

Becoming a Critically Engaged Storyteller:
An Interrogation of ArcGIS StoryMaps as a Public Communication Tool in Archaeology

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Abstract

Despite their responsibility to share the findings of their research with the public, archaeologists have not always done so in a way that is accessible and engaging to public audiences. This thesis examines the ArcGIS StoryMaps feature developed by the GIS software company Esri to determine if it can serve as a useful tool for accessible and engaging public communication in the discipline of archaeology. For this research, a StoryMap about the archaeological excavations at Iser Kelly Castle, a towerhouse site in Co. Galway in Ireland, was created and shared on social media and information was gathered from three other archaeological groups who have employed StoryMaps. Through an analysis of the social media engagement data and other analytics that were gathered about this StoryMap as well as the information gathered from the other archaeological groups, numerous advantages of the platform for archaeologists were uncovered. StoryMaps offer a unique opportunity for archaeologists to easily integrate current digital datasets (e.g. 3D models, hypermedia, digital mapping) and interactivity into their work while simultaneously unravelling an intriguing archaeological narrative that is engaging to the public. Furthermore, by embracing the role of a “critically engaged storyteller” and the “multiple perspective model” of public archaeology, archaeologists can use StoryMaps to engage with the public in a way that democratizes the discipline, making it more accessible, ethical, open to criticism, and inclusive of a plurality of perspectives. This thesis suggests that the platform has numerous features that are particularly advantageous for archaeologists as critically engaged storytellers, including the editability and general accessibility of StoryMaps, and their ability to effectively engage with existing audiences. A more accessible and engaging archaeology is also beneficial for the public who draw their own personal value from and form their own individual interpretations about archaeological research.

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Table of Contents

Introduction	1
Critically Engaged Storytellers and Public Archaeology	1
ArcGIS StoryMaps	3
StoryMap Summary	6
Motivations and Creative Process	6
Making the StoryMap	10
Finishing Touches	14
Sharing the StoryMap and Analytics	16
Reflection	20
Review of other StoryMaps	26
<i>Kingdom of Copper</i> StoryMap	26
<i>Sheffield Castle</i> StoryMap	29
TII StoryMaps	33
Discussion	37
StoryMaps in general as a platform	37
StoryMaps for archaeologists	39
<i>General Accessibility</i>	40
<i>Integration of Digital Archaeological Data</i>	42
<i>Editability</i>	43
<i>Engagement with Existing Audiences</i>	44
Value of StoryMaps for the public	47
<i>Educational value</i>	48
<i>Personal connection value</i>	48
<i>Value as a venue for multivocality</i>	49
Conclusion	52
Notes	55
References	56

Figures

Figure 1. Isert Kelly Castle during the summer 2023 excavation with part of the bawn wall exposed in the left middle portion of the photo. SOURCE: Charlotte Ens.	7
Figure 2. Isert Kelly Castle, Co. Galway, Ireland. The opening photo of the StoryMap. SOURCE: GAFS 2022 Site Report.	9
Figure 3. Screenshot of the ArcGIS Online Map Viewer Tool with a polygon layer representing each individual trench. SOURCE: Charlotte Ens.	12
Figure 4. A marked-up photo highlighting certain architectural elements of Isert Kelly Castle. SOURCE: Charlotte Ens.	13
Figure 5. Graphic advertising my StoryMap, formatted for Instagram. SOURCE: Charlotte Ens.	16
Figure 6. Screenshot of the title card of my StoryMap. SOURCE: Charlotte Ens.	17
Figure 7. Chart showing the number of engagements (shares, comments, likes) that the StoryMap posts received on each social media platform. SOURCE: Charlotte Ens.	18
Figure 8. Screenshot of the usage details for the StoryMap between December 12, 2023-January 14, 2024, with a noticeable spike in engagement on December 14 when the StoryMap was initially shared. There is also a more recent spike in data correlating with the sharing of the StoryMap by Galway community organizations. SOURCE: Charlotte Ens.	20
Figure 9. Screenshot of the 3D model embedded into the StoryMap. Viewers are able to interact with the model within the StoryMap or by viewing it in a separate tab. SOURCE: Charlotte Ens.	23

Introduction

Archaeologists have a responsibility to communicate the results of their research with the public, particularly in a way that is accessible, informative, and respectful to affected communities (Canadian Archaeological Association 2024; Society for American Archaeology 2024). Unfortunately, the dissemination of archaeological information has not always been done in a way that is also engaging; in his distinguished lecture on the issue of communication and the future of American archaeology, Jeremy Sabloff (1998, 869, 871) identified a problem with public communication in archaeology that includes a prejudice against the use of popular media (television, books, blogs, etc.), despite this being the most effective method for disseminating information to the general public. Furthermore, archaeological publications are not always accessible, with many being published in academic journals or archives that are inaccessible to the general public. The inaccessibility of so-called “grey” literature – meaning unpublished literature produced by commercial excavation firms and government agencies – is another illustration of this issue (Bertemes and Biehl 2009, 182; Ford 2010). Together, I would argue that these factors have led to a communication breakdown between archaeologists and the public they seek to serve; in order to make the discipline more inclusive and relevant to the broader society, archaeologists need to find a way to bridge this gap.

Critically Engaged Storytellers and Public Archaeology

In an article written by Indigenous scholar and archaeologist Sonya Atalay on decolonizing archaeology, she suggests that archaeologists become “critically engaged storytellers,” centering the discipline of archaeology and communication of archaeological knowledge around the Anishinaabe concept of *gikinawaabi* (Atalay 2006, 297). She defines

gikinawaabi as a concept that implies communal access to knowledge through “the passing or reproduction of knowledge, through experience, from elder to younger generations” (296). When applied to the process of communicating archaeological research, Atalay argues that this calls for archaeology that is “done for the community, in a true collaborative effort with them” (299). This approach has many similarities to Nick Merriman’s (2004, 7) “multiple perspective model” of public archaeology which, as the name implies, recognizes and engages with the diversity of beliefs about the past, ultimately aiming to engage the public with archaeology in order to “encourage self-realisation, to enrich people’s lives and stimulate reflection and creativity.” This multiple perspective model is an alternative to what Merriman calls the “deficit model” of public archaeology, which reinforces the authority of archaeological professionals by viewing the lay public as lacking archaeological knowledge and thus as “needing education in the correct way to appreciate archaeology” (Matsuda 2016, 42; Merriman 2004, 6); this approach does not align with the concept of *gikinawaabi*. Rather, central to both the multiple perspective approach and the approach of Indigenous archaeology outlined by Atalay is the post-processual idea of multivocality (Atalay 2008): literally meaning “many voices,” this is a concept that refers to, on a local level, “the idea that different (often previously marginalized) groups should have a voice in interpreting archaeological findings” and, on a global level, it is seen “as a way to democratize archaeology itself” and “dismantle larger forces of colonialism” (McDavid 2020, 7480).

With this knowledge of the concepts of multivocality and *gikinawaabi*, I have come to a new understanding of the term “critically engaged storyteller”: to me, this role requires archaeologists to create and share narratives based on their research that are captivating to the general public (like a storyteller) and collaborative (i.e. critically engaged), ultimately making archaeology more accessible, ethical, open to criticism, and inclusive of a plurality of

perspectives. This thesis is centered on embracing this role in the hopes that it will be effective in engaging the public with the archaeological discipline.

ArcGIS StoryMaps

In the past, before the internet was widely available, archaeologists relied on print publications (e.g. books, brochures) as well as in-person experiences (e.g. museum visits, public lectures) to communicate archaeological information. As the discipline of archaeology has entered into the digital age, newer forms of broader public dissemination have become available to archaeologists, beginning in the 1990s with television shows (such as Time Team) and continuing with the advent of the internet and other audiovisual media forms such as blogs, YouTube videos, audiobooks, and podcasts. However, archaeologists have not always taken advantage of these tools for public engagement, resulting in a communication breakdown.

To bridge the gap between archaeologists and the public, a new, engaging, and accessible methodology for disseminating archaeological information should be considered; to be successful in today's digital world, such a methodology will likely incorporate interactivity, digital datasets and involve the use of the internet and/or social media. In particular, I believe that a feature developed by the GIS (Geographic Information Systems) software company Esri, known as StoryMaps, could be beneficial to the toolkit of any critically engaged storyteller. Also known as ArcGIS StoryMaps, this platform is marketed as a "powerful storytelling tool" that combines "interactive maps with multimedia content [such as photos, videos and 3D models] and text to tell stories about the world" (Esri n.d.). In the current digital age, tools such as GIS software, remote sensing technologies and 3D reconstruction have become essential to the practice of archaeology. The StoryMaps platform offers an opportunity for archaeologists to

easily integrate these digital techniques into their work while simultaneously unravelling an intriguing archaeological narrative. Furthermore, I have identified a number of unique features that might make them particularly useful for incorporating multivocality into archaeological interpretations, such as their general accessibility, their integration of interactive data, and their editability.

As such, given their potential, the purpose of this thesis is to determine if ArcGIS StoryMaps are an effective tool for disseminating archaeological information to the public in a way that is simultaneously engaging, informative, and multivocal. In order to do so, I have created my own StoryMap about an excavation site and field school in Ireland that I am well acquainted with – namely Isert Kelly Castle and the Galway Archaeological Field School (GAFS) – and shared it on a variety of social media platforms including my own personal Instagram account, the official GAFS Instagram account, Dr. Jonathan Fowler’s *Archaeology in Acadie* Facebook page, and the pages of a couple of Galway community organizations such as Galway Community Archaeology. These platforms were chosen because of their connection to Isert Kelly Castle in particular and/or their more general connection to the discipline of archaeology. The effectiveness of my StoryMap has been measured through a qualitative analysis of social media engagement (e.g. likes, comments, and shares) as well as by comparing the StoryMap post to the success of other posts on these platforms (e.g. *Archaeology in Acadie*). Further quantitative data (e.g. average engagement time, number of interactive clicks) and metadata about viewers (e.g. location of user) was gathered through the attachment of Google Analytics to my StoryMap. Finally, an embedded comment box at the end of my StoryMap was included to elicit feedback and questions that could be qualitatively analysed. Together with the social media engagement data, an analysis of these other elements has given me a better

understanding of the relative success of my StoryMap in generating engagement, effectively communicating information, and encouraging multivocality.

Additionally, I broadened my analysis by examining the success of similar projects created by three other archaeological groups; these projects were found through a Google search for “archaeology StoryMaps” and selected because of their relation to the discipline of archaeology or to Irish archaeology specifically in the one case. The projects include the *Sheffield Castle* StoryMap created by Wessex Archaeology, the *Kingdom of Copper* StoryMap created by Matthew Howland, and co-authors, and the collection of archaeological StoryMaps created for Transport Infrastructure Ireland (TII). Understanding the success of these StoryMaps was valuable in supplementing the data collected about the dissemination of my own StoryMap. These projects all operated on a larger scale and within different sectors than my own and thus helped me to see the broader picture of the effectiveness of StoryMaps in the archaeological discipline; being the among the top results in the search, I decided that they would serve as relevant examples of successful archaeological StoryMaps with a relatively broad reach. When considered all together, the data generated from my own StoryMap, and the data collected from these other archaeological groups help to demonstrate that ArcGIS StoryMaps are a valuable tool for archaeologists as critically engaged storytellers. This research also uncovers some of the potential shortcomings of the platform which is helpful for determining how to employ StoryMaps in the most effective manner moving forward.

StoryMap Summary

Motivations and Creative Process

The StoryMap that I created is focused on Irish towerhouses and the archaeological excavations undertaken at Isert Kelly Castle in Co. Galway, through the Galway Archaeological Field School, and is titled *Exploring Towerhouses: Archaeological Excavations at Isert Kelly Castle*.¹ Isert Kelly Castle (Figure 1) is the name of the remains of a well-preserved 15th century Irish tower house and bawn wall; a tower house is a type of medieval fortified castle that was common in Ireland between the 15th and 17th centuries, with the term “bawn wall” referring to the defensive wall that would have enclosed the castle and its bawn/courtyard. I have become acquainted with the Isert Kelly site through my involvement in the Galway Archaeological Field School (GAFS) offered through the University of Galway. This field school has been excavating at this site since 2014 with a two-fold objective: to uncover material evidence that can inform our lack of knowledge about the social and economic environments of Irish tower houses while simultaneously educating aspiring archaeologists in the practical aspects of archaeological excavation (Sherlock 2023).



Figure 1. Isert Kelly Castle during the summer 2023 excavation with part of the bawn wall exposed in the left middle portion of the photo. SOURCE: Charlotte Ens.

My intention behind creating this StoryMap was to generate public interest in the site and the excavations taking place there through the use of a variety of multimedia (including pictures, maps and 3D models) and narrative text. The value of sharing this information was not only intended to be educational but also aimed to foster a sense of community amongst those with a vested interest in the site (e.g. Galway residents, field school students and alumni) and encourage the public to derive their own meaning from the information provided. This public was to include both stakeholders and those with no previous connection to the site, but with an interest in the subject matter or archaeology more generally. Identifying my target audience and defining my key takeaways as such were the first steps I took before proceeding with the outline of my StoryMap.

StoryMaps, as their name implies, are primarily a storytelling tool, demanding the integration of content and information with style. Esri provides a number of resources that are helpful in developing compelling stories through this particular medium; Hannah Wilber, a member of Esri's StoryMaps team, offers tips for planning and outlining a story using ArcGIS while Allen Carroll, another member of the StoryMaps team, shares nine steps for creating a narrative that resonates with any audience (Wilber 2019; Carroll 2022). To achieve the essential narrative tone I was striving for, I drew inspiration from their advice when developing the outline of my StoryMap. Following Wilber's advice, I began by creating an inventory of the content I wished to include in my StoryMap; this included contextual information about Irish towerhouses found in academic articles, information about the Iseret Kelly excavations found in various site reports, as well as all available images, graphics and digital assets including site plans and a relevant 3D model. In this last category, I was more limited as I was not able to obtain a 3D model of Iseret Kelly itself nor a georeferenced map of the locations of all known towerhouse sites in Ireland today. However, I was able to solve these issues with resources I found on the internet, including the 3D modelling platform Sketchfab and a digitally published article about the distribution of Irish towerhouses on JSTOR, an online source of digitized academic articles (Ó Danachair 1977). Once I had established an inventory of available content, I began to outline the StoryMap.

According to Carroll (2022), a compelling StoryMap should "start with a bang," hooking the reader with a strong title and striking image. He also suggests incorporating a hero into the narrative in order to further engross the audience (Carroll 2022). I chose to establish Iseret Kelly Castle itself as the hero of my StoryMap, introducing the towerhouse as a welcoming home across generations and an iconic symbol of the Irish landscape. Following the title, the opening

photo of the StoryMap established the castle as a focal point in the landscape (Figure 2) and the next photo demonstrated the sheltering quality of the castle from the rainy weather. Together with the accompanying text, these images were meant to draw the reader into the world of Isert Kelly and the archaeological excavations taking place there.



Figure 2. Isert Kelly Castle, Co. Galway, Ireland. The opening photo of the StoryMap. SOURCE: GAFS 2022 Site Report.

After the initial hook, part of establishing the flow of a StoryMap is determining the scale of each section and how it might change throughout; in this context, the notion of a changing scale refers to the differing levels of generalisation in the content of each section, similar to how the level of detail in a map changes with scale (Carroll 2022). I decided that, after starting with a specific reference to Isert Kelly in the introductory section, the following section would “zoom out” to the bigger picture of Irish towerhouses in general to give the reader the necessary contextual information, before diving into the more technical details of the GAFS excavations. This more detailed “larger scale” section provided readers with the choice between thorough summaries of each trench and its excavation or a more general summary of the important findings. Carroll (2022) reminds designers to keep their StoryMaps “short and sweet” in order to

retain the interest of less-invested readers and thus it seemed necessary to provide an alternative option for those readers who did not want to delve into the nitty-gritty details of each excavation.

A successful StoryMap, according to Carroll (2022), inspires readers and concludes with one or more calls to action to turn that inspiration into action. The ongoing nature of excavations at Iser Kelly made it simple to provide a straightforward call to action in the final section of my StoryMap: to encourage the reader to engage further with the field school and the excavations at Iser Kelly, I decided to provide links to the GAFS website and Instagram page. I also chose to include a summary of my hopes for the StoryMap as well as a comment box that encouraged people to leave any questions or comments that they had, following the example of another archaeological StoryMap entitled *Kingdom of Copper* that was created by Matthew Howland, and co-authors. A list of references at the bottom of the page was intended to establish the reliability of the information provided throughout as well as provide the audience with further reading if they were interested in learning more. At this point, the outline was finished, and I was able to begin the process of bringing the StoryMap to life.

Making the StoryMap

According to Carroll (2022), effective StoryMaps employ a unifying design theme and colour palette that is visually attractive and applied consistently throughout the story. Taking advantage of Esri's option to create a personalised StoryMap theme, my StoryMap included custom elements such as colour palette, typography and other visual minutiae like the appearance of buttons, links, and basemaps. I decided to have the background colour and various accent colours echo the two key colours of the Irish flag: orange and green. For typography, I chose the font PT Serif Pro in black to contrast against the light orange background and ensure readability.

Throughout the StoryMap, I highlighted certain words by using the theme accent colours for the font and because of a built-in feature of the StoryMap editor that determines legibility, I was able to maintain the accessibility of these pieces of text. Both the colour palette and the typography came together with the images, maps, and other visual elements to create a cohesive whole.

The maps themselves are one of the defining elements of the StoryMap as a storytelling tool, allowing users to incorporate geospatial data in a unique and interactive way. Carroll (2022) suggests using a mix of active and passive maps to serve different functions within the StoryMap. I wanted the principal map in my StoryMap to be interactive; as part of the section detailing the Isert Kelly excavations, I wanted it to serve as a focal point of engagement between the reader and the text. The process of creating the map and adding all of the necessary overlays was done through the ArcGIS Online Map Viewer tool where I was able to add a polygon representing each individual trench and the final sketched site plans of each trench (Figure 3). When embedded into the StoryMap, the polygons were interactive, allowing the reader to activate a pop-up text box that described the key features that were associated with each trench. The final site plans became visible if the reader clicked the prompt that initiated a crash zoom to an individual trench. Ultimately, the integration of text and map elements in this section aided in engaging with invested readers.



Figure 3. Screenshot of the ArcGIS Online Map Viewer Tool with a polygon layer representing each individual trench. SOURCE: Charlotte Ens.

The text of StoryMaps demands a unique style of writing that simultaneously creates an impactful narrative while still being coherent, accurate, and thorough. Archaeological writing itself also typically follows certain conventions that differ depending on the intended audience; several scholars in the discipline address the issue of writing archaeology for a public audience, emphasizing the need for writing that avoids the use of jargon and develops a narrative (Connah 2010, 154; B. Fagan 2006, 26; Richardson 2014, Chapter 5). Thus, while writing the text for the StoryMap I focused on being clear and engaging as well as avoiding unnecessary jargon or, when necessary, explaining in straightforward terms any jargon that was included. Because my StoryMap is primarily aimed at a public that likely already has some existing interest in Ireland, archaeology, or Isert Kelly specifically, I knew that I could include some jargon (e.g. context, deposit, feature) in an otherwise fairly high-level overview of the subject matter. The narrative element of my text was the story of Isert Kelly Castle and the GAFS excavations which, as a recurring aspect throughout, provided the necessary foundation for the other contextual information, technical details, and images to build upon.

Photographs and other visual and interactive elements such as 3D models and hyperlinks are helpful in tying StoryMaps together. In my StoryMap, I included photographs that

complimented each accompanying section of text, directly referencing certain images in the text and adding captions when necessary. In a couple of instances, I included photos that were edited to include additional elements highlighting specific details (Figure 4). In order to comply with copyright rules, each image has an icon in the top left corner that, when prompted, displays the necessary attribution. Other interactive elements included the 3D model of Renvyille Castle and hyperlinks within the text. The 3D model is meant to serve as an engaging visualisation of some of the key architectural features of Irish towerhouses and can be interacted with in the StoryMap itself (in most formats) or by following a hyperlink to a separate tab on the Sketchfab website. A total of eighteen hyperlinks (five external, thirteen internal) were scattered throughout the text as well, indicated by their bold typeface and unique colouring as well as explicit text cues in some cases (e.g. click here). Together, all of these visual and interactive components were meant to immerse the reader into the educational experience.

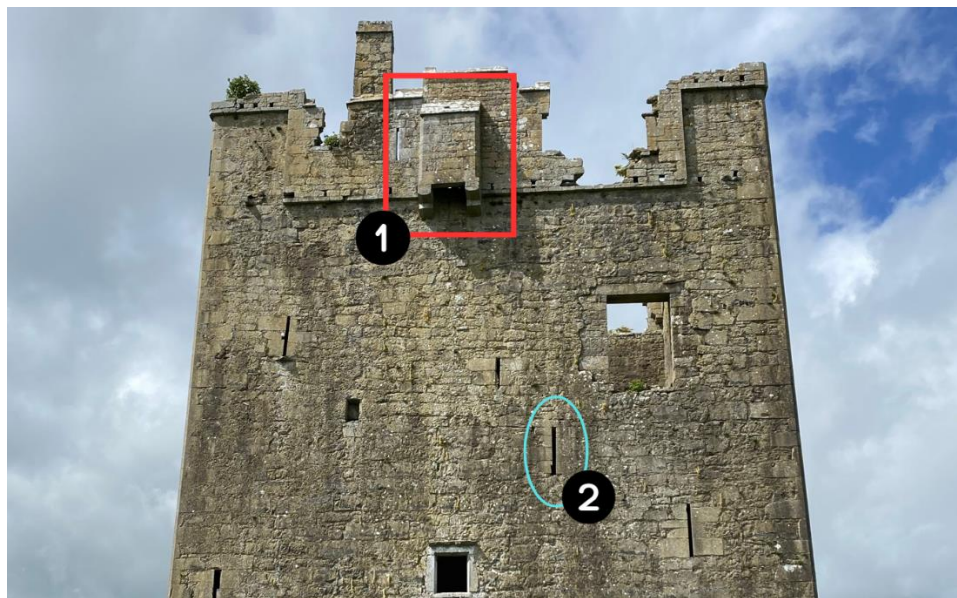


Figure 4. A marked-up photo highlighting certain architectural elements of Isert Kelly Castle. SOURCE: Charlotte Ens.

An important aspect to consider when creating a StoryMap is how the content will appear on different devices and a variety of screen sizes such as mobile, tablet or desktop (Carroll

2022). To help designers understand how a StoryMap might look in these different contexts, the StoryMaps builder offers a preview function; while the majority of content looks the same across all devices, one important difference is the inability to see or interact with embedded content (e.g. 3D models, comment box) on mobile devices. This was significant for my StoryMap because, due to the nature of the platforms I was sharing the StoryMap on, I was anticipating that the majority of users would view it on a mobile device. Therefore, when creating my StoryMap, I included additional text cues for those who were viewing it in this way by using italic font and a consistent introductory phrase (“For those viewing this on a mobile device...”), followed by instructions on how to interact with the content. Making these elements accessible for all viewers was one of the final steps I took before initially publishing my StoryMap.

Finishing Touches

Like any other medium of academic or educational writing, it is important for StoryMaps to be edited and revised to ensure the accuracy and completeness of the content within. Therefore, one of the most invaluable assets of StoryMaps is the ability to edit and add content even after the StoryMap has been published, without changing the URL. Once my own StoryMap was complete, I published it and shared it with Dr. Rory Sherlock, the director of the field school, so that he could revise and provide any notes on the accuracy of the content. After making a few minor changes to some of the images and terms within the StoryMap based on Dr. Sherlock’s revisions, I republished the StoryMap to the same URL address. This was essential for being able to attach an analytics tool to the StoryMap.

ArcGIS Online provides a very general overview of the usage details of StoryMaps after they are published that includes the overall view count and average item views per day within a

specified time period. To collect more detailed analytics of the StoryMap, it is possible to attach an external analytics service such as Google Analytics or Adobe Analytics. For the sake of my research, I chose to use Google Analytics because it is free and user-friendly; this service has been very valuable in providing metadata about who is engaging with the StoryMap (number of users, country, region, etc.) and in what manner (average engagement time, platform of referral, interactive clicks, etc.).

Today, one of the most common and effective ways to share information with a relatively large audience is through a variety of different social media platforms. To reach my target audience, I identified a number of social media platforms that are oriented towards stakeholders in the excavations at Isert Kelly and anybody with an interest in the subject matter more generally. Once the platforms were identified, I contacted the administrators of each platform in order to coordinate the effort of sharing the StoryMap. Part of making this a cohesive effort was creating and distributing a universal graphic (Figure 5) that was compatible with a variety of platforms (e.g. Instagram, Facebook, PowerPoint).



Figure 5. Graphic advertising my StoryMap, formatted for Instagram. SOURCE: Charlotte Ens.

Sharing the StoryMap and Analytics

On December 14th, 2023 I shared my StoryMap entitled *Exploring Towerhouses: Archaeological Excavations at Isert Kelly Castle* (Figure 6) on my personal Instagram. I created a post using the graphic that I had made and shared it on my Instagram Story. From this platform, I received a total of 69 likes on the post, twelve people reposted it on their personal Instagram story, and fourteen people commented. On the same day, Dr. Sherlock created a post using the same graphic on the official Galway Archaeological Field School Instagram account; this post garnered a total of 91 likes and three comments. The link was also shared on my mother's Facebook page and this post received a total of 25 reactions and twelve comments. On December 16th, 2023 the StoryMap was shared as a post on the SMU Arts faculty Instagram page, receiving a total of 29 likes; the same post on SMU Arts department Twitter page, received a total of ten likes, seven shares, and one comment.



Figure 6. Screenshot of the title card of my StoryMap. SOURCE: Charlotte Ens.

On the same day (December 16th) it was also shared by Dr. Jonathan Fowler on his Facebook page *Archaeology in Acadie*; this post garnered 41 reactions and four comments. In comparison to other posts on the *Archaeology in Acadie* Facebook page, the post with my StoryMap did not prove particularly popular; it was likely less successful in generating reactions and comments because it is not related to Acadian archaeology or archaeology in Nova Scotia. Because the Facebook page itself is dedicated to the archaeological study of Acadie, Mi'kma'ki, and Nova Scotia, the most popular posts touch on that subject matter, with many receiving over 100 and sometimes upwards of 200 reactions. Furthermore, those popular posts often garner around 30 comments each as well. Despite the fact that the post about my StoryMap only received four comments, the content of one comment was of particular interest to me; responding to a prompt within the caption of the post, one commenter expressed that they would be interested in a digital tour/StoryMap of Acadia. This demonstrates that the public is interested in engaging with digital forms of archaeological research through a medium such as StoryMaps, particularly when the subject matter is of interest to them.

On January 8th, 2024 the StoryMap was shared on the archaeology department Facebook page of the University of Galway, which is the university affiliated with the field school; this post received a total of 20 reactions and one share. The *Archaeology Ireland* magazine was the organization that shared the post and, on their Facebook page, it received ten likes and one additional share. On January 10th, 2024, it was also shared on the Instagram and Facebook pages of Galway Community Archaeology, garnering fourteen likes/reactions and two shares across both platforms. In total, I received 309 likes/reactions, 34 comments and 23 public shares across these ten platforms and this data is summarized in an Excel sheet and graph (Figure 7). It is important to note that some of these engagements are duplicates across various platforms as the same users were liking each individual post, particularly on Instagram.

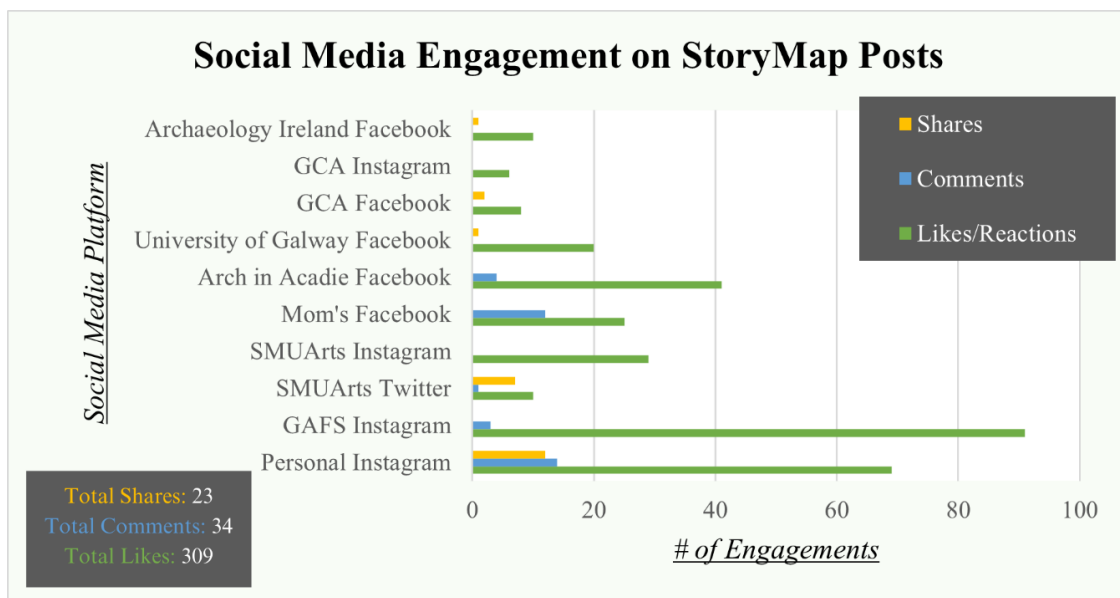


Figure 7. Chart showing the number of engagements (shares, comments, likes) that the StoryMap posts received on each social media platform. SOURCE: Charlotte Ens.

From the 34 comments that I received across all of the social media platforms, I was able to identify three key themes within: complimentary comments, field school alumni/nostalgia, and acknowledgement of information/content. Twenty-six of the 34 comments (76%) contained commendatory phrases including “amazing,” “well done,” “so cool,” and “very interesting.”

From personal knowledge of those who commented, I know that a significant number of the comments across the GAFS Instagram and my own personal Instagram were left by former attendees of the field school with these nine comments also accounting for over a quarter (26%) of the 34 total comments received. Two of these comments, in particular, made reference to a certain nostalgia that was prompted by the StoryMap, using the verbs “revisit” and “reminisce.” Finally, there were six comments (~18%) that made some sort of acknowledgement of information or content within the StoryMap, with three people commenting that they “learned a lot” and three other people expressing interest in the 3D model that was included. In terms of the comment box that was embedded in the StoryMap, two people used it to leave commendatory comments. One of the comments praised the interactive and educational nature of the StoryMap and the other mentioned that the graphics were very helpful in illustrating the descriptions.

The post was also emailed out to a couple other groups, as Dr. Sherlock shared the link with the mailing list for potential 2024 GAFS students and I shared the link with an Irish-language group that I am a part of here in Halifax. I received a couple of emails in response from the members of the Irish-language group, including one that was asking for further information about the name “Isert Kelly” out of personal heritage interests. I also shared the StoryMap with, and received feedback from, several people that I had reached out to during the semester, including Dr. Matthew Howland and the archaeologists Rónán Swan and Ken Hanley who work for Transport Infrastructure Ireland. The feedback I received from them was positive, with specific praise of my “clear,” “engaging” and “accessible” writing style as well as my application of the interactive features of StoryMaps (e.g. inclusion of the 3D model).

According to Esri analytics (Figure 8), the total view count of the StoryMap was 598 (up to January 17th, 2024), however, these are not necessarily unique engagements. According to

Google Analytics (up to January 17th, 2024), a total of 305 unique users viewed the StoryMap for an average engagement time of one minute and nine seconds. Average engagement time is defined as the average length of time that the website had focus in the browser. The majority of users (227) were classified as coming from an “Organic Social” channel, meaning that they came from a social media site such as Instagram or Facebook. Users were located in a total of ten different countries with the majority of users being located in Canada (187), the United States (59), and Ireland (51). In terms of interactivity within the StoryMap, there was a total of 255 WebMap clicks and 41 Hyperlink clicks. This Google Analytics data is summarized in a reports snapshot PDF.

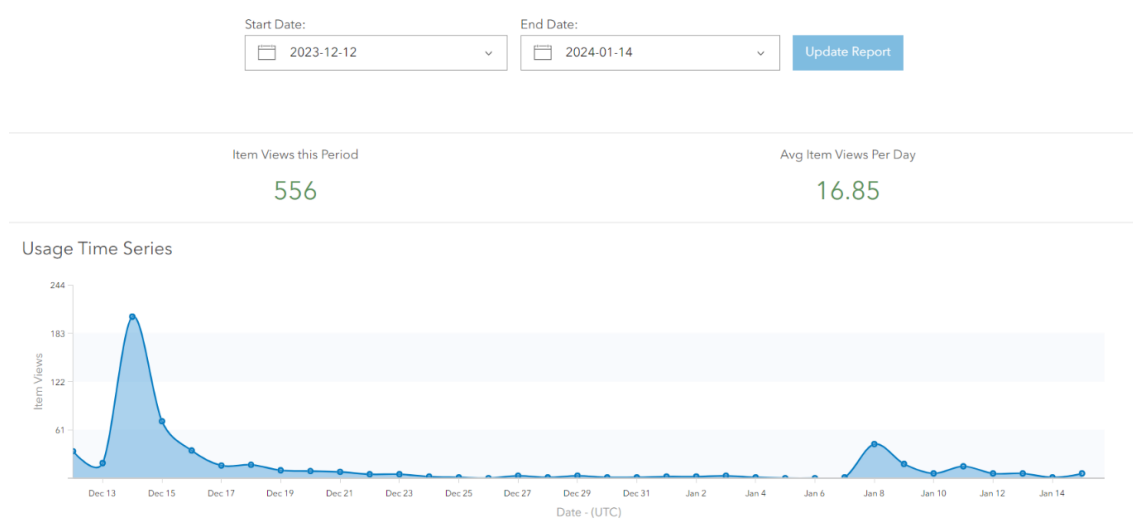


Figure 8. Screenshot of the usage details for the StoryMap between December 12, 2023-January 14, 2024, with a noticeable spike in engagement on December 14 when the StoryMap was initially shared. There is also a more recent spike in data correlating with the sharing of the StoryMap by Galway community organizations. SOURCE: Charlotte Ens.

Reflection

Overall, I am satisfied with the final product of my StoryMap. Based on the feedback I received from those who viewed the StoryMap, I believe I succeeded in creating a piece of content that is simultaneously educational and engaging. I am also pleased to have been able to demonstrate the use of StoryMaps as a tool for communicating archaeological information to

someone in the field; Dr. Rory Sherlock (pers. comm.) expressed his appreciation for the final product and said that it has opened his eyes to the value of such things as a means of communication. However, upon reflection, I believe there are a couple of points where the project could have been improved despite my general satisfaction with the StoryMap and its reception.

Firstly, I acknowledge that there is bias in the platforms that I chose to share my StoryMap on, and that this bias is reflected in the engagement that I have received; a glance at the graph in Figure 7 shows that the majority of likes/reactions and comments were garnered from my personal Instagram post, the GAFS Instagram post and my mom's Facebook page. This bias corresponds with the fact that the StoryMap was oriented towards people that are already linked to the site and any person with an interest in Ireland or archaeology more generally. That being said, I had hoped to receive more engagement from the local community in Galway; again, the graph in *Figure 7* reveals that the social media posts of the Galway Community Organization were the least successful in generating engagement. I might have achieved more engagement with the local community if I had put more effort into finding venues for the StoryMap where people from that community were already present.

One of the other aspects of the project that could have been improved was the limited availability of relevant datasets, which ultimately made it more difficult to achieve the desired final product during the creation of my StoryMap; more relevant datasets could have included a distribution map with all towerhouse sites in Ireland, a 3D model of Isert Kelly Castle, and/or videos of the GAFS excavations. In their description of the process of creating the *Kingdom of Copper* StoryMap, Howland et al. (2020, 355) highlight the importance of not letting the availability of suitable data (e.g. maps, images, 3D models) drive the framing of StoryMaps,

instead focusing on making the development of a compelling narrative the focal point of the project. In theory, I agree with this objective and I tried to adhere to it; however, in practice, this was easier said than done. For the contextual section about Irish towerhouses, I curated the majority of the photos from my own personal collection to avoid issues with copyright. This sometimes made it difficult to find a photo that was relevant to the accompanying text. In some cases, it was necessary to utilise other internet resources to find pertinent content that was not copyrighted such as Sketchfab, Wikimedia Commons, and academic articles. It is likely that a better understanding of copyright laws and attribution as well as more time to complete the project would have facilitated the development of this section as I would have been able to include photos from other external sources.

In the detailed section about excavations at Isert Kelly Castle, I also would have liked to include more digital forms of data such as a 3D model of one or more trenches and/or a video of some aspect of the excavation. Based on the feedback that I received for my own StoryMap, the 3D model (Figure 9) was successful in engaging with viewers and, thus, I think my StoryMap could have benefited from the inclusion of more relevant 3D models. In this section, there were also a number of trenches that unfortunately did not have a final site plan to include as layers on the interactive map. It is likely that these pieces of content could have been acquired or created with more time; however, because they were not essential to the narrative of the StoryMap and because this was undertaken as an undergraduate project rather than a professional one, I felt their omission was justified. Overall, the process of creating this StoryMap has taught me that time and access to a comprehensive underlying dataset is essential in creating a compelling and thorough StoryMap.

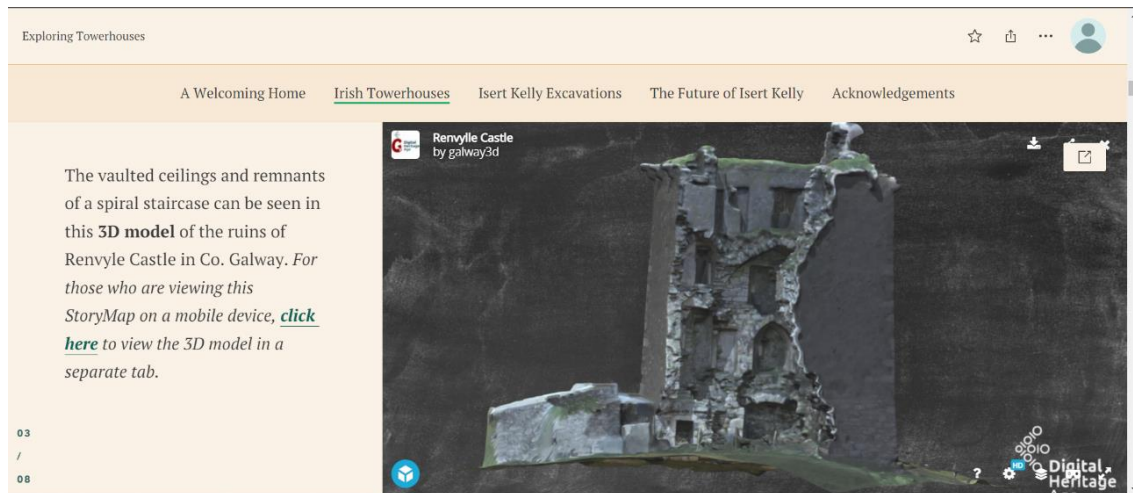


Figure 9. Screenshot of the 3D model embedded into the StoryMap. Viewers are able to interact with the model within the StoryMap or by viewing it in a separate tab. SOURCE: Charlotte Ens.

Another area in which I think the StoryMap could have been improved is by adjusting its length as the average engagement time of one minute and nine seconds is low relative to the time it would take to read my StoryMap; perhaps, it is not short and sweet enough. The *Kingdom of Copper* StoryMap (which is comparable in length) has a similar average engagement time of one minute and thirty seconds. Significantly, these engagement times are nowhere near the average of six minutes of engagement time on StoryMaps that is shown by the general analytics of the ArcGIS StoryMaps team (Carroll 2022). Therefore, the low engagement time of these projects has interesting implications for the effectiveness of StoryMaps in engaging the public with archaeology. The popular internet phrase “tl;dr” – meaning “too long; didn’t read” – may be relevant here as social media engagement is notoriously short and ephemeral. It is also likely related to the level of interest that the audience has in engaging with heritage and educational content.

In a book on capturing visitor attention in museums, Stephen Bitgood (2013) predicts the engaged attention of museum visitors with the exhibit readings of art prints by well-known artists. He considers how two variables affect how deeply visitors engage with the readings: the

first variable is interest, and the second variable is workload, which refers to the amount of reading there is to do and indicates the time and effort required to process information (Bitgood 2013, 93). When considered together, Bitgood suggests that interest and workload contribute to the value that a person takes from the reading and that the value ratio is a “powerful predictor of engaged attention” (94). His study found that a high workload inhibits engagement as it may trigger an avoidance reaction; in the case of a high workload, high interest in the subject becomes more important in order to motivate the reader to engage with the readings (102). Conversely, Bitgood found that visitors are more willing to read when the workload is low, even if interest is low and he presumes that this is because “the cost of investing time and effort is low and ‘worth a gamble’” (102).

While the context of Bitgood’s experiment does not necessarily directly correlate with how people engage with StoryMaps, the demonstrated relationship between the two variables of the value ratio and audience engagement is helpful in explaining the limited average engagement time of my StoryMap. Because there is a high workload associated with reading through the StoryMap, it is likely that users with only a moderate interest in the subject are less likely to engage more with the content. To overcome this barrier to engagement, Matthew Howland (pers. comm.) has suggested that “multiple short StoryMaps on subtopics within a larger framework could be a better approach than a long StoryMap with multiple subsections.” These shorter StoryMaps could then be grouped within a StoryMap collection similar to the Galway County Heritage trails collection.² Alternatively, users could be directed to companion StoryMaps within the text of another StoryMap itself; an example of this is TII’s *The Forgotten Cemetery* StoryMap, in which the audience is encouraged to click an embedded link leading them to a

secondary StoryMap if they have an interest in the analysis of human remains (Abarta Heritage 2023).

Further research into what affects average engagement time with StoryMaps is necessary to gain more insight into what drives audience engagement. It would be helpful to understand what specific elements people are most engaging with and how far they are scrolling through the StoryMap before quitting the session. A better understanding of the factors that motivate or inhibit user's engagement with archaeological content in StoryMaps would be helpful in determining the extent to which they are useful within the discipline.

Finally, I am disappointed that I did not receive any feedback or engagement that I could incorporate into the StoryMap; unfortunately, my StoryMap has failed to become multivocal. However, while the feedback I received is unfortunately not really meaningful to add to the StoryMap, I think that offering people a place to convey their own perspectives is an important step towards implementing multivocality. Matthew Howland (pers. comm.) has suggested that a lack of feedback "illustrates the need to not just publish a StoryMap online, but share it directly with stakeholders in the work described, and find venues to share it and talk about it where the people who will be most interested in the content are already present." Social media is an effective way of sharing this kind of information with a large audience; however, given the failure of my own StoryMap to generate meaningful feedback after being shared on social media, it is possible that success may depend upon the size of the following that already exists on these platforms or on the pre-existing popularity or passion for the site that is being described.

Review of other StoryMaps

There are a number of other archaeologists and consultation groups who have also realized the potential of StoryMaps for sharing archaeological information with both invested communities and the more general public: this includes the archaeologists at Transport Infrastructure Ireland (TII), the archaeological consultation group Wessex Archaeology, and archaeologist Dr. Matthew Howland. To gain a better understanding of each of these archaeologists' views on using StoryMaps for disseminating archaeological information, I reached out to them through personal communication (e.g. email, interview) and the data from my StoryMap has been supplemented by data from each of these individuals/groups, ultimately strengthening my analysis. A comparison of the content, dissemination process, and success of the StoryMaps of these archaeologists to those facets of my own StoryMap reveals further benefits and disadvantages of this tool for different sectors within the discipline. In particular, the *Kingdom of Copper* StoryMap created by Matthew Howland, and co-authors, the *Sheffield Castle* StoryMap created by Wessex Archaeology, and the collection of StoryMaps created by Transport Infrastructure Ireland (TII) are helpful in demonstrating their utility in archaeology.

***Kingdom of Copper* StoryMap**

Matthew Howland was one of the main creators of the *Kingdom of Copper* StoryMap which delves into archaeological research that is focused on the impacts of copper production on the development of politics and economics in Iron Age Faynan, Jordan (Howland et al. 2023). An explanation of archaeological investigative processes adds another educational component to the StoryMap. This StoryMap is available through the ArcGIS StoryMaps gallery collection and is the subject of an interview that Matthew Howland did with the StoryMaps Community team

(StoryMaps Community Team 2019); additionally, the authors of the StoryMap wrote an article about the use of StoryMaps for integrating digital datasets into public engagement, using the *Kingdom of Copper* StoryMap as a case study (Howland et al. 2020). In order to make the StoryMap accessible to the local communities in Jordan whose heritage is being researched, there is both an English-language and Arabic-language version available. This StoryMap has been successful in a range of ways including generating views, encouraging multivocality, and incorporating interactivity.

In terms of views, the English version of the StoryMap has garnered a total of 5,424 views to date and the Arabic version has received a total of 3,726 views; significantly, the English version of the StoryMap itself has received more views than the journal article that was written about the project. These numbers are noteworthy for an archaeological publication; to contextualise, that same number of views (5,424) is equivalent to or higher than some of the most read articles of all time in archaeological journals such as *Medieval Archaeology*, *World Archaeology*, and *Public Archaeology*.³ This success better demonstrates the utility of StoryMaps for archaeologists than the 300 views that I received on my StoryMap, although this number of views is itself also comparable to some of the most read articles in the aforementioned journals within the last year.⁴ The number of views on the Arabic version of the *Kingdom of Copper* StoryMap is also considerable; Matthew Howland (pers. comm.) expressed his satisfaction with this metric, particularly “given the lack of Arabic-language promotion of the StoryMap and the lack of Arabic-language media in general.”

That an Arabic version of the StoryMap exists signifies the commitment of this StoryMap in engaging with local communities in a meaningful and accessible manner. For my own StoryMap, I would like to create an Irish-language version of the StoryMap; despite the fact that

the majority of Ireland's population does not speak the Irish language in their everyday life, the language still holds important symbolic and literal weight as the country's first official language. Isert Kelly Castle itself is located in close proximity to the town of Loughrea in County Galway which has official status as part of the *Líonra Gaeilge* (Irish Language network initiative), and therefore an Irish-language version of my StoryMap would offer an accessible and meaningful way for Irish language speakers to engage with the archaeology and heritage of the area. This increased accessibility could then lead to an increase in the feedback on the StoryMap, and thus improved multivocality.

In an effort to engage with the local communities in Faynan, Jordan, there was a comment box included at the end of the *Kingdom of Copper* StoryMap; this was the model for the comment box that I included in my own StoryMap and it was meant to elicit feedback and “stories and contextual information from the Faynan community for inclusion in the StoryMap” (Howland et al. 2020, 358). That comment box has received a total of eight comments so far, which Matthew Howland classified as “somewhat disappointing,” as half of the comments were blank, nonsensical, or spam. Two other comments were complimentary of the quality of the StoryMap, similar to the two comments I received from the comment box on my own StoryMap. Finally, one other comment prompted the addition of some new data and writing in the StoryMap by asking interesting questions; Howland et al. (2020, 355) also state that parts of the StoryMap have been redesigned and rewritten in response to public feedback. While it is unfortunately not possible to know if any of these comments came from local communities within Jordan, this StoryMap has still been more successful than my own in incorporating the voices and perspectives of the public with a vested interest in the site; in other words, this StoryMap has become multivocal. Howland et al. describe StoryMaps as “a first draft that communities can

engage with, edit, and use as a platform to tell their own stories and explain their own relationship with their cultural heritage” (357) and this perspective aligns with Merriman’s ‘multiple perspective model’, the concept of *gikinawaabi*, and with the role of a critically engaged storyteller.

To generate feedback and enhance people’s engagement with the story, it is also important to include a variety of interactive elements within the StoryMap. For this reason, the creators of the *Kingdom of Copper* StoryMap were particularly focused on adopting the concepts of hypermedia and deep mapping which respectively refer to multimedia elements that are “available for free-form exploration rather than strictly sequential storytelling” and “a process of providing multiple layers of representations and multiple forms of media in a way that is by definition not static and may tell multiple stories” (Howland et al. 2022, 352). In total, their StoryMap included 13 interactive maps, two videos showing archaeological processes, five interactive 3D elements as well as dozens of photographs and hyperlinks to other relevant content (356). This is therefore a good example of how StoryMaps can integrate a broad variety of archaeological digital datasets in order to engage the audience. It is notable that a number of the comments and feedback I received for my StoryMap were specific in pointing out and praising the inclusion of a 3D model; it is clear that, as Howland et al. (2020, 352) suggest, multimedia archaeological datasets including these types of interactive elements can “serve as the basis for effective and engaging public outreach.”

Sheffield Castle StoryMap

The *Sheffield Castle* StoryMap was created by Wessex Archaeology, which is an educational charity and private consultation company in the UK that offers a range of

archaeological and heritage services. This StoryMap is focused on describing the results of archaeological excavations undertaken at the site of a lost castle in the city of Sheffield. In comparison to the *Kingdom of Copper* StoryMap, as well as my own, this StoryMap is much more focused on outlining the history of archaeology at the site and less on contextualizing the site and developing a narrative. This StoryMap is available through Google search as well as on the Wessex Archaeology website as part of a blog post explaining the uses of StoryMaps (Wessex Archaeology 2020). Although I was not able to learn the usage metrics of the *Sheffield Castle* StoryMap, the Studio Manager of Wessex Archaeology, Karen Nichols (pers. comm.), said that it has proven popular. Nichols also provided more helpful information about how StoryMaps are employed successfully in this sector of archaeology.

One of the main reasons that the *Sheffield Castle* StoryMap has proven popular is because of the high-level of community interest that surrounded the project already; Karen Nichols (pers. comm.) explained that the lost site of Sheffield Castle was already well-known within the city, with the interest level in it being heightened by the archaeological excavations that Wessex Archaeology undertook there in 2018. To keep the community informed and get them involved with the excavations, they provided regular updates on the work in progress, offered opportunities to volunteer, held open site tours for the public, and also actively promoted the project through blogs and vlogs. As a result, the *Sheffield Castle* StoryMap was better able to succeed because of the preexisting public audience with a vested interest in the site. In comparison, while there are a number of stakeholders (e.g. field school students and alumni) engaged with the excavations at Isert Kelly Castle, general public interest is less prolific; this is likely a result of the relatively isolated location of the site. However, this is not to say there is no public interest in the site as there were a number of site visits that took place during the summers

I spent at the site. Additionally, the interest of stakeholders cannot be totally disregarded as it indicates the important retention of interest of a large number of people who, similar to the community involved in the excavations at Sheffield Castle, are an invested public audience. Thus, the success of the *Sheffield Castle* StoryMap as well as the results that I gathered from sharing my own StoryMap suggest that StoryMaps are particularly suited to engaging with existing audiences.

In addition to being useful in informing and engaging with the public, Karen Nichols (pers. comm.) explained that the *Sheffield Castle* StoryMap was one of the tools that Wessex Archaeology used to inform the architects and redevelopment team about the underlying heritage of the site. This informative intention for the StoryMap is apparent in its more report-like tone; using a range of multimedia such as images, videos, and interactive maps with underlying GIS data, it presents a very brief history of the castle and the results of the excavations in a straightforward, single section report. My own StoryMap was made to have a more narrative tone, as I see the storytelling potential of the platform as one of its main advantages for disseminating archaeological information in an engaging way; however, the *Sheffield Castle* StoryMap demonstrates that different approaches to StoryMaps are likely necessary in different contexts and depending on the primary aim of the author. In this example, the archaeological work and interpretation was undertaken through a private company and the resulting StoryMap thus reflects a primary focus on educating the public (along the lines of Merriman's "deficit model" of public archaeology, which sees the public as lacking proper knowledge and needing a professional education) rather than on eliciting feedback from and seeking to incorporate the voices of the public; the *Sheffield Castle* StoryMap does not include a place for people to comment or ask questions directly and Karen Nichols (pers. comm.) described StoryMaps as a

way to present archaeological data via a “controlled” narrative. The straightforward, more report-like tone lends itself well to this deficit-based learning approach and, although it does not really encourage multivocality, it is still a more accessible form of dissemination for a wider public audience than the usual venues of publication. Overall, the *Sheffield Castle* StoryMap is a good example of how StoryMaps can be versatile and reflect the unique approach of the person or company that is creating them.

However, despite their versatility and utility in engaging with a more public audience, Karen Nichols stated: “I do not believe StoryMaps are the answer to the dissemination of all archaeological sites.” She explained that Wessex Archaeology uses StoryMaps alongside other forms of digital media such as eBooks, online PDFs, video, and animation to inform and engage people with heritage; she specified that “video is the best media” to reach a wider public audience at the moment, based on the successes of Wessex Archaeology. For example, according to Nichols, their most wide-reaching video thus far has just over 300k views. Furthermore, each video in the series of the Sheffield Castle excavation vlogs received approximately 1k views; the most viewed vlog garnered almost 3.7k views.⁵ While it was not possible for me to generate a video or other form of digital dissemination for Isert Kelly Castle, a video posted by the University of Galway about excavations at the site in 2015 has received almost 1k views which is quite a bit higher than the 300 views I received on my StoryMap.⁶ This fact, along with the success of the Wessex Archaeology videos, demonstrates the importance of using StoryMaps in conjunction with other forms of media in order to reach the largest possible audience.

TII StoryMaps

Transport Infrastructure Ireland (TII) has produced a significant number of StoryMaps that each describe the results of individual archaeological projects undertaken solely by TII or in collaboration with another company. These StoryMaps are available on the TII website in the Archaeology and Heritage section (TII 2023a). The viewership metrics for these StoryMaps is impressive with a total of around 63.5k views received over all of the StoryMaps, an average of 3,528 views on each one and a peak of 9,098 views on their most popular StoryMap entitled *Ambush at Cúil na Cathrach (Coolnacaheragh), West Cork, Ireland* (Hanley and Lyne 2021a). In addition to usage metrics, TII archaeologists Rónan Swan and Ken Hanley have provided further information about the use of StoryMaps in the public sector.

Like the *Kingdom of Copper* StoryMap, the viewership numbers on the TII StoryMaps are significant for archaeological publications; this success could be attributed to a number of different factors. One factor is likely the more accessible writing style of StoryMaps in comparison to traditional forms of publication such as books; Rónan Swan (pers. comm.) notes the difference between the “off-putting” conventions of standard writing found in books and the more casual narrative tone and jargon-free writing style of StoryMaps which is more appealing to public readerships. Another factor suggested by Ken Hanley (pers. comm.) is the considerable exposure that StoryMaps receive as an online product that “can be viewed instantaneously, worldwide.” However, while Hanley is relatively satisfied with the total viewership numbers on TII StoryMaps, he also suggests that they could be “greatly improved on with provision of better meta data and continuous promotion.” Currently, the focus of TII’s dissemination of StoryMaps is less on promoting them to a broader audience and more on ensuring that the necessary

information is communicated directly to key stakeholders and the local communities that are affected by the work, according to Rónan Swan.

The communication strategy for StoryMaps is largely a reflection of the strategic objectives of TII as an organization: in the October 2023 update of TII’s Statement of Strategy for 2021-2025, one of the strategic objectives for engagement and collaboration is to “communicate with the communities affected by TII projects” (TII 2023b). Underlying this objective is a sense of responsibility to the public that was summarized by Swan: because TII is spending public money on behalf of the State, they have a responsibility to inform the public on how their money is being spent. This responsibility to communicate with a diverse public audience seems to demand a unique form of narrative delivery that StoryMaps are particularly suited for: the most recent publication on communicating archaeological discoveries in the National Roads Authority agency (what is now TII) from 2010 specifies that “the information is presented in narrative as well as analytical form and in a variety of media” (NRA 2010). Other countries and public organizations might be subject to different expectations, but StoryMaps can be adapted to meet these expectations while maintaining accessibility and engagement with the public.

Another way that TII is able to successfully engage with local communities through StoryMaps is by making them accessible in Irish when they refer to projects that are taking place within the Irish speaking regions of the country (i.e. the Gaeltacht). For example, the *Ambush at Cúil na Cathrach, West Cork, Ireland* StoryMap, which is the most viewed TII StoryMap, describes a historical event that occurred in a Gaeltacht area in County Cork and, thus, there is also an Irish-language version of the StoryMap available (Hanley and Lyne 2021b). This StoryMap itself has received 1,348 views which is considerable; again, it seems that an Irish-

language version of my own StoryMap would thus offer an accessible and meaningful way for Irish language speakers to engage with the archaeology and heritage of the area, ultimately leading to increased feedback from the local community and opportunities to incorporate their voices.

TII's approach towards incorporating multivocality into their archaeological interpretations is not immediately apparent; the TII StoryMaps do not include a comment box or any other place for the public to leave feedback or suggestions. Furthermore, while the StoryMaps are disseminated widely through TII social media channels such as LinkedIn and X (formerly Twitter), Rónan Swan explained that the organization is hesitant to engage in conversations with the public on these platforms for fear of vitriolic backlash. However, despite this lack of discussion and engagement, Swan has an interesting proposal for working closely with local communities: he suggested that it would be interesting to conduct interviews with members of the public and/or the archaeologists working on a specific project and then create a StoryMap about the project that is based around these people's perspectives. Done in this way, the StoryMap would become multivocal, ceasing to solely express the voice of a single author stating objective facts. While a StoryMap project of this kind has not been undertaken yet, TII has completed an audiobook project using a similar approach; the *Buttevant Heritage Trail* audiobook was written and narrated by the local community through a series of workshops.⁷

Similar to Wessex Archaeology, StoryMaps are only one form of communication that TII uses to disseminate information; they also commission the production of numerous audiobooks, generate a number of more standard publications in print and online, and publish regular instalments in their online magazine, the *Seanda Ezine*. Rónan Swan emphasized the point that there is no one solution for archaeological dissemination and that each method has its own

strengths and weaknesses. Therefore, it is clear that StoryMaps should be used in conjunction with other more traditional forms of dissemination as well.

Discussion

The data compiled from creating and sharing the *Exploring Towerhouses* StoryMap as well as the information that has been gathered about similar archaeological StoryMaps gives insight into the advantages of ArcGIS StoryMaps as a tool for archaeologists in different sectors. This research also uncovers some of the potential shortcomings of the platform which is helpful for determining when and how to employ StoryMaps in the most effective manner moving forward. The following section first outlines the practicality of the fundamental features of the platform before discussing the value of archaeological StoryMaps from two different perspectives: that of the archaeologist and that of the public.

StoryMaps in general as a platform

To evaluate ArcGIS StoryMaps as a tool for archaeology, it is useful to understand its effectiveness in other disciplines as well as the practicality of the fundamental features of the platform such as cost, ease-of-use, and longevity. A brief glance at the StoryMaps that are featured in Esri's example gallery demonstrates the utility of StoryMaps in a wide range of industries and disciplines including infrastructure planning and development, conservation, public health and safety, natural hazard risk management, as well as in the humanities and geography more generally.⁸ There is a limited number of articles that have been written about the effectiveness of StoryMaps for disseminating archaeological information (e.g. Howland et al. 2020; Alemy et al. 2017); however, more research has been done in other disciplines that demonstrates their effectiveness in communicating information and engaging with local communities (Antoniou et al. 2018; Cisneros et al. 2023; Cocal-Smith, Hinchliffe, and Petterson 2023; Oubennaceur et al. 2021; Pons Izquierdo 2023; Valentina et al. 2023).

To make use of all of the design features of StoryMaps, an ArcGIS Online “Creator” license is required with an additional cost for more “credits”; these “credits” determine the amount of cloud-space that is available to a user. Currently, in Canada, this license (which includes 500 credits) costs \$950/year, with an additional 1000 credits costing \$235. This cost is substantial and potentially cost-prohibitive for individuals that do not have access to a license through a business or institution (Howland et al. 2020, 353). However, upon comparison with other similar platforms, Howland et al. determine that StoryMaps are still “a superior choice over the available alternatives when economically viable” based on its visual appeal and functionality (353).

Based on my experience as well as some of the research that I have done on StoryMaps, I have found that the process of creating a StoryMap is very user-friendly and intuitive (Alemy et al. 2017; Malkowski and Klenke 2020, 178-179). Because the construction of a StoryMap does not require any knowledge of coding or website development, Howland et al. (2020) argue that the program is easy to use for any content creator or researcher (353). I believe that a prior understanding of how to efficiently upload, interrogate, and interpret geospatial data through ArcGIS is an asset in creating interactive maps that are relevant and contain multiple layers; however, overall, the process is generally straightforward, and the user interface is easily comprehensible.

Unfortunately, despite the various benefits of StoryMaps as a storytelling tool, there are some concerns with the longevity of the products. TII archaeologist Ken Hanley (pers. comm.) explained that StoryMaps are account-sensitive, making it difficult to edit or view statistics of StoryMaps if account details are lost or forgotten. Moreover, StoryMaps will only last as long as Esri decides to continue funding this service; as Ken Hanley pointed out, StoryMaps “will only

last as long as Esri maintain the service.” This could be problematic in the future as Hanley has identified a pattern over time where, “as web technologies advance, it becomes increasingly too costly for ESRI to maintain legacy formats.” While it is possible to ensure the preservation of the StoryMap text in printed form, this analogue format would not preserve the digital interactivity that is arguably the defining feature of StoryMaps. Fortunately, there are archaeologists who are working to address challenges of digital preservation such as this; Rónan Swan mentioned the SEADDA (Saving European Archaeology from the Digital Dark Age) group which is described as “a community of archaeologists and digital specialists working together to secure the future of archaeological data across Europe and beyond” (SEADDA 2024).

Overall, StoryMaps are a versatile, effective, and easy-to-use platform for a wide spectrum of users and in a wide range of disciplines and industries. While there are some concerns with the longevity of the platform as well as with the attainability of the cost for individual users, StoryMaps are generally practical and advantageous in terms of aesthetics, editability, and functionality.

StoryMaps for archaeologists

There are a number of characteristics that make StoryMaps an effective and powerful storytelling tool for archaeologists, particularly those who seek to embrace the role of a critically engaged storyteller and the Anishinaabe concept of *gikinawaabi*. To reiterate, this role requires archaeologists to create and share narratives based on their research that are captivating to the general public (like a storyteller) and collaborative (i.e. critically engaged), ultimately making archaeology more accessible, ethical, open to criticism, and inclusive of a plurality of perspectives. This requires a move beyond the “deficit model” of public archaeology to a

“multiple perspective model” that incorporates multivocality and reflexivity into archaeological interpretations. The main characteristics that make StoryMaps an effective tool for archaeologists are their accessibility to a wide public audience, their easy integration with current digital practices in archaeology, their editability, and their notable ability to engage with existing audiences.

General Accessibility

As an online product, StoryMaps are widely accessible to an international public audience. Bertemes and Biehl (2009, 180) discuss the use of the internet in archaeology stating that it allows archaeologists to “quickly and at low cost (or cost-free) produce and communicate archaeological knowledge to an international specialist community, schools and the interested public alike.” Wessex Archaeology and the archaeologists at TII also note the advantage of this online form of communication in reaching a worldwide audience. My own StoryMap is an illustration of their broad geographical reach as well: the majority of people who viewed it were located within a diverse geographical range across Canada, Ireland, and the US. Furthermore, it has been viewed by at least one user in twelve different countries, including some countries where English is the not primary language such as Mexico, Brazil, Lithuania, and the Philippines.

StoryMaps are also easily discoverable and free to view which helps to make them more accessible than other standard forms of published or unpublished literature in archaeology such as “grey” literature or journal articles; even if these forms of publication are available online, they are restricted because they often require a subscription/payment or have limited reach and recognition (Bertemes and Biehl 2009, 181). The significant number of views on the *Kingdom of*

Copper StoryMap in comparison to its associated journal article is an illustration of the superiority of StoryMaps for disseminating archaeological information to the public.

Furthermore, the average amount of views on TII StoryMaps is also noteworthy in the context of archaeological publications and demonstrates the wide discoverability of these products. In terms of the *Exploring Towerhouses* StoryMaps, it has achieved a relatively high level of discoverability: currently it is the seventh result of a Google search for the phrase “Isert Kelly Castle” and the sixteenth result of a Google search for the more general phrase “Irish towerhouses.”

Unfortunately, while StoryMaps and the internet are generally accessible to a wide-ranging audience, they are still inaccessible to some. Bertemes and Biehl (2009, 181) call attention to the Eurocentric perspective of digital archaeology that results from the lack of speedy and reliable internet access worldwide; Carol McDavid (2004, 164) makes a similar point about how large percentages of the groups that archaeologists want to reach via the internet are still “economically and technologically disenfranchised.” Howland et al. (2020, 357) further argue that this means that StoryMaps are targeted to “a disproportionately wealthy, English-speaking, and literate audience.” As a result, when creating an archaeological StoryMap, it is important to be conscious of the best practice for reaching local communities and stakeholders, particularly if these groups speak a different language than the StoryMap creator or have limited access to the internet; for example, the *Kingdom of Copper* StoryMap was made available in Arabic and it was in the creators’ plans to install a version of it in the local museum “in order to reach members of the local community without internet access in person” (Howland et al. 2020, 357). Overall, despite this weakness, it is fair to say that StoryMaps are largely accessible to a wide public audience.

Integration of Digital Archaeological Data

In the current digital age, tools such as GIS software, remote sensing technologies and 3D reconstruction through digital photogrammetry have become essential to the practice of archaeology. StoryMaps offer an effective way for archaeologists to integrate this digital data into their interpretations and communication with the public. It is important to integrate these digital datasets because they are informative and, more importantly for public outreach, they are engaging; Howland et al. (2020) argue that 3D data is significant in heightening audience immersion and providing “a bridge from textual storytelling,” with the interactivity of online maps also providing further opportunities for the audience to explore spatial data in more meaningful ways (354). Other projects also suggest the utility of 3D content as a tool for public engagement in archaeology (Williams et al. 2019; Sparrow et al. 2024). The effectiveness of digital datasets in engaging with the public can be seen through the data collected from my own StoryMap as well, as a number of the comments and feedback I received for it were specific in pointing out and praising the inclusion of a 3D model. Furthermore, a small number of highly invested viewers (~9%) engaged deeply with the interactive WebMap in the excavation section of my StoryMap, with each of these viewers clicking on it an average of nine times. Ideally, engagement with the map would come from a larger number of viewers; however, it is significant that the small number who did explore the WebMap further did so thoroughly.

Another form of digital interactivity that is useful to archaeologists and that can be integrated into StoryMaps is hypertext; Bertemes and Biehl (2009) define hypertext as text that allows readers to “click and move out of a text and search for references within a global network of information” (174). An example of this in a StoryMap would be the inclusion of internal and external hyperlinks within the text that allow the viewer to choose to seek further information about certain content. By allowing viewers to generate their own interpretations, follow their

own path through the data, and comment on archaeological research, Bertemes and Biehl argue that archaeological publications based in online hypertext environments facilitate multivocality (175), making them particularly useful for archaeologists that wish to be critically engaged storytellers. My own StoryMap included a total of eighteen hyperlinks within the text (five external, thirteen internal) as well as five additional external hyperlinks in the references and further reading list. Again, only a small number of viewers (~11%) engaged with the hyperlinks; however, this does not mean that this cannot be an effective way of engaging with a highly invested audience.

Editability

The ability to edit and add content to StoryMaps after they have been published without affecting the original URL is one of the most unique and valuable features of the platform. This is something that was discovered through the process of creating my own StoryMap; as outlined in the StoryMap Summary section, it was this feature that allowed me to revise the StoryMap after it was initially published, which was crucial to its factual accuracy. Other archaeologists have also recognized the practicality of this feature; for example, Wessex Archaeology notes the utility of this feature for when there are additional revisions or updates to make to the content (Wessex Archaeology 2020). TII Archaeologist Rónan Swan (pers. comm.) referred to their strength as “living documents” and Howland et al. (2020) also point out that it is beneficial that StoryMaps can be easily updated with additional research (353). As new information is constantly coming to light through continuous archaeological excavation, it is important for archaeologists to be able to share the most accurate and up-to-date information.

Additionally, Howland et al. remark on the effectiveness of StoryMaps in encouraging multivocality because of their easy adaptability; as a perpetual draft with no end product,

StoryMaps allow archaeologists to incorporate audience feedback and engage with the living heritage of local communities, ultimately moving beyond a “deficit-based learning model” (353, 357). The *Kingdom of Copper* StoryMap was successful in doing this by first eliciting feedback and questions through a comment box embedded in the StoryMap and then updating the StoryMap to reflect the responses. This is what Carol McDavid (2004) would refer to as adaptive interactivity: it allows users some measure of creative control because they are able to change the site in ways that are visible to other visitors (165). The ability of users to leave comments on various social media platforms and the comment box embedded in my own StoryMap are examples of functional interactivity: they allow users to give feedback, but the responses generally do not become a part of the web site’s content (165). Despite functional interactivity being slightly less inclusive and multivocal than adaptive interactivity, McDavid argues that both are important features of online products that allow archaeologists to make their research and the discipline more democratic (165-166). In this context, “democratic” archaeology is being defined as archaeology that is egalitarian and uncensored, allowing anybody to express their opinions equally and/or challenge archaeological and historical interpretations (164). Thus, for archaeologists who wish to embrace the role of a critically engaged storyteller, the editability of StoryMaps is particularly important.

Engagement with Existing Audiences

StoryMaps are particularly useful for engaging with existing audiences for archaeological projects such as local community members and stakeholders in the research. This is evident in the feedback and engagement I received on my own StoryMap (Figure 7): the majority of the engagement I received came from my personal Instagram and the GAFS Instagram post, likely because a large number of former field school students (who have a preexisting interest in the

site) follow these social media platforms. Notably, just over a quarter of the total comments that I received on my StoryMap came from former field school attendees and approximately 30% of the total likes came from the post shared on the GAFS Instagram page. The success of the *Sheffield Castle* StoryMap is also partially attributed to the already high level of public interest surrounding the site. Furthermore, the high number of views on TII StoryMaps illustrates the power of stakeholder and local community engagement as the archaeologists at TII are primarily focused on promoting them in venues that are accessible to these existing audiences rather than the more general public. For a critically engaged storyteller, this ability to engage with invested communities could be especially helpful for achieving multivocality as this facilitates the elicitation of feedback and stories from affected communities which can subsequently be incorporated into the StoryMap.

Unfortunately, however, it does not seem that StoryMaps are as successful in generating new public audiences for archaeological research. Following the findings of Stephen Bitgood's study on the ratio between value and audience engagement, I would argue that, because there is a high workload associated with reading through the StoryMap, users with only a moderate interest in the subject are less likely to engage with the content; this is reflected not only in the low average engagement time with both the *Exploring Towerhouses* and *Kingdom of Copper* StoryMaps but also in the small number of users who engaged with the interactive elements within my StoryMap, and the lack of feedback and engagement it received on social media platforms that were not directly connected to myself or the field school. For example, the *Exploring Towerhouses* StoryMap post on the Archaeology in Acadie Facebook page was less successful in garnering reactions and comments in comparison to other posts relating to archaeological research in Acadia and Nova Scotia, likely because there was less interest in the

subject matter. However, one comment on this page expressed interest in a digital tour of Acadia which illustrates the converse side of the relationship between interest and workload: when a person has a high interest in a certain subject matter, they are more likely to overlook a higher workload and engage further with an exhibit/StoryMap about that subject.

The interest/workload correlation is only one possible explanation for the lack of engagement, however, and it is possible that StoryMaps are not suitable for engaging the public with all archaeological sites and excavations. It may be that some subject matter is not well-suited to the medium or that the StoryMaps themselves are not engaging enough to the audience that is being targeted, whether that be due to a fault in how the StoryMap was designed or due to a lack of existing public interest for the subject matter. This potential weakness is indicative of the need for archaeologists to also employ various other forms of digital media for archaeological interpretation and presentation (e.g. short or long videos, social media posts, audiobooks, etc.) alongside StoryMaps to determine what medium is the most effective form of communication with their target audience. Rónan Swan at TII recognizes StoryMaps as only one method of dissemination, with other digital and traditional publications as well as audiobooks filling out their communication strategy. A similar sentiment was expressed by Karen Nichols at Wessex Archaeology; they use a variety of digital forms of dissemination, and it would seem that video is currently one of the most successful forms of media as, for example, the videos created by Wessex Archaeology receive a considerable number of views. In this case, it also does not appear that a high workload/length inhibits engagement; contrarily, Karen Nichols stated that videos are the most successful especially if they are a “longer form in depth documentary, that include a well-known personality.” Ultimately, despite their potential weakness when used alone, it is clear that StoryMaps can be a strong addition to a broader dissemination strategy when used

in conjunction with a diversity of digital media in order to reach the widest possible public audience. Furthermore, because they are particularly suited to reaching existing audiences, they give archaeologists the opportunity to engage more critically with those who have a vested interest in the research such as local communities and key stakeholders.

In order to better disseminate the information about the archaeological excavations at Isert Kelly Castle and garner greater public interest and engagement, I believe it would be beneficial to generate more pieces of digital data (e.g. 3D models) and other forms of digital media (e.g. videos) as well. This could include the creation of more widely accessible 3D models of the castle or the trenches themselves as well as weekly or bi-weekly video updates about the work that is being done on site. Not only could these pieces of content easily be shared on social media to inform anyone with an interest in the site, but they could also be incorporated into the StoryMap to make it more engaging and interactive. In terms of making a StoryMap about Isert Kelly that is more multivocal, it would be interesting to make a concerted effort to gather and incorporate information or stories about the site from the local community (e.g. Galway heritage enthusiasts, the local farmers) and/or to conduct interviews with the field school students and supervisors as well as Dr. Sherlock that could then be added into the StoryMap as sound bytes or videos.

Value of StoryMaps for the public

Based on the feedback that I received on my StoryMap, the public view these types of projects as valuable for a number of reasons including for their educational capability as well as their ability to help reinforce an already existing personal connection with the site or provoke reflection about heritage and identity. Unfortunately, considering the lack of meaningful feedback, critique or stories that could be added to the StoryMap, it seems that people do not

necessarily view StoryMaps as a place to share their voice and opinions currently. However, StoryMaps still have potential in the future for incorporating multivocality into archaeology through conversations with local communities and/or the creation of a co-authored project.

Educational value

From the feedback and comments that I have received on my StoryMap, I have found that many people seem to primarily engage with and recognize the educational value of this type of archaeological content. Across the social media platforms, three commenters specifically expressed this by saying that they “learned a lot”; furthermore, one of the comments left through the comment box embedded in the StoryMap said that it was “so educational and interactive.” These observations align with the results of a public survey project (NEARCH) conducted in 2015 in nine European countries, as the study revealed that the public believes that the ability of archaeology to produce knowledge and educate is its primary role and benefit to society (Dries 2021; Kajda et al. 2018, 100). StoryMaps are thus a valuable tool for archaeologists looking to meet this educational expectation by disseminating archaeological information in an innovative and engaging way.

Personal connection value

I also found that nostalgia and/or a personal connection to the site was likely an important motivating factor for some of the engagement that I received; over 50% of the people who commented on my personal Instagram post and the official GAFS Instagram post were former students of the field school. One of the comments stated that the StoryMap was “a great way to

revisit the site” while another also said that they were excited to “take a look after work today and reminisce.” Additionally, there was one person who viewed the StoryMap and chose to engage with it further out of personal interest. I received an email from this person asking about the origins of the name “Isert Kelly” as they have a connection to the Irish surname “Kelly” and have been attempting to locate distant relatives who still live in Ireland through genealogy research in recent years. Although this archaeological site and my StoryMap do not necessarily help to directly connect this person with these relatives, I think it is significant that they wished to engage more deeply with the information that they were provided. It is perhaps indicative of the power that publicly sharing archaeological information can have in encouraging self-realization and community building; supporting this point, Kajda et al. (2018) suggest that, based on the responses from the NEARCH survey, “the importance of archaeology stems from how it relates to identity” and that it has a “strong link with the legitimization of one’s presence in a place” (103). However, Monique van den Dries (2021) found that “the respondents to the NEARCH survey did not demonstrate a strong *personal* connection with archaeology” as only 54% said that archaeology is a field for which they have a personal attachment. More research into this subject would be helpful in revealing whether or not this is an important motivating factor in the public’s decision to engage with archaeology. Regardless, it seems that StoryMaps are a useful way of reinforcing an already existing personal connection with archaeological research or provoking reflection about heritage and identity.

Value as a venue for multivocality

Unfortunately, considering that the comments on my StoryMap lack critical feedback and/or personal stories or interpretations, it seems that the public do not necessarily view

StoryMaps as a place to share their voice and opinions. I believe that this is likely the result of a perceived separation between the “experts” and the general public that gives authority to the singular authorial voice of the archaeologist. Bertemes and Biehl (2009) suggest that archaeologists often adopt the role of “educational gatekeeper” as “the intellectual control over the informational core of the recording, its catalogue of objects and relations, has largely remained in the hands of the of elite experts” (178). The NEARCH survey reveals that this view of archaeology as the work of academic experts is pervasive in public opinion as well: 73% of respondents indicated that they believe that archaeological research is mainly carried out by staff members of universities, museums or public research institutes (Dries 2021). This is disappointing, as I believe that it is important for archaeologists to adopt a pluralist approach to archaeology that recognizes a diversity of beliefs about the past.

However, despite public perceptions of the archaeology as the work of experts, the NEARCH survey also indicates that people are interested in getting more involved in archaeological research: 85% indicated that they wanted greater involvement in archaeology through visiting sites, 62% wanted to meet archaeologists to better understand archaeology’s usefulness for their local community, and 61% wanted to take part in excavations (Kajda et al. 2018, 107). It seems that the desire to get more involved in archaeological research is there; it is thus the responsibility of archaeologists (as critically engaged storytellers) to foster an inclusive archaeological environment that encourages multivocality, recognizes a diversity of perspectives, and provides more opportunities to engage in archaeological projects (Kajda et al. 2018, 109). StoryMaps have the potential to help archaeologists fulfil these responsibilities. As demonstrated above, the editability of StoryMaps allows archaeologists to encourage multivocality by directly eliciting feedback from local communities and key stakeholders and then subsequently updating

the StoryMap in light of the responses; when other perspectives are included, the project ceases to reflect a single authorial voice and becomes multivocal. Following the example of the archaeology and heritage sector at TII, one could create a StoryMap that is co-authored with a local community in order to incorporate public perspectives as well.

To be more successful in eliciting feedback and perspectives from the public that can be integrated into a StoryMap, archaeologists should look for venues that directly reach these communities. I believe that social media has great potential for this type of engagement, however, my own StoryMap is not necessarily a great illustration of that. It may be necessary to be more intentional in asking for feedback and other additional information. It is also likely that a larger platform or a more contentious subject matter would result in more responses. However, despite these possible improvements, it seems that StoryMaps have great potential value for the public as a venue for multivocality.

Conclusion

Archaeologists have a responsibility to communicate the findings of their research with the public. Unfortunately, it has not yet necessarily become common practice for archaeologists to do so in ways that are easily accessible, engaging, and inclusive of the perspective of local communities and key stakeholders; I argue that this has led to a communication breakdown between archaeologists and the public they seek to serve. In order for the discipline of archaeology to become more inclusive and relevant to the broader society, archaeologists need to find a way to bridge this gap.

In this thesis, I have argued that the digital storytelling tool ArcGIS StoryMaps offers a new methodology for effectively communicating archaeological information in an inclusive and engaging way. Further, I have argued that this is a useful tool for those archaeologists who seek to embrace the role of a “critically engaged storyteller”; rooted in the approaches of Indigenous archaeology, the “multiple perspective model” of public archaeology, and the post-processual concept of multivocality, this role requires archaeologists to create and share narratives based on their research that are captivating to the general public (like a storyteller) and collaborative (i.e. critically engaged), ultimately making archaeology more accessible, ethical, open to criticism, and inclusive of a plurality of perspectives. In order to demonstrate the use of StoryMaps as tool for archaeologists and critically engaged storytellers I collected and analysed data that relates to the creation and dissemination of my own StoryMap as well as the dissemination of other archaeological StoryMaps within different sectors of the discipline.

My own StoryMap entitled *Exploring Towerhouses: Archaeological Excavations at Isert Kelly Castle* was based on my personal experience with the excavations that are taking place at Isert Kelly Castle through the Galway Archaeological Field School. The creation and subsequent

dissemination of this StoryMap on various social media platforms (related to myself, the field school, or archaeology and Ireland more generally) generated social media engagement data (e.g. likes, comments, shares) and other pieces of quantitative and metadata that were gathered through Google Analytics; considered together, this data revealed a number of advantages of StoryMaps, as well as some areas for improvement with projects similar to this. This data was also supplemented by the information that I gathered through personal communication with three other archaeological groups/individuals that have made use of StoryMaps including Dr. Matthew Howland, Karen Nichols at Wessex Archaeology, and the Transport Infrastructure Ireland (TII) archaeologists Rónan Swan and Ken Hanley.

Based on this research, I have uncovered a number of characteristics that make StoryMaps a valuable tool for communicating archaeological information with the public as well as its perceived value in the eyes of the public themselves. The main characteristics that make StoryMaps a useful tool for archaeologists are their accessibility to a wide public audience, their easy integration with current digital practices in archaeology, their editability, and their notable ability to engage with existing audiences. In particular, the feature allowing you to edit and republish the StoryMap to the same URL is valuable for incorporating multivocality into archaeological interpretation, though it was demonstrated through the lack of feedback on my own StoryMap that a concentrated effort needs to be made in order to elicit feedback and interpretations from the public. Fortunately, because StoryMaps engage so well with audiences that already have a vested interest in archaeological research, it should be possible to gain insight into the perspectives of local communities and stakeholders by directly engaging with these groups through forums for discussion like social media and/or embedded comment boxes in the StoryMap; the *Kingdom of Copper* StoryMap is an illustration of this. Furthermore, StoryMaps

could be co-authored by archaeologists and the local community, producing a project that is collaborative and multivocal; in this way, StoryMaps become valuable as a venue for multivocality for the public that is seeking to get more involved in archaeological research. Additionally, StoryMaps seem to have value for the public as educational tools and as a way to reinforce an already existing personal connection with archaeological research or provoke reflection about heritage and identity.

However, StoryMaps are not the ultimate answer for the dissemination of all archaeological sites. Archaeologists who seek to engage with the widest public audience should ideally use StoryMaps in conjunction with other forms of digital media and communication (e.g. eBooks, audiobooks, video, and animation) as the high workload involved in reading a StoryMap requires viewers to have a relatively high level of interest in the subject matter. Additionally, Indigenous archaeologist Sonya Atalay (2008) calls for multivocality to go beyond the level of interpretation in archaeology; she argues that multivocality is a critical component in all aspects of archaeological research including “developing the research design, asking research questions, funding projects, sharing the knowledge that is created with a wider community (knowledge stewardship), and overall heritage management” (36). Moving forward, this is important for archaeologists as critically engaged storytellers to keep in mind in order to make the discipline as democratic and inclusive as possible. Regardless, however, ArcGIS StoryMaps are a valuable addition to the toolkit of any archaeologist and critically engaged storyteller, offering an innovative, engaging, and accessible way to integrate digital archaeological data into interpretation as well as collaborate with local communities and key stakeholders.

Notes

¹ *Exploring Towerhouses: Archaeological Excavations at Isert Kelly Castle* StoryMap: <https://arcg.is/lia14y>.

² Galway County Heritage trails collection: <https://storymaps.arcgis.com/collections/72fe361f467444428fb4b36234999120>

³ In the journal *Medieval Archaeology*, the fifth most viewed article of all time (“Burial in Early Medieval Scotland: New Questions”) has a comparable 5,582 views (<https://www.tandfonline.com/action/showMostReadArticles?journalCode=ymed20>). In the journal *Public Archaeology*, the third most viewed article of all time (“Contemporary Cultural Heritage and Tourism: Development Issues and Emerging Trends”) also has a comparable 5,446 views (<https://www.tandfonline.com/action/showMostReadArticles?journalCode=ypua20>).

⁴ In the journal *Medieval Archaeology*, the fourth most viewed article in the last year (“Late-Medieval Animal Remains in Grave-Like Pits: A Case Study of Rituals in 15th-Century Finland”) has less views than my StoryMap with 227. In the journal *World Archaeology*, the sixth most viewed article in the last year (“Making dolia and dolium makers”) also has less views with 285 (<https://www.tandfonline.com/action/showMostReadArticles?journalCode=rwar20>). In the journal *Public Archaeology*, the fifth most viewed article in the last year (“Heritage under Siege: The Case of Gaza and a Mysterious Apollo”) has less views with 185.

⁵ Sheffield Castle excavations video playlist: https://www.youtube.com/playlist?list=PLahO83m3ZEORjuXb_EX1kTZxmjrgFg0HK

⁶ Excavations at IK Castle video: <https://www.youtube.com/watch?v=nZkfrNztPGg>

⁷ Buttevant Heritage Trail audiobook: <https://www.abartaheritage.ie/buttevant-heritage-trail/>.

⁸ Esri StoryMaps Gallery: <https://doc.arcgis.com/en/arcgis-storymaps/gallery/>

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