



Case study

Low versus high intensity approaches to interpretive tourism planning: The case of the Cliffs of Moher, Ireland



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HIGHLIGHTS

- Visitors' preferences for the intensity of interpretive facilities are examined.
- Evaluations of low-tech and high-tech visitor facilities are compared.
- Low-intensity interpretation was preferred to technologically-driven displays.
- Visitors need greater recognition as stakeholders in tourism planning.

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ABSTRACT

In recent decades, investments in tourism capital and the advancement of media technologies have transformed the construction and consumption of tourism destinations. Using the \$45 million Cliffs of Moher (CoM) visitor center in the west of Ireland as a case study, this paper investigates a central debate in interpretive planning: how the intensity of multimedia applications and onsite facilities shapes visitor experiences in natural area destinations. Drawing from onsite surveys, semi-structured interviews and participant observations, as well as comparative evaluations of the former and current visitor centers, results indicated that low-intensity interpretation was preferred to high-intensity, technologically driven displays. This paper challenges the dominant producer-oriented development paradigm for visitor centers where the architectural design is often the focus of attention. Instead, the authors argue for greater emphasis to be placed on interpretation that incorporates the perspectives of visitors and residents throughout all phases of the planning process.

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1. Introduction

In recent years, scholarly attention toward nature-based tourism and sustainable development has been interwoven with wider discourses of neoliberalism and ecological modernization. This dialogue has helped shape the debate on use and management of publicly owned goods and spaces (Jamal, Everett, & Dann, 2003). To some, global rationalization has transformed tourism destinations into an increasingly commodified resource. Consequently, important natural and cultural resources within these destinations have been managed and even valorized by governmental

authorities and international agencies in the name of economic development (Baram & Rowan, 2004; Silberman, 2007). Amenity-rich environments that provide outstanding examples of unique heritage and culture, symbolized, for example, by their designation as national parks or World Heritage Sites, are increasingly subject to commodification (Frost & Hall, 2009; Leask & Fyall, 2006).

Tourism planners and managers seek to provide memorable experiences for visitors, offering a setting or “experiencescape” to achieve their goals. O'Dell and Billing (2005) argue that experiences are co-created between what the industry provides and how that is consumed. Visitor centers play a central role in shaping experiences. Therefore, public sector monies are often invested in the construction of centers to enhance experiences and attraction to destinations (Fyall, Garrod, Leask, & Wanhill, 2008). This commitment to a “build it and they will come” scenario has drawn

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government attention to and support of a boosterism policy in tourism planning and development (Hall, 2008). Publicly funded programmes such as the European Union's Interreg, ERDF (European Regional Development Funds), and the World Bank have helped set standards as well as offer substantial economic incentives for government investment in the form, structure and even presentation design of cultural heritage sites (Silberman, 2007).

In an attempt to provide new markets for tourism, many destinations have become re-engineered, often by actors beyond the immediate locality (Shaw & Williams, 2004). With often significant investment committed from the public sector, infrastructural improvements frequently incorporate elaborate presentation technologies, which require complex project management skills. As such, a network of multimedia technologists, heritage consultants and architects are increasingly competing for lucrative architectural and multimedia contracts from national governments (Silberman, 2007). Consequently, distinctive and unique physical forms often emerge in site plans, of which visitor center architecture and multimedia applications are central elements. The prolific advancement of media technologies has unequivocally transformed how destinations are constructed and how visitors engage with and consume them. Some have argued that state-of-the-art visitor centers and high-tech interpretive approaches now fulfill functions that are more revenue-generating than experience-oriented (Silberman, 2005).

For example, recent multi-million-dollar visitor center developments at Stonehenge (England, \$62m), Giant's Causeway (Northern Ireland \$29m), Mount Longushan World Heritage Site (China, \$24m), Jasper glacier skywalk (Canada, \$31m), Grand Canyon skywalk (US, \$30m), and the focus of this study, the Cliffs of Moher (CoM) (Republic of Ireland, \$45m), all carry accolades such as architectural design awards, virtual reality experiences and interactive multimedia. However, little is known about the extent to which these facilities reflect visitor preferences for development. Although it is now generally accepted that interpretation, if planned carefully and sensitively, can act as an effective management tool to achieve sustainable development of visitor facilities (Moscardo, 1999; Stewart, Glen, Daly, & Sullivan, 2001; Timothy & Boyd, 2003), the reduction of "places, objects and experiences" to commodities can prove problematic to management if the *scale* of reduction or the resultant commercialization and commoditization leads to alteration or loss of a destination's physical, sociocultural or environmental qualities. The extent, appropriate form and scale of new visitor facilities are thus critical management considerations.

Drawing on qualitative and quantitative data collected from visitors to the recently constructed \$45m Cliffs of Moher (CoM) visitor center in the west of Ireland, this paper investigates a central debate in interpretive planning: how the engagement of multimedia technology and onsite facilities influences the visitor experience, particularly in the case of natural areas. The study was guided by three objectives. Firstly, it examined visitors' use of and engagement with interpretive facilities and their preferences for the intensity of interpretive displays at the CoM. Secondly, it explored visitors' reactions to the transformation of the CoM from a low to high intensity interpretive facility. The third objective compared visitors' evaluations of the former center compared to the more recent center, which opened in 2007. This paper aims to provide insight into visitors' reactions to different degrees of intensity in interpretation, question current trends in natural-heritage-based interpretive planning, and provide management recommendations that can be incorporated into the design of future visitor centers. Attention now turns to a review of extant literature on interpretation that guided this research.

2. Literature review

2.1. Natural heritage tourism interpretation

Tourism activities have differential effects on natural area destinations. On one hand, past research has indicated that tourist activities can preserve and improve natural resources, provide jobs, increase local revenues, and enhance community cohesion and pride (Hall & Boyd, 2005). Studies have also documented the role of tourism activities in imparting an environmental ethic (Moscardo, 1998; Powell & Ham, 2008), while generating revenue to support sustainable resource management activities (Shaw & Williams, 2004). On the other hand, tourism can provide a mechanism for transforming goods and services in a way that alters the fundamental meanings of places (Saarinen, 2004). The commodification and homogenization of landscapes are well documented in the literature (see Jamal et al., 2003; Saarinen, 2004) and are widely recognized as a global tourism management problem (Shaw & Williams, 2004; Timothy & Boyd, 2003). Although maintaining nature-centric conditions requires limits to development and tradeoffs, change is inevitable. Widespread efforts in the academy and among practitioners have mitigated the extent of change occurring, thus providing a toolkit or "cookbook" of supply-and-demand techniques (see Hall & Lew, 2009). A favored, "demand-driven" approach is that of interpretation as a means to inform, educate and possibly modify visitor behavior.

Interpretation is central to shaping the experiences that visitor attractions can offer (Fyall et al., 2008), as well as managing expectations and fostering appreciation (Moscardo, 1998). For the purposes of this study, interpretive planning is defined as a process "to establish a collaborative, focused and strategic approach to developing and maintaining meaningful interpretive and educational services" (Dominy, 1998:103). This paper considers interpretation as a tool for imparting management objectives and increasing awareness and appreciation of tourism destinations, which may encourage behavior that minimizes environmental impacts (Absher, 1997; Stewart et al., 2001; Timothy & Boyd, 2003; Van Riper & Kyle, 2014). Although the benefits of interpretive planning have been well documented over the past decade, concerns have been raised about its inadequacy on a global scale (Black & Thwaites, 2011; Bramwell & Lane, 1993; Goulding, 2000; Hall & McArthur, 1998; Silberman, 2005; Timothy & Boyd, 2003).

Visitor centers are often used as vehicles for housing interpretive displays and facilitating interaction between visitors and natural area destinations (Hughes & Morrison-Saunders, 2005; Munro, Morrison-Saunders, & Hughes, 2008). These facilities provide information and services that encourage reflection and learning among tourists, while attracting visitor spending and the development of ancillary services (Fallon & Kriwoken, 2003a; Pearce, 2004). These benefits are particularly helpful in areas of economic or social decline. Revenue generation is often developers' chief motivation and can be used as an index of success (Silberman, 2007); however, many authors have revealed that cost recovery imperatives and economic objectives can be prioritized over the broader well-being of communities and environmental protection (Bramwell & Lane, 1993; Cooke, 2000). Questions have been raised about the benefits of tourism spaces not only in terms of economic viability but also in how local cultures are represented (Fallon & Kriwoken, 2003b; Kneafsey, 1994; McDonagh & Healy, 2009; McManus, 1997).

Interpretation is now becoming increasingly high-tech as it moves toward entertainment-oriented goals. The prolific advancement of media technologies has contributed to the transformation of tourism destinations, in that much interpretation is now focused on multisensory experiences involving simulated

environments (historical, natural, cultural, technological) through live interpretation, performance and state-of-the-art films (Ritzer & Liska, 1997; Timothy & Boyd, 2003). Although entertainment and education are not mutually exclusive, some critics argue that the pressures of tourism markets push environmental and heritage interpretation inexorably toward gimmickry and overt commercialization (O'Toole, 2007). Interpretation planning has thus shifted toward what De Varine (1985) coined the “new museology,” where education and entertainment are fused to offer “edutainment.” This shift is now evident in our visitor attractions sector, particularly visitor centers, where visitors embrace new technology as part of their learning environments (Corsane et al., 2007; Leask, Fyall, & Barron, 2013; Timothy & Boyd, 2003). Although venues such as ecomuseums support sustainable development and incorporate low-intensity, low-cost and locally participated technologies (Corsane et al., 2007), the “theming” of landscapes still occurs, whereby distinctions among product, service, and entertainment are blurred (Gottdiener, 1997).

2.2. Visitor reactions to interpretation

There is limited understanding of how visitors make use of media, exhibits and technology in visitor centers (Cooke, 2000; Fallon & Kriwoken, 2003a), and there are increasing calls for research to determine how best to implement interpretation, especially the provision of technology in natural area destinations (Reino, Mitsche, & Frew, 2007). Tourists' reactions to facilities and resources on display in visitor centers have been debated in past research, particularly their use of multimedia (e.g., audiovisual programs, sound and light shows, videos or interactive computers) (Fallon & Kriwoken, 2003a). On one hand, multimedia can provide multilingual facilities, create excitement, and speed up or slow down shows while ensuring a consistent performance (Moscardo, 1989). Tourists who experience interactive computer exhibits often spend more time at these displays and increase levels of participation, suggesting a more positive association (Moscardo, 1989). However, not all tourists positively evaluate the provision of touchscreens and interactive displays (Goulding, 2000; Timothy & Boyd, 2003). Some experiences require little or no interpretation (Howard, 1998), whereas others lend themselves well to higher levels of technology (Hughes & Morrison-Saunders, 2005). Using Field and Gough (1998) “enrichment without words” as one approach to interpretation, Hughes and Morrison-Saunders (2005:162) describe how “simply being in a natural setting can be meaningful and provoke visitors into viewing their surroundings in new ways.” Such minimalist interpretation relies on visitors' ability to derive meaning, recognize a site's significance, and have a fulfilling experience without facilitation. Without interpretation, however, the significance of the site and educational goals of investors may not be fully realized (Hughes & Morrison-Saunders, 2005).

A key element in creating successful and sustainable interpretive facilities comes from understanding visitors' needs, desires and expectations (Moscardo, 1998). Debate exists about whether recent trends in interpretation and tourism policy are producing developments that meet visitors' needs and expectations. Poor or insufficient interpretive planning can result in ill-conceived programs that meet the needs of interpreters instead of visitors, do not meet objectives, needs and interests of target audiences, and are not evaluated. Nevertheless, natural and cultural sites are being transformed across the world through substantial investments in interpretive facilities: there is a clear need to evaluate this transformation.

3. Case study

3.1. The Irish context

The Irish government doubled its tourism expenditure during the 1990s, with IR£140m allocated to heritage projects under the Operational Programmes for Tourism 1989–99 (National Tourism Strategy) (McGrath, 1996). Assisted by the availability of incentives from the EU Structural Fund, it sought to develop a niche tourism market around the interpretation of its natural and cultural heritage. An overwhelming bias toward capital funding meant that the long-term financial viability of projects received little attention, while the adoption of five-year funding cycles frequently led to projects being rushed without sufficient research (Cooke, 2000). The extraordinary growth of the Irish economy in the 1990s exposed Ireland to new tourism management challenges. Healy, Rau, and McDonagh (2012:455) contended that within a decade “the presentation of Irish natural and cultural heritage underwent something of an interpretative revolution.” The Operational Programme for Tourism for 1989–93 and An Bord Fáilte's (now Fáilte Ireland, Ireland's national tourism body) (1992) document *Heritage Attractions Development: A Strategy to Interpret Ireland's History and Culture for Tourism* promoted visitor centers as a key development strategy. Growth in visitor centers from 1989 onward triggered critical tourism management issues concerning the appropriate presentation of Ireland's heritage (Cooke, 2000; McGrath, 1996), sustainable development of visitor facilities (Kneafsey, 1994), the role of public participation in decision-making (Healy et al., 2012) and formulation of tourism development agendas (O'Rourke, 2005). The CoM visitor center development encapsulated all of these debates.

3.2. Cliffs of Moher (CoM)

The CoM is a stunningly beautiful landscape of sea, stone and sky. Located in County Clare in the west of Ireland, the cliffs extend 8 km from the village of Doolin in the North to the fishing village of Liscannon on its southern edge (Kaul, 2014). Designated as a Refuge for Fauna in 1988 and as a Special Protected Area under the EU Birds Directive in 1989, and a key stop along Ireland's recently marked-out Wild Atlantic Way (a 2500 km touring route of the southwest coastline), the site attracts close to one million visitors a year.

In 2001 Clare County Council (CCC), the local government authority, granted itself planning permission to construct a €31.5m “state-of-the-art” visitor center (Healy & McDonagh, 2009). The scale of the development was intensely opposed by An Taisce (National Environmental Trust) and Shannon Development (a regional tourism authority who operated retail facilities at CoM). Shannon Development proposed a counter plan, which would maintain the former visitor center (see Fig. 1) and introduce a park-and-ride scheme from nearby villages, bringing more tourists in direct contact with local businesses. Drawing on Greff's (1994) economies of scope, they proposed that basic facilities and interpretation would be provided on site while all commercial visitor facilities would be relocated to neighboring villages to increase tourist expenditures (to benefit the local community) rather than increase tourist numbers. The CCC proposed a separate development that opened to the public in February 2007 and was officially marketed as the new and improved “Cliffs of Moher Visitor Experience.” Boasting austere, hypermodern and fluid architectural design (Kaul, 2014), the entire building was hidden underground to reduce the visual impact of the center (see Figs. 2 and 3). Pathways were extended and large viewing platforms constructed and restoration of the eroded cliff edge habitat was completed. The visitor center included a large cavernous exhibit hall, high-tech



Fig. 1. Former Cliffs of Moher visitor center.

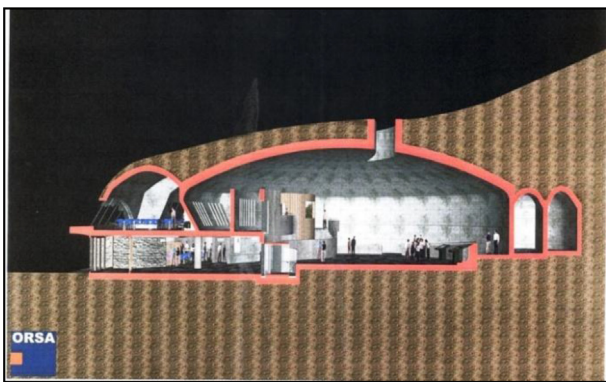


Fig. 2. Subterranean design plans (McGrath, 2002).



Fig. 3. The newly completed subterranean visitor center.

multisensory interpretive displays, a “state-of-the-art” virtual reality experience called “The Ledge” (see Fig. 4), a large gift shop, restaurant and café.

The CoM was transformed from a robust tourist attraction with basic visitor facilities to an ultra-modern and professional commercialized space. This transformation was in marked contrast to past thinking, which suggested that the sense of remoteness and feelings of raw nature were among the most appealing aspects of the destination (Mcilveen, 2002). Modernist developments like the CoM were at odds with previous marketing campaigns supported by Fáilte Ireland, which promoted Ireland as a clean, green country

of simple people living in traditional ways far from the hustle and bustle of city life (Clancy, 2009; O'Connor, 1993). The new visitor center also brought new costs: car park fees doubled to €8, bus parking increased eightfold to €60, and visitors who entered the interpretive area paid €4.95. These increases prompted visitors, tour operators and locals to raise issues of equity and exclusiveness. Healy and McDonagh (2009:462) argued that the price hike did “not represent a de-marketing initiative but instead a transfer of costs to the visitors in an attempt to repay the shortfall in funding (approx. €2–3m) and annual loan charges of €1.1m.”

3.3. Understanding the wider policy environment of the CoM development

The chasing of EU grants, and political interference in the Irish planning system, led to growth-driven, producer-orientated developments that frequently lacked sufficient marketing and environmental research (Rau, 2009; Cooke, 2000). The visitor centre was based upon a 1993 architectural design competition that was facilitated by the Royal Institute of Architects of Ireland. Crucially, not one visitor was asked about their preferences for interpretation. Clare County Council did not provide any brief for the center's interpretive design, nor was any attempt made to incorporate the views of locals and visitors. Rather, the focus was to create a world-class visitor destination with emphasis on its economic potential. The intent was the creation of a “world-class experience” through displays such as “The Ledge” that aimed to increase both visitor dwell time as well as, indirectly, overnight stays in Clare County.

Because of Ireland's delayed social, cultural and economic modernization relative to the European Union, the drive to create a “wow factor” experience was initiated by politicians who used tourism development as an outlet to champion progress, sophistication and the country's new wealth. Although CCC claimed that creating a “world-class visitor experience” was a key factor for positive development, without sufficient research the visitor experience became an uncalculated by-product. The research presented in this paper attempts to address this lacunae, by gauging visitor reactions to the changes initiated at CoM, and in particular how the focus on a high-tech interpretive planning model influenced the quality of the visitor experience.

4. Methods

This study adopted a mixed-methods approach to incorporate techniques and procedures from qualitative and quantitative research traditions. Data collection involved semi-structured interviews ($n = 33$), informal interviews ($n = 48$) participant observations (10 h), and onsite self-administered surveys ($n = 345$; 87% response rate). For the first phase of this research, grounded theory provided philosophical guidance to better understand the phenomena of interest and identify several emergent themes to be subsequently tested (Strauss & Corbin, 1990). The second empirical phase examined the relationships highlighted in the three study objectives. Thus, multiple paradigms were adopted to develop theoretically sound and pragmatic outcomes for tourism managers.

4.1. In-depth investigation

For the initial phase of this research, triangulation (Creswell, 2008) was used to engage with the multiple layered constructed realities and messy texts of lay and expert knowledge. Drawing on grounded theory (Strauss & Corbin, 1990), semi-structured interviews were conducted with tourism planners, tour guides, visitors, and social scientists familiar with the CoM. The aim of the interviews was to thoroughly examine key actors' views and



Fig. 4. "The Ledge" virtual reality experience in the new visitor center.

perspectives on the transformation of the CoM. Each interview included general questions such as: *What was your initial reaction to the transformation of the site?*, and more specific questions such as: *What are your views on the alternative development proposal from Shannon Development?* Informal conversations with visitors were also used to probe participants' thoughts and feelings about the center. All conversations were tape-recorded and noted in shorthand. Descriptive information was transcribed verbatim and categorized into key words and emergent themes and concepts. This information was analyzed through open annotating and coding, followed by axial coding to compare open codes with each other. Selective coding was then performed to integrate and refine the frequently occurring axial codes and to identify categories (Strauss & Corbin, 1990).

Semi-structured and short interviews were supplemented with continual on-site participant observations that involved a complete covert observer role (Gold, 1969). The goals of these observations were to better understand: (a) visitors' use of the visitor center and its interpretive displays; (b) visitors' use of the interpretation areas (e.g., which exhibits they used, the extent to which interpretive exhibits attracted and held their attention, and for how long); and (c) visitors' engagement with interpretive facilities (e.g., whether visitors stopped to look at signs or information plaques, and their reaction) (Creswell, 2008; Gold, 1969). Conversational eavesdropper methods were also used (Gold, 1969), whereby relevant conversations or points were recorded while watching the audio-visual show in the visitor center, walking along the cliffs' edge, sitting outside the visitor center, and sitting in the café and restaurant. To record use patterns, visitors were selected according to the principles of random sampling and the next-to-pass technique (Creswell, 2008). Given the qualitative nature of observations, sample size was not predetermined, and observations continued to a level of saturation. The main method of recording was through detailed field notes assembled at the end of each day or when possible during the on-site observations. Burgess's (1982) recording method was used, which resulted in substantive field-notes, methodological field-notes, and analytic memos.

4.1.1. On-site survey design and analysis

Previous studies on visitors' experiences of high versus low intensity on-site media (Hughes & Morrison-Saunders, 2005), satisfaction and use levels (Fallon & Kriwoken, 2003a) and differences in visitor center developments (Mayer & Wallace, 2007) were instrumental in designing the present study. Drawing on the observations of these authors and on in-depth information collected via interviews and participant observations, a self-administered survey was constructed. Specifically, survey items were developed to examine visitors' use of facilities, preferences for interpretive

intensity, and reactions to the transformation of the CoM visitor center using data collected during the first phase of this study and results from previous research conducted at the CoM (Mcilveen, 2002). On-site surveys were conducted during the peak tourist season between July and August, 2007. Survey days were randomly selected and stratified by day of the week (60% weekend vs. 40% weekday) to reflect visitor patterns and time of day to coincide with visitation. One female and one male assistant administered surveys to reduce gender-related interviewer bias (Denzin, 1989). The interviewers were strategically positioned at two main exit areas, including a path leading to the bus pickup point and a path leading to the visitor car park. A random sample method was employed whereby every fifth person was approached after completion of the previous survey. All data were coded, entered into databases, and analyzed using SPSS Version 21.0.

In response to the three study objectives, respondents were first asked to select their preferred level of interpretation intensity, from low to high-intensity approaches. Interpretive displays, entrance rates, dwell times, and use of interpretive facilities were explored. To address the second research objective, survey items were developed from themes that emerged from the first phase of the study to examine the perceived transformation of the CoM and respondents' reaction to interpretive material. These items reflected a transformation defined as a change of physical and cultural attributes of the CoM and its appeal to visitors. Key emergent themes were: transferal of development costs onto visitors; commercialization of the CoM; appropriate scale of development; and impacts on the intangible qualities of the CoM. Six statements reflecting these themes were measured on a scale ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree"). Following DeVellis (2003), Cronbach's alpha scores were estimated to determine reliability of the scale, and missing data (10.4% Missing Completely at Random) were accounted for in a full information maximum likelihood estimation procedure.

In response to the third research objective, those who had visited the CoM before 2005 were asked to compare their experiences at the older versus newer visitor center. For this objective, only data from visitors who had experienced both centers were used to assess reactions to the transformation of the destination before and after the new center opened. Respondents evaluated seven items reflecting various visitor center attributes on a scale ranging from 1 ("Very Poor") to 5 ("Very Good"). Survey items, developed from the qualitative dimension of the study, were selected for comparison. Results from Mcilveen's (2002) survey of the old CoM experience also highlighted the need to capture visitors' opinions of the value of the experience for money and appreciation of site characteristics. A paired samples t-test was performed to compare evaluations between the older and newer

visitor centers.

5. Results

5.1. Socio-demographics

The gender distribution of survey respondents was equally male and female. Sixty-four percent of respondents were 21–50 years old. Twenty-one countries were represented in the sample, including 33% Europeans (excluding Irish), 32% North Americans, 24% Irish, and 10% Australasian. Eighty percent were first-time visitors, while 20% had visited before 2005. Eleven percent of surveys were collected on wet and windy days. This profile was consistent with the average statistics for visitation to the CoM (Mcilveen, 2002).

5.2. Use of interpretive facilities and preferred method of display

In order to address our first objective, visitors were asked to identify their use of interpretive facilities at the CoM. Visitors had access to the following facilities within the center: extensive toilet facilities, a small café, a large retail unit, a 150-seat franchise restaurant, and the “Atlantic Edge” interpretation area located at the rear of the visitor center. Entrance to the centre was free, while access to the “Atlantic Edge” cost €4.98. Some tour operators included this entrance fee in their overall tour package. Most visitors (85%) made use of the visitor center (see Table 1). Forty-four percent stayed for less than 15 min and 65% stayed for less than 30 min, fulfilling what many interviewees called “a tea and pee stop” or pit-stop function (Tourism Manager Interview #5, 2007). Thirty percent entered the “Atlantic Edge” interpretation area. Reasons for not entering included lack of interest (40%), limited time (22%), cost (16%), and not knowing an interpretive area existed (19%). One year after opening, owing to lower than expected entrance numbers, CCC was forced to re-adjust its projected

“Atlantic Edge” income, which was being used to offset development costs (CCC Interview #2).

Respondents were generally “satisfied” with the cost of entry ($M = 3.78, SD = 1.14$), though package tour visitors were unaware of any entrance costs, as this was included in their package tour price (Research Notes #21). Visitors who entered the interpretive area showed different preferences for facilities, in that 11% reported using none of the displays, while 38% used at least some. The average time spent in the interpretation area was approximately 12 min (Participant Observation Notes #29). As for their preferred level of technology, of the 276 visitors surveyed, 33% preferred a few basic displays, 28% preferred a low-intensity approach, 36% preferred the current center, while just 4% wanted the current center with more interpretive facilities.

Some visitors believed the scale of interpretation was too extensive. An English visitor commented, “The cliffs are self-explanatory. You need visitor centers for historic, battlefields, archaeological sites [and] places, but this is too much” (Visitor #173, England). Other visitors questioned the need for “The Ledge” display: “If I wanted to see a virtual reality show on the Cliffs I could have just went to the Irish center in Chicago” (Visitor #166, USA). The then-Taoiseach (Irish prime minister) was most impressed by the high-tech virtual reality displays that were originally mooted and promoted by politicians and councilors: “I have no doubt that for many, the most lasting memory will be of The Ledge, a high-tech presentation which enables people to see close-up the natural world from the perspective that only birds have the privilege of seeing.” Ironically however, some visitor surveys identified “The Ledge” as one of the least favorite displays in the interpretation area. Others delighted in the spectacle, signs, and multisensory experience – particularly during inclement weather conditions. For instance, an Irish visitor stated that it “was one of the best, most interactive centers I have been to, [it] has something of interest for everyone. It really enhanced the experience due to the foggy day” (Visitor #111, Irish). Others considered such facilities necessary for a satisfactory visitor experience, as reflected in the following statement: “The displays were educating, engaging and exciting, and made what is essentially a cliff face a very interesting day out for adults and children alike. Without the displays the cliffs would be a bit uninspiring” (Visitor #109, English). Overall, visitors' interactions with the facilities resulted in satisfaction among those who entered the interpretation area ($M = 4.0, SD = .89$) and positive feelings about its importance ($M = 3.44, SD = 1.06$). Three-quarters (75%) of the visitors surveyed believed they could have high-quality experiences without the displays encountered.

5.3. Reactions to the transformation of the Cliffs of Moher

In order to address the second objective, visitors' reactions to the current CoM visitor center were evaluated using a series of statements. Items were developed to reflect the concept of “perceived transformation” and illustrate how visitors responded to the various attributes of the CoM (Table 2). The reliability (Cronbach's alpha) of this scale was acceptable (greater than .70) and all factor loadings were near .40 (Hair, Anderson, Tatham, & Black, 1998). One item fell just below .40 but was deemed relevant for the construct, given its importance highlighted in the first, in-depth phase of this research to reflect the perceived transformation of the CoM.

Survey respondents were neutral or agreed with all statements reflecting the transformation of the CoM. The overall mean of survey items loading on this construct was 3.06 ($SD = 0.53$) on a five-point scale. Visitors were neutral about the CoM's value for money ($M = 2.46, SD = 1.03$) and just over half believed the car park fees were too expensive ($M = 3.13, SD = 2.14$). Respondents agreed

Table 1
Survey respondents' use and views of media, exhibits, and technology at the Cliffs of Moher visitor center.

Variables	N (%)
<i>Enter the visitor center</i>	
No	48 (14.2)
Yes	288 (85.0)
Will enter later	3 (0.9)
<i>Enter the interpretation area</i>	
No	233 (67.5)
Yes	105 (30.4)
Will enter later	7 (2.0)
<i>Enter the audio visual show</i>	
No	7 (6.5)
Yes	101 (93.5)
<i>Number of displays used</i>	
None	12 (11.2)
Some	41 (38.3)
Many of them	14 (13.1)
Most of them	24 (22.4)
All of them	16 (15.0)
<i>Views on technology</i>	
A few basic information displays	91 (33.0)
Some basic information displays with modern technology	77 (27.9)
Extensive interpretation displays with modern technology	98 (35.5)
Existing center with even more interpretive facilities	10 (3.6)
Satisfaction with cost of entry to interpretation area M (SD) ^a	3.78 (1.14)
Satisfaction with interpretation area M (SD) ^a	4.00 (0.89)
Perceived importance of interpretation area M (SD) ^b	3.44 (1.06)

^a Measured on a Likert scale ranging from 1 “Very Dissatisfied” to 5 “Very Satisfied.”

^b Measured on a Likert scale ranging from 1 “None” to 5 “All of them.”

Table 2
Reactions to the transformation of the Cliffs of Moher.

Statement ($\alpha = .784$) ^a	λ	M	SD
The Cliffs of Moher are too commercialized	.838	3.01	1.13
The Cliffs of Moher is value for money ^b	-.443	2.46	1.03
Visitor experience is too controlled	.624	3.57	0.99
Such a large-scale visitor center is not needed at the Cliffs of Moher	.648	3.18	1.17
I would like to see similar visitor center developments at other natural tourist destinations in Ireland ^b	-.647	3.00	1.22
The car park fees are too expensive	.385	3.13	2.14

^a Measured on a Likert scale ranging from 1 “Strongly Disagree” to 5 “Strongly Agree.”

^b Reverse coded survey items.

most with the statement: “Visitor experience is too controlled” ($M = 3.57, SD = 0.99$). The Clare Tourist Board and CCC claimed that the CoM development was “a flagship development for the whole country” (Clare Tourism Board Interview #1). Forty-two percent of visitors stated they would like to see a similar visitor center at other destinations, while 33% disagreed. Two of the world’s most popular travel guides were of the same view: *Lonely Planet Ireland* informed readers that the new visitor center was “impressively unimpressive” (Downs & Davenport, 2008:388), while *The Rough Guide to Ireland 9* condemned the “extortionate” prices and the “ludicrous electronic counterpart,” and recommended that visitors avoid the center (Gray & Wallis, 2009:399).

Interestingly, some visitors enjoyed experiencing familiar and predictable environments where their experience was characterized by order, systematization and consistency. For example, one participant noted: “O my god, Bob look, they have Ben and Jerry’s ice-cream!” (Participant Observation notes #65). Others rejected the scale of commercialization and spatial homogenization, reflected in quotes like this from an American visitor: “Like rural America with McDonalds and Wal-Mart, Ireland is losing its personality and identity, just like us with the dude ranches. You are sacrificing your heritage” (Visitor #217, USA). This viewpoint was contested by a visitor from the same package tour (Researcher Survey Notes #15), who said: “In comparison to the States this is not commercialism, you come to the States and you will see commercialism. For me, commercial means McDonalds and ugly buildings” (Visitor #219, USA). Study findings illustrated discontent over levels of commercialization and concern regarding an over-controlled visitor experience.

5.4. Comparing the old and new Cliffs of Moher visitor experience

Few case studies situate research findings over time and across a spatial scale. Fewer still have had the opportunity to gauge visitor responses and experiences to an attraction before and after substantial physical alteration. In an attempt to capture these perspectives in the context of the CoM (objective 3), this study analyzed data collected from a subset of respondents who experienced both the old and new visitor center facilities ($n = 66$). Although the sample size for this special subset of visitors was relatively small, it was used to reveal information on changing perspectives over time where technological developments could potentially alter the visitor experience, which in turn carries implications for developing visitor management strategies. In response to the third study objective, evaluations of the older and newer visitor centers were compared. Visitors responded positively to both centers but preferred the older facility to a statistically significant degree (Table 3). Specifically, the following characteristics were more appealing at the old site: “unspoilt,” “character,” “uniqueness,” “authenticity,” “feelings of raw nature,” and “value for money.” Cronbach’s alpha scores suggested that the survey items evaluating the old ($\alpha = .827$) and new ($\alpha = .871$) visitor

Table 3

Summary of how survey respondents evaluated the transformation of the older to the newer Cliffs of Moher experience.

Statement ^a	Older experience		Newer experience		t-stat (df)
	λ	M (SD)	λ	M (SD)	
Unspoilt destination	.675	4.29 (0.74)	.493	3.58 (1.06)	-5.73* (62)
Character of site	.754	4.29 (0.99)	.755	4.09 (0.93)	-2.79* (62)
Uniqueness of destination	.616	4.46 (0.79)	.932	4.33 (0.90)	-2.56* (64)
Authenticity of destination	.822	4.51 (0.71)	.829	4.05 (1.07)	-3.65* (64)
Feeling of “raw nature”	.839	4.51 (0.79)	.759	3.50 (1.27)	-7.64* (64)
Value for money	.523	4.21 (0.83)	.419	3.46 (0.95)	-5.30* (62)
Appeal of site	.613	4.17 (0.91)	.718	4.20 (0.78)	-1.12* (61)

* $p \leq .05$.

^a Measured on a Likert scale ranging from 1 “Very Poor” to 5 “Very Good.”

centers comprised a reliable scale (Cortina, 1993).

Findings suggested that visitors responded more favorably to the simpler, low-intensity interpretive approach taken at the former CoM center. Participant observations and semi-structured interviews suggested that the CoM shifted towards entertainment-oriented goals and objectives. Many visitors rejected this focus on technology-driven techniques, as evidenced by one observation: “The Council has turned a natural phenomenon into a place of entertainment. It is too commercially orientated and represents a very sterile, Disney-park-like structure or production” (Visitor #36, 2007, Irish). Semi-structured interviews also indicated an “erosion of place” where original natural and cultural landscapes were altered, and stressed a loss of unique and authentic characters (Relph, 1976). The following quote aptly summed up this thinking: “I think it is total bullshit, this development is ridiculous. This is not Ireland, this is not why visitors come to this country, this is commercialism, putting a price on nature and exploiting it. If Ireland continues to progress in this manner, the country will be totally disenchanting and destroyed” (Tour Guide Interview #7, German).

Components of the new development that were commended by key actor interviewees, included: “improved shelter facilities”; “increased visitor safety”; “fantastic disability access”; “great toilet facilities”; “the new biological waste treatment plant” and the “improved ecological restoration of cliffs edge.” Nevertheless, there was contention over the use of high-intensity interpretation, with the majority of visitors and interviewees in favour of a simpler approach to interpretation: “I would prefer if the information wasn’t handed on a plate — there is no sense of exploration. A lot less would have meant a lot more” (CoM Visitor Survey #222, 2007, Scottish).

Irrespective of whether key actor interviewees or visitors were for or against the new development, all parties praised CCC’s attempt to reduce the visual impact of the visitor centre, as reflected by the following quote: “The visitor centre blends in with the hillside, and great effort has gone into ensuring it is not

physically obtrusive like other centres” (Conservationist Official Interview #3, 2007). The provision of approximately 100 jobs for staff and rangers was received positively in the region. Furthermore, many key actors and visitors praised the availability of rangers on site to help with visitor safety and the provision of detailed information about local, environmental and historical conditions.

6. Discussion

6.1. Interpretation as a process not a product

Using the Cliffs of Moher as a case study, this paper investigated a central debate in interpretive planning: how the intensity of multimedia applications and onsite facilities shapes visitor experiences. By exploring visitors' reactions to the transformation of the CoM, the dominant producer-oriented development paradigm that drives the transformation of tourism destinations worldwide was challenged. With the neoliberal wave of economic restructuring, nature has become an increasingly commodified resource. As digital technologies, particularly visualization and multimedia applications, are becoming recognized as “cutting edge” in interpretive outreach, more destinations are using extravagant site design – often with questionable educational values – to lure visitors in the name of economic development (Silberman, 2013; Timothy & Boyd, 2006). In a mediated, consumption-oriented era, natural sites have too often become themed places of entertainment driven by the industry perspective that visitors need to be entertained as opposed to a middle position of blending education with entertainment, namely edutainment (De Varine, 1985). At the heart of good interpretation is “telling a good story” and creating mindful visitors as opposed to mindless ones (Moscardo, 1999; 1989). Interactive technology is receiving more attention today in helping to present these stories and shape visitor experience (Hughes, Bond, & Ballantyne, 2013). But to what extent must the information presented be driven by interactive technology? What emerged from the CoM study was that a blend of technology with more traditional media is perhaps most appropriate.

In Ireland, government authorities were fixated on developing the CoM visitor center using high-tech, high-intensity interpretive facilities despite the fact that many visitors preferred the landscape with less facilitation and simple, low-intensity facilities. Visitor centers in sites such as historical and commemorative parks in Ireland have effectively used interpretive media to enhance the visitor experience, whereas many charismatic and provocative sites have been overpowered by prominent visitor centers. Expert and political decision-makers in Ireland over-emphasized the need for state-of-the-art facilities and adopted the “spick and span” philosophy which can be far removed from visitors' preferences for nature-based conditions and overlook the relevance of authenticity as a management goal (Budruk, White, Wodrich, & van Riper, 2008). In tourism development projects in particular, landscapes often reflect the ideas of elite groups and thus constitute material expressions of the power structures in society (Teo & Yeoh, 1997; Timothy, 2011; Timothy & Boyd, 2003). The results herein echo this argument and suggest that construction of the CoM visitor center was a response to political power and commercial interests rather than public demand.

This paper did not set out to map the extent of co-creation between producers and consumers in the design of an interactive visitor center such as CoM; rather the findings suggested a relative absence of connection between the local authority, elected officials and visitors. Stakeholder engagement of the wider local community and past visitors would have provided vital preferences regarding interpretive intensity. Results also suggested that in terms of overall

design, the new visitor center is more sustainably built, maintaining low levels of environmental impact and constructed in a less intrusive way. However, the design of any sustainable tourism facility should reflect site-specific characteristics and include the use of local human capital in the design of effective and appropriate interpretive media.

7. Management implications

The management implications emanating from this case study suggest that stakeholder engagement should take place prior to goal and objective formulation and then throughout the planning process. Residents, tourists, and other individuals should be given opportunities to rate and evaluate the roles, appearances, and various development options before any development takes place, to increase the likelihood of public acceptance of policy change. That is, more sustainable outcomes will likely ensue if potential audiences are recognized and their needs considered by decision-makers (Garrod, Fyall, Leask, & Reid, 2012; Hall & McArthur, 1998; Timothy & Boyd, 2003). The current CoM experience reflects the absence of engagement with visitors and local residents as equal stakeholders to industry in the heritage tourism planning process.

Results from this research showcase the difficulties of management decisions about how best to use technology in visitor centers. Many people are in search of diverse experiences that industry and multiple interest groups can create using technologically advanced media for communication. Part of this experience may include interactions with the servicescape present in the new CoM visitor center. That is, some respondents believed the high-tech approach had utility to facilitate meaningful interactions and create virtual realities that could be visited both before and after the on-site experience. Over time, the tourism industry has witnessed a shift from product-based markets to those focused on what the consumer or visitor desires, namely meaningful and satisfying experiences that industry aims to provide. It is up to individual planners to seek out context-specific preferences for development to best suit the needs of their constituents.

Planners would be mindful to note that tourism scholars have long recognized that visitors are not a homogeneous group and have changed their thinking over time (Cohen, 1972; Hvenegaard, 2002). As indicated by the findings of this case study, not all people conform to similar experience typologies in terms of how they wish to interact with displays and features in visitor centers. While a low-tech approach seemed preferable, a blend of high-tech interpretation with traditional media may accommodate more diverse audience needs. In light of this, future planning and development at visitor centers should be cognizant of trends and changing preferences for development. The CoM case indicates that there need to be stronger linkages between planning and evaluation so that informed decisions about interpretation can replace assumptions, lack of expertise, and political agendas (Healy et al., 2012). Future research should also continue to unveil and more fully develop understanding of how the complex constructs assessed in this case study (e.g., authenticity, commodification, price of an experience) influence visitor preferences for development.

Tourism planners and managers should also be attuned to the unintended consequences that may emerge from large-scale development. The unrealistic expectations of increased visitation at the CoM led to a development scenario that failed to materialize. In this context, the costs of adequate staffing, maintenance, and regular content updating soared, and as such, the economic gains of the visitor center were not maximized. It is important to note that a destination's perceived competitiveness in the international

tourism market can be tainted unless developers dedicate time and give due consideration to consulting local communities and anticipating public acceptance of proposed developments. Thus, visitor attractions, in particular visitor centers, need to have sufficient funds to connect the public to important places and maintain the desired experience that industry sells to the wider market. Interpretation and how it is planned are central to that challenge.

8. Conclusion

This paper explores the transformation of one of the most important tourist attractions in Ireland – the Cliffs of Moher. Although authorities celebrate the creation of what is referred to as a world-class experience, architectural excellence and state-of-the-art interpretive technology, this research highlights the dangers of producer-oriented tourism development, given visitors' mixed reviews of the center's technology-intensive interpretive displays. Results from this study indicate that some of the multimedia applications and technologies in the newer CoM visitor center are under utilized and many visitors prefer simple, nature-based interpretation that does not mediate all aspects of the onsite experience. Tourism management agencies should thus consult with local communities and incorporate public interests in decisions about how much emphasis to place on iconic, high-intensity interpretation versus more basic designs that fit within natural and cultural landscapes.

With today's visitors being more e-savvy than ever before, visitor attractions are embracing social media not only as a way to engage with their visitors as customers, but also to use technology such as social media as part of the overall visit experience (Leask et al., 2013). As such, it is unlikely that the interpretation pendulum will swing back to more basic and simple interpretation strategies. Natural and cultural heritage sites may have to accept and embrace the focus of edutainment in their overall interpretive planning, whereby certain levels of technology are used. However, if a visitor center is focused on showcasing natural and/or cultural heritage – as is the case with the CoM – interpretive strategies may be more successful if focused on telling a good story that reflects local interests and relies on bottom-up rather than top-down decision-making structures.

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