Locative Gaming, Folk Geographies, and the Experience of Cultural Heritage[1]

Anthony Bak Buccitelli
The Pennsylvania State University
Harrisburg, USA

Abstract

Folklorists and ethnologists have increasingly begun to take notice of the ways in which digital technologies are playing a central role in the creation of contemporary vernacular understandings of space and place (for example, McNeil 2007; 2012; Buccitelli 2013). Yet, like the digital spaces in which much of contemporary folklore is being performed, the possibilities and constraints of the different technological platforms through which these folk geographies are taking shape have not been fully explored. This paper will begin this exploration by comparing the spatial practices of "geocaching" to those involved in the augmented reality game Ingress. In particular, the paper will focus on the ways in which each community of participants establishes important geographic sites in play, with particular attention to how Niantic Inc., a former Google subsidiary and the makers of Ingress, structures and defines spatialized notions of cultural heritage for its players.

Of Portals and Places

In early 2012, the National Intelligence Agency assembled a special team at the European nuclear agency CERN to begin investigating a newly discovered form of matter, known as exotic matter or XM, which had come to light in the wake of the recent discovery of the Higgs-Boson particle. This project, which was named the "Niantic Project," was composed of two NIA agents and eleven subject experts. Along with five scientists, mainly physicists, the team included a semiotician, a theologian, a musician, a sculptor, a stage magician, and Hank Johnson, an archeologist, historian, and "former special forces operative." Through their study, this team determined three things. First, they were able to isolate a pattern in the emission of XM that suggested something like intelligent communication: someone or something, they concluded, was trying to communicate through the patterned pulsation of these particles. Second, that the emission of XM particles was happening on a much larger scale than they had initially supposed. As they studied the phenomenon in greater depth, they began to see that XM particles could be found on a global scale. Yet there too, they found patterns. The particle emissions were "clustered around key sites, places of cultural, intellectual, and religious significance around the world." Finally, they also determined that exposure to XM particles had a very specific effect on human mental function. It "seemed to increase intellectual ability, creativity, and insight in some, but brought out darker aspects of the personality in others" (Niantic Labs 2013).

On November 30th, now known as "Epiphany Night", everything changed. The Niantic

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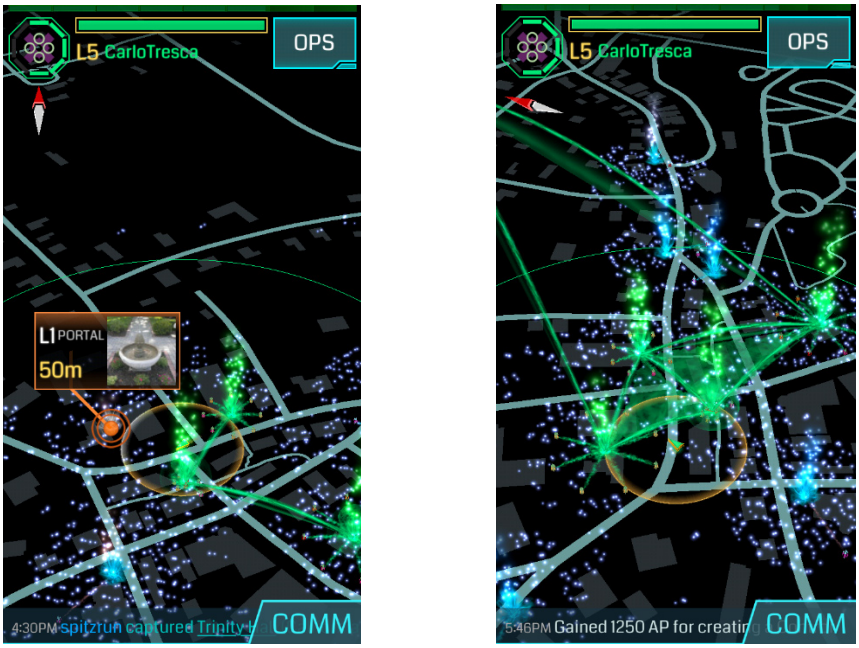
> lab at CERN was exposed to a massive dose of XM radiation, sending the researchers into frenzied bouts of creativity, like Enoch Dalby's musical compositions. Whatever the researchers saw that night irreparably splintered the team: some researchers went on to work for Hulong Transglobal, IQTech, and Visur Technology, while others (like Roland Jarvis) ended up dead. The schism of the team was due in large part to philosophical differences about the true purpose of XM, exacerbated by their exposure to massive quantities of XM through Epiphany Night. To the team members who went on to became the core of the Enlightened faction, the Shaper's influence on sensitive individuals through XM was viewed as the next step in human evolution. For the team members who chose the path of greatest Resistance, the Shaper's influence was in XM [and] was deemed a "Shaper Mind Virus" that must be countered (Andersen 2014).[2]

This is the setting backstory for the 2013 release of the locative augmented reality game *Ingress*. Created by Niantic, a software development company that began as a subdivision of Google in 2010, the game is played primarily using a GPS-enabled application downloaded on to a user's mobile phone.[3] During initial set-up, the player must choose to embrace one of two "factions" in the game, the blue-themed "Resistance" or the green-themed "Enlightened." Depending on the player's chosen faction, s/he will receive specially-tailored information about the "Shapers," the mysterious intelligent beings who are thought to be responsible for the emission of XM. In a nutshell, Resistance members receive information which suggests that the Shapers are an invading alien force, while the Enlightened receive information suggesting that the Shapers are a race of saviors, who are coming to bestow knowledge and meaning upon human life. Regardless of the factional information a player receives, however, gameplay is the same for both factions. The objects of play include taking and defending control of "portals," sites in the physical world from which XM is emitted, and creating "links" and "fields" between portals, XM connections that strengthen the energy and value of portals.

In a certain way then, as it is described in some of Niantic's promotional materials, *Ingress* is a giant digital game of capture the flag. Players must use their mobile devices to locate portals, which are keyed to specific physical sites that can only be accessed once a player is in physical proximity. Then they use their XM weaponry to attack and take control of the portal in the name of the faction. While the game can be played anywhere in the physical world, in-game social groups tend to form around physical areas: counties, cities, or neighborhoods might each have their own Resistance or Enlightened player groups who will work together to take and defend portals, exchange supplies, and create higher-scoring links and fields across larger physical territories.

While folklorists and ethnologists, following Robert Glenn Howard, have already begun to explore the dynamics of institutional-vernacular hybridization in digital spaces (Howard 2008a; 2008b; 2010), it is useful to consider how these dynamics, in turn, structure our everyday cultural understandings of the physical world.[4] There is an important dimension of the *Ingress* platform that suggests this further approach to the study of locative media that is relevant to folklorists and ethnologists: it does not



Figures 1 and 2. The *Ingress* user interface showing the "Pineapple Fountain" portal and two Enlightened "fields," or three-point links between controlled portals, located in Hingham, MA.

just allow access to users who can construct and experience spatialized knowledge through their own annotations and interactions, but it also actively constructs a user experience of localized spatial knowledge. For instance, Robbie Campbell, a 29 year-old restaurant manager from Beaumont, TX told a reporter for National Public Radio in 2014:

> "I'm from a relatively small town. I was born there. And I didn't know until I started playing this game that Thomas Edison actually came to Beaumont and turned on the first generator to power the first electric lights," he says. Campbell found out this history "at a museum that is a portal that I never knew existed before I played this game" (Sydell 2014).

While the role that these games play in shaping user experience of space is perhaps currently most pronounced in *Ingress*, it is a tacit feature of all locative media platforms, especially games.[5] Inasmuch as *Ingress* and other platforms shape user experience with physical spaces in very specific ways, then, I want to suggest that we might usefully consider these games not just through the vehicle of individual user experience but also as spatial "regimes," value-encoded systems of power that play out in the individualized user's experience of space and place.[6] In other words, we must consider the role that augmented reality games, as well as other kinds of locative media, play in setting up the everyday conditions under which users encounter and come to understand spaces and places, how these technologies allow users to shape

those experiences, and how users respond to the conditions set forth in these platforms. Along the lines of the Michel de Certeau's dualization of urban space, I am proposing that we consider not just the vernacular tactics of interaction that are facilitated by locative media applications, but also the institutional forces that strategically structure how users encounter the physical world (de Certeau 1984, 91-110).

In order to do so, this article examines two main examples of digital applications that augment or annotate reality to guide users to specific sites as part of a game: *Ingress* and *Geocaching*. An application that facilitates the practice of "geocaching," a pastime which relies of GPS technology but built on much older traditions of spatial gaming (McNeil 2007), *Geocaching* is a popular mobile phone app. The app allows users to upload information relevant to finding cache sites, as well as a variety of other kinds of user-defined information and discourse. Although in very different configurations, both programs lay out an in-game geography of sites in the physical world through the means of a mobile application that users can access to guide them through physical space. Furthermore, to a greater or lesser degree, each application allows users to take part in the process of geographic construction. Both games also lay out clear but tacit official systems to control how in-game geography is defined and how users can interact with, edit, or construct this geography. These systems fuse together the pragmatics of gameplay with certain governing ideologies that shape user experience of space and place in the context of each game. In the case of *Ingress*, the corporate, legal, and pragmatic elements that are encoded into the game's basic design are cloaked by a larger narrative which proposes the game as access to a very specific kind of spatialized experience: the experience of cultural heritage. By contrast, the *Geocaching* app, less rigidly but still importantly structured by ideology, presents a user experience less defined by narrative, and therefore somewhat more open to the imposition of vernacular values and knowledge on to in-game geography. The argument presented in this essay, while instantiated in the analysis of these two platforms, is not married to any single device, platform, or software version, however. These two apps have been chosen for analysis only because they represent two popular but somewhat different systems for shaping user experience with space and place, or with the concept of cultural heritage. In exposing these differences, I am not intending to criticize or praise either platform; I simply wish to show the ways in which different configurations in the hybrid structures of digital technology, invested as they are with the pragmatic, legal, or corporate concerns of technology companies, quietly overlay physical spaces with cultural value systems.

Because locative augmented reality games like *Ingress*, games that employ GPS technology to overlay gameplay onto physical spaces, necessarily require users to move through physical spaces to engage in gameplay, they must make use of what Marc Tuters and Kazys Varnelis have called the "annotative" function of locative media (Tuters and Varnelis 2006). In other words, they tag digital information to physical spaces that can be accessed by users at later times, in this case, generally as they come into proximity to the physical site. As a quick illustration that will be fleshed out later, the information annotated to physical sites in *Ingress* is generally minimal;

along with game-related information about the control and modification of the portal by other players, the user will generally find at least one picture of the portal site and a short description of it. Yet, aside from the value players locate in the gameplay itself, it has been widely noted in the press that players value the game's requirement to visit physical sites. This value stems not from the digital annotations they find there, but rather because they are forced to experience physical spaces and to interact with others in order to play. For instance, *LifeHacker* writer Alan Henry noted in a June 2015 piece on his experience with *Ingress*:

> I've met people for whom Ingress is their primary source of interaction with others. I've met people who are disabled and use the game to find a community they can get involved with, and people who are socially anxious and prefer to talk through text long before meeting people in person. I've met people who have lost weight thanks to all of the walking they do while playing Ingress. I've met people who used to never get out of the house (much like me) until they started playing. When I say it takes all kinds, I mean it, and I've found a welcoming, extremely diverse community that I don't feel strange or alone being a part of. If you stick with it, I'll bet you will too (Henry 2015).

These functions, especially the emphasis on the actualized experience of physical spaces, are not incidental. They are intentional features of the game, as it was originally envisioned by Niantic's designers. The head of Niantic, John Hanke has explained, for example, that in building the application, "[w]e wanted to experiment with this idea that you could use technology and mobile apps to get people more deeply in touch with the real world instead of the opposite—instead of people tuning out the real world and focusing only on their technology" (Sydell 2014). Indeed, this kind of conscious opening up to the physical spaces around a person is hinted at in the game's tag line: "The world around you is not what it seems."

Yet as the tagline also suggests, the game's aesthetic features don't simply aim to promote getting users off their computers and out-of-doors but also to actively shape their experiences in the spaces they traverse. "Ingress offers you a totally new experience of your city," writes Louise Beltung, "where you traverse your city for hours on end with smartphone users who were complete strangers only moments ago, making public space into your playing field—climbing the Ingress hierarchy, level by level" (Beltzung 2015). This "totally new experience" of the city (or town or county, for there is suburban and rural play of *Ingress* as well), of course, isn't all that new in technological terms. Indeed locative media scholar Adrianna de Souza e Silva wrote of these technologies in 2004 that they had become "tools for creating novel and unpredictable imaginary spaces, re-narrating cities" (de Souza e Silva 2004a, 1). More recently in 2013, I made a case for closer folkloristic attention to the ways in which the process described by de Souza e Silva interacts with our previous understanding of folk geographies, culturally constructed maps or landscapes with resonance in specific folk groups. I also suggested that the boundaries of relevant cultural categories, such as locality, or folk groups, such as residents of a specific neighborhood, may be changing significantly as a result of the changing conditions of access to both folk geographic

knowledge and local social interaction (Buccitelli 2013).[7] What follows is a reversal of focus from this previous work. Instead of centering on the creation, creative expansion, or alteration of folk geographies through the integration and use of locative media in vernacular life, this essay exposes the strategic structures encountered.

The Shapers of a Heritage Geography

In the case of *Ingress*, the most operative knowledges in the game are not necessarily those of the "local" or the "vernacular" but of something very like what folklorists and ethnologist might call "heritage." [8] Robert Shannan Peckham has outlined a useful distinction within this concept. Peckham observes that:

> For most people today 'heritage' carries two related sets of meanings. On the one hand, it is associated with tourism and with sites of historical interest that have been preserved for the nation. Heritage designates those institutions involved in the celebration, management and maintenance of material objects, landscapes, monuments and buildings that reflect the nation's past. On the other hand, it is used to describe a set of shared values and collective memories; it betokens inherited customs and a sense of accumulated communal experiences that are construed as a 'birthright' and are expressed in distinct languages and through other cultural performances (Peckham 2003, 1).

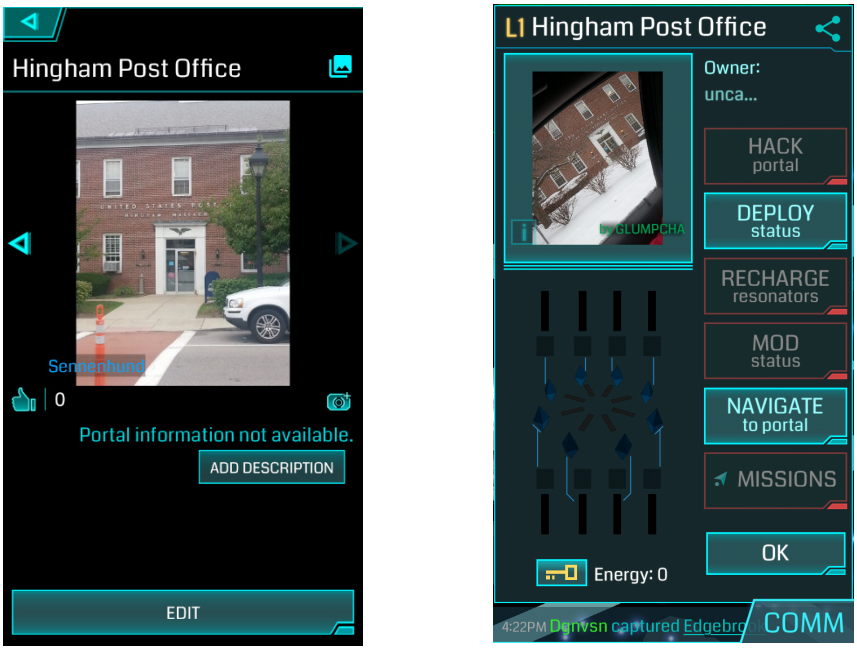
Peckham's distinction sits at the heart of the tension in how games like *Ingress* construct heritage geographies. Portals, you will recall, are not simply local landmarks or sites of import to specific communities, but rather are "clustered around key sites, places of cultural, intellectual, and religious significance around the world." In other words, they are sites of human heritage, though more like those described in Peckham's first definition than his second. For, as Robbie Campbell's statement shows, these different senses of heritage knowledge can be mutually exclusive. Campbell, born in Beaumont and living there, is unaware that all this time a heritage site has been sitting right under his nose. Without *Ingress*, he implies, he may never have known about Beaumont's connection to Edison; it is simply not part of his personal or social "conceptual map" (Tangherlini 1999; 2001; Buccitelli 2013).[9] And here we find the crux of *Ingress*'s proposed user experience exposed. By guiding users to specific sites that are understood through the aesthetic construct of the game to be sites of human cultural importance, *Ingress* requires its users to engage in the sensory experience of what it proposes to be their own heritage. As Deborah Kapchan, following Kathleen Stewart and Laurajane Smith, has pointed out:

> ..."[P]ower is a thing of the senses" (Stewart 2007:84). The performance of heritage, the actual embodiment of heritage – in festivals, dances, historic recreations, interactive museum exhibits, storytelling, music listening and production – thus takes on political force. For insofar as performances inculcate identity through mimesis and repetition, evoking and creating memories henceforth associated with heritage, the heritage event creates the very body of the "inheritee," transforming the social sensorium in

> the process...heritage events are 'not only physical experiences of 'doing,' but also emotional experiences of 'being'' (L. Smith 2006: 71). (Kapchan 2014, 18-19).

In other words, by laying out *Ingress* as a geography of human heritage, Niantic Labs is constructing a certain politics of heritage for its users as well, shaping their understandings of what is and is not part of this heritage and asking them to embody this knowledge through performance, that is, by visiting and interacting with these physical sites.

Yet, notably, I have encountered nothing to suggest that Niantic (or Google) is particularly interested in adjudicating in matters of heritage *per se*. It is perhaps for this reason, and the more generalized user-experience design logic of "crowdsourcing", that *Ingress* portals, at least after the platform's initial launch, have often been user defined.



Figures 3 and 4. *Ingress* interface showing the information available about a portal. The post office image featured in figure 3 is clearly taken from the window of a vehicle. The image in figure 4 was taken from the sidewalk across the street.

Niantic developed a procedure for players to submit new portals that could be added to the digital geography of the game as sites that emit XM and which can be controlled by factional players. At the same time, the construction of this procedure reveals some of the ways in which Niantic seeks to establish a *de facto* heritage geography for its users. Interestingly, as well, these guidelines have shifted over time, and without much, if any, publicity by Niantic/Google. Here is a synthesized version of these criteria as they appeared on the *Ingress* website in the spring of 2015 and later in June 2015:

Well since you asked, we've developed these criteria to help you understand what we consider to be a great Portal and to give more insight into how we evaluate new candidates. Please keep in mind that the following criteria apply to new Portal candidates, but are not necessarily retroactively applied to existing Portals.

ACCEPTANCE CRITERIA

High-quality Portal candidates are those that help Agents discover and enjoy their community, such as:

- **A LOCATION WITH A COOL STORY, A PLACE IN HISTORY OR EDUCATIONAL VALUE**
  - Interesting story behind the location/object
  - Historical significance (apart from just being old)
  - Historical sites and markers
- **A COOL PIECE OF ART OR UNIQUE ARCHITECTURE**
  - Statues, paintings, mosaics, light installations, etc.
  - Venues that showcase fine art (e.g., performance art theaters and museums)
  - Buildings designed by renowned architects/ structures famous specifically for their architecture
- **A HIDDEN GEM OR HYPER-LOCAL SPOT**
  - A popular local spot that you would take a friend visiting your community for the first time
  - A popular spot where locals gather, but may be lesser-known outside the community
  - Tourist spots that showcase local flavor and culture and that make your city/neighborhood unique
  - More off-the-beaten-path tourist attractions (i.e., if you weren't a local, you wouldn't necessarily know to go here)
  - Adventurous tourist attractions - think lookout towers, observatories, signs or markers atop mountain peaks, etc.
- **A COMMUNITY GATHERING PLACE**
  - Somewhere where members of the city/town gather to socialize or impact the community
  - A local hangout where people gather, talk spend time together.
- **A POINT OF INTEREST THAT FACILITATES DISCOVERY/EXERCISE**
  - Promotes the idea of "Adventures on foot"
  - Encourages outdoor exploration

SPECIAL NOD CANDIDATES

Why are many transit stations and post offices Portals if they don't seem to meet the acceptance criteria?

In addition to using the above acceptance criteria, we often add candidates that are a special nod to industries and networks that connect people around the world, just as Ingress connects Agents around the world. These include:

- **PUBLIC LIBRARIES**
  - A nod to education and discovery, cornerstones of Niantic & Ingress
  - Includes little free libraries, provided they are not on private residential property; does not include mobile libraries
- **STAND-ALONE POST OFFICES**
  - A nod to the postal industry as a powerful system that connects the entire world
  - Does not include contract post offices
- **TRANSIT STATIONS**
  - A nod to the transportation industry, which also connects and unites people around the world
  - Includes larger transit hubs, but not necessarily every stop along a transit route.
- **PUBLIC PLACES OF WORSHIP**
  - A nod to the other worldly, which is integral to the story of Ingress

Taking a clear, bright photo for your submission that shows the subject and its surroundings helps us more easily determine if the candidate meets our acceptance criteria and confirm it is physically located in the suggested location.

However, *candidates do not necessarily have to be visually impressive to meet our acceptance criteria*.

Similarly, while descriptions are not required, they are highly encouraged, and they often provide context and help us more clearly understand how your candidate meets the acceptance criteria.

MOST LIKELY REJECTED

This is a non-exhaustive list of Portal candidates that, in general, are rejected, but for which we make some very specific exceptions. Candidates listed here may be rejected even if they meet the acceptance criteria listed above.

We generally reject candidates on the grounds of:

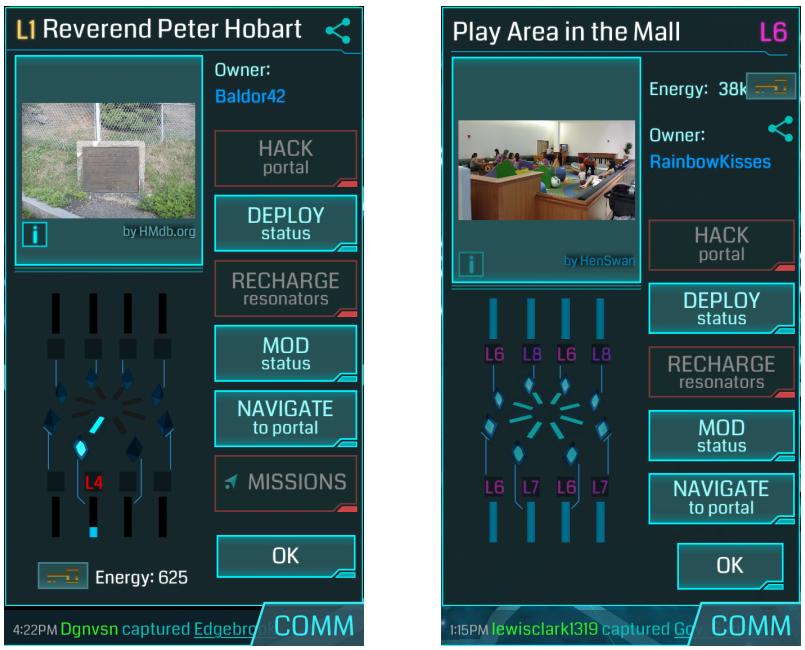
- **PRIMARY/SECONDARY SCHOOLS**
  - Exceptions for art that is accessible from a public sidewalk
- **FIRE STATIONS, POLICE STATIONS AND HOSPITALS**
  - Exceptions for candidates that meet the acceptance criteria and don't interfere with operations of the facility.
- **PRIVATE RESIDENTIAL PROPERTY** (including farms)

PLEASE DON'T SUBMIT

Please refrain from submitting these candidates, as reviewing these submissions slows down the process for everyone.

- Candidates in locations with NO SAFE PEDESTRIAN ACCESS.
- Candidates of PEOPLE, BODY PARTS, LIVE ANIMALS, etc.; please, just don't.
- Candidates that are NATURAL FEATURES (Includes pictures of landscapes as well as submissions where the subject is a lake, river, stream, mountain, volcano, waterfall, etc.; does not include man-made points of interest - plaques, signs, etc. - near natural features).
- Candidates that are NOT PERMANENT, including SEASONAL DISPLAYS that are only put up during certain times of the year.
- Candidates submitted with a PHOTO THAT YOU DID NOT TAKE YOURSELF (i.e., pulled from a third-party source); these will be rejected even if the candidate itself meets acceptance criteria or is on the list of things we generally accept.
- Candidates on PRIVATE RESIDENTIAL PROPERTY (including farms)
- Candidates that may interfere with the operations of FIRE STATIONS, POLICE STATIONS AND HOSPITALS
- Candidates on the grounds of PRIMARY/SECONDARY SCHOOLS[10]

While some of the changes to these guidelines that took place in the period of this study, such as the shuffling around of paragraphs here or there, or the merging of "most likely rejected" and the "please don't submit" categories, are not especially telling, others more clearly demonstrate Niantic's careful concern for the placement of portals. For instance, Niantic deleted of several large categories of sites (Post offices, transit stations, community gathering places, points of interest/discovery) and the removed of the criterion that portal candidates fall into two or more categories. Both of these alterations represent fairly substantial changes to what can be considered, in playable terms "places of cultural, intellectual, and religious significance."



Figures 5. shows a portal listing for a plaque commemorating the landing of the Rev. Peter Hobart and the founding settlers of Hingham, MA in 1635. The plaque was placed on this location by the Daughters of the American Revolution in 1913. Figure 6 shows the portal listing for a children's play structure at a shopping mall.

Moreover, even in the guidelines that remained consistent, there were some interesting elaborations on how Niantic constructs its geography of human heritage. For instance, we might note that "natural features" are excluded from the criteria for portal creation, unless, of course, they have been marked in some way by a plaque or sign, a criterion that suggests that while a wide variety of other human made structures might count in this geography, natural features only do so insofar as they have been assimilated by tourism or heritage industries or governmental entities, of the kind that might be responsible for placing a marker or plaque at the site. In fact, as Niantic quietly notes elsewhere in its criteria, many of its original portals were identified not by players or designers but by the Historical Markers Database, a site that tracks and maps recognized historic landmarks.

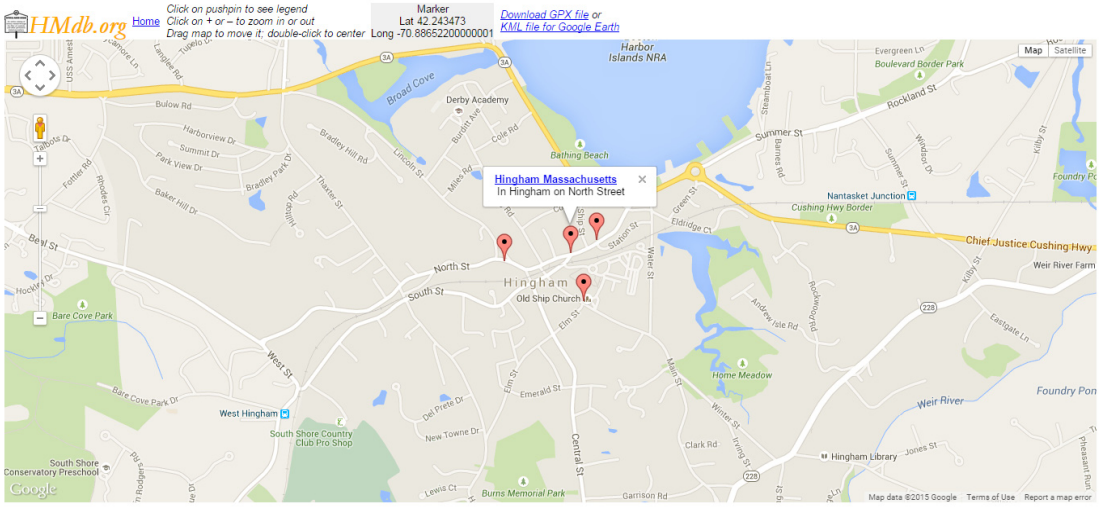


Figure 7. shows the map interface of the Historical Markers Database for Hingham, MA.

Similarly, as folklorists should be especially cognizant of, the prohibition on impermanent "displays" also excludes what we might call intangible culture, unless perhaps such heritage practices have generated a permanent physical site, such as a fairground, workshop, or theater, again structures of the kind that might be generated by the institutionalization of cultural practices into "intangible cultural heritage" (ICH). We should note as well that this rule also excludes even tangible culture that has a temporary duration or presence in a particular area.

Meanwhile, along with the negative encoding of values through prohibition, we also find articulations of several positive values, though some of these were eliminated during the changes instituted by June 2015. For instance, portals are encouraged at sites that promote "outdoor exploration" or "adventures on foot, or at "tourist spots that showcase local flavor and culture and that make your city/neighborhood unique," or, tellingly, at "off-the-beaten-path tourist attractions (i.e., if you weren't a local, you wouldn't necessarily know to go here)." All of these, of course, are the exact values we find celebrated in Niantic's marketing and commented on by users and media reports surrounding the game. More to the point, they are, as is suggested in the criterion for libraries, "a nod to education and discovery, cornerstones of Niantic & Ingress." Despite its strategy of developing a platform to allow the user defined creation of its heritage geography, then, Niantic makes clear in these guidelines the extent to which the values of Niantic/Google are, in fact, the baseline in this spatial regime.[11]

We should not overlook, of course, the fact that many of the principles that govern the selection of portals also have pragmatic values or reasons behind them. An impermanent portal is problematic in practical terms for playability. A large number of players physically congregating at a police station could interfere with its functioning, a potential problem that raises issues not only of practicality but of legality. Indeed, several of the guidelines for portals, especially the prohibitions, seem to address these

issues explicitly. Portals with "no safe pedestrian access" are excluded to prevent player injury and potential liability; third-party photos are prohibited to prevent copyright lawsuits; private residential properties are prohibited to avoid issues of trespass. The prohibitions are not unreasonable, of course, both from the standpoint of helping players to avoid injury or legal entanglements, and from the standpoint of helping Niantic avoid the same, yet they undeniably but very quietly shape the geography of the game, and in turn the experience of heritage it proposes.

The Old and Ordinary: A Case Study in the Experience of Cultural Heritage

And now it's time to reveal my double identity. I am an agent of the Enlighted. Playing sporadically but regularly as @CarloTresca since 2014, I have hacked portals, created links and fields, and engaged in various missions, sometimes working with a local Enlightened faction in Lancaster, Pennsylvania, but also solo in half a dozen US states and several European countries.

I mention my player connection here not only to show my familiarity with the playable side of the game but also because it bears on part of the research I conducted for this study. In order to understand the way in which the *Ingress* platform encodes heritage geographies and structures the user experience of heritage in practice, rather than just through the published guidelines of the game, I decided to make a systematic study of the portal geography players would encounter in a given area. In order to make this study manageable, I choose a small and well-defined area of about half a mile square. I also choose a location that I was deeply personally familiar with, but on which I had done no previous research: the town square of my hometown of Hingham, Massachusetts. Having first moved to Hingham in 1985 as a child, I became familiar with the formal history of Hingham (founded in 1635) like any informed and interested resident might, through a long and somewhat piecemeal learning process, consisting of local history units in school classes and visits to various historical sites around town. At the same time, having lived in the town for many years, though not regularly since 2000, I also have my own conceptual map of the space, a map developed both through my individual experiences in town and those I shared or observed with others.

On several trips to Hingham between the fall of 2014 and the spring of 2015, I mapped out *Ingress* portals in the area of Hingham Square, an area which is both personally familiar to me, which is a significant center of social and cultural life in the community, and which is rich with sites with connections to local, state, and US national history. The Square area is the location of more than a dozen Ingress portals. Some of these portals include institutionally recognized sites of national historical significance, such as the Old Ship Church (built in 1681), a Unitarian church which is also the oldest religious building in continuous use in the United States, or state-level significance, such as the house of Samuel Lincoln (1622-1690), an early settler of Hingham whose descendants include a Governor of Massachusetts and President Abraham Lincoln. Some portal sites of this kind were represented only by historical markers, rather than existing structures, such as the Peter Hobart plaque in Figure

5 above. Other portals included important formally defined social sites, such as the Hingham Community Center, an organization that does public programming and offers rental of event space in its building in Hingham Square. Consistent with the submission guidelines, the Hingham Post Office (Figures 3 and 4) was also included as a portal. By contrast, while two other churches in the square were sites of portals, no portal was located at the St. Paul Catholic Church (founded in 1871), which is the central church in an area with a large Catholic population. Instead, a small fountain (the "Pineapple Fountain" shown in Figure 1) tucked away in the courtyard between the church and rectory was included.

As suggested by the guidelines above, less formally (and physically) defined social and cultural spaces were more systematically unrepresented. For example, a street corner located in the central part of the square, which has often served as a meeting point for members of the community, especially teenagers, was not the site of a portal. The tendency not to represent social and cultural sites without a definite marker such as a statue or plaque may seem to be a minor aspect in terms of the representation of the community's heritage in the context of Hingham, but in urban areas in which the vernacular conceptual maps developed by communities are often centered on widely understood but uncodified geographies, this matter takes on additional significance. For instance, studies going back at least to the 1940s have indicated, the social systems, especially youth social systems, in many Boston area neighborhoods have significantly revolved around street corner spaces.[12]

In order to better understand the portal creation process, I also submitted both a portal candidate and a picture for an existing portal. For the former, I choose the Old Ordinary (built in 1688) a Colonial-era inn, now run as a small museum by the Hingham Historical Society. I choose this building because, unlike the street corner, it was a well-defined site with a demonstrable historical connection reaching back as far or farther as a majority of the existing portals. Moreover, the Ordinary, as a teaching museum run by the local historical society included on a popular historic houses tour, is a principal site in the officially sanctioned heritage geography of the town.

After submitting the portal location and a brief description, received a terse response: "Thank you for your Portal submission. However, this Portal candidate does not meet the criteria required for approval. Please refer to New Portal Submission criteria at our Help Center for further information." It is tempting to speculate that portal rejection might be done in a blanket fashion, but both my photo of the main Hingham Historical Society building, and a portal submitted at a location in Pennsylvania have been accepted into the geography of the game. Since no official explanation was given, it is obviously not possible to understand exactly why the portal was not accepted, and there could be any number of real or perceived reasons for its rejection. However, as with the other Hingham Square examples mentioned above, the important point is that the inclusion and exclusion of portal sites, and hence the embodied experience of heritage *Ingress* proposes, is certainly not coterminous vernacular folk geographies, such as those which might include street corners as sociocultural places, but also may not even be coterminous with localized institutional heritage geographies, such as

local churches or heritage management institutions, either. Instead, *Ingress*'s heritage geography, despite its claims to stand for universal human heritage, is a unique and often opaquely crafted geography, a spatial regime structured around the corporate values of Google/Niantic.

Playing Space and Place: *Ingress* Monuments and Geocaches

While player experience of space and place is clearly shaped in significant ways by the underlying conditions of play set forth by Niantic designers and Google, it's important to also acknowledge that players don't always go down the paths carefully set for them. Just as de Certeau long ago observed the possibility of for a vernacular re-appropriation of urban spaces based on the individual's tactics of walking in the city, *Ingress* players, encountering a heavily determined geography shaped both by Google specifically and by institutional forces of law and commerce more generally, engage in many similar practices of tactical poaching, sometimes with the sanction of Google itself. Most often, players have employed tactics common to many digital environments of repurposing in-game features to create unintended aesthetic or meaning-making possibilities. For instance, a reporter for *Wired Magazine* noted in a 2014 article that:

> The friendly localized rivalries have even led to some unexpected and unprompted instances of geo-locative artwork. Given a palette of geo-locative points on a map, Enlightened and Resistance field agents teamed up to engage in not-so-random acts of field art, carving out virtual bat signals, woodpeckers, and sailboats to decorate the game's interface (Andersen 2014).[13]

In addition to simple aesthetic creations such as this, players have also occasionally used in-game practices to comment on actual world events. In the wake of the Boston marathon bombing, for example, leaders from the two factions at MIT declared a truce, and, player and Google employee Christopher Davis led an effort to place two ingress portals, one of each faction color, on the site of the death of Officer Sean Collier, who was shot by the bombers on MIT campus (Kirsner 2013).

Yet, despite these possibilities for developing a tactics of resistance in *Ingress*, its vernacular spaces are significantly more limited than other locative media or augmented reality games, mainly due to the tight conditions of control set up by Niantic. In this regard, a brief comparison of these features of another platform, the app *Geocaching*, and the broader practices associated with geocaching, provides an informative contrast.

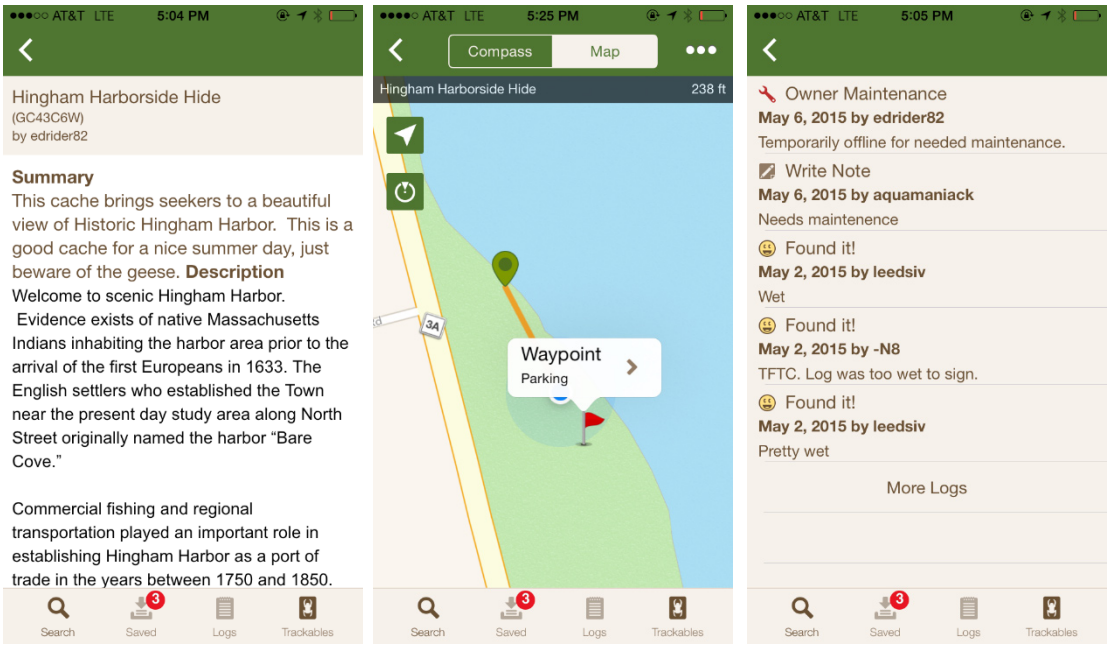
The practice of geocaching developed around the year 2000, when Global Positioning Systems data became widely available through handheld GPS devices (McNeill 2007, 292). Similar to much older practices like "letterboxing," geocaching involves the placement of hidden "caches," or water-proof containers generally ranging in size from a lipstick tube to a small tool box, in the local landscape. Once the cache is placed, its GPS coordinates and other information about the cache is made available to players so that they may later locate the cache themselves. When this is done, the finding player generally records her/his name or nick name in a log book in

Figures 8 and 9. Showing two *Geocahing* caches of different sizes near Lancaster, PA. Photos by author.

the cache, and sometimes leaves a small object (a penny, a plastic figure, a computer circuit board) in the cache to mark the find.

Although the technological platforms for geocaching have varied a bit, the most common current point of access to information about the location of geocaches is through smartphone applications like *Geocaching*, which has both a freeware and paid version. These versions are quite similar, though the paid version provides the player with slightly more detailed information about caches in the local area. In addition to the logbook found in the cache itself, both the free and paid applications allow users to record their find of the cache (or their failure to find it), along with some notes and pictures for players or the cache owner.

Like *Ingress* then, geocaching is a locative media "game" that requires players to move through physical spaces in order to locate pre-defined sites, to interact with these sites in certain defined ways, and to interact with other players as they do so. Both are, in their own ways, examples of what Lynne McNeill has referred to as "type B serial collaborative creations," or activities that require players to move through space to locate certain objects or sites, but in a serialized rather than simultaneous fashion (McNeill 2007, 285-286). In other words, in both activities, users are in some ways "alone together," to borrow Sherry Turkle's term (Turkle 2012). They interact with each other digitally, sometimes simultaneously but many times in the serialized communication common to many digital environments (Buccitelli 2012, 78-79); they visit the same locations, but often individually.



Figures 10, 11, and 12**.** Showing various interface elements for a single cache in the *Geocaching* app.

Unlike *Ingress*, however, geocaching is less of a "game," at least in the terms that have come to define many digitally enabled games. There are no real objectives other than finding or placing caches, and there is no significant reward for success or failure to do so. Also, and most significantly, there is no master narrative. Geocaching, unlike *Ingress*, is not "about" anything, and thus the sites of caches don't carry the same overarching narrative baggage that *Ingress* portals do.

Also, notably, geocache sites, unlike *Ingress* portals are entirely user created: there are no caches to my knowledge that have been placed on the map by *Geocaching* employees.[14] Yet, like *Ingress*, the *Geocaching* application does have a specific set of guidelines as to the placement of caches. These guidelines are, if anything, much more extensive than those of *Ingress*, but here is a bullet list of the main governing principles (See p. 22).

While we find some pragmatic overlaps in these guidelines with those that govern *Ingress*, such as the compliance with local laws or a concern for placement of caches on private property (though *Geocaching*'s guidelines are notably more lenient on the latter), there is nothing in these guidelines that speaks to the placement of caches in cultural terms. There is no concern for aesthetic importance of the site, for "local flavor," for historical significance, or for any of the other heritage-related constructs that are so thoroughly integrated into both the master narrative and the portal submission guidelines of *Ingress*.

I. PLACEMENT Guidelines: Placement guidelines govern the physical location of a geocache.

"When you go to hide a geocache, think of the reason you are bringing people to that spot. If the only reason is for the geocache, then find a better spot." – briansnat

The more geocaches that you have found, the better you will understand the various elements that make up a great geocaching experience. This knowledge will be invaluable when you place a hide, and likely make your geocache more enjoyable for the community. We encourage you to find at least twenty geocaches before you choose to hide one.

1. Fundamental Placement Guidelines
    1. All local laws and documented land management policies apply.
    2. You assure us that you have the landowner's and/or land manager's permission before you hide any geocache, whether placed on private or public property.
    3. Geocaches are never buried, neither partially nor completely.
    4. Geocache placements do not damage, deface or destroy public or private property.
    5. Wildlife and the natural environment are not harmed in the pursuit of geocaching.
    6. Geocaches are not placed in restricted, prohibited or otherwise inappropriate locations.
    7. Physical elements of different geocaches should be at least 0.10 miles (528 ft or 161 m) apart.
    8. Geocaches are allowed in space, on other planets and in spacecraft.
2. Other Placement Considerations
    1. Select an appropriate location and container.
    2. Label your geocache.

II. LISTING Guidelines: Listing guidelines cover the requirements that you, as a geocache owner, need to adhere to in order for your geocache to be successfully published on Geocaching.com.

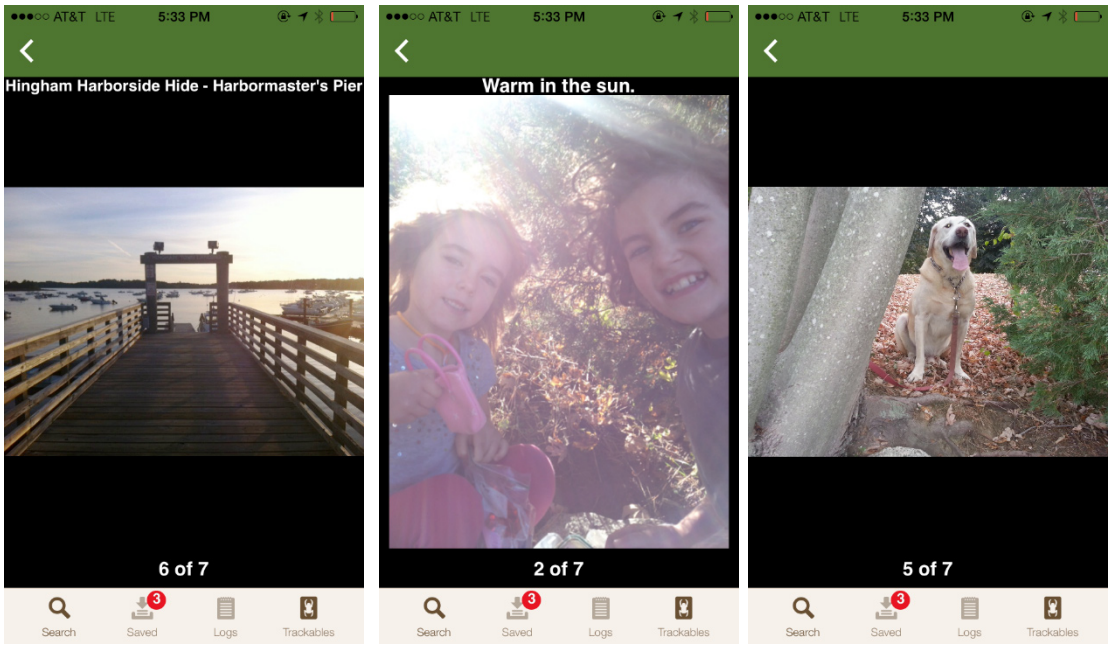
Before a geocache is published on the website, a volunteer reviewer will look at the page for compliance with these guidelines. The physical geocache site is not verified. As the geocache owner, you retain all responsibility for your geocache listings and you are responsible for the placement and care of your geocache.

1. Listing Guidelines for All Geocaches
    1. Technical Requirements
        - Listings must contain accurate GPS coordinates.
        - Geocache listings that require additional website registration, installs or downloads are generally not publishable.
    2. Geocache Maintenance
        - Owner is responsible for geocache listing maintenance.
        - Owner is responsible for visits to the physical location.
    3. Geocache Contents
        - Geocache containers include a logsheet or logbook.
        - Contents are family-friendly.
        - Contents are appropriate for outdoor life.
    4. Solicitation and Commercial Content
        - Geocaches do not solicit for any purpose.
        - Commercial geocaches are disallowed.
    5. Geocache Permanence
        - Geocaches are placed for the long term.
    6. Submitting a Geocache Listing
        - Placing a large number of geocaches to be published on the same date requires advanced planning.
        - Geocache must be in place before you enable the listing.
        - Communicate with your reviewer.[15]

The two platforms are further differentiated by their respective interfaces. While the *Ingress* platform requires players to submit a picture of the portal site, and offers the chance to submit a short description, the picture guidelines are fairly strict and few descriptions are entered for portals. Also, while there is an in-world chat function that allows a player to IM with any other player in the general area, there is no space attached to specific portals that players can use to create annotations on the site for other players.

By contrast, the interface of *Geocaching* allows but does not require cache owners and players to upload pictures, and is much less restrictive about the types of pictures accepted. For example, at a visit to a cache on a beach in Hingham, MA, yielded several uploaded photos, some of which were not particularly relevant to finding the cache.[16]

Similarly, the cache owner is allowed to upload a much longer description of the cache, and owners use this space in a wide variety of ways, which include discussing local history associated with the placement of the cache, recalling their personal memories associated with this site, giving information or clues to help locate the



Figures 13, 14, and 15**.** showing user images uploaded to the "Hingham Harborside Hide" cache. The actual location of the cache is in a rock seawall along the beach. The first image shows a dock that is several minutes' walk from the cache site, not a waypoint. The second image shows two unidentified children with the caption "Warm in the sun." The third image shows a dog standing nearby to the cache location.

Figures 16, 17, and 18. showing a Saint Patrick's Day themed cache and a "techno cache" themed cache. Both placed near Lancaster, PA. Photos by author.

cache, or otherwise providing information they see as relevant to the cache's location.[17] Interestingly, cache creators will sometimes place caches in a "series," a number of different cache sites that are intended to be found in a particular order. In many cases, these series caches have themes or narratives associated with them, some of which can only be understood if the user has found all the caches in the proper order. But even single caches sometimes have themes associated with them, which can include holiday themes, such as Saint Patrick's Day or Christmas or themes associated with the contents of the original cache, such as "techno cache." Interestingly, however, one of the few content related prohibitions in the *Geocaching* guidelines is one that prevents the use of caches for commercial promotion: you can't create a cache near a McDonald's that is titled "Buy a Big Mac."

Finally, unlike the *Ingress* platform, *Geocaching* provides several ways for finders to leave their own annotations on the site. They can "log" their find on the application, they can leave notes and comments for future finders, and they can upload their own pictures. Most commonly, these spaces are used by finders to record their experience on the find, to thank the cache creator, to note problems associated with finding the cache, or to mention things that they saw around them as they looked for the cache. These are not always permanent landmarks. At one cache I encountered, for instance, several finders had noted the presence of a large white dog in the yard across the street, a comment that turned out to be helpful in finding the cache.

By drawing this comparison between *Ingress* and *Geocaching*, I want to do more than simply expose the differences in player experience or to praise one and admonish the other for their differing levels of openness to vernacular expression in player experience. Actually, I want to highlight what is common about both of these platforms, and in some form about all locative media. As programs that require users to engage in a certain experience of physical space in order to participate, both programs overlay these spaces with cultural values. In the case of *Ingress* these cultural values are heavily managed by Niantic's design and policies, while in *Geocaching* the cultural values tend to be more heavily user-defined. Yet, importantly, in doing so, both offer users an encounter with spatialized knowledge, with a heritage or a folk geography of sorts. While Niantic's spatial regime seems to connect more readily with the kind of universalized concept of heritage noted in Peckham's first definition, *Geocaching* seems to allow users to define the in-game geography through the "accumulated communal experiences" that constitute heritage's alternative definition. Yet while the guidelines in *Ingress* seem to more clearly and heavily define the geography laid out in the game, we should be aware that the guidelines and technical parameters and affordances of both programs play a key though often hidden role in structuring the spatial experiences and knowledge of users.

As folklorists or ethnologists concerned with understanding the workings of power in the production and reception of vernacular, traditional, or everyday expressions or knowledge, we must begin to more deeply explore the ways in which digital technologies, and the corporate and legal structures that underlie their creation, have importantly begun to structure or restructure central aspects of our everyday experience. In particular, as I have shown here, we must be cognizant not only of the ways in which institutions of power *act* through digital technologies to control the vernacular, but also the ways in which the ideologies of various institutional structures are directly encoded in these digital platforms themselves. Inasmuch as everyday life, including embodied experiences, such as the experience of cultural heritage, is increasingly shot through with the use of digital technology, the encoding of institutional power in this way will become an ever more central point of study for scholars of vernacular culture.

Notes

1 My thanks go Robert Glenn Howard and Coppélie Cocq for their great helpfulness and expert advice as I prepared this article. I would also like to offer thanks to the other participants in the "Inheritance of the Digital" panel at the 2015 Congress of the Société Internationale d´Ethnologie et de Folklore in Zagreb: Stefan Gelfgren, Christian Ritter, Anna Johansson, Nancy McEntire, Andrew Peck, and Asta Vonderau. This wonderful discussion contributed greatly to this piece.

2 The word insertion here is my own. The original article in *Wired* appears to contain a syntactical error.

3 The research for this study was carried out between 2014 and mid-2015. Since that time, Niantic Labs, the original Google subdivision, broke off to become an independent

company, and several game features have changed. One of the most notable changes to the game is that user portal submission has been suspended. But the case made here is for increased attention to the construction of heritage regimes through locative gaming, and is not contingent upon the particulars of any specific regime constructed by a platform or version. So while a revised analysis of *Ingress* in its current configuration would likely look slightly different than what is presented here, the fundamental point remains unchanged.

4 For suggestive considerations of different aspects of this issue, see Blank 2013; Buccitelli 2013.

5 Interestingly, Niantic's second and much better known release, *Pokémon GO* (2016), while it uses much of the same underlying data, sets up a much less explicit geographic regime. This is partially because the *Pokémon GO* platform is based more heavily on the appearance of seemingly random visual augmentations in physical spaces, the various Pokémon that the player encounters, rather than the more static, map and site-based *Ingress*.

6 The classic distinction between the concepts of "space" and "place" were offered by geographer Yi-Fu Tuan. Tuan's works *Topophilia: A Study of Environmental Perception* (1974) and *Space and Place: The Perspective of Experience* (1977), have formed the basis for what Tim Cresswell calls the phenomenological approach to place. Although this school of thinking has come to envelop a number of disparate positions, all of them seek "to define the essence of human existence as one that is necessarily and importantly 'in-place'."(Cresswell 2004, 51). In *Space and Place*, for instance, Tuan separates the concept of space from the concept of place using "experience" as a wedge. Treating "space" as the bare facts of spatial existence, Tuan writes that "[t]he given cannot be known in itself. What can be known is a reality that is a construct of experience, a creation of feeling and thought" (Tuan 1977, 9 quoted in Cresswell 2008, 55). Through our experiences in particular locations, Tuan argues, we develop meaningful understandings of and attachments to space. In this way, the basic facts of "space" become the humanized and culturally meaningful category of "place." While I find this distinction useful in many contexts, I am not especially concerned here to establish place-making processes or to show how users distinguish between places and spaces.

7 See also de Souza e Silva 2004a; 2004b; Gordon and de Souza e Silva 2011; de Souza e Silva and Sheller 2015. In a slightly different but very suggestive take, Shira Chess has argued that *Ingress* represents a form of transmedia storytelling that brings together local and global registers in transformative ways (Chess 2014).

8 For excellent discussions of how folklorists and ethnologists have conceived of this term, see Kirshenblatt-Gimblett 1998; Bendix 2000; 2009; Hafstein 2007.

9 The term "conceptual map" as applied by Tangherlini and myself, essentially to mean a sociocultural form of spatialized knowledge attached to specific sites, should not be confused with the de Certeaudean "concept city," by which he intended to indicate the way in which urban geography is laid out strategically according to an abstract set of concepts and then instrumentalized by institutions of power. This he would distinguish from the lived tactical knowledge of daily life.

10 I have presented here a composite of two versions of the portal criteria recorded from the *Ingress* help forums on the http://www.ingress.com site between March and June 2015. It would be very interesting, in a longer study, to track how guidelines like these are altered over time, and in doing so to analyze how these changes reveal the evolving concerns within the corporate cultures that produce them. But for purposes of clarity and concision here, I have omitted notations showing the changes that took place within the period of this study. The relevant point is to expose the existence of tacit value-regimes within the

structures of these platforms, rather than to historicize them within the history of platform development or corporate culture. Currently portal submissions have been suspended by Niantic Labs. The new portal submission FAQ currently reads: "As of September 2, 2015, we suspended new Portal submissions for a period of time while we work on processing the backlog and on designing new and more efficient ways to evaluate Portal submissions and edits" (https://support.ingress.com/hc/en-us/articles/217695688-How-do-I-add-a-Portal-or-get-a-Portal-removed, accessed March 30, 2016).

11 This is, of course, not the only tacit feature of the *Ingress* platform. Hulsey and Reeves, for instance, have also argued that *Ingress* is "simply suggestive of broader sociocultural transformations in which citizens must submit to pervasive surveillance in order to participate fully in contemporary economic and political life" (2014, 390). Along different lines, Wendy Hui Kyung Chun has offered fascinating insights into the hidden cultural logics of computer code itself, both in her 2011 book *Programmed Visions: Software and* Memory and in her 2015 chapter in de Souza e Silva and Sheller's *Mobilty and Locative Media: Mobile Communication in Hybrid Spaces*. But here, I am responding most closely to scholars of vernacular media spaces such as Robert Glenn Howard (2008a;2008b;2010), who have called for closer attention to the way in which institutions set the conditions in which vernacular knowledge and practices take shape in digital spaces.

12 For perhaps the most well-known articulation of this pattern, see William Foote Whyte's classic 1943 study *Street Corner Society*. See also, Gans 1982 [1962], 14, 64-74 and Buccitelli 2016, 113.

13 Spelling corrected from original source.

14 Interestingly, while another notable difference seems to be that geocaching involves placing a physical object into the environment, there apparently were "virtual geocaches" at some point, but these were deemed too difficult to manage and were mostly eliminated. I have also encountered some geocaches that involve something slightly less physical, such as the placement of a sticker on a light pole with a numerical code that is used to identify that as a cache.

15 These guidelines were recorded from the help form of the *Geocaching* app website, http://www.geocaching.com/about/guidlines.aspx, accessed in June 2015.

16 *Geocaching* does place a warning for players before they view uploaded photos that these could provide unwanted information about the location of the cache.

17 As Freese and Hargittai put it "[t]he collective wisdom of geocachers is more varied, colorful, and intimate than anything you'd find in a guide book" (2010, 67).

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