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The lost rural idyll? Tourists' attitudes towards sustainability and their influence on the production of rural space at a rural tourism hotspot in Northern Ireland

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ABSTRACT

This study focuses on tourists' power in the production of space expressed by their travel attitudes when visiting a rural tourism hotspot that follows a growth ethos and is characterized by mass tourism. It aims to decode how these dynamics influence small-scale rural tourism, contesting sustainable rural change and the rural idyll as perceived by the tourists. For this purpose, a standardized survey amongst visitors at the Giant's Causeway, the most visited tourist attraction in Northern Ireland, was conducted. The results show that sustainability awareness decreases from individual trip tourists to coach trip tourists to cruise ship tourists, and thus segment-specific sustainability governance is desirable. By realizing this, a rural tourism hotspot should function as a hub that coordinates and promotes a network of regional tourism providers in order to enable its genuine integration in the rural community.

1. Introduction

The rural is often conceived of as an idyllic place with an intact environment, where life is shaped by traditional values and in harmony with nature (Lovell and Bull, 2017; Shucksmith, 2016; Rockett and Ramsey, 2016; Gaffey, 2004). Against the backdrop of this image of the rural, tourists have shown a growing interest in the countryside and its natural and cultural landscapes (Carneiro, Lima & Lavrador Silva, 2015). According to Lane and Kastenholz (2015) rural tourism is defined by its small-scale character. The landscape and the rural life are commodified by rural tourism providers, and thus activities such as experiencing farm life or guided walks to encounter the characteristics of a landscape are offered (Woods, 2011). In many rural areas, this form of tourism is used as a conservation tool (Powell and Ham, 2008; Cortes-Vasquez, 2017). Hence, rural tourism is closely linked to sustainable development (Lane and Kastenholz, 2015: 1139). However, the production of space is influenced by the dynamics of power induced by different stakeholder groups in the specific rural arenas (Frisvoll, 2012). Tourists can be considered one of them.

Over recent decades, an increasing number of rural heritage sites in the countryside have been established and intensely marketed for tourism. Such sites usually follow growth-oriented government goals. Their interpretation centres are often able to serve immense numbers of visitors. Visitor access is very comfortable and the average duration of stay relatively short (Reichel, Uriely & Shani, 2008; Panzer-Krause, 2019). Due to the development of such large-scale flagship attractions the dynamics of tourism have changed profoundly in such rural regions. On the one hand, the attraction sites have become rural tourism hotspots characterized by mass tourism. On the other hand, their hinterlands, which retain a small-scale orientation, struggle to economically benefit and have to grapple with the ecological and socio-cultural consequences (Weidenfeld, 2010; Panzer-Krause, 2019).

Much is known about mass tourism in urbanized destinations (Bramwell, 2004; Essex, Kent & Newnham, 2004; Do Valle et al., 2012; Dodds and Butler, 2010; Weaver, 2012; Lai and Hitchcock, 2016). Indeed, in recent years, tourism's negative consequences, especially in cities, have been linked to the term overtourism which describes a situation when a destination's carrying capacity is exceeded and a 'too much' of tourism is perceived by the local population (Gürsoy, 2019; Namberger et al., 2019). However, tendencies of overtourism at spatially confined rural tourism hotspots are still a relatively neglected field of research. And although the commodification of rural landscapes for tourist consumption from the tourism providers' point of view has been studied extensively (Garrod, Wornell & Youell, 2006; Everett, 2012; Ikonen, 2016; Kordel, 2016; Eimermann, 2016), less attention has been paid to rural tourists' attitudes and behaviour (Lee and Moscardo,

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2005; Pérez, Hernández & Campón, 2013; Buffa, 2015; Chen, Nakama & Zhang, 2017), and hardly any studies have segmented rural tourists in relation to sustainability aspects (Kim and Weiler, 2013).

This study tackles these gaps in research and seeks to decode the dynamics of tourism in rural regions impacted by rural tourism hotspots under the influence of growth-oriented governance models. The focus of interest is on tourists' perspectives and their influence on the production of a rural tourism space. A segment-specific sustainability approach is used to examine tourists' sustainability awareness and travel attitudes. For this purpose, tourists at the Giant's Causeway, the most visited tourist attraction in Northern Ireland, are segmented into individual trip tourists, coach trip tourists and cruise ship tourists. Furthermore, the investigation considers the ways in which the rural idyll, perceived as authentic by tourists, and sustainable rural change are contested. Here, it is hypothesized that individual trip tourists have a higher awareness of sustainability challenges while travelling rural regions than coach trip tourists and cruise ship tourists.

The paper proceeds as follows. In Section 2, the threefold model of rurality as developed by Halfacree (2007) and Frisvoll (2012) is further extended by considering tourists as a group of stakeholders who influence the production of rural space against the background of sustainability challenges. Section 3 presents the methodology of the empirical study and Section 4 provides discussion of the results. Section 5 concludes and derives measures for sustainable rural change in a region characterized by a rural tourism hotspot.

2. Rurality, tourists and sustainability challenges

2.1. The conceptualization of rurality in the context of rural tourism

In the academic literature, rurality has been conceptualized in different ways. In contrast to many researchers who interpret rurality as oppositional to the urban, Cloke (2006) and Woods (2011) reject such a binary theorization. Instead, Cloke (2006: 18), amongst others, argues that the ongoing and profound changes in the rural which are driven by processes such as agricultural restructuring, counter-urbanization or digitalization, have led to a "blurring of conventional boundaries between country and city". Cloke (2006) emphasizes the combination of the imaginative and material status of rurality. While many other rural researchers show a reluctance to open their theoretical perspectives to the gains of the cultural turn, he pleads for a hybrid conceptualization of rurality that involves both the approach of social construction and concerns of political and economic materialism.

As an analytical lens for the social construction of rurality in combination with materialism, this study uses Halfacree's (2006, 2007) three-fold model of rural space, which is inspired by Lefebvre (1991 [1947]) and extended and deployed in the rural tourism context by Frisvoll (2012). Halfacree (2006, 2007) differentiates rurality into rural localities, formal representations of the rural and everyday lives of the rural. Rural localities refer to spatial practices representing production and/or consumption activities. Formal representations are activated and portrayed by different rural stakeholders who try to ensure their representations prevail over others, while everyday lives of the rural can take diverse shapes formed by the daily routines of the rural population. All three facets constitute the rural totality. The degree of rural spatial coherence reflects "the extent to which rural residents, policy makers, business interests, pressure groups etc. are 'singing from the same hymn sheet" (Halfacree, 2007: 128). Here, Halfacree (2007) distinguishes between three formats and emphasizes that each may dynamically change from one to another. A congruent and unified condition indicates that the three facets of rural space are in line and co-constitutive. A contradictory and disjointed state points to tension within/between the elements of rural space. An overall coherence, however, exists. Finally, when internalizing the three facets of rural space completely fails, Halfacree (2007) refers to a chaotic and incoherent condition. Here, spatial contestation takes place. He incorporates this in the concept of trial by space. In rural spaces with a high degree of coherence, trial by space has been successful, while with regard to the other extreme, in chaotic conditions, trial by space has not been resolved (Halfacree, 2007).

Although Frisvoll (2012) appreciates Halfacree's (2006, 2007) conceptualization of rural space, he criticizes it for failing to adequately address the subject of power with regard to coherence and trial by space. He thus refers to the significant role of power in the social construction of rurality. Hence, Frisvoll (2012) extends the Halfacreean approach and applies it to a range of rural tourism cases. He interprets power as entanglements. Thus, power is regarded as embedded into practices, forces, processes and relations. Frisvoll (2012) proposes three hubs as an analytical lens to investigate the nature of power in the production of rural space: an immaterial hub, a material hub and a personal hub. The immaterial hub focuses on the actors' social relations with regard to laws and regulations as well as informal guidelines. The material hub considers the material side of the stakeholders' social relations such as property or money. The personal hub, finally, draws attention to the personal side of the actors including family, career, personal vulnerabilities and similar aspects. The three hubs interrelate with each other and with the three facets of Halfacree's (2006, 2007) model of rurality.

Neither Halfacree (2006, 2007) nor Frisvoll (2012) consider tourists as a group of stakeholders that have an influence on the trial by space in the rural. However, especially in rural tourism hotspots with an immense number of visitors, their attitudes and behaviour certainly have an impact on the production of rural space against the background of sustainability challenges. Thus, this study focuses on tourists and seeks to decode their role of power. Thereby, the three hubs of analysing power shall be used as an analytical tool.

2.2. Rural tourism, tourism hotspots in rural regions and sustainability concepts

According to Woods (2011: 94), rural tourism can be defined as "touristic activities that are focused on the consumption of rural land-scapes, artefacts, cultures and experiences". Here, rural signifiers such as fresh air, visually pleasing landscapes, historic farm buildings and other forms of countryside capital are of particular relevance (Woods, 2011; Garrod, Wornell & Youell, 2006). Moreover, sensory impressions are vital for the rural tourism experience (Woods, 2011). Since these are place-related, Bardone and Kaaristo (2014) refer to rural sensescapes.

Since the 1970s tourism has been strategically used as a regeneration and conservation tool in rural areas, many of which face a decline of the agricultural sector which requires new forms of income to be found (Carneiro, Lima & Lavrador Silva, 2015; Lane and Kastenholz, 2015; Cortes-Vasquez, 2017). Thus, rural tourism was interpreted as an alternative to mass tourism such as was, for example, experienced in the coastal regions of the Mediterranean (Bramwell, 2004; Essex, Kent & Newnham, 2004; Dodds and Butler, 2010; Hernández, Suárez-Vega & Santana-Jiménez, 2016). In contrast to these formerly rural regions that had undergone rapid and radical change with regard to their landscape and previously rural communities, rural tourism is considered small-scale, ideally controlled by local people who run small family-owned businesses and at best held together by cooperation and integration in order to gain benefits for all involved, as well as being of traditional character and having little impact on nature and rural society. Rural tourism is often interpreted as the "antithesis of mass tourism" (Lane and Kastenholz, 2015: 1139). Hence, it is considered an option to sustainably develop rural regions (Essex, Kent & Newnham, 2004; Carneiro, Lima & Lavrador Silva, 2015; Lane and Kastenholz, 2015). Rural tourism is thus often equated with sustainable tourism and regarded as a win-win-situation for local residents, tourists and the environment (Poudel and Nyaupane, 2013).

Experiencing rurality has become increasingly popular (Woods, 2011). One of the reasons for this is the rising number of internationally recognized iconic sites that have been established in rural regions and

intensely marketed for tourism over recent decades such as Neuschwanstein Castle, Germany or the Cliffs of Moher, Ireland (Paunović and Jovanović, 2017; Panzer-Krause, 2019).

Many heritage sites in rural regions have become large-scale visitor magnets accompanied by interpretative centres that offer good infrastructure and service facilities and are accessible for everyone. In the countryside, they frequently contrast sharply with the small-scale tourism structures of rural destinations. Although in many cases flagship attractions are state-run and thus do not directly benefit local tourism businesses, they are usually considered a developing engine for rural economies (Reichel, Uriely & Shani, 2008; Panzer-Krause, 2019; National Trust, 2019a).

Yet, recent years have often witnessed high rises in visitor numbers so that these solitary tourism hotspots in rural areas undermine the notion of rural tourism as a small-scale alternative to mass tourism and create numerous sustainability challenges. These include heavy traffic and congestion on inadequate, small rural roads, increased sealing, for instance to create new service and parking facilities or walkways, destruction of fragile sites by careless visitors or overutilization, the diverging interests of the various stakeholders and a lack of adequate consideration of local residents' needs (McAreavey and McDonagh, 2010; Healy, van Riper & Boyd, 2016).

Despite these challenges and although rural tourism hotspots usually declare their commitment to sustainability, a strong adherence to a traditional growth ethos persists. This is in line with the general sustainable tourism planning that has been debated since the 1990s (Weaver, 2012; Hall, 2011; Brouder, 2017; Gibson, 2019). Here, Hall (2011) acknowledges certain positive effects such as the development of indicators and management plans, however, he criticizes the lack of progress concerning real change towards sustainability. Meanwhile, Fletcher (2011) condemns sustainable tourism as having no sustaining effect at all except for helping to sustain capitalism. With regard to small-scale rural tourism, Mellon and Bramwell (2016) give a more positive outlook and argue that sustainable tourism policies usually co-evolve with and through other community-related policies. However, whether this can be the case for solitary rural tourism hotspots remains unclear. Generally, Jafari (2001) suggests considering the fact that mainstream tourism cannot be fully replaced by small-scale tourism due to large visitor numbers.

Moreover, while there has never been a genuine discussion about significantly reducing or even quitting tourism on a global scale, Moscardo and Murphy (2014) state that contrariwise tourism development is considered a tool for sustainability by international organizations (UN, 2012; UNEP & UNWTO, 2012). As a consequence of these prevalent opinions which are unlikely to be abandoned in the foreseeable future, there is a need to engage in developing pragmatic green growth-related practices that allow a growing number of tourists to be handled. Hence, Weaver (2012) pleads for strategies to establish sustainable mass tourism destinations.

In order to derive measures for sustainable rural change – which Woods (2012) refers to as one of five key challenges for rural studies – it is not only necessary to recognize the rural tourism industry's perceptions and national governments' development goals, but also to better decode visitors' travel attitudes and their view of rural holidays as they have a significant impact on the production of rural space.

2.3. Rural travellers and their influence on the trial by space regarding sustainable rural change

Studies that investigate small-scale rural tourism often portrait the rural traveller as a person who engages in nature-oriented activities like hiking, horse-riding or cycling while on holiday, who seeks cultural experiences and feels a desire to learn about the destination's environmental context and its local customs (Chen, Nakama & Zhang, 2017; Fennell, 2015⁴). They are often referred to as ecotourists, green tourists, nature-based tourists or responsible tourists (Buffa, 2015). However,

Woods (2011) argues that the spectrum of rural tourists can widely range from those focusing on scenic tourism as the most passive level of holidaying to those who actively engage in activities that ensure a physical connection to and interaction with the cultural and natural landscape. Therefore, tourists travelling to rural areas and seeking nature-oriented experiences have to be considered diverse.

Tourists' increasing desire to experience rurality and to consume natural and cultural landscapes is often inspired by their somewhat nostalgic idea of the rural as an idyll. Especially in Western societies, this ideal of the countryside links rural life to harmony with nature. Rurality is associated with environmental intactness and a backward, simple and innocent way of life characterized by traditional values and culture (Woods, 2011; Carneiro, Lima & Lavrador Silva, 2015; Reichel, Uriely & Shani, 2008). Hopkins (1998: 65) describes the countryside as it is idealized and romanticized by tourists as "some other place, a place, spatially, temporally and symbolically distanced from the everyday way of life".

Even though rural tourists are a heterogeneous group, their quest for authenticity when visiting the rural is characteristic (Frisvoll, 2013). They seek a more or less active connection with the land and the local people. However, the meanings that tourists associate with the rural are socially constructed and often not congruent with reality (Woods, 2011; Lovell and Bull, 2017). Tourists' perceptions of the countryside are nonetheless used for marketing purposes, and by turning the landscape, culture and traditions into a commodity, the rural myth is constantly reinforced (Gaffey, 2004; Kaul, 2009). Hence, tourists contribute to shaping rurality and thus have an influence on the trial by space. The increasing popularity of food-motivated travel provides a good example. As Everett (2012) asserts, rural food producers who showcase their facilities to visitors adapt to the tourists' expectations of traditional food production and thus perpetuate idealistic rural images.

Kim and Weiler (2013) as well as Carneiro, Lima & Lavrador Silva (2015) and Pérez, Hernández & Campón (2013), amongst others plead for differentiated approaches to rural tourism marketing to reflect the diverse audience of tourism consumers. In addition to the marketing aspect, in this paper it is argued that tourism-segment-specific measures need to be developed and implemented to minimize the negative environmental, socio-cultural and economic impacts of tourist activities at rural tourism hotspots and in their surrounding rural areas.

Yet, a pre-requisite for the segment-specific sustainability governance of the trial by space with regard to rural tourists is to identify groups with similar sustainability orientations. According to Bergin--Seers and Mair (2009), green consumerism can be found in the tourism industry. Here, as in general, it is useful to distinguish between different green shades ranging from dark green to not green at all (Bergin-Seers and Mair, 2009; Buffa, 2015; Orams, 1995). In this way tourists can be classified, according to their green consumer scorecard. However, Bergin-Seers & Mair (2009) point out that very green tourists may not exist as such people would abstain from travelling due to their concerns about its negative impacts. Furthermore, highly inconsistent behaviour can be observed amongst tourists, which accentuates that "not all who claim to have green values translate that into purchases" (Bergin-Seers and Mair, 2009). Additionally, Kim & Weiler (2013) found that many tourists are characterized by attitudinal ambivalence and show, for instance, pro-environmental behaviour in one case but ignore sustainability targets in another. Therefore, Buffa (2015) concludes that the different segments of sustainable tourism are not always easily understood. Moreover, so far most studies that exist on the subject only investigate the sustainability attitudes of ecotourists. On the one hand, they often narrow down the view to environmental issues only, on the other hand, they also disregard the rest of the general population of tourists (Do Valle et al., 2012; Buffa, 2015).

In their study Do Valle et al. (2012) analyse the relationship between tourists' pro-environmental behaviour and a number of socio-demographic variables and psychological determinants. Accordingly, they observe a generally positive relationship between

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pro-environmental behaviour and rising levels of education and income. However, no well-established effects can be identified concerning age and gender. With regard to psychological determinants it can be stated that there is a strong relationship between pro-environmental behaviour and personal values such as self-respect, and personal norms such as altruism as well as environmental awareness in general.

According to Orams (1995), it is possible to identify three approaches that positively influence tourists' behaviour in natural areas: firstly, physical control measures such as barriers or boardwalks; secondly, direct control measures like permits and charges; and thirdly, indirect control measures, especially with regard to on-site environmental interpretation. Buffa (2015) confirms that especially light-green or softer ecotourists engage with interpretation facilities. Nevertheless, empirical results on the effectiveness of environmental interpretation are inconsistent (Orams, 1997; Poudel and Nyaupane, 2013). Moscardo and Murphy (2014) generally see little evidence of any significant change in tourism practice, and Weaver (2012) is convinced that tourists might be concerned about sustainability problems but not prepared to take any personally inconvenient remedial actions.

However, there is a lack of research about an integrated approach to the segment-specific sustainability attitudes of tourists who visit a rural tourism hotspot that contrasts starkly with the adjacent rural area characterized by a small-scale-oriented tourism sector. This paper aims to contribute to a better understanding in order to address sustainability challenges not only on-site but also within the surrounding region by generating a concept of governing the trial by space regarding tourists, and thus to encourage sustainable rural change against the background of a persisting growth ethos.

3. Methodology

3.1. Case study

The empirical study draws on a case study located in Northern Ireland. The Giant's Causeway and Causeway Coast was designated as a natural UNESCO World Heritage Site in 1986. It stretches 3 km along the north coast of county Antrim. The site's main attraction consists of the approximately 40,000 regularly patterned tertiary basalt columns that formed during an episode of extensive volcanic activity and were eventually exposed by the sea. The area is closely associated with the legend of the mythical giant Fionn MacCumhail who is said to have created the causeway as a crossing to Scotland (Causeway Coast & Glens Heritage Trust, 2012).

Tourism at the Giant's Causeway that includes the consumption of the natural landscape as well as artefacts, culture and experience can be traced back about 300 years. However, it was only with its designation as a World Heritage Site and especially after the 1998 Good Friday Agreement which ended a 30-year-era of civil unrest in Northern Ireland, that the Giant's Causeway became relevant for international tourism and started to develop into an iconic tourism hotspot in the rural (Crawford and Black, 2012). With the opening of a new 18.5 million GBP interpretive centre in 2012 visitor numbers rose by 98% within seven years (Table 1). Thus, in 2018 the visitor centre attracted more than one million tourists from over 160 countries, and tourist numbers are likely to climb further. Hence, the Giant's Causeway is the most visited tourist attraction in Northern Ireland (Crawford and Black, 2012; NISRA, 2019a; National Trust, 2019a). With an estimated 484.26 million GBP of revenue generated at the Giant's Causeway in 2018, tourism has become a key pillar of the regional economy and is considered an engine for the region's development (Causeway Coast & Glens Heritage Trust, 2012;

National Trust, 2019a).

The Giant's Causeway flagship attraction follows a high intensity approach to interpretive rural heritage tourism. Due to the increasing popularity of the site, which is owned and managed by the UK National Trust, it faces capacity problems, especially during the peak season and has therefore adopted a range of visitor management measures to ensure visitor flow and visitor safety while protecting the site and its outstanding universal value. These include the monitoring and coordination of visitor arrivals during the day in order to stretch visiting slots from morning to evening and to avoid visitor rejections due to capacity limits. Furthermore, the site is facing sustainability challenges such as increased ground sealing caused by the construction of the newly built visitor centre, pathways and the expansion of carpark facilities, and problems associated with intense traffic and congestion (Causeway Coast & Glens Heritage Trust, 2012; National Trust, 2019a; National Trust, 2019b).

3.2. Research design

In order to investigate tourists' attitudes towards sustainability and create a snapshot of the current situation, a questionnaire survey was carried out at the main attraction of the Giant's Causeway by means of face-to-face-interviews with 379 tourists on June 9, 2019. To realize a simple random sample the 20 interviewers were instructed to randomly approach a person returning from the Giant's Causeway site approximately every 25 min. Thus, the data collection was stretched out throughout the whole day. Since neither detailed data about the entire population of visitors in 2019 nor samples of further current studies are available, a test of representativeness was not possible. Thus, the possibility of sampling bias cannot fully be ruled out. However, the research leader who was present on-site to supervise and give support was reassured by the visitor centre that the chosen date was a typical day within the high season.

The questions addressed the importance of seven different aspects of the visitors' trips, evaluated from the tourists' point of view and measured on a 5-point Likert scale ranging from "not important at all" (1) to "very important" (5). According to the concept of sustainability, these aspects represent economic, ecological and socio-cultural facets of travelling (Table 2). The selection of the items was guided by key findings of different rural tourism studies conducted on the island of Ireland (Saunders, 2015; Healy et al., 2016; Cawley and Gillmor, 2008;

Items measuring tourists' attitudes towards sustainability.

number	item	dimension of sustainbility
1	Have good value for money/travel inexpensively	economy (scale reversed)
2	Eat local and fresh food (regional cuisine)	ecology, socio-culture, economy
3	Stay in ecofriendly-certified accommodations	ecology
4	Meet the local people and get to know their everyday life	socio-culture
5	See the whole island of Ireland in limited time	ecology, economy, socio- culture (scale reversed)
6	Learn about the history of Northern Ireland	socio-culture
7	Spend lots of time outdoors (hiking, cycling, surfing etc.)	ecology

Response format: 1 = not important at all, 5 = very important.

Table 1
Visitor numbers at the Giant's Causeway 2011–2018 (source: NISRA, 2019a).

Year	2011	2012	2013	2014	2015	2016	2017	2018
Number of visitors (thousands)	533	524	754	788	851	944	1012	1039

Conway and Cawley, 2012). Within the conflict area of economy, ecology and socio-culture, they reflect main sustainability challenges specifically with regard to experiencing rurality. In favour of relatively short interview times for the tourists, further possible sustainability indicators were not included, even though they might have allowed a more nuanced evaluation of the tourists' attitudes towards sustainability.

Furthermore, the survey included questions about the tourists' type of travel, their motivation to visit the Giant's Causeway, their on-site spending, the duration of their trip and the location of their accommodation before and after their visit to the Giant's Causeway. The visitors were interviewed mostly in English. To reduce language issues with regard to the international audience, questions using a Likert scale as a response option were accompanied by smiley symbols. Although the questions were phrased carefully, the risk of a social desirability bias needs to be acknowledged (Krumpal, 2011).

Following a segment-focused approach, the respondents were categorized according to their type of travel into coach trip tourists who travelled on an organized tour either for their whole holiday or only for a day trip, cruise ship tourists who were on a cruise ship holiday and used the port of Belfast as the starting point for a day trip to the Causeway Coast, and individual tourists who planned their trip and travelled independently. Correspondingly, 41% of the interviewed tourists were coach trip tourists, 32% could be identified as individual tourists, and 27% of respondents were on a cruise ship trip. On the day of data collection, two cruise ships docked in Belfast bringing around 4000 visitors to Northern Ireland (Belfast Harbour, 2019a). Due to the expanding cruise ship market in general and the growing numbers of visitors calling at Belfast Harbour on cruise ships specifically (Belfast Harbour, 2019b), cruise ship tourists were treated as a separate segment in this study.

In the survey sample females were slightly overrepresented with 56% of respondents. The largest age group interviewed was that of the 51–65 year olds, and most of the respondents held an undergraduate college or university degree. The mean trip duration amounted to 11.4 days (Table 3).

Data analysis included generating a sustainability index for each interviewed person. The items 1 and 5 were reversed in the analysis (Table 2), so an additive index could be calculated and the respondents could be ranked according to their index value which can be between 7 and 35. The index was utilized to undertake an analysis of variance (ONEWAY ANOVA) in order to investigate the differences between coach trip tourists, cruise ship tourists and individual trip tourists concerning their travel attitudes. Additionally, selected tourism behaviours on-site and the location of accommodation chosen by the three tourism segments were investigated. Here, a series of coefficients C were calculated.

4. Tourists at the Giant's causeway

4.1. Sustainability attitudes

One of the main aims of this study was to analyse whether segmentspecific travel attitudes with regard to sustainability issues exist. The empirical findings from the ONEWAY ANOVA reveal that there are

Table 3Overview of general characteristics of interviewed tourists.

characteristics	sample $(N = 379)$
coach trip tourists:cruise ship tourists:individual tourists	41:27:32
female:male:n/a	56:42:2
biggest age group	51-65 yrs (32%)
biggest educational degree group	college/undergraduate degree (43%)
mean trip duration	11.4 days

significant differences between the three tourist segments investigated F (2, 295) = 4.942, p < .05 (Table 4). The mean sustainability scores decrease from the segment of individual trip tourists (mean = 26.4, SD = 2.716), to the segment of coach trip tourists (mean = 25.4, SD = 2.695) to the segment of cruise ship tourists (mean = 25.2, SD = 3.104). The homogeneity of variances is affirmed by using Levene's test. This shows that equal variances can be assumed (p = .428) (Cardinal and Aitken, 2006). Hence, individual trip tourists can be identified as the group with the highest sustainability awareness, while cruise ship tourists are worried about sustainability issues while travelling the least.

Tukey post-hoc analysis (Cardinal and Aitken, 2006) reveals a significant difference (p < .05) between the sustainability scores of the individual trip tourists and the coach trip tourists (1.05550, 95% - CI [1.9748, 0.1361]) as well as the individual trip tourists and the cruise ship tourists (1.22936, 95% - CI[2.2599, 0.1989]). There is no significant difference between coach trip tourists and cruise ship tourists. Therefore, it can be assumed that variations between coach trip tourists and cruise ship tourists are negligible. Nevertheless, in this study the three tourist segments will be further analysed separately.

4.2. Motivation to visit the Giant's causeway and selected on-site practices

Studying the motivation to visit a rural tourism hotspot helps to provide information about the tourists' pre-visit knowledge about and their interest in the rural and the specific value of its localized natural and cultural heritage. Investigating whether they participate in a guided tour or not as well as the amount of money spent during the visit are aspects of on-site practices that give insights into the visitors' expectations of their stay and their behaviour at a rural tourism hotspot, and can be linked to sustainability issues.

The analysis of the reasons why tourists come to see the Giant's Causeway reveals that there is a significant moderate relationship between the tourist segment and the motivation to visit the World Heritage Site (C = 0.404, p < 0.001). On the one hand it can be seen that cruise ship tourists and coach trip tourists tend to visit the Giant's Causeway simply because it is a 'must see' in Northern Ireland and is part of their travel itinerary organized by tour operators. On the other hand, individual trip tourists come to the Giant's Causeway more often because they are interested in geology or because it was recommended to them by relatives and friends. Hence, it can be assumed that individual trip tourists look into the subject before their visit more profoundly than cruise ship tourists and coach trip tourists. Nevertheless, many individual trip tourists are also motivated to visit because the site is marketed as something special.

Here, power plays a role with reference to the personal hub. Tourists contribute to the trial by space through the motivation that lies behind their visit to the Giant's Causeway. Their motivation is strongly linked to their attitudes towards trip preparation. Uninformed tourists who more often tend to be cruise ship tourists and coach trip tourists may not appreciate the fragility of such a site as much as tourists who are more prepared to engage with the meaning of a site beforehand, as individual tourists more regularly do. The former tourists may use the site as a 'tramplescape' to stage their ultimate holiday experience rather than carefully sense rurality. This can have a strong influence on the production of rural space as it alters the overall impression of the specific rurality.

Table 4Sustainability score by tourist segment.

tourist segment	mean	SD	min.	max.	N	F	p
individual trip tourists	26.4	2.716	21	35	86	4.942	.008
coach trip tourists cruise ship tourists	25.4 25.2	2.695 3.104	20 17	32 32	132 80		

Although there is no limitation to the length of stay at the Giant's Causeway, the Giant's Causeway visitor centre estimates the average tourist's visit duration as 2 h (National Trust, 2019b). While the visitor centre uses this time interval as a basis for calculating capacity limits for the site, it simultaneously affirms the observation of Reichel, Uriely & Shani (2008) that the average duration of stay at such tourism hotspots is relatively short. In order to understand the economic relevance of rural tourism hotspots like the Giant's Causeway, it is essential to analyse the spending patterns of the three different tourist segments under investigation during their stay. Here, on-site spending can be differentiated into the admission fees tourists pay to enter the site and further spending for souvenirs, meals, drinks etc. Taking into account that pre-booked group discount rates of at least 20% apply, as communicated on the Giant's Causeway website, it can be stated that admission rates for group members (i.e. coach trip tourists and cruise ship tourists) are cheaper than those for individual trip tourists. Green admission discounts apply for tourists who arrive by public transport, bicycle or on foot (National Trust, 2019a; National Trust, 2019c). However, analysis of the survey data shows that this type of discount is hardly used (12 of 379 interviewed visitors). In view of the disadvantages associated with coach trip tourists and cruise ship tourists, cheaper admission rates for these segments are surprising. Here, with reference to the material hub, money as a channel of power has a rather destructive influence on the production of rural space with regard to sustainable rural change, as individual trip tourists are financially discriminated over the rest although their sustainability awareness is generally higher.

The tourism industry also has high expectations of visitors spending money at tourism hotspots besides their admission fee. At the Giant's Causeway 80% of the craft offered for sale is produced locally (National Trust, 2019a). However, all tourists spend rather little money on meals, drinks and souvenirs: excluding admission, the vast majority of the tourists of all three segments spend less than 10 GBP during their stay at the World Heritage Site. There is a significant relationship between the tourist segments and their spending (C = 0.234, p < .01) with a weak tendency for cruise ship tourists to spend the greatest amount of money while coach trip tourists spend the least. Individual trip tourists rank in the middle. Adopting the lens of the material hub again, the tourists' spending patterns reflect their ability and preparedness to support local enterprises such as crafters and thus influence the structure of the rural economy. Even though meals, drinks and souvenirs provide a possibility to sense rurality, here there is no indication of a genuine engagement.

Concerning visitor participation in a guided tour at the Giant's Causeway heritage site, there is a weak significant relationship between the tourist segment and the probability of taking part in an interpersonal tour on-site that provides information about the geology, the site's mythical legend and sustainability aspects interactively (C = 0.273, p = .000). Hence there is a tendency that cruise ship tourists participate in a face-to-face guided tour more often than coach trip tourists. The latter, in turn, join such a tour more often than individual trip tourists who seldom seek to learn about the heritage site by using the option of guided interpretation.

Knowing that especially tourists on an organized itinerary, who are characterized by lower sustainability scores and who are less informed about the site prior to their visit, take advantage of the possibility to participate in a guided tour, offers the chance to adapt such tours to the needs of these tourist segments with regard to education for sustainable development and sustainable rural change. Yet, while these findings add to the existing literature about guided interpretation in terms of the need for a segmented approach, it has to be taken into consideration that studies about the effectiveness of guided tours regarding the internalization of sustainability issues show mixed results (Orams, 1997; Powell and Ham, 2008; Poudel and Nyaupane, 2013). Nevertheless, applying the immaterial hub, guided tours, especially for cruise ship tourists and coach trip tourists, provides rural tourism hotspots with the opportunity to communicate sustainability guidelines in order to actively govern the production of rural space by tourists.

4.3. Trip duration and locations of accommodation

The Giant's Causeway is considered a driver of regional development with an estimated revenue of 484.26 million GBP generated at the site in 2018 (National Trust, 2019a). Nevertheless, besides the economic benefits that can be engendered at the sites themselves, UNESCO calls for World Heritage Sites to be managed in such a sustainable way that they have a function in the surrounding communities' everyday life and thus ensure socio-economic benefits for all (UNESCO, 2019). The Giant's Causeway and Causeway Coast WHS Management Plan 2013–2019 recognizes the site's "failure to achieve effective community involvement" (Causeway Coast & Glens Heritage Trust, 2012: 28) up to the first decade of the 21st century, but also sets out the goal to establish partnerships and enable local communities "to gain greater benefits" in the following decade (Causeway Coast & Glens Heritage Trust, 2012: 30).

A sign of successful re-engagement with local communities would be if tourists decide to spend some time, at least one night, within the region in order to further experience and sense rurality by using other tourism services such as accommodation, gastronomy, transport or tourism activities. In order to evaluate this, the data was analysed with regard to the tourists' whole trip duration and the locations of their accommodation for the night before and the night after their visit to the Giant's Causeway. Here, the unit of analysis was the region of the Causeway Coast and Glens district that surrounds the Giant's Causeway and Causeway Coast World Heritage Site. In 2016, it had an area of approximately 2000 km², 18 settlements and a total population of 143,500 (Causeway Coast and Glens Borough Council, 2018).

Trip duration can be used as an indicator to analyse how much time tourists can potentially spend in a rural destination and thus engage in rural tourism activities that benefit the local economies. Empirical findings for tourists at the Giant's Causeway show that the trip duration differs statistically significantly for the different tourist segments according to Welch's F(2, 236.94) = 38.87, p < .001 (Table 5). Here, Games-Howell post-hoc analysis reveals a significant difference between the trip durations of the individual trip tourists and the cruise ship tourists and between the coach trip tourists and the cruise ship tourists. There is no significant difference between individual trip tourists and coach trip tourists. Thus, the holidays of cruise ship tourists are clearly longer (average duration: 14.9 days) than those of individual trip tourists (average duration: 8.9 days) and coach trip tourists (average duration: 9.8 days). Nevertheless, it needs to be taken into consideration that these tourists spend most of the time on the cruise ships with shore leaves at different ports and usually cover much longer distances including different countries during their trip. Hence, with regard to cruise ship tourists it is unlikely to find potential for rural tourists spending more than a few hours within the region. Considering individual trip tourists and coach trip tourists potential exists, but their choices regarding the location of accommodation require in-depth analysis.

With regard to accommodation, the calculation of coefficient C reveals that there is a moderately significant relationship between the tourist segment and the probability of whether a visitor to the Giant's Causeway stays within the surrounding region for at least one night (C = .467, p < .001). Not surprisingly, cruise ship tourists do not stay overnight within the region, but return to the cruise ship after their day trip to the Causeway Coast. Only a few coach trip tourists use accommodation in the area. However, even the majority of individual trip tourists do

Table 5Trip duration by tourist segment (Welch's ANOVA).

tourist segment	mean	SD	min.	max.	N	F	p
individual trip tourists	8.91	6.008	1	35	101	38.865	.000
coach trip tourists	9.78	6.194	1	35	153		
cruise ship tourists	14.88	5.072	3	40	117		

not recognize the Causeway Coast and Glens district as a tourist destination where it is worth spending a night (Table 6).

The locations chosen by individual trip tourists and coach trip tourists before and after visiting the Giant's Causeway rather show that they prefer to stay in bigger cities such as Derry/Londonderry (65 km), Belfast (95 km) or even Dublin (265 km) (Table 7). Thus, a high tendency towards city-based rural tourism can be identified in both segments. Nevertheless, there is a greater propensity for individual trip tourists to use accommodation within the Causeway Coast & Glens district (C = .434, p < .001, see also Table 7). Thus, this segment is more open for a kind of tourism which benefits local tourism providers.

With regard to the accommodation choices of the vast majority of visitors to the Giant's Causeway and thus the limited amount of time these tourists seem to spend within the surrounding region, it needs to be acknowledged that there is still great potential for the management of the tourism hotspot to strengthen its engagement with the local community. However, in view of the trend towards city-based tourism, prospects for success might be rather limited. Again, the tourists' power over the production of rural space, here in a wider regional context, is at play. With reference to the material hub – represented as money flows – and the personal hub – shown as the tourists' preferred accommodation locations – rural travellers visiting the Giant's Causeway rather hamper an easy integration of the rural tourism hotspot into the surrounding region.

5. Conclusion and recommendations

Using the Giant's Causeway as a case study, this paper aimed to decode the dynamics of rural tourism shaped by tourism hotspots in the countryside by focusing on the tourists' power to influence the production of rural space which is interpreted as both socially constructed and materialized (Cloke, 2006; Halfacree, 2006, 2007; Frisvoll, 2012). The development of rural tourism hotspots as large-scale flagship attractions is often in stark contrast to the small-scale orientation of rural tourism that can usually be found in their surroundings. By means of a segment-specific sustainability approach with regard to tourists' sustainability attitudes on holidays, the goal of this study was to derive measures for sustainable rural change by investigating ways in which the rural idyll as perceived by tourists and sustainability in rural regions are contested.

The study revealed that the trial by space in the Giant's Causeway region is ongoing as the travel attitudes of cruise ship tourists, and to a lesser extent of coach trip tourists, are hardly in line with the expectations of regional tourism providers. A contradictory state of rural spatial coherence exists since the tourists' influence on the production of rural space is strong.

However, as long as mass tourism at rural heritage sites is favoured over low-intensity approaches (Healy, van Riper & Boyd, 2016), green growth measures that cover ecological, economic and socio-cultural issues are the only option that can be drawn upon (Weaver, 2012). Against this background and with a view to collaborative tourism, a rural tourism hotspot such as the Giant's Causeway should function as a rural hub that coordinates and promotes regional tourism providers and initiatives in a network of rural tourism actors with established

Table 6 Accommodation within the Causeway Coast & Glens district by tourist segment (N = 359).

			ast one night in the eway Coast & Glens ict	
		yes	no	TOTAL
tourist segment	individual trip tourists	48	66	114
	coach trip tourists	5	136	141
	cruise ship tourists	0	104	104
	TOTAL	53	306	359

sustainability criteria for membership eligibility (Panzer-Krause, 2017; Panzer-Krause, 2019). Segment-specific sustainability strategies are then desirable due to the tourists' differing attitudes towards sustainability. Here the study revealed that the mean sustainability scores decrease from individual trip tourists to coach trip tourists to cruise ship tourists. The hypothesis formulated at the outset of this study was thus confirmed.

Hence individual trip tourists represent the tourist segment with the highest sustainability awareness. They are amenable for conventional rural tourism. Consequently, a rural tourism hotspot sustainability strategy for this tourist segment may include easy and bundled access to information, guidance and booking services with regard to nearby rural tourism providers such as accommodation, gastronomy, transport and tourism activities both in the planning stage of their visit and on-site.

On the other hand, coach trip tourists and especially cruise ship tourists are characterized by lower sustainability scores. They are not likely to spend much time within the area. Here, a concentration strategy at a rural tourism hotspot should be followed in order to avoid destruction and protect and conserve the natural and cultural rural landscape by employing rigorous measures in the most vulnerable areas on-site; these may include capacity limits, barriers and specific walkways that have to be used to move around the site (Weaver, 2012). Although coach trip tourists and cruise ship tourists are less prepared for their visit to a rural heritage site, they show a greater interest in guided face-to-face interpretation than individual trip tourists and are, at least with regard to cruise ship tourists more willing to consume. Therefore, in order to take account for the lower sustainability scores of these tourist segments as well as their reluctance to partake in conventional rural tourism that would benefit regional tourism providers, admission fees for members of organized groups should be, contrary to current practice, higher than those of individual trip tourists. Bearing in mind the sustainability challenges that accompany these two tourist segments, discounts on admission fees should be avoided. Additional earnings can be directed to conservation projects instead. Furthermore, packaged prices for admission and interactive guided tours on-site that include elements of education for sustainable development and sustainable rural change are advisable to further encourage participation of coach trip tourists and cruise ship tourists.

Moreover, with a view to the trend towards city-based rural tourism, especially for the segment of cruise ship tourists, but also for coach trip tourists who travel on a day trip, the regional network of tourism providers that forms around a rural tourism hotspot can offer tour operating services from bigger cities including transport to the rural tourism hotspot, a local guide on board, and optionally further activities and gastronomy. The sustainability ethics incorporated by the rural tourism network that forms around a rural tourism hotspot could thus be communicated more intensely while regional tourism providers benefit. This would allow genuine collaborative tourism, which can reduce social conflict within the rural communities and allow natural and cultural heritage sites influenced by mass tourism to develop a function in the surrounding communities' everyday life, as demanded by UNESCO (2019).

The rural idyll is to be considered as the tourists' image of authentic rurality that is closely linked to the concept of sustainability. However, this image is constantly shaped and re-shaped by tourists and not necessarily congruent with reality. Just as natural and cultural land-scapes undergo changes and adaptations, so too does the image of the rural idyll. Yet, the pace of the change affecting real rurality may greatly differ from the pace of change of visitors' perceptions of it. Tendencies for overtourism at a rural tourism hotspot and the sustainability challenges involved can change travellers' images of its natural and cultural landscape. However, sustainability issues are likely to arise before the visitors' perceptions of the rural adapt. Therefore, measures to avoid a loss of the rural idyll have to be seized well before this possibility has arrived in the tourists' imaginations.

This study provides a snapshot of the sustainability attitudes of

Table 7 Locations of tourists' accommodation before and after their visit to the Giant's Causeway (excluding cruise ship tourists) (N = 265).

		CC&Glens	other rural regions in NI	Belfast/(London-) Derry	Dublin	other	TOTAL
tourist segment	individual trip tourists	41	4	44	15	9	113
	coach trip tourists	4	7	101	37	3	152
	TOTAL	45	11	145	52	12	265

CC&Glens = Causeway Coast & Glens district.

tourists visiting a tourism hotspot in the countryside that is characterized by mass tourism. While methodological limitations due to the highly dynamic visitors' composition at such a site need to be acknowledged, further research is recommended with regard to visitors' general attitudinal change and the effects of segment-specific sustainability measures realized by rural tourism hotspots. Also, the transformational potential for moving towards degrowth approaches at natural and cultural heritage sites influenced by mass tourism should be evaluated. Finally, more insight into tourists' changing images of the countryside as a rural idyll is needed.

Credit author statement

Sabine Panzer-Krause: single author, contributed everything.

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