

Connecting characteristics of social media activities of a heritage organisation to audience engagement

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Abstract

Cultural organisations are increasingly leveraging social media in their activities: although often considered primarily as a marketing tool, analysing social media interactions can provide insight into the changing nature of heritage engagement. Taking an Instagram account maintained by Historic Environment Scotland as an example, this study analyses the performance of activities on the platform to explore the characteristics of exceptionally-performing activities. This study showed there is not a strong relationship with the subject or geographic focus of a post or story on Instagram. Rather, posts that performed exceptionally (as indicated by the standard metrics of Instagram performance) could be classified by a set of five types of engagement: 1) participation, 2) storytelling, 3) sharing user-generated content, 4) relating heritage to popular media or culture, and 5) providing information. An additional investigation of the way in which users interacted Stories (a series of sequential content) revealed that content within the first two slides were proportionally viewed much higher than the subsequent slides. These findings further understanding of the nature of heritage engagement in an increasingly digital world with implications for how heritage organisations engage with diverse communities within the public.

Keywords: cultural heritage, public engagement, heritage engagement, Historic Environment Scotland, social media, Instagram

1. Introduction

Cultural heritage encompasses a wide range of valuable things and practices from the past which are a part of our present should remain so in the

future. These resources are finite, scarce and non-renewable (Spennemann, 1999). According to the Faro Convention (Council of Europe, 2005), people identify heritage, independently of ownership, as a reflection and expression of their constantly evolving values, beliefs, knowledge and traditions. Moreover, they exhibit our collective memory, help construct our identity, and also drive the economy. For instance, in the UK, the heritage sector had a total gross value added of £36.6bn in 2019 (Historic England, 2020).

Since the adoption of Venice charter in 1964 (International Council on Monuments and Sites, 1964), the scope of term cultural heritage has broadened. It includes individual buildings and sites to groups of buildings, historical areas, towns, environments, artifacts, artworks, practices, and so on. The introduction of social media has reframed our perception and understanding of heritage (Giaccardi, 2012). Concurrently, how we define heritage is also constantly being reshaped. Researchers have studied the use of social media by cultural heritage institutions in order to enhance public participation (Drotner and Schröder, 2014). Further, researchers have also studied promoting heritage sites on social media: for instance, Yoon and Chung (2018) analysed the promotion strategy of Hwaseong Fortress in South Korea. Their findings suggests that events such as the ‘2016 Visit Year Suwong Hwaseong’ can be central in creating promotional strategies and have implications for social media engagement. In addition to information dissemination, the rise of multimedia narrative activities on social media has triggered an innovation of brand design and a revolution in brand awareness (Zhou, 2017). The branding strategy for each institute and company on social media, has become more visual in today’s modes of communication (Salzer-Mörling and Strannegård, 2004; Schroeder, 2004). Visual branding has been dominating brand advertising and campaigns on social media (Phillips et al., 2014; Petrescu and Lauer, 2017), in which brands adopt various techniques and aesthetics (Colliander and Marder, 2018) thereby making Instagram a very important platform for social media marketing. These past studies have enhanced the understanding of marketing and information Track changes is off Everyone Track changes for everyone You Track changes for You orr.scott Track changes for orr.scott Guests Track changes for guests Current file Overview Connecting characteristics of social media activities of a heritage organisation to audience engagement Abstract Cultural organisations are increasingly leveraging social media in their ac- tivities: although often considered primarily as a marketing tool, analysing social media interactions can provide insight into the changing nature of heritage engagement. Taking an Instagram account main-

tained by Historic Environment Scotland as an example, this study analyses the performance of activities on the platform to explore the characteristics of exceptionally-performing activities. This study showed there is not a strong relationship with the subject or geographic focus of a post or story on Instagram. Rather, posts that performed exceptionally (as indicated by the standard metrics of Instagram performance) could be classified by a set of five types of engagement: 1) participation, 2) storytelling, 3) sharing user-generated content, 4) relating heritage to popular media or culture, and 5) providing information. An additional investigation of the way in which users interacted Stories (a series of sequential content) revealed that content within the first two slides were proportionally viewed much higher than the subsequent slides. These findings further understanding of the nature of heritage engagement in an increasingly digital world with implications for how heritage organisations engage with diverse communities within the public. Keywords: cultural heritage, public engagement, heritage engagement, Historic Environment Scotland, social media, Instagram

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has primarily focused other social networking sites, including as Facebook and Twitter (Akar and Topcu, 2011).

2. Research aim

This study analyses the performance of social media activity to further understanding of the role of social media in how heritage organisations engage with their audiences. Through an analysis of recent posts and stories published by Historic Environment Scotland, this study seeks to understand the relationship between heritage engagement and different approaches to social media engagement of a cultural organisation, including the primary topic, geographic relevance, and the way in which the engagement is framed (i.e. the nature of engagement). A further aim is to specifically characterise how users interact with Instagram Stories, which are a particularly interesting format of engagement due to being structured as a series of ordered content. A discussion follows on the implications for the wider understanding of heritage engagement in the digital age, and relevance to communications strategies of heritage organisations.

3. Materials and Methods

3.1. Terminology

Herein, we use the term ‘user’ to denote someone who is active on Instagram. This is only a subset of the ‘public’ that a heritage organisation might be trying to reach on social media (their ‘audience’). These groups are one of the relevant stakeholders of the relevant heritage, in addition to those who are involved management, curation, and interpretation, among others. Several Instagram concepts and metrics related to posts and stories are discussed. An Instagram post is a photo or video shared by an account on the platform which is typically permanently available after it has been posted. Instagram Stories, launched in 2016, is a feature which allows Instagram accounts to publish a set of ‘slides’ containing photos and videos that disappear after 24 hours. Several slides can be included in a single Instagram story, which users tap through one by one. In order to make the stories more appealing, they can also be enhanced by using audio, links, filters emoticons, drawing tools and text. Moreover, the features available to enhance the posts are significantly less than Stories: this is more or less limited to filters and modifications to image quality. The posts from an account can be viewed on their profile, depending on the privacy settings of the account. This study draws on several analytics produced by Instagram:

- Comment is a feature that lets users write short messages on others’ posts. Comments can be considered to be the highest form of engagement as it required greater effort from an Instagrammer (Aramendia-Muneta et al., 2021) that not every user would be willing to devote.
- Like is a heart-shaped button that appears below each post on Instagram. Users press this button if they appreciate the post. While some

other social media platforms offer an array of reactions (e.g. Facebook), Instagram offers only like. • Reach refers to the total number of people who have seen a post or story. • Impression refers to the number of times a post or story has been displayed on a screen. • Profile Visit refers to the number of times a profile was viewed immediately after viewing a post or story. 4 • Saves refers to the number of unique Instagram accounts that saved a post.

3.2. Case study: Historic Environment Scotland Historic Environment Scotland is a non-departmental public body with charity status dedicated to the advancement of heritage, culture, education and environmental protection. Historic Environment Scotland aims to increase people’s engagement with Scotland’s historic environment, with a vision that the historic environment can be cherished, understood, shared and enjoyed with pride by everyone. Even without physically visiting heritage sites, the historic environment can still make a difference in people’s lives in many ways. Historic Environment Scotland has been improving and promoting its content on social media, to continue supporting their communities in protecting and valuing their heritage, and increase understanding and awareness of the historic environment (Historic Environment Scotland, 2020a). This research is based on one of the Instagram accounts maintained by Historic Environment Scotland (@historicscotland). HES started posting on this Instagram channel in 2013; as of September 12, 2020, the Historic Scotland Instagram account had 135k followers, and had shared a total of 1,308 posts.

3.3. Data This study explores user engagement on Instagram using a set of content, metadata, and exported analytics from the @historicscotland Instagram account: • Content and performance of posts: 320 posts (February 2018 to January 2020), including including a picture name, region of focus1, content of picture, and the number of comments, links, profile visits, and saves • Performance of whole Stories: 43 stories (April 2019 to February 2020), including a name, and the number of impressions per slide • The performance of individual slides and the site they are about: 515 slides (June 2018-2019 inclusive), including the main subject (e.g. a priory) and the number of unique pageviews

1For 9 posts, this data was unavailable

5	lll	llll	l	Likes	0	2000	4000	6000	8000	10000	0	50	100	150	l	l	l	l	ll	ll	lll	ll	llllll														
(a)	Comments	and	likes	ll	ll	ll	ll	l	Reach	(hundred	thousands)	Impressions	(hundred	thousands)	0	0.25	0.5	0.75	1	1.25	0	0.5	1	1.5	2	l	l	l	l	l	l	l	l	l	l	l	l
(b)	Reach	and	Impressions	llll	llll	l	lll	l	ll	ll	Profile	visits	Saved	0	50	100	150	200	0	100	200	300	400	500	l	l	l	ll	l	l	l	l	l	l	l	l	
(c)	Profile	Visits	and	Saves	Figure 1: Individual Post Performance																																

3.4. Performance evaluation methods The main focus of the

quantitative data analysis was to characterise the performance of different activities and types of activities on Instagram, while a qualitative method was adopted to analyze the content and identify emergent themes. The quantitative method can use the collected data to systematically analyze engagement of a heritage organisation on social media; however, it cannot, by itself, explain the phenomenon and the reasons behind it. This explanation requires a combination of quantitative and qualitative methods, to improve the possibility of more in-depth analysis while ensuring the precision and richness of statistical data (Petrescu and Lauer, 2017). It is critical to use both quantitative and qualitative methods when conducting this research, in order to recognize trends and identify the factors in posting content that affect the performance results.

4. Results

4.1. Performance metrics

From Figure 1 it is evident that the performance of posts (as indicated by all of the metrics) is typically densely clustered around the median value, meaning there is a relatively narrow distribution (little variability). However, there are exceptionally-performing posts evident for each performance metric. There is a great degree of overlap between the exceptionally performing posts as measured by individual metrics, i.e. the exceptionally performing posts in comments are mostly the same as exceptionally performing posts in profile visits, saves, etc. As exceptionally-performing posts reach large numbers of users on Instagram, they have great potential in enabling engagement with the case study heritage institution. Thus, this study focuses on exceptionally-performing posts to understand how the content, subject and visual qualities of posts can impact the number of comments. As there was significant overlap between posts that performed exceptionally well for several metrics, we opted to identify exceptionally-performing posts for further investigation (see Section 4.4) only using the number of comments as the metric.

4.2. Geographic focus

Each of HES's posts on Instagram from February 2018 to January 2020 was categorised by the region in which it was embedded or was most relevant to within Scotland. Figure 2 demonstrates the overall performance of the posts. Overall, the performance of posts are not dependent on the population of the region, i.e. the most densely populated region Glasgow, Clyde Ayrshire (population: 2 million) did not attract the most engagement. Most lightly populated region Orkney (population: 22k) did not attract least engagement.

4.3. Content (subject of image)

Each slide within a story published on @historicscotland between June 2018 and June 2019 was assigned to the site managed by Historic Environment Scotland, which can be broadly grouped into types of sites by their main subject; evaluating the

unique pageviews of these groups enabled a discussion of the role of content; in this case the content is represented by the main subject of the slide. The median number of unique pageviews is consistent across most main subjects, but several are of ‘mid-popularity’, showing a skew toward the higher end (seen in Figure 3 as taller boxes up to upper whisker: these include Palace, Castle, Abbey, and Cathedral. These groupings are all large-scale and grand types of sites, typically associated with long-standing traditions and established cultures. In contrast, the ‘exceptionally-performing posts’, statistical outliers within their groups that have very high page views occur across a wider range of subjects, suggesting alternative reasons for their performance (e.g. Cairns, connection to popular culture, Chapel, etc). Thus, the main subject of a slide, and likely more broadly post and stories on Instagram by a heritage 7 22,270 2,016,810 Population ScotlandRegion 0 5 10 15 20 25 30 35 Avg.Comments 0 500 1000 1500 2000 2500 30003500 Avg.Likes Glasgow,ClydeAyrshire NorthGrampian EdinburghLothians CentralWest KingdomofFife Perthshire,KinrossAng.. DumfriesGalloway Borders WesternIsles ShetlandIsles Orkney ScotlandRegion 0K 10K 20K 30K 40K Avg.Impressions 0K 5K 10K 15K 20K 25K 30K Avg.Reach Glasgow,ClydeAyrshire North-Grampian EdinburghLothians CentralWest KingdomofFife Perthshire,KinrossAng.. DumfriesGalloway Borders WesternIsles ShetlandIsles Orkney ScotlandRegion 0 10 20 30 40 50 60 Avg.Profilevisits 0 50 100 150 Avg.Saved Glasgow,ClydeAyrshire NorthGrampian EdinburghLothians CentralWest KingdomofFife Perthshire,KinrossAng.. DumfriesGalloway Borders WesternIsles ShetlandIsles Orkney

Figure 2: Several performance metrics for a set of posts published by @historicscotland from February 2018 to January 2020 (n = 311), categorised by the region that they are embedded in or most relevant to. The regions are presented in order of descending population. 8 sharing on Instagram, and this helps to explore the link between posts produced by organisations on Instagram and building relationships and rapport with the audiences they are trying to reach.

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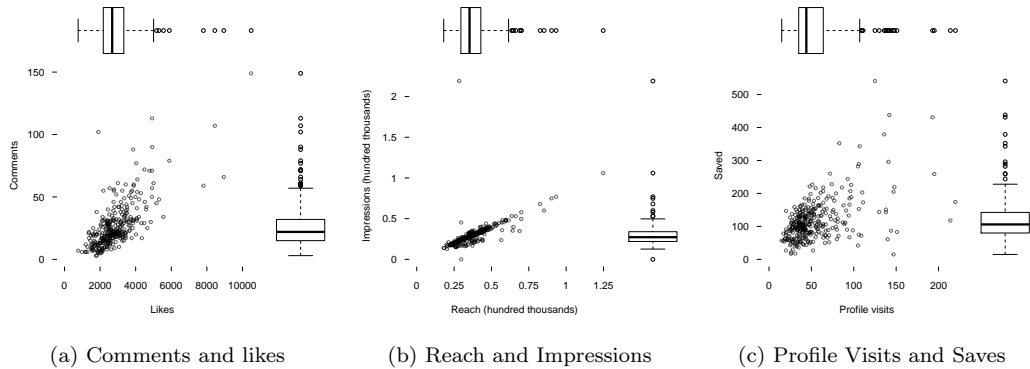


Figure 1: Individual Post Performance

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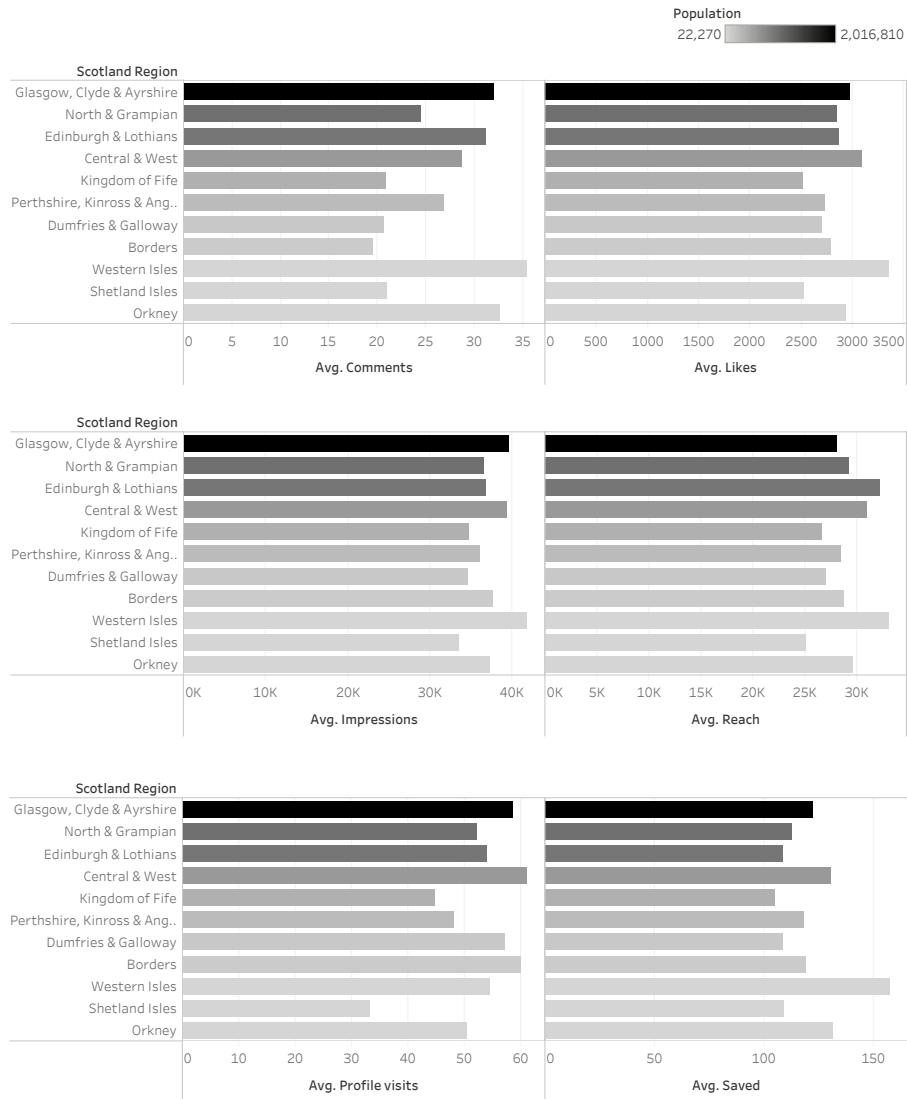


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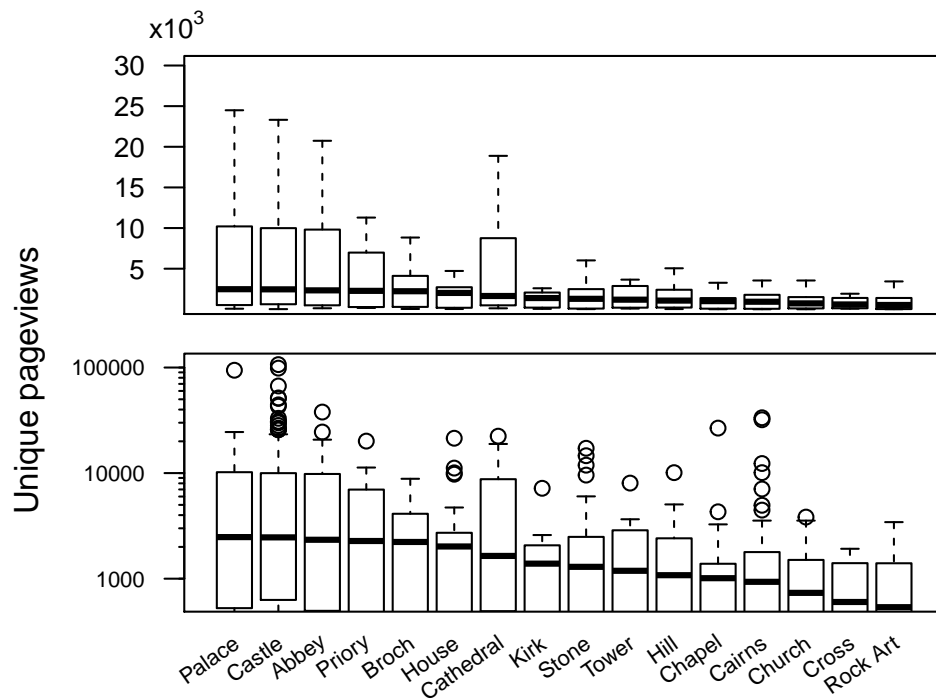


Figure 3: Boxplots of the unique pageviews for 515 slides published as part of Stories by @historicscotland between June 2018 to 2019 (inclusive), grouped of the type of main subject in them. *Upper*: Boxplots shown with a linear y-axis without outliers; *Lower*: Boxplots shown on a logarithmic axis including outliers, demonstrating the order of magnitude difference to median behaviour in many groups.

organisation, cannot on its own explain why some posts perform exceptionally well.

4.4. *Nature of engagement*

Content of the Posts: Table 1 illustrates the contents and subject of the posts that received extraordinary number of comments from the users. Overall, there are five types of contents that invited most comments. These include (in descending order of occurrence in the subset of 19 exceptionally performing posts):

1. Participatory posts (n=15). The posts that invite users to participate or engage with the posts was the most popular type of content. HES used different ways to invite users including mystery pic game, invitation to share photographs or visiting experience. While the most commented post (see S.No.1 in Table 1) invited participation through a mystery pic game, invitation to share photographs or visiting experience was used more times by HES during this period.
2. Storytelling posts (n=8). The posts that describe events and stories related to a particular historic site was the second popular type of content. The stories revolve around people (e.g. Mary Queen of Scots escaping imprisonment at the castle), construction and use of historic sites in the past.
3. Posts that shared user-generated contents (n=4). HES actively invites users to share their contents and tag the organisation in the posts. Of these, the organisation selects a few to re-share on their profile. Out of the nineteen exceptionally performing posts, four were user-generated contents.
4. Posts relating heritage context to popular media (n=1). Heritage often is a part of popular media. Our findings suggest that posts that relate heritage to popular media (e.g. Outlanders TV show) invites user engagement with the content, even though this approach only appeared once in the set of exceptionally-performing posts (see Table 1).
5. Informative posts (n=1). Posts that share information relevant to visiting HES managed sites (e.g. free entry) were also found to be exceptionally performing. This technique was also used only once by HES in the exceptionally performing posts.

Table 1 also illustrates that HES often used the above-mentioned content types in combination.

Table 1: The top 19 exceptionally performing posts (determined by number of comments) and the nature of their content published between from February 2018 to January 2020 (n= 320).

S.No	Date	No. of Comments	No. of Likes	Content	Subject
1	19.02.2019	149	10490	Inviting participation through a mystery pic game	Castle
2	25.01.2019	113	4923	Storytelling	Castle
3	11.12.2018	107	8449	Inviting participation through a mystery pic game	Abbey
4	25.09.2019	102	1907	Inviting Participation through a mystery pic game	Castle
5	28.03.2019	90	4930	Storytelling and inviting participation to share visiting experience and photographs	Cathedral
6	18.11.2019	88	3860	Storytelling and inviting participation to share visiting experience and photographs	Castle
7	03.09.2019	79	5893	Storytelling and inviting participation to share visiting experience and photographs	Castle
8	22.08.2018	77	4030	Information (free entry) and inviting participation to share visiting experience and photographs	Stones
9	30.01.2019	72	4497	Inviting Participation through a mystery picture game	Cathedral
10	08.10.2019	71	4777	Storytelling	Cathedral
11	07.11.2018	71	4914	User Content	Castle
12	29.08.2018	66	8954	User Content and inviting participation to share visiting experience and photographs	Castle
13	16.05.2018	64	4098	Storytelling and inviting participation to share visiting experience and photographs	Cathedral
14	19.09.2019	61	5007	Storytelling, inviting participation to share photographs, user Content	Castle
15	31.07.2018	61	3001	Not Available	Abbey
16	14.08.2018	60	3895	Storytelling, Relating to popular media (Outlander), inviting participation to share photographs	Castle
17	08.08.2019	60	3442	Inviting participation through a mystery picture game and share photographs	Broch
18	27.12.2018	59	7807	User Content and inviting participation to share photographs	Broch
19	09.10.2018	59	3891	Inviting participation through a mystery picture game	Church

The participatory posts used a conversational language, i.e. the HES team aimed to use an informal tone that helped to build an informal rapport. The posts also posed questions, requesting the audience post tagged pictures and comment. They used an informal language style which is popular on social media. This included use of emojis and multiple exclamation marks, etc. There were some commonly used phrases in participatory posts. E.g. ‘comment below’, ‘don’t forget [to]’, ‘share favourites’, ‘tag photos’, ‘answer below’, ‘hear [your] experience’, etc.

4.4.1. User engagement with Stories

The sequential nature of stories introduces complexity to how users engage with them, since users are not obliged (and rarely do not) view all slides in a story. Figure 4 shows the page views for each slide as a relative proportion to an equal distribution of views between all slides in the story; this would be represented by a flat line at 0 in the figure. As can be seen, regardless of the story length, the first and second slides is relatively overrepresented in terms of impressions, generally decreasing consistently thereafter. In no particular story By extension, this means users are much less likely to look at the story all the way through to the end. For stories of 7 slides or longer, there is a wider distribution (overrepresented in impressions approximately up to the first 5 slides), but there are fewer stories from which to draw conclusions and this should be taken with caution. The implications of this for engagement are discussed later.

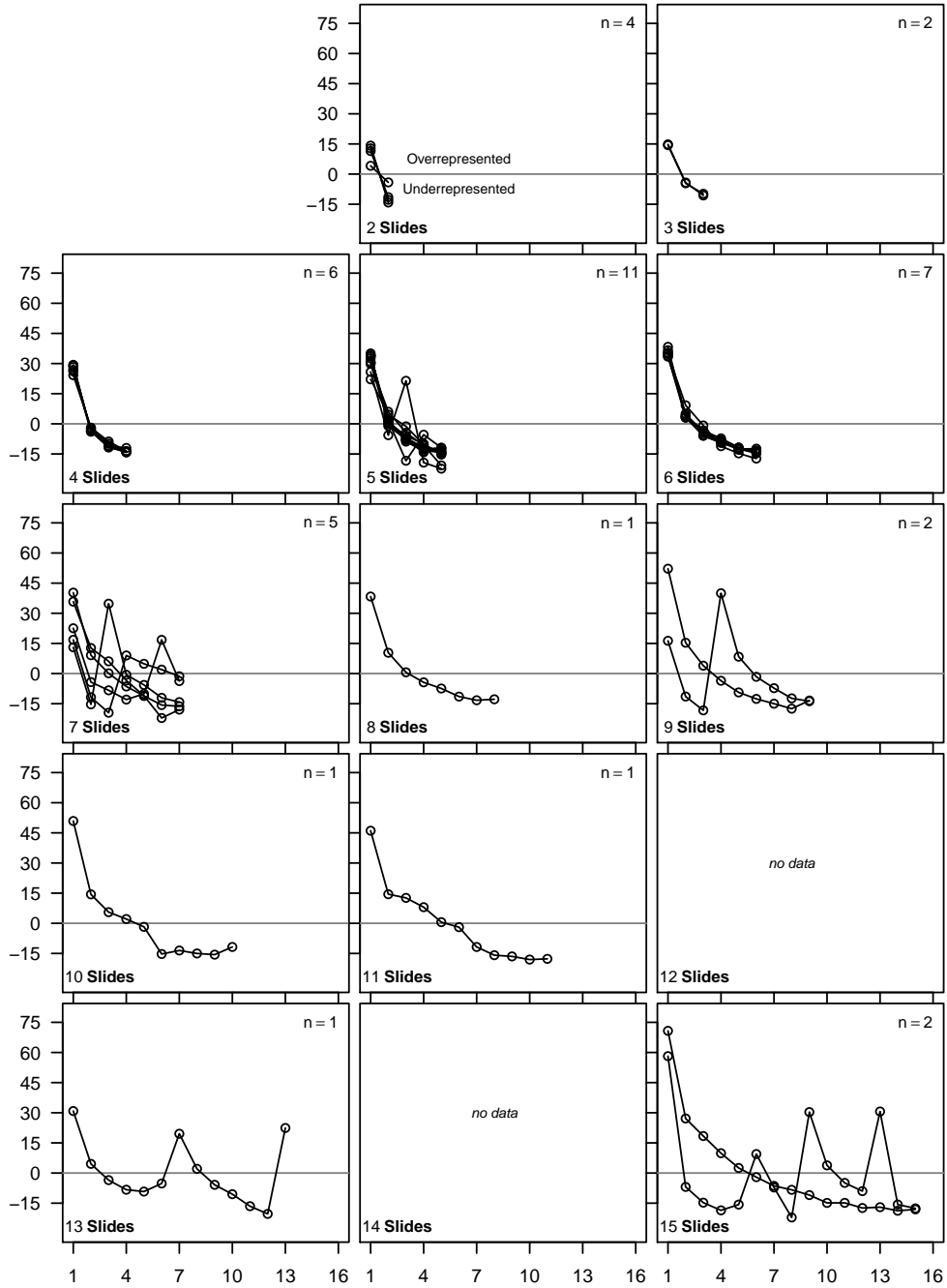


Figure 4: The proportion of impressions for each slide (grouped by story length, $n_{tot} = 43$) relative to an equal proportion between all slides within a story. A relative proportion for that slide above 0 means the slide is overrepresented, while a relative proportion less than 0 means it is relatively underrepresented. 18

5. Discussion

Since its launch in 2010, Instagram users have increased exponentially. With over 1200 million active users, it is one of the most popular social media platforms available (Statista, 2021b). However, cultural heritage organisations have not utilised the platform to its full capacity. For instance, Amanatidis et al. (2020) concluded that out of 125 archaeological museums in Greece, only one museum had a profile on Instagram. Furthermore, researchers have also concluded that cultural heritage organisations including museums are using Instagram for traditional one-way communication (Brown Jarreau et al., 2019; Fletcher and Lee, 2012), thereby missing the opportunity to be a part of participatory culture afforded by the social media. In this research, we focus on factors that contribute to audience engagement using the case of one of the Instagram accounts maintained by Historic Environment Scotland.

Previous studies suggest that most museums included in their study use Instagram to promote their public-facing exhibits and activities (Brown Jarreau et al., 2019). Moreover, other researchers have also concluded that cultural organisations use social media for one-way messaging or promotions. Building on this, our findings suggests that the posts which are exceptionally-performing are not one-way messaging or promotional. Instead, these posts actively invite users to participate. HES has invited users to participate in many different ways including mystery pic game, invitation to share photographs or visiting experience. The findings of this research is also in line with the findings of (Belch and Belch, 2018) that audiences on Instagram, despite the visual nature of the platform, not only pay attention to the scenery and landmark buildings of a particular heritage site, but also care about the story, background, history, and other deeper cultural meanings behind it.

The world wide web and social media also offers a space for digital curation (Jensen, 2013), i.e. co-creation of contents between the users and organisations. It also provides a space for building knowledge in collaborative ways (Fermoso et al., 2015). However, this has not been explored by many organisations including HES. Heritage organisations' policies, procedures, legal frameworks and budget constrains are considered to be a hindrance for them to collaborate with heritage communities that self-organised groups active on social media (Roued-Cunliffe and Copeland, 2017). As a result, in the eight rungs on a ladder of citizen participation developed by Arnstein (1969), heritage organisations often fall within the bracket of 'tokenism'. Re-

ardless of the institutional constraints, this research provides an insight on how institutions can enhance audience engagement on social media.

People spend limited time on social media and attention of people on social media is known to be short-spanned ². This is particularly evident in our findings. Figure 4 illustrates that the impressions in the first two slides are almost always greater than the rest (compared to an equal proportion). This suggests that when sharing a story on Instagram, the institutions could exploit this by including key messages in the first two slides.

A discussion on the performance of posts and stories is also necessary at this point. Our findings suggest that most posts and stories perform at rates closely centred around the median (i.e. there is a narrow distribution). However, this is not the case for all cultural organisations: Brown Jarreau et al. (2019) research using 1073 Instagram posts of 221 science museums in the United States concluded that that the 55% of the posts received less than 100 likes and the maximum number of comments were 174. This trend is unlike trends in the posts and stories studied herein (posted by HES between 2018 and 2020). HES Instagram posts and stories have received significantly higher engagement. It may be due to combination of different factors such as subject, content, number of slides, geo-location of the posts and so on. It is not possible to identify with great accuracy the exact factor(s) that cause this.

For heritage institutions, Instagram can be an important tool to promote, market, interact, participate, and enhance the engagement with the audience (Suess, 2018). A stakeholder survey in 2018 showed that awareness of HES was rising – about two-fifths of the Scottish population were aware of HES, which was a higher proportion than in 2016. The findings of the 2018 stakeholder survey also suggest that the younger population and C2DE social groups³ working continued to be those least aware of HES. Even though HES has not defined an explicit age bracket when referring to the younger population (Historic Environment Scotland, 2019), Instagram can provide the opportunity to connect with the target population as about two-third of Instagram users are 34 years or younger (Statista, 2021a). Therefore, the organisation should investigate on more creative ways to engage with diverse

²Even before the introduction of social media researchers have argued that “attention is a finite and a non-renewable resource” (Thorngate, 1988, p. 248).

³a UK demographic classification based on occupation, comprised of those in the skilled working class, working class, and non-working class

communities on Instagram.

The data used and analysis presented in this research directly precedes the introduction of measures to control the spread of COVID-19, including site closures and social distancing. The analysis presented in this research does not address the challenges faced and approach of HES during the lockdown. The pandemic had a significant impact on the heritage sector including their digital outreach (Samaroudi et al., 2020; Network of European Museum Organisations, 2020; International Council on Monuments and Sites , 2020). During this period, HES adopted a proactive attitude in keeping their audience informed (Historic Environment Scotland, 2020b). introduction of measures to control the spread of COVID-19, including site closures and social distancing. The organisation experienced a spike in social media conversations following this announcement. Throughout this period, HES adapted the contents with the aim to retain their existing audiences. This included virtual tourism, providing resources for home learning and curating online exhibitions using digital collections. This was followed by messages reinforcing safety measures and reopening of sites resulting in the increase of web users (Historic Environment Scotland, 2020c).

6. Conclusions

This study analysed the performance of social media activity to understand how heritage organisations engage with their audiences. Using the case of an Instagram account maintained by Historic Environment Scotland (@historicscotland), we explored user engagement with the organisations posts and stories on Instagram from 2018 to 2020. Data regarding various performance metrics were selected for analysis, using a combination of quantitative and qualitative analysis. Our findings suggest that while most of the posts perform in a similar way, some posts are exceptionally performing in terms of their potential for engagement (as represented by standard Instagram metrics). It may be due to the content and subject of the posts. The performance of the posts do not depend on the population density of geographical region of historic sites they are based in. Lastly, the first two slides of any story posted by HES between 2019-2020 received more attention (relative to an equal proportion) than the rest of the subsequent slides. Future work could systematically compare the nature of engagement on Instagram to other social networking platforms. also include analysis of HES posts on other social networking sites. Future work could examine

whether similar trends are observable in the efforts of other cultural heritage institutions on Instagram, leading to a deeper understanding of the nature of engagement. This research provides useful insights and on how heritage organisations engage their audiences in an increasingly digital world.

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