al., 2012
USA	One in three Americans hiked in 2005. Trail-related activities generated 716,000 jobs and US$ 11.2 billion in tax revenue in 2005.	Frantz, 2007
South Korea	One in three Koreans will go hiking more than once per year. It is considered a trend moulded into Koreans' national identity.	Kim et al., 2015

Table 2 - Hiking trends in different geographical areas

The trends are also empirically confirmed by the statistics provided by the Pilgrim Office of Santiago de Compostela (2020), the most renowned Cultural Route: they show that in 2018 the number of people travelling on the Camino more than doubled in ten years, reaching 327,342 presences. They also show that 94% of the total was travelling mainly by foot, providing an explicit quantification of the phenomena of

walking for leisure. The same magnitude of the increase has also been registered for Via Francigena, another Cultural Route of the Council of Europe, which will serve as a case study for the empirical part of this research.

The "transformative potential" of WT

Tourism development in recent decades has been heavily influenced by the development of society as a whole (Richards, 2011). As Bremner and Boumphrey (2017) noted, "there is a fundamental shift in consumer values towards experiences over things that bring happiness and well-being", leading them to invest in more meaningful experiences during their travels and leisure time. The need for the "real or authentic" (Yeoman et al., 2007) and "environmental responsibility" (Triarchi and Karamanis, 2016) have also been identified as two strong novel motivations for explaining tourists' choices.

Tourists involved in forms of AT have frequently expressed peculiar sensibility to topics around the environment and its preservation. Slow travellers, for example, are found to have a different approach to understanding the natural environment, which is not conceived simply as a "picture" but is perceived with all five senses (Moira et al., 2017). Especially walking tourists are "embodied subjects" (Hill et al., 2014), moving beyond visual consumption to experience nature reflexively through all senses (e.g. Dann and Jacobsen, 2003). Immersing the body in nature provides a multisensory, multidimensional appreciation of natural settings that can move individuals into a state of "flow" (Csikszentmihalyi, 1990), resulting in losing consciousness of the passage of time, becoming absorbed in the moment and the surroundings. This uniting of emotion and ecology can invoke a feeling of profound happiness and well-being, in which individuals perceive intense beauty and a close connection with nature (Hill et al., 2014). Walking changes the time dimension and allows tourists to perceive the meaning of landscape differently (Falqui and Serenelli, 2009). The landscape becomes a dynamic element, changing at every step and telling the

surroundings' history (Diti et al., 2015).
During this peculiar journey, the distance between pilgrims and the environment is shortened (Caliandro et al., 2014). As a result, individuals feel responsible for decisions about pollution or energy use, start managing their wastes and get involved in clean-up efforts. They have increasingly adopted these sustainable behaviours during their travels and, possibly, when back home (Buonincontri et al., 2017). Experiences play a crucial role in influencing tourists' future behaviours (Loureiro, 2014) and specifically pro-environmental behaviours (Ballantyne et al. 2011). Whether interpreted as a deliberate intention or as an incidental process, transformative travel leads to a positive change in attitudes and values (Wolf et al., 2017).

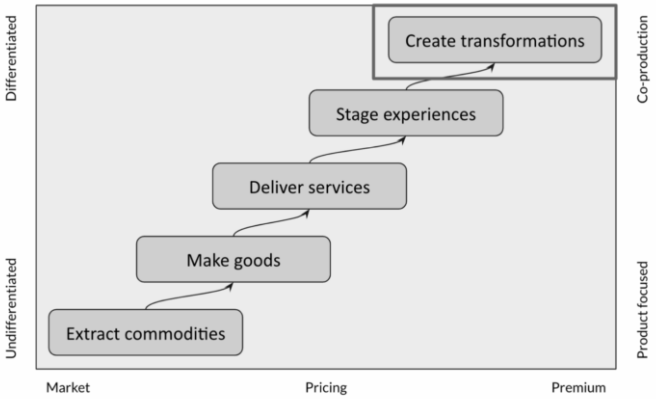

Figure 1 - The trajectory of production. Adapted from Richards, 2011

These considerations resonate with the principles of the Experience Economy (Pine and Gilmore, 1999), which suggests that tourism's "value network" - rather than the old value chain - is developing towards the area of transformations. In the fifth economy, transformation as an outcome of integrating experiential elements in travel is seen as the ultimate form of an experience (Figure 1).

The Environmentally Responsible Behaviours of tourists

The environmental impacts of nature-based tourism primarily arise from human activities. To reduce those impacts, it is important to educate tourists and cultivate their environmental values, attitudes, and behaviours (Haukeland et al., 2013). One of the most significant challenges for sustainable tourism development is encouraging tourists to act in ways that minimise environmental and experiential impacts (Buonincontri et al., 2017) and, accordingly, plan management actions to promote more responsible behaviours (Lee, 2013). Understanding tourists' behavioural responses is critical to nature-based tourism destinations when they expect both economic and environmental sustainability (Han et al., 2016). Starting from the study by Buonincontri et al. (2017) and Lee et al. (2013a), the different terms and definitions associated with behavioural responses towards the environment are summarised below (Table 3). For this research, we selected "Environmentally Responsible Behaviours" (ERB), with a focus on the interaction between tourists and the environment, being the most comprehensive and commonly used term in tourism and environmental literature (Table 3).

Term	Abbr.	Definition	Reference
Environmentally Responsible Behaviour	ERB	Actions motivated by the desire to **interact** with the environment more responsibly, supporting more sustainable use of natural resources, their preservation and conservation and the mitigation of the impacts.	Lee & Jan, 2015
Environmentally Concerned Behaviour	ECB	Positive attitudes and **commitment** to preserving the environment, also through indirect effects.	Zimmer et al., 1994
Environmentally Significant Behaviour	ESB	**Changes** in the individuals' behaviour aimed at improving the environment.	Stern, 2000
Pro-Environmental Behaviour	PEB	The individual **engages** in actions to protect the environment and minimise any negative impact on the natural and built world.	H. Han & Hyun, 2017
Sustainable Behaviour	SB	The individual acts with more sustainable **consideration**.	Richards, 2011

Table 3 – Definitions of behavioural responses related to the environment. Adapted from Buonincontri et al., 2017.

Research Questions and Objectives

This research is based on the premise that the increased visitors' understanding and appreciation of the environment, deriving from their walking tourism experience, can result in heightened ERBs, with a range of implications for sustainable tourism development. However, the ways in which the recreation experience impacts different dimensions of ERBs have not been examined by the literature so far. To address these gaps, this research examines how a walking experience influences Tourists' ERBs. Accordingly, the research questions and related

objectives are listed below (Table 4).

	Research question	Research objective
MAIN	How does an experience of WT influence ERBs?	Calculate the influence that the components of the WT experience have on ERBs.
2.	Which variables can describe a WT experience?	Select the components of the WT experience that could influence ERBs.
3.	Which variables can describe ERBs?	Select a set of ERB indicators.
4.	How can nature conservation benefit from WT's transformative potential?	Uncover the implications for nature conservation strategies.

Table 4 - Research Questions and Objectives

Methodology

An intrinsic objective of this research is to define a suitable research framework that includes both the components of a WT experience and the indicators to describe ERBs. The methodology is therefore composed of: i) Research framework; ii) Case study: Via Francigena Cultural Route in Italy; iii) Questionnaire design; and iv) Data analysis.

Research framework

To develop this research framework (Figure 2), a multi-disciplinary literature review on the ways to describe an experience was performed, particularly in the context of WT and AT. Chhetri et al. (2004, p. 34) argue that "there is no single theory that defines the meaning and extent of [walking] tourist experiences". The review was thus compiled by combining aspects that emerged in the traditional tourism research on the quality of the experience (namely physical setting, social setting, satisfaction and motivations) with the considerations from other approaches and constructs (such as memorability of the experience,

research of intimacy, place attachment and loyalty).

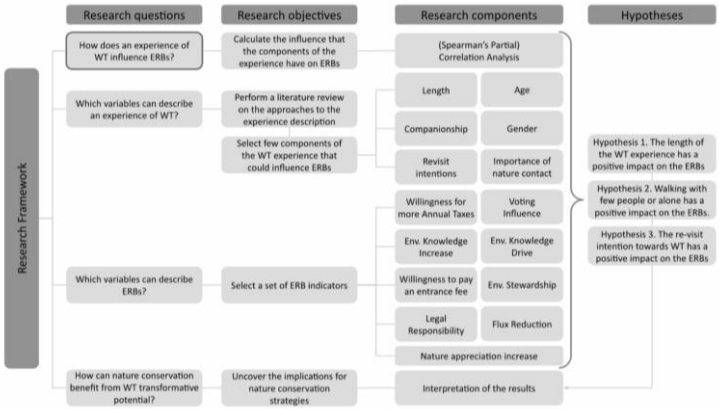

Figure 2- Adopted methodology: a research framework.

Only a few research components were selected from the literature due to their relevance in the context of WT. The selected variables related to the description of the experience are the length (i.e. Km), companionship, intentions to revisit (i.e. loyalty), age, gender and importance of contact with nature (i.e. motivations), in an attempt to reflect the complexity of an experience in nature. The set of Environmentally Responsible Behaviours indicators was also drawn from the literature, particularly by adopting the assessment scale used by Lee et al. (2013b) for a study on community-based tourism. The suggested constructs allowed the identification of a set of indicators relevant to WT and this research (Table 5). Each indicator represents a concrete action, a realistic example of the behavioural response that each construct of ERB could produce. For the construct of "Civil action", for example, the willingness to pay more annual taxes (WAT) and the influence on voting decisions (VI) were chosen as operational indicators, as used by Lee et al. (2013a) or Thapa (2010).

Construct	Indicator	Abbr.
Civil action	Willingness to pay more Annual Taxes	WAT
	Influence on Voting Intentions	VI
Educational action	Environmental Knowledge Increase	EKI
	Environmental Knowledge Drive	EKD
Financial action	Willingness to pay an Entrance Fee	WEF
Legal action	Legal Responsibility	LR
	Flux Reduction	FR
Persuasive action	Environmental Advocacy	EA
Summary indicator	Nature Appreciation Increase	NAI

Table 5 - Selected ERB indicators and related constructs.

Thanks to Spearman's Partial Correlation Analysis, it was possible to assess the relationship between the first three components of the experience - length of the experience, companionship and intentions to revisit - and the tourists' behavioural response, expressed by the set of ERB indicators (see figure 2 above). In addition, it was possible to exclude the influence of the latter three variables - age, gender, and motivations. In particular, the indicator of "importance of contact with nature" (i.e. motivations) was used as a control variable in the attempt to remove the possible confounding effect of personal and previously owned environmental attitudes. To answer the research questions and fulfil the research objectives, this complex relationship is expressed with three operational hypotheses based on the rationale hereby briefly explained.

Hypothesis 1. The length of the WT experience has a positive impact on the ERBs. By planning the features of a trail, with the length being one of them, there is the potential to influence the outcomes of the experience itself (Xiang, 1996). Recent studies (Amerson et al., 2020) indicated that with increased time on the trail, the hikers' sense of place identity increased, which is recognised as a promoter of ERBs (Halpenny, 2010; Ramkissoon et al., 2012). On these bases, the length of the experience, quantified in Kilometers, is presumed to have an impact on the behavioural response

of the tourists. It is hereby tested that a longer distance walked corresponds to a higher level of ERBs.

Hypothesis 2. Walking alone or with a few people has a positive impact on ERBs. The number of people encountered during an experience of WT is considered a factor in the perceived experience quality: opportunities for hiking in wilderness settings that are remote and lightly used are most likely to satisfy the motivation of solitude and lead to associated benefits (Manning, 2012). According to the research of Hill et al. (2014), the peak state of "flow", which allowed visitors to the rainforest to gain a close connection with nature, was facilitated by completing the walk alone or with just one companion. On these bases, the present elaboration wants to verify that the fewer people are walking together, the higher the influence on the visitors' ERB.

Hypothesis 3. The re-visit intention towards WT has a positive impact on the ERBs. The assumption is based on the recent research from Lin and Lee (2020), which proves that for visitors of ancient trails, place attachment had a more significant mediation effect than environmental attitudes on environmentally responsible behaviour. The constructs of place attachment and loyalty were previously identified as possible anticipators of satisfaction (Chen and Chen, 2010), and tourists who experience higher value and satisfaction were found to be more likely to engage in environmental behaviour at tourist destinations (e.g. Han et al., 2016; Ramkissoon et al., 2013). Therefore, this study wants to explore the relationship between ERB and conative loyalty, measured by intention to revisit.

Case study: Via Francigena Cultural Route in Italy

To collect empirical data, the case study of Via Francigena (VF) was considered, being one of the most iconic Cultural Routes of the Council of Europe since 1994 (Gazzola et al.,

2020). The origins of VF are connected to the pilgrimages of Sigeric, Archbishop of Canterbury, who walked to Rome in 990 AD recording 79 stages of the journey in his diary. Thanks to this historical document, it was possible to reconstitute a route between Canterbury and Rome for almost 3000 km, passing through England, France, Switzerland and Italy. The European Association of Vie Francigene (AEVF) was created in 2001 and recognised by the Council of Europe as responsible for safeguarding and enhancing the route in 2007.

Contextually to a great interregional project, in 2006 the Italian part of the route was ultimately defined: 1,300 Km between the Alpine passes (Great St. Bernard Pass, Moncenisio, Monginevro) and Rome, including the administrative area of 140 municipalities and seven regions (UNESCO, 2019).

Figure 3 - Via Francigena in Italy: the regional areas and Km. Data from AEVF, own elaboration in ArcGIS.

At the end of 2019, the route was officially extended from Rome to Santa Maria di Leuca, based on an *Itinerarium Burdigalense*, a journey towards Jerusalem of an anonymous pilgrim from 333 AD (Council of Europe, n.d.). The subject of this study is identified as the Italian section of the trail, from the Great St. Bernard Pass to Santa Maria di Leuca, for a length of around 2,000 Km (Figure 3).

The development of VF in the last two decades resulted from a farsighted territorial management policy and adequate investments that enhanced usability and walkability - what Gazzola et al. (2020) called "the economy of Via Francigena". The number of people walking on the Via Francigena increased by 20% from 2016 to 2017 (UNWTO, 2019). In recent years, the development of WT was also greatly supported at the national level. For example, the Italian Ministry of Cultural Heritage and Tourism (MiBACT) proclaimed 2016 to be the national "Year of Walking Paths" and promoted the development of the "atlas of the paths". Moreover, at the European level, the UNWTO proclaimed 2017 to be the "International Year of Sustainable Tourism for Development" and 2018 to be the "European Year of Cultural Heritage" (UNWTO, 2015). Finally, the inclusion in the tentative list of UNESCO heritage values would mean the recognition of Via Francigena as one of the most eminent "documents-monuments" of the Italian inseparable combination of material and immaterial assets: urban, landscape, architectural, technological and artistic (UNESCO, 2019).

Questionnaire design

A multiple-choice online survey was identified as the most appropriate medium to collect the testimonies of walking tourists along the Via Francigena, consisting of both

qualitative and quantitative data. The advantages of online surveys include access to individuals in distant locations (Evans and Mathur, 2005), which was a crucial point in this research. The software "ArcGIS 123 Survey" from ESRI, was employed for the questionnaire design. Social media were used as a distribution channel: in particular, Facebook pages and groups were targeted, both public and private. Even though several pages are dedicated to Via Francigena, a few Facebook groups were selected due to their audience extent and member participation. The questionnaire was public for a time frame of three weeks in December 2021, which allowed the collection of 140 usable answers. An incentivising strategy was also put into place: the posts on the social channels explained that a tree would have been planted for every ten answers received thanks to a donation to the association Primaklima e. V.

The structure of the survey somehow reflects the objective of the research:

A. a first section, to determine the components of the experiences (where, when and how the experience took place);
B. a second section, to create a profile of the respondent through a self-assessed score capturing the "seriousness" of the respondent.
C. a third section, to evaluate their Environmentally Responsible Behaviours through the set of nine indicators presented in the research framework;
D. a fourth section, to contextualise the sample according to the respondents' personal information, namely age, gender, education level and nationality.

Data analysis

The survey data analysis has been performed in three phases: i) univariate analysis, including descriptive statistics; ii)

Spearman partial correlation analysis, to answer the research questions; iii) and qualitative content analysis (as described in Elo and Kyngäs, 2008).
Being a nonparametric approach, the Spearman Partial Correlation does not care about the normality of the sample and, therefore, was considered the most appropriate methodology for the data retrieved with the survey. The analysis was carried out with an integration between the two open-source statistical software, JASP and R, following the methodological remarks by Kim (2015).

Results

Univariate analysis.

Amongst the 140 respondents to the survey, the average age is around 51 years old, and the most common age group is between 55 and 64 years old, corresponding to 29.3% (n = 41) of the sample. Around 55% of respondents are between 50 and 70 years old. The sample is quite gender-balanced, with a slight majority of female respondents (55.7%, n=78). The level of education is generally high: 33% (n=46) have a master's degree, around 25% (n=36) have a bachelor's degree, and another 10.7% (n=15) have a PhD, for a total of about 70% of respondents with higher education. The majority has an Italian nationality (60%, n=84), and the respondents from the European area are, in total, including the Italians, around 75%. The remaining 25% is represented by US citizens (8.6%, n=12), Australians, Canadians, New Zealanders, and a few others.
Respondents were allowed to report on a map more than one experience on the Via Francigena, performed at different moments. Amongst the 473 total visits, Toscana and Lazio regions have the highest frequencies: 127 visits are

recorded on the Via Francigena in Tuscany and 100 in the Latium's stretch. Between 45 and 65 visits took place in the regions of Valle d'Aosta, Piemonte, Lombardia and Emilia Romagna. Fewer visits are recorded on Via Francigena in Campania and Puglia, respectively 8 and 16. The results also paint an interesting picture of the experience's variety: from a minimum of 20 Km to a maximum of 2000 Km, respectively lasting two days to more than 90 days. The average length walked was about 572 Km and 23 days. The survey respondents walked mainly alone (39.3%, n=55) or with just another person (32.1%, n=45); another 25% walked with a group, small or big.

In the attempt at a segmentation of the sample, a "seriousness index" (SI) was also calculated. The results uncovered that the sample is composed of 45% of serious walkers (SI between 4.1 and 5), 34% of casual walkers (SI between 3.1 and 4) and 21% of short-term walkers (SI between 2 and 3). The index was calculated by averaging three self-assessed values of i) regularity (occasionally or frequently), ii) commitment (casually or seriously) and iii) previous experiences (inexperienced or experienced). It is also interesting to note that only around 21% (n=29) have only one experience with WT.

The re-visit intentions for Via Francigena were also surveyed. The results show that 67.4% (n=94) of the respondents expressed very high or high intentions to return to the Italian part of Via Francigena and 82.8% (n=116) to repeat an experience of WT in general. To comprehend the motivations behind the choice of walking for leisure, the importance of contact with nature was evaluated: more than 70% of the respondents indicated high or very high importance.

Finally, the table below (Table 6) shows, for each of the eight ERB indicators, the percentage of respondents from very high (=5) to very low levels (=1).

% / ERBs	Very High	High	Medium	Low	Very low	Unsure
Willingness to pay more Annual Taxes	20	19.3	29.3	15	9.3	7.1
Influence on Voting Intentions	29.3	27.1	25	6.6	6.4	5.7
Environmental Knowledge Increase	25.7	36.4	24.3	7.9	3.6	2.1
Environmental Knowledge Drive	19.3	22.9	30.7	16.4	7.9	2.9
Willingness to pay an Entrance Fee	7.9	18.6	22.1	18.6	18.6	14.3
Legal Responsibility	28.6	25	22.9	12.1	7.9	3.6
Flux Reduction	5.7	14.3	15	20.7	22.1	22.1
Environmental Advocacy	42.9	25	21.4	4.3	4.3	2.1
Nature Appreciation Increase	38	19.3	25.7	10	5	1.4

Table 6 - Summary of the ERB indicators' results

Spearman Partial Correlation analysis

When analysing the correlation between the three selected components of the experience and the ERBs, the results show a significant relationship only between loyalty to WT (i.e. the intentions to choose a walking experience again) and the ERBs. This significance was found to be stronger for the indicators of environmental knowledge drive, environmental advocacy and legal responsibility, with p values (ps) lower than .01.

On the contrary, the results also show that the coefficients of correlation are not significant for any of the associations between length of the experience and ERBs and any of the associations between companionship and ERBs. As a matter of fact, none of their p values was found to be significant (ps $> .05$).

	Length	Companionship	Loyalty WT
Willingness to pay more Annual Taxes	**.03** [-.17, .21]	**-.01** [-.20, .20]	**.17** [.00, .33]
Influence on Voting Intentions	**.07** [-.14, .2]	**-.05** [-.21, .13]	**.20*** [.03, .36]
Environmental Knowledge Increase	**.09** [-.09, .26]	**-.07** [-.24, .11]	**.17** [-.02, .34]
Environmental Knowledge Drive	**-.14** [-.31, .03]	**.01** [-.16, .19]	**.23**** [.07, .38]
Willingness to pay an Entrance Fee	**-.10** [-.30, .08]	**.06** [-.14, .28]	**.04** [-.13, .23]
Legal Responsibility	**-.06** [-.24, .13]	**.03** [-.14, .19]	**.26**** [.07, .42]
Flux Reduction	**.04** [-.15, .23]	**-.07** [-.25, .14]	**.13** [-.07, .30]
Environmental Advocacy	**-.14** [-.31, .02]	**.08** [-.07, .25]	**.26**** [.08, .41]
Nature Appreciation Increase	**.01** [-.16, .18]	**.03** [-.15, .21]	**0.23**** [.06, .38]

Table 7 - Spearman Partial Correlation coefficient and CI. Note: *ps<.01, **ps<.05, ***ps<.001

The Confidence Intervals (CI) also show that p=0 is included in the possible results, making it impossible to reject the null hypothesis and, therefore, to verify the first and the second hypotheses of this research.

Qualitative analysis

Verbal or behavioural data were categorised to summarise the data into fewer content-related categories. In general, people expressed direct positive feelings about the experience. Some mentioned strong intentions to revisit and loyalty towards the route and the activity. Some also expressed complaints and difficulties related to: i) lack of signage; ii) lack of services; iii) threats from animals; iv) personal issues; v) Covid-19; vi) meteorological conditions; vii) landscape features and pollution; viii) accommodation availability.

Discussion

In this final section, the survey's data analysis results are interpreted in light of the relevant environmental literature. The aim is to provide important insights for tourism managers and policymakers wishing to obtain visitor experiences that promote a transformative outcome.

According to the results of this research, the ERBs of WT's participants are influenced by the intentions of choosing an experience of WT again. If the satisfaction level is high, the experience of WT can be considered effective in stimulating especially educational, legal and persuasive actions. Therefore, policies should focus on increasing tourists' perceived value and satisfaction by:

- Including interpretation programs to foster experiential engagement and appreciation of aesthetics, using affect and emotion coupled with an outcomes-focused communication plan.
- Planning "attractivity features" to stimulate the curiosity of revisiting the same route by foot, providing a diversified and compelling experience each time.

Identifying satisfaction as one of the possible predictors of ERBs gives a common goal for nature conservation practitioners and tourism managers, implying that satisfaction could also be studied as an instrument to foster attuned public-private relationships and productive partnerships. The same conclusions were drawn by Han et al. (2016), who also uncovered that conservation efforts create positive feedback with satisfaction: it is demonstrated that maintaining ecological integrity can increase the quality of hiking experiences (Coghlan, 2012; Lynn and Brown, 2003), which in turn will produce higher tourist satisfaction and, as also demonstrated in this research, higher inclination towards ERBs, that ultimately contribute to sustainable development and conservation (Figure 4).

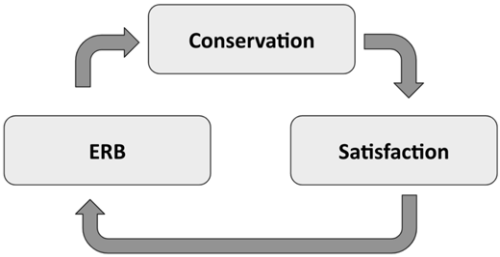

Figure 4 - Positive cycle facilitated by the WT experience. Adapted from Han et al. (2016).

Tourism planners and resource managers who strive to achieve both environmental sustainability and maximise tourist satisfaction could include interpretation programs to foster experiential engagement and appreciation of aesthetics (Patchen, 2016). In addition, affect, and emotion could also be used to enhance visitor satisfaction and experience, coupled with an outcomes-focused communication plan (Ramkissoon et al., 2013). Research by Ballantyne et al. (2009) confirms that wildlife tourists are open to receiving information about adverse impacts created on the local environment by human activities and are particularly interested in examples of practical and achievable things that they can do to contribute to the conservation of the environment they are experiencing, both on-site and back home.

In the context of nature-based tourism, Kim et al. (2011) already successfully proved the positive influence of interpretation programmes on site-specific ERBs on the principle that when tourists become more aware of and concerned about climate change or its impacts, they are more likely to behave in environmentally responsible ways (Han et al., 2016). Adopting a proactive role, in which environmental responsibility is embedded in tourism products and services and also actively communicated to tourists and other visitors, was already addressed as the most

sustainable and most effective approach to foster behavioural responses (Ballantyne and Packer, 2011). In light of these findings, it is suggested to plan experiences and interpretation programmes mainly focusing on the intensity and qualitative elements that add significance, to ensure high perceived satisfaction and associated ERBs.

Public administrations and resource managers, willing to support a local sustainable tourism system, should plan "attractivity features" to stimulate the curiosity of revisiting the same route by foot, providing a diversified and compelling experience each time. With this aim, it is also suggested to plan a marketing strategy with sophisticated message development and delivery, building emotional attachment, a sense of belonging, and enhanced personal meaning (Ramkissoon et al., 2013). Regarding Via Francigena, the extensive valorisation program of the route that AEVF is currently carrying on will likely positively influence the intentions to revisit the way in the future and the general satisfaction level regarding walking experiences. Therefore, the results of this research strengthen the strategic role of Via Francigena in the sustainable development of Italian Tourism.

Further research and Conclusion

This research proved that intentions to walk again, loyalty, and satisfaction are some of the factors that better stimulate environmentally responsible behavioural responses in WT practitioners. Nevertheless, comparative results selecting different independent and confounding variables might produce stronger correlation evidence. Further research can focus on a broad series of topics: the relationship between different walking tourists' specialisation levels and ERBs (e.g. Dyck et al., 2003); the influence of different WT routes

in facilitating a behavioural response (e.g. Ballantyne et al., 2011); the effect - and the persistence in time - that diversified post-experience stages can have on behavioural responses (e.g. Higham and Lück, 2008); how technology could facilitate the relationship with nature during WT and, in turn, support the development of ERBs (e.g. Amerson et al., 2020); the role of tourism, and especially WT, as potentially able to enhance tourists' global consciousness and, in turn, the personal process towards sustainability (e.g. Galvani et al., 2020).

Ultimately, this article shows that the experience-behaviour association is complex but exists and deserves further exploration. The positive impact of WT does not stop at the moment of the experience but is prolonged and creates transformations in behavioural choices related to the environment. If transformation is becoming the ultimate outcome of recreation experiences, this field will soon have increasing attention from research and tourism policymakers. There is also who support the possibility that AT experiences will not necessarily lead to positive changes in attitudes, awareness and, ultimately, environmental behaviour: tourism may instead reinforce the human notion of being separated from nature, which may prove to be detrimental to sustainable development.

Due to societal changes and the urgency to tackle the climate crisis, tourism should not remain simple means of leisure but should also provoke in tourists a necessary awakening of the global consciousness, which leads towards sustainability (Galvani et al., 2020). This work wanted to support the idea that tourism not only has the responsibility to compensate for the impacts it produces but also has the opportunity to "offset" those impacts by creating a positive feedback mechanism between tourism and conservation efforts. This would allow resolving, at least partially, the conundrum between tourism and sustainability: if we consider that

tourism cannot be sustainable in its own right but may contribute to the sustainable development of some regions under some circumstances, then a number of new approaches to tourism development are due to emerge.

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