

Tecumseh Lies Here: Goals and Challenges for a Pervasive History Game in Progress

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Portions of this article have been removed to avoid spoiling puzzles and plot elements for the beta run of our game, now scheduled for Summer 2011. The full version will be available after that time.

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We live in a complex world, filled with myriad objects, tools, toys, and people. Our lives are spent in diverse interaction with this environment. Yet, for the most part, our computing takes place sitting in front of, and staring at, a single glowing screen ... From the isolation of our work station we try to interact with our surrounding environment, but the two worlds have little in common. How can we escape from the computer screen and bring these two worlds together?

—Pierre Wellner et al, “Computer Augmented Environments: Back to the Real World”¹

Imagine a game which takes as its raw material the actual record of the past, and requires its participants to explore museums, archives, and historical sites. Imagine a series of challenges where students and others perform the genuine tasks of practicing historians—collecting their own evidence, formulating their own hypotheses, and constructing their own historical narratives. Imagine a large-scale, ongoing activity that ultimately connects hundreds or thousands of players across the country and around the world in a sustained encounter with the past.

Alternate or augmented reality games (ARGs), also known as pervasive games, are an emerging genre that breaks down boundaries between the online world and the real.² Unlike traditional computer games or simulations, which contain game play inside sealed virtual environments, pervasive games can spread across the entire ecology of electronic and traditional media and into public spaces like streets, museums, and schools. Although it is difficult to generalize about such a rapidly evolving form, most ARGs to date have combined an underlying story or narrative, a series of puzzles and challenges, and a collaborative community of players. Game designers distribute story pieces, clues, and missions via websites, email, mobile messaging, and even physical objects sent through the postal system or installed in public spaces. Game players then use wikis, chat rooms, and blogs to analyze evidence, solve puzzles, and ultimately co-create the narrative of the game.

While the first ARGs were designed as entertainment, and often as promotions for commercial media such as computer games and films, designers and players were immediately intrigued by the genre’s potential for education and addressing real world problems. MIT’s educational ARG *Reliving the Revolution* (2005)

¹ Pierre Wellner et al, “Computer-Augmented Environments: Back to the Real World,” *Communications of the ACM* 36, no. 7 (1993): 24-26.

² Dave Szulborski, *This Is Not A Game: A Guide to Alternate Reality Gaming* (Macungie, PA: New Fiction Publishing, 2005); Jane McGonigal, “This Might Be a Game: Ubiquitous Play and Performance at the Turn of the Twenty-First Century” (Ph.D. diss, University of California at Berkeley, 2006); Markus Montola et al, *Pervasive Games: Theory and Design* (Amsterdam: Elsevier, 2009).

turned the site of the American Revolutionary Battle of Lexington into an augmented learning environment where students learned techniques for historical inquiry, effective collaboration, and critical thinking skills. In the PBS-funded ARG *World Without Oil* (2007) over 2,000 players from twelve countries came together to manage a simulated global oil crisis, forecasting the results of the crisis and producing plausible strategies for managing a realistic future dilemma. And the World Bank's *Urgent Evoke* (2010) enlisted over 19,000 players in an effort to empower young people, especially in Africa, to come up with creative solutions to environmental and social problems.³

Historians have only begun to take note of these developments and devices.⁴ Yet pervasive games may have the potential to enhance and inform history education and public history outreach. The authors of this paper became curious about the possibilities of ARGs and pervasive games for history education through their interests in history pedagogy, game design, and the new digital humanities. Could we design a pervasive game that taught genuine historical thinking? Could we bring a large group of players into a sustained, evidence-based encounter with the history around them and so awaken them to the pervasive presence of the past? Could we engage an ad hoc, multilingual, international group of players in a parallel and distributed process of historical research? We set out to try. In this chapter we discuss our goals, our progress, and the challenges we have met along the way—challenges we believe will be relevant to anyone contemplating a project in this space.

Playful Historical Thinking

Hundreds of thousands of Americans who do not earn their living as history professionals dedicate considerable time, money, and even love to historical pursuits. They volunteer at local historical organizations, lead tours of historic houses, don uniforms for battle reenactments, repair old locomotives for the railway history society, subscribe to *American Heritage* and *American History Illustrated*, maintain the archives for their trade union or church, assemble libraries from the History Book Club, construct family genealogies, restore old houses, devise and play World War II board games, collect early twentieth-century circus memorabilia, and lobby to preserve art deco movie houses.

--Rozensweig and Thelen⁵

³ The number of fully active players is generally much smaller—by one estimate, less than a tenth of *World Without Oil's* players submitted more than one piece of content.

⁴ K.L. Schrier, "Revolutionizing History Education: Using Augmented Reality Games to Teach Histories," (Masters thesis, Massachusetts Institute of Technology, 2005).

⁵ Roy Rosenzweig and David Thelen, *The Presence of the Past: Popular Uses of History in American Life* (New York: Columbia University Press, 1998), 34.

“Every few years,” observes social studies educator Bruce VanSledright, history teachers go through “an embarrassing national ritual.” In the United States, Canada, Britain, and other countries, the ritual is much the same. Students take a standardized history test. Almost invariably, a sizable percentage cannot identify many basic events in their country’s history. These results are published in the media and taken up as ammunition in a long-running battle over curriculum content. The sides in this struggle are drearily political. Conservatives blame academic historians and educational bureaucrats for moving away from a traditionally heroic, nation-building narrative. Liberals blame the very narrative that conservatives seek to preserve. Both sides bemoan the ignorance of today’s students, worry that we are losing touch with our history and heritage, and indict teachers and educators for failing to make the grade. Real as these problems may be, the so-called “history wars” have become a predictable pantomime that sheds neither heat nor light.⁶

There is today a robust literature on history pedagogy and historical thinking that seeks to transcend this stale debate. Decades of research argue for an inquiry-oriented approach to teaching history, one built around arguing from evidence, assessing and questioning the reliability of sources, and evaluating and synthesizing competing narratives about the past. This approach arms students with the skills of historical investigation, yet aims to go beyond skills training to inculcate a way of thinking about history that is sceptical but also charitable and mature.

ARGs or pervasive games, we believe, exhibit many features that would complement an inquiry-oriented history pedagogy. They are investigative exercises. They are collaborative and open-ended. They often involve piecing together clues, questioning sources, and assembling a narrative from incomplete or contradictory evidence. Teaching critical historical thinking does not require elaborate technology or activities of this kind, but the genre seems to contain potential it would be foolish to ignore.

One possible criticism of the literature on historical thinking, especially in its first wave, is that it sometimes took as a given that the goal of history education must be to get students to think about history in the same ways that professional historians do. We agree that the thought processes and skills of professional historians are a useful model for students and teachers to emulate—but are they the only model? How do we want our students to think about history, not just while they’re in class, but when they leave the classroom, become adults, and set out into the world? This is a question that cannot be answered without serious thought about what history is for.

Our modest contribution to the literature on historical thinking is to argue for the value of play. We want to make a case for playful historical thinking as a healthy, productive, and even responsible way for citizens of the twenty-first century to relate to the past. Playful historical thinking is, or can be, critical and engaged. It

⁶ Bruce VanSledright, *The Challenge of Rethinking History Education: On Practices, Theories, and Policy* (New York: Routledge, 2011); Sam Wineburg, *Historical Thinking and Other Unnatural Acts: Charting the Future of Teaching the Past* (Philadelphia: Temple University Press, 2001).

recognizes limits on our ability to fully know other peoples and times, yet makes the effort to know them just the same. It wears its certainties lightly and takes pleasure in the whimsy, mystery, and strangeness of the past.

Professional historians can of course be playful in their thinking. Sam Wineburg notes the “ludic” nature of a skilled historian’s engagement with his or her sources—right down to the way she or he reads certain passages in funny voices to signal distance from the text.⁷ But play is also mistrusted by many professional historians, and whatever playful engagement they may have with their sources rarely trickles down into classrooms or survives translation into articles and books. For more models of playful historical thinking, we turned to a wider community of vernacular history makers, including history gamers, re-enactors, and amateur history buffs. These groups engage with history in ways that are different than professional academics, but which can still be valuable, rigorous, and even scholarly. We do not need to give up our professional standards to listen and learn from these communities. They have much to teach us about what makes history engaging, fascinating, or fun.

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The challenge is to find a way of illustrating critical engagement with the past in a manner that captures the imagination of a lay audience—an audience that may well be eager for dramatic narrative and impatient with ambiguity and contention. I have no clear answers for this and I would not wish to be prescriptive. Nonetheless, as a tentative suggestion as to how that might be managed I suggest that there is great potential in the model of the detective story.

—Alexander Cook, “The Use and Abuse of Historical Reenactment”⁸

In the spring of 2009, we received a moderately-sized grant to investigate the potential of ARGs and pervasive games for history and heritage education.⁹ The approaching bicentennial of the War of 1812 suggested a topic for such a game. Our intent was to design and run a short prototype game in the summer of 2010, with an eye to acquiring further funding for a more elaborate game in the bicentennial year of 2012.

⁷ Wineburg, *Historical Thinking*, 72.

⁸ Alexander Cook, “The Use and Abuse of Historical Reenactment,” *Criticism* 46, no. 3 (2004): 495.

⁹ The grant was an Image, Text, Sound, & Technology (ITST) Grant from the Social Sciences and Humanities Research Council of Canada (SSHRC). Robert MacDougall was principal investigator, with Kevin Kee and William Turkel listed as co-investigators, Shawn Graham as a collaborator, and Timothy Compeau as project manager. Tom Mitrovic, Kristen Way, and Anna Zuschlag were also hired as graduate research assistants.

The War of 1812 was a messy, confusing frontier war, and today it is poorly remembered and often misunderstood. In the United States, the conflict was once touted as the Second War for American Independence, but it is almost entirely forgotten by Americans today. In Canada, the war was unpopular and only reluctantly fought, yet was later mythologized as a great nation-building victory. And for the First Peoples of the Great Lakes region and the Old Northwest, the war marked the zenith and then the end of hopes for an autonomous pan-Indian confederacy. These contradictory narratives offer rich material for a game that we hope will require close collaboration among players on both sides of the border, with different backgrounds, biases, and understandings of the war. We see our project as a kind of subversive commemoration, one that explores the murky history of the war while challenging some kinds of banal nationalism likely to be on display at its bicentennial.

For our prototype game,



On this historical foundation, we built the framing narrative for our game, *Tecumseh Lies Here*. The game imagines a

Players seeking to solve the mystery encounter



“History Invaders”: The Problem with Educational Games

The more one begins to think that *Civilization* is about a certain ideological interpretation of history (neoconservative, reactionary, or what have you) ... the more one realizes that it is about the absence of history altogether, or rather, the transcoding of history into specific mathematical models. ... So “history” in *Civilization* is precisely the opposite of history, not because the game fetishizes the imperial perspective, but because the diachronic details of lived life are replaced by the synchronic homogeneity of code pure and simple. —Alexander Galloway, “Allegories of Control”¹¹

Those who design games with educational goals in mind face deceptively difficult challenges. One lies in the interface between a game’s procedures and its subject: what you do versus what you are supposed to learn. As Alexander Galloway insists, “games are actions.”¹² The deep lessons of a game come not from its ostensible subject matter but from the decisions its players make and the actions they perform.

It is easy enough to squeeze educational content into an existing game genre: imagine a game of *Space Invaders* where players shoot down historical errors instead of invading aliens. It is also easy to see why this is next to useless in pedagogical terms. Such a game’s historical content is only a superficial screen between the player and the actual mechanics of the game. To master an activity like this often means ignoring that layer of surface content and focusing on the game’s deep tasks. All a player or student learns from “History Invaders” is how to play *Space Invaders*—moving from side and shooting descending blocks.

That example is intentionally banal, but the “History Invaders” problem infects far more sophisticated game designs. Many commercial computer games, like the *Civilization* series produced by Sid Meier, purport to simulate history or at least draw heavily on historical themes and content. Scholars and educators have experimented with using such games for history education.¹³ We enjoy games of this type, yet we are skeptical of such projects. *Civilization* and its cousins are indeed compelling, challenging, and fun, but it is far from clear what historical skills they teach.

Debates about *Civilization*’s suitability for the classroom have typically centered on the ideologies it appears to endorse. Does the game reward militarism

¹¹ Alexander Galloway, *Gaming: Essays on Algorithmic Culture* (Minneapolis: University of Minneapolis Press, 2006), 103.

¹² Galloway, *Gaming*, 2. See also Ian Bogost, *Persuasive Games: The Expressive Power of Videogames* (Cambridge: MIT Press, 2007).

¹³ See for example Kurt Squire, “Open-ended Video Games: A Model for Developing Learning for the Interactive Age,” in K. Salen, ed. *The Ecology of Games: Connecting Youth, Games, and Learning* (Cambridge: MIT Press, 2008), 167-198.

and imperialist expansion? Perhaps. But, following Alexander Galloway, we argue that this question is ultimately beside the point. Getting good at *Civilization* means internalizing the logic of the simulation and its algorithms. In so doing, a player learns to ignore all the things that make it a game about history and not about, say, fighting aliens. “The more one begins to think that *Civilization* is about a certain ideological interpretation of history,” Galloway writes, “the more one realizes that it is about the absence of history altogether.”¹⁴ Mastering the simulation game necessarily involves a journey away from reality towards abstraction, away from history towards code. If what you learn from a game is what you do while playing it, then what *Civilization* teaches is how to interact with a complex computer model. That may indeed be a useful skill, but is it history? Is it the kind of historical thinking most educators wish to instill and inspire?

For a game to work as meaningful pedagogy, its lessons must be embedded in its very mechanics and procedures, in the stuff players manipulate and the actions they perform. If we as public historians and history educators are serious about teaching history with games, we have to inject ourselves deep into the game development process. We need to articulate what we think history and historical thinking are good for in the first place. Then we have to build outwards from the kinds of historical thinking we want to inculcate, creating games and activities whose procedures are historical procedures, whose moving parts are historical ideas.

Our goal in designing *Tecumseh Lies Here* was to unite mechanics and subject, procedure and context, what players do and what we hope they will learn. We wanted our game to demand multiple kinds of historical thinking: first, the sorts of activities performed by professional historians; second, more vernacular kinds of history-making performed by amateur history communities and affinity groups; and finally, some kinds of collective collaboration across a distributed community of players.

Tecumseh Lies Here: The Game

[The] idea was that we would tell a story that was not bound by communication platform: it would come at you over the web, by email, via fax and phone and billboard and TV and newspaper, SMS and skywriting and smoke signals too if we could figure out how. The story would be fundamentally interactive, made of little bits that players, like detectives or archaeologists, would discover and fit together. We would use political pamphlets, business brochures, answering phone messages, surveillance camera video, stolen diary pages. ... In short, instead of telling a story, we would present the

¹⁴ Galloway, *Gaming*, 103. See also Bogost, *Persuasive Games*, 103-109, 242; Kevin Kee et al, “Towards a Theory of Good History Through Gaming,” *Canadian Historical Review* 90:2 (June 2009).

evidence of that story, and let the players tell it to themselves.
—Sean Stewart, “Alternate Reality Games”¹⁵

Because ARGs remain unfamiliar to many, it makes sense at this point to offer some description of our plans for *Tecumseh Lies Here*. Yet it is difficult to describe a game of this kind in advance. Pervasive games are by their very nature open-ended. This is a key pedagogical feature of the genre. Designers cannot predict what decisions players will make or how a narrative will unfold. As one student of the form has observed, “audience participation”—if one can even speak of an “audience” for ARGs—is “not a byproduct, but rather an essential and formative component of the text.”¹⁶ We are also wary of spoiling puzzles and plot elements if and when the game is publicly run.¹⁷ So what follows is only a loose description of what might be.



¹⁵ Sean Stewart, “Alternate Reality Games,” *SeanStewart.org*, 11 June 2006, [HTTP://WWW.SEANSTEWART.ORG/INTERACTIVE/ARGS/](http://www.seanstewart.org/interactive/args/).

¹⁶ Jeff Watson, “ARG 2.0,” *Confessions of an Aca-Fan*, 7 July and 9 July 2010, [HTTP://HENRYJENKINS.ORG/2010/07/ARG_20_1.HTML](http://henryjenkins.org/2010/07/arg_20_1.html).

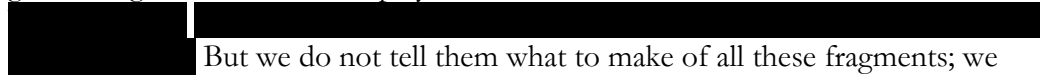
¹⁷ Many early ARGs took great pains to disguise the circumstances of their creation, even the fact that they were games. Today, it is less common to go to these lengths. As the conventions of the genre take shape, players are more and more willing to suspend their disbelief, and absolute verisimilitude is no longer required. Still, we would not want all the secrets of our game to be published in an academic article before its run!



Another puzzle concerns strings of text in an unfamiliar language that active players begin receiving by email, Twitter, and other means.



And so the plot thickens. As in any mystery story—just as in historical research—every discovery leads to further questions. Each layer of the onion is peeled back to reveal another layer which casts the existing facts in a new light. As game designers, we direct the players’ attention to a series of historical documents.



But we do not tell them what to make of all these fragments; we leave them to reconstruct the past together and debate what it might mean. “Instead of telling a story,” says author and ARG designer Sean Stewart, “we ... present the evidence of that story, and let the players tell it to themselves.” Elsewhere, Stewart has called this process “storytelling as archaeology—or possibly, the other way around.”¹⁸ What Stewart describes, of course, is very close to the process of real historical research.

¹⁸ Stewart, “Alternate Reality Games”; Jim Hanas, “The Story Doesn’t Care: An Interview with Sean Stewart,” *Encyclopedia Hanasiana*, 25 January 2006, [HTTP://WWW.HANASIANA.COM/ARCHIVES/001117.HTML](http://www.hanasiana.com/archives/001117.html).

Thus, playing *Tecumseh Lies Here* is very much like doing real historical research. Players visit libraries and archives. They gather evidence. They interpret, analyze, and debate the evidence they have found. Some of our fictional characters are not above misusing history by forging or fabricating documents, so players must also learn to question their evidence and consider its source. Historical content is not layered on top of a game activity; historical research *is* the game.

Heritage and historical sites become part of the game too, through puzzles that can only be solved by visiting real locations. Riddles refer to museum exhibits. Objects are hidden in parks and battlegrounds. The patter of costumed interpreters occasionally includes statements with in-game as well as historical significance. New puzzles lead players to scour the internet but also to visit libraries, archives, and commemorative sites in a widening circle around the Great Lakes region and beyond. One lesson of the game is that the past is everywhere. A pervasive game trains its players to look for game-like clues and patterns in non-game places. Even a forgotten war leaves its mark in place names, political boundaries, and local mythologies. *Tecumseh Lies Here* aims to open eyes to the pervasive presence of the past.

As players work their way through our game, they encounter allies and adversaries in the squabbling factions of the history demimonde. Each fictional group has its own interpretation of history, a point of view that is valid in some respects and lacking in others. These groups set open-ended tasks for players, asking them to [REDACTED], to locate and document errors and mistruths in history textbooks and other secondary sources, [REDACTED]

At a deeper level, each of these factions represents a different kind of historical thinking that we hope players will learn from but also critique. [REDACTED]

If these puzzles and activities sound challenging, that is because they are meant to be. ARG players typically work together, connecting in online forums and tackling puzzles as a group. Does someone read French? [REDACTED]? Is there someone who can visit an archive in Chicago? Sault St. Marie? Ghent? Does anyone know how to [REDACTED]? Interpret an aerial photo? Track an animal in the wild? The short history of this genre suggests that large, determined groups of players will quickly crack almost every puzzle put before them. Once player groups reach a certain size, they become “alarmingly

efficient,” combining a range of competencies and skills.¹⁹ ARG puzzles must have the character of a “trapdoor function” in cryptography: easy to create but difficult or impossible to solve without large-scale effort and cooperation. The collective nature of most ARG-play contains its own fundamental lesson, one we are happy to endorse: that the strength of a network lies in the diversity of its members.

Problems and Challenges

Several of our playtesters said, “Where are the monsters?” A good question to ask of any serious games initiative.

—Edward Castronova, on his “failed” educational MMORPG *Arden*²⁰

We began work on *Tecumseh Lies Here* in the summer of 2009 with high hopes and enthusiasm. A small team of history graduate students spent the summer doing research for the game, gathering archival and secondary sources, mapping and photographing historical sites, and brainstorming possible puzzles. Timothy Compeau and Robert MacDougall began actively designing the game, constructing activities, writing its fictional framing narrative, and plotting the direction of play.

Soon, however, we encountered challenges and problems. Some of these were specific to our circumstances and are probably extrinsic to the project of designing a pervasive game or ARG for history education. Others, however, may be intrinsic to the genre as currently understood. It seems worthwhile to describe these difficulties, both to help others working on similar projects and to qualify some of the exuberance in this current cycle of enthusiasm (hardly the first) for educational games.

Time and Cost

One of the most difficult tasks people can perform, however much others may despise it, is the invention of good games.

—Carl Jung²¹

The first difficulty we encountered was predictable yet profound. Designing, mounting, and running a successful ARG is, very simply, an immense undertaking. Though we sought this challenge out, and still welcome it, we now admit we were

¹⁹ Watson, “ARG 2.0”; Jane McGonigal, “Why I Love Bees: A Case Study in Collective Intelligence Gaming,” in Salen, *The Ecology of Games*, 199-228.

²⁰ Edward Castronova, “Two Releases,” *Terra Nova*, 27 November 2007, [HTTP://TERRANOVA.BLOGS.COM/TERRA_NOVA/2007/11/TWO-RELEASES-AR.HTML](http://TERRANOVA.BLOGS.COM/TERRA_NOVA/2007/11/TWO-RELEASES-AR.HTML)

²¹ Quoted in Greg Costikyan, “I Have No Words and I Must Design: Toward a Critical Vocabulary for Games,” in Frans Mäyrä, ed., *Proceedings of Computer Games and Digital Cultures Conference* (Tampere, Finland: Tampere University Press, 2002), 32.

not prepared for the size of the task, and particularly for the way the dynamic, open-ended nature of an ARG constantly multiplies the time and effort involved.

Budget issues concerned us too, but never as much as time. We have no illusions about the ability of educators or public history sites to compete with the cost and production values of commercial video games.²² ARGs and pervasive games, by contrast, may offer a more level playing field. There certainly have been slick, expensive ARGs, such as Levi Strauss's *Go Forth* (2009), which used the poetry of Walt Whitman to advertise jeans, or McDonald's and the International Olympic Committee's *The Lost Ring* (2008), tied to the 2008 Olympics in Beijing. Yet there have been at least as many highly successful low budget games. Pervasive games do not require sophisticated graphics or software. Indeed, a "lo-fi" aesthetic and underground sensibility are often part of their appeal.

The real barrier we faced—and it will be a critical one for almost any teacher, professor, or public sector educator—was the time involved. Designing an open-ended, multi-threaded narrative for a large group of players means juggling the tasks of a programmer, novelist, screenwriter, and game designer, plus a researcher and a teacher if the game has educational goals. It involves anticipating and planning for innumerable contingencies, and generating large amounts of content for a wide variety of media channels such as websites, email, video or audio, and physical clues. Much of the content for *Tecumseh Lies Here* came from the actual historical record and did not need to be written from scratch. Yet our historical sources still had to be identified, gathered, and organized, and our fictional framing story built around them.

And all this describes only the design and production stage of a dynamic game. ARG game masters describe actually running games as an extremely demanding experience. Game mastering during runtime becomes a round-the-clock blend of writing, troubleshooting, improvisational theatre, and community and crisis management. Even modest games can generate hundreds of emails, text messages, and the like, and any game, if designed correctly, will go in directions its designers have not planned.

Some game designers have responded to these challenges by relinquishing narrative control of their games and moving towards almost entirely player-generated content. This trajectory, from what Jesper Juul calls "games of progression" towards "games of emergence," can be seen in the work of well-known game designer Jane McGonigal.²³ Her first major game, *I Love Bees* (2004), was a traditional ARG—indeed, it is one of the archetypal ARGs—with a storyline and puzzles crafted by writer Sean Stewart and others. McGonigal was the game's community lead, working to guide, motivate, and organize the emergent community that came together to play

²² The production and launch budget for a recent game industry blockbuster, *Call of Duty: Modern Warfare 2*, was in the vicinity of \$200 million. Ben Fritz, "Video game borrows page from Hollywood playbook," *Los Angeles Times*, 18 November 2009.

²³ Jesper Juul, *Half-real: Video Games Between Real Rules and Fictional Worlds* (Cambridge: MIT Press, 2005); Jane McGonigal, *Reality Is Broken: Why Games Make Us Happy and How They Can Change the World* (New York: Penguin Press, 2011).

the game. McGonigal's more recent games, such as *World Without Oil* (2007), *Superstruct* (2008), and *Urgent Evoke* (2010), had no predetermined solutions or narrative line. Almost all the content of these games was created by their many players—an ARG 2.0 model, if you will.²⁴

In planning *Tecumseh Lies Here*, we have tried to compromise between designer- and player-authored content, mixing prewritten puzzles and storylines with open-ended activities and tasks. A move from prewritten to player-generated content may relieve, but hardly removes, the challenges of designing and running an ambitious game. Instead, it shifts the work of the game runners from content creation towards community management, and from the design and production stages of a game's development towards the runtime stage. *Urgent Evoke* boasted a large paid staff and an even larger team of volunteers, yet its game runners reported being seriously overwhelmed by the success of the game and the volume of player-generated material they had to quickly process and respond to.²⁵

We report all these difficulties not to make excuses for ourselves but because we wonder whether they are intrinsic to ARGs and pervasive games as currently conceived. Our intent was always to limit the scope of our own game. Perhaps naïvely, we imagined *Tecumseh Lies Here* as the limited prototype for a more ambitious game to be designed and run during the two-hundredth anniversary of the War of 1812. But there is something in the narrative architecture of pervasive games that encourages them to grow.

Markus Montola writes that the imperative strategy for “visceral” and “unforgettable” experiences in pervasive game design is to set and then surpass player expectations.²⁶ The most effective, memorable moments in pervasive game play are very often those moments when players discover the game to be bigger or more ambitious than they had originally imagined: a clue on one website leads to another, far more extensive set of sites; a game that heretofore took place online suddenly manifests in the offline world. This is arguably the whole point of pervasive play, but it creates a kind of arms race between game designer and player expectations. Players in *The Beast* (2001) became used to calling phone numbers and hearing cryptic answering machine messages; midway through the game they were stunned when answered by live actors. Eight years later, players in *The Jeune Institute* (2009) were amused when San Francisco payphones rang and voices on the other end ordered them to dance. But they were surprised and delighted when a man in a gorilla suit and a 1980s-style b-boy with a boom box emerged from a nearby alley to dance with them.

²⁴ Watson, “ARG 2.0.”

²⁵ Our source here is an off-the-record conversation with game runners, but see also Jane McGonigal, “What Went Right, What Went Wrong: Lessons from Season 1 of EVOKE,” *Evoke Blog*, 26 July 2010, [HTTP://BLOG.URGENTEVOKE.NET/2010/07/26/WHAT-WENT-RIGHT-WHAT-WENT-WRONG-LESSONS-FROM-SEASON-1-EVOKE1/](http://BLOG.URGENTEVOKE.NET/2010/07/26/WHAT-WENT-RIGHT-WHAT-WENT-WRONG-LESSONS-FROM-SEASON-1-EVOKE1/).

²⁶ Montola et al, *Pervasive Games*, 137-38.

At its best moments, historical research has similar qualities, minus perhaps the gorilla suit. A good source leads to more sources, a good question leads to further questions, and the most satisfying discoveries are often ones that suddenly connect previously minor details to much larger things. Our own experience of such moments and our desire to share that feeling form much of our motivation for writing a pervasive game about historical research. Designing for that experience, however, means a constant and powerful tendency towards structural inflation and narrative sprawl.²⁷

Specific personal and professional circumstances certainly exacerbated the challenges described above and slowed our progress on *Tecumseh Lies Here*. Tim Compeau is a Ph.D. student completing his dissertation; Rob MacDougall is an untenured faculty member with small children. But what educator's working life does not involve pressures and interruptions? By January 2010, when we decided to postpone the running of *Tecumseh Lies Here*, the question could not be evaded. Is this kind of sprawling, immersive game a practical model for cash and time strapped educators? Can public sector labor practices accommodate the demands of ARG production? Is the work involved in designing and running a game of this sort really feasible for university professors, K-12 history teachers, graduate students, or museum staff?

Audience, Community, and Impact

ARGs have the economics of films and the audiences of novels. They require a deep level of engagement. That's great for some audiences, but ... they lose their way. One of the things about mystery series: they have to get weirder. ... So the audience gets smaller and weirder. And it's harder to join that audience. You can't reboot the complexity.

—Cory Doctorow on ARGs²⁸

A second set of challenges involved questions about our game's audience or community, its impact, and its replayability.

It is very difficult to predict how many players a pervasive game or ARG will attract. As with many online activities, only a small fraction of those who encounter a game of this sort typically become active players. And only a smaller fraction of active players will leave their computers to perform more demanding real world

²⁷ See also Neil Dansey on designing for "apophenia," the perception of meaning or pattern in events which are actually accidental. Neil Dansey, "Facilitating Apophenia to Augment the Experience of Pervasive Games," paper presented at the "Breaking the Magic Circle" seminar, University of Tampere, Finland, April 2008, available online at WWW.DETERMINEDSOFTWARE.CO.UK.

²⁸ Annalee Newitz, "Cory Doctorow Talks About the Future of the Novel, Including His Own," *io9*, 30 September 2009, [HTTP://IO9.COM/5371362/CORY-DOCTOROW-TALKS-ABOUT-THE-FUTURE-OF-THE-NOVEL-INCLUDING-HIS-OWN](http://IO9.COM/5371362/CORY-DOCTOROW-TALKS-ABOUT-THE-FUTURE-OF-THE-NOVEL-INCLUDING-HIS-OWN).

tasks. Over 19,000 players registered for *Urgent Evoke*. Less than two hundred completed the game's final mission. While developing *Tecumseh Lies Here*, we have worried at different times about handling too many players and about reaching too few.

We have also wrestled with defining our intended audience. Should *Tecumseh Lies Here* be designed to appeal to the small but dedicated community of experienced ARG players or to a larger, more casual public audience? Our working answer has been to shoot for something in the middle—to design a game that celebrates, and hopefully appeals to, the world of amateur history buffs, history gamers, re-enactors, and similar vernacular history communities. But this is a difficult needle to thread. The challenges necessary to engage expert ARGers can quickly discourage less experienced players. But new and casual players cannot be counted on to perform the kinds of tasks or cultivate the collective community that sustains an ambitious or challenging game.

Augmented reality games are said to build community, and for a time, most do. But once an effective player community has been established, its need for new members and the opportunity for new arrivals to usefully contribute rapidly declines. Jeff Watson argues that “elite players with available time, an appropriate range of competencies, and relevant social capital will gather, process, and analyze data faster and more thoroughly than a non-integrated outsider ever could.”²⁹ This tendency must temper hopes for ARGs as inclusive community-forming experiences.

In fact, game design is not merely difficult; it is impossible. That is, it is impossible, or virtually impossible, to spec a game at the beginning of a project, and have it work beautifully, wonderfully, superbly, from the moment a playable prototype is available. There's just too much going on here, too many ways for it to fail. Game design is ultimately a process of iterative refinement, continuous adjustment during testing, until, budget and schedule and management willing, we have a polished product that does indeed work.

—Greg Costikyan, “I Have No Words and I Must Design”³⁰

Related to these concerns is the question of replayability. Most ARGs are designed to be played only once. They have been described as “rock concerts”: large, one-time events that are powerful and engaging for those present, but not reproducible for those who are not.³¹ This is understandable given the demands of running of a dynamic game, but it makes iterative design difficult and seriously limits the impact and accessibility of the form.

²⁹ Watson, “ARG 2.0.”

³⁰ Costikyan, “I Have No Words and I Must Design,” 25.

³¹ “Events, not ARGs: Interview with the Founders of 4th Wall,” *Variety*, 4 May 2009, [HTTP://WEBLOGS.VARIETY.COM/TECHNOTAINMENT/2009/05/EVENTS.HTML](http://weblogs.variety.com/technotainment/2009/05/events.html).

Some games do leave static elements behind, with activities that can be performed by late arrivals without the active participation of game runners or designers. *Ghosts of a Chance* was an ARG hosted by the Smithsonian American Art Museum in 2008. The ARG invited gamers to create objects and mail them to the museum for an exhibition “curated” by two fictional game characters, while simultaneously uncovering clues to a narrative about these objects. The game culminated with a series of six scavenger hunts at the museum. While the bulk of the game cannot now be replayed, the scavenger hunts remain for museum visitors to enjoy. *Ghosts of a Chance* was certainly a successful ARG and we have kept its model in mind. But some Smithsonian staff reported disappointment that the game did not reach a larger audience beyond the existing ARG community, and that more of the game’s experience could not be repeated or replayed by the general public.³²

As with our concerns about the time and cost of mounting a successful game, the larger question here is whether these worries are simply cold feet at the midpoint of a demanding project, or whether they point to something intrinsic about the genre. Participating in a successful pervasive game is a powerful and lasting experience. Players of *The Beast*, *I Love Bees*, and other seminal ARGs still gather years later to talk about these games. But is this intensity predicated in part on the exclusivity and irreproducibility of the games? Is it in fact necessary to bewilder or exclude a large group of people so that a much smaller few can enjoy a powerful, unrepeatable experience? At least one researcher has argued that making ARGs more accessible would “remove important triggers to hard-core player production and enjoyment.”³³ Like many intense group activities, pervasive games described after the fact have a strong “you had to be there” quality. Maybe these experiences would not be so powerful, and the communities around completed games would not be so tightly knit, if the games were easier to join and play and understand.

Two motifs that often appear in pervasive games are hidden conspiracies and secret worlds hidden behind the one we know. This is no coincidence. Part of the fun of such games is the appeal of being “illuminated,” of perceiving an alternate reality (the world of the game) that leaves others (non-participants) in the dark. Alexander Galloway has argued that simulation games are always ultimately “allegories of control,” whatever surface ideologies they may project.³⁴ In a similar way, ARGs and pervasive games may inevitably enact allegories of conspiracy, of the unknowing masses and the illuminated few. Such tropes have an appeal that it would be naïve to deny, but they are not an appealing model, practically or philosophically, for most educators.

³² Our source here is an off-the-record conversation with Smithsonian staff, but see also Georgina Bath, “Ghosts of a Chance Alternate Reality Game Final Report,” *Smithsonian American Art Museum*, 6 November 2008, [HTTP://GHOSTSOFACHANCE.COM](http://ghostsofchance.com), p. 17.

³³ Christy Dena, “Emerging Participatory Culture Practices: Player-Created Tiers in Alternate Reality Games,” *Convergence* 14:1 (2008), 41-57.

³⁴ Montola et al, *Pervasive Games*, 59; Galloway, *Gaming*, 85-106.

Professional and Ethical Questions

Are computer games necessarily and inherently countercultural and escapist? Is what makes them engaging, like rock and roll (and frankly, like poetry), their protest, desperation, and defiance? Or, like comic books and movies, their ability to transport one to a different and irrelevant place?

—Clark Aldrich, *Learning By Doing*³⁵

A final set of challenges involved dealing responsibly with sensitive historical topics, and also with professional and ethical questions surrounding history and play.

We can only confess: it is in part the very unpleasantness of this story that intrigued us and appealed to us as a way to explore and critique the official memory of this strange and poorly remembered war. Again, *Tecumseh Lies Here* aspires to be a subversive commemoration. The complexities of the War of 1812 have not been well served by the nationalist myths that later grew up around it. ■ we would argue, requires challenging outdated historiography on both sides of the border. Our aim is certainly not to offend. But popular history has always contained a fascination with war, death, and crime. And we cannot see how to make an engaging game with multiple characters and input from diverse players that could not possibly offend anybody. Instead, we hope to make our own misgivings part of the game itself. The different factions in our game constantly criticize each other; we hope our players will critique our use of ■ too.

As a Pew Internet and American Life Report on the digital disconnect between children and their schools details with excruciating clarity, what students do with online technologies *outside* the classroom is not only markedly different from what they do with them in schools ... it is *also* more goal driven, complex, sophisticated, and engaged. If we care to understand the current and potential capacities of technology for cognition, learning, literacy, and education, then we must look to contexts *outside* our current formal education system rather than those within.

—Constance Steinkuehler, “Cognition and Literacy in Massively Multiplayer Online Games”³⁶

³⁵ Clark Aldrich, *Learning By Doing: A Comprehensive to Simulations, Computer Games, and Pedagogy in e-Learning and Other Educational Experiences* (San Francisco: Pfeiffer, 2005), 159.

We intended from the start that *Tecumseh Lies Here* would engage and critique certain “misuses” of history. Our game therefore includes fake and forged historical documents, conspiracy theories, and counterfactuals. We considered even more fantastical elements, such as [REDACTED]. Professional historians are extremely wary of such pseudohistorical tropes, yet they are familiar and beloved by many amateur history makers and enthusiasts. They are basic elements of much historical play.

We were inspired by educational projects like *The Lost Museum* and *Great Unsolved Mysteries in Canadian History*, which manage to be playful yet remain eminently respectable in their historical practice. Still, we believed there was room for something edgier, less sober, and more playful than these examples. We hoped to produce something that might capture the imagination of gamers and playful history subcultures. We wanted a game that did not look or feel like it was designed for a classroom. We wanted, frankly, to play with toys that historians are not supposed to play with. James Paul Gee has asserted that video games, and perhaps all games, require an element of social transgression.³⁷ All games have rules, but play is not truly play until some rules are broken.

This did not mean that we abdicated our responsibility to think and talk about the ethical and professional questions posed by pseudohistorical play. Instead, it meant that we talked about these questions all the time.

We took some guidance from our subjects and desired audience in both gaming and vernacular history communities. Many hobby subcultures, especially those that are in any way transgressive, develop their own codes of ethical practice and self-regulation.³⁸ ARG players debate codes and practices about privacy, trespassing, interacting with non-participants, and so on; historical re-enactors care devoutly about authenticity and respect for the past; and history gamers place a high priority on historical realism even or especially when their scenarios diverge wildly from the actual past. These codes are not the same as those of the classroom or the professional historian—nor should they be. But respecting these communities, we felt, meant at least listening to and trying on alternate ways of interfacing with the past.

We developed our own set of internal rules for *Tecumseh Lies Here* to follow. For instance, all fictional events in the game take place in the present day. The players must decide for themselves, based on the real historical record, what really happened in the past. [REDACTED]

³⁶ Constance Steinkuehler, “Cognition and Literacy in Massively Multiplayer Online Games,” in Julie Coiro et al, eds., *Handbook of Research on New Literacies* (New York: Lawrence Erlbaum Associates, 2008), 612.

³⁷ James Paul Gee, *What Video Games Have To Teach Us About Learning and Literacy* (New York: Palgrave Macmillan, 2004).

³⁸ Montola et al, *Pervasive Games*, 198; Henry Jenkins, *Fans, Bloggers, and Gamers: Exploring Participatory Culture* (New York: New York University Press, 2006).

but are not dependent collective problem-solving or time-sensitive events? We hope that by playing with history in *Tecumseh Lies Here*, we can approach more definitive conclusions. These questions, fittingly, demand both critical thought and creative play.