

Experiments in Immersion

Part 1: The ARG

Jason Aston

Interactive Telecommunications Program
New York University
E-mail: jasonaston@gmail.com

ABSTRACT: In this age of information, audiences increasingly seek out a connection to the stories they read and the games they play. When a connection is made, immersion occurs. With each new medium and innovation, it becomes easier to reach and create this state of immersion.

Experiments in Immersion, Part One aims to explore the use of subversion and intervention by browser extension to elicit said immersion in readers and players of online interactive narratives and narrative-based games. Part One is focused on the story-dependent alternate reality game (ARG), a game that uses reality as the platform for play, that is, it takes place in real time, using real elements like websites, phone numbers, actors, to engage players.

KEYWORDS: immersion, alternate reality games (ARG), interactive storytelling; browser extensions; javascript, subversive media, tactical media, non-linear narrative

THE INTRODUCTION

How can we be so consumed by a novel that we seem to forget about our daily routine or chores as we turn the final page, only afterwards to remain in a stupor of constant thought and reflection, further drawing out our selves relinquished?

Moving from literacy to mediacy, the same question applies. Why do we walk into a

movie theater calm and composed, and leave sobbing, furious, or feeling fortunate?

Well-made films and television programs affect us. That's why we curl up on the couch once a week to view our favorite shows or sit amongst strangers in a dark theater with our eyes glued to the screen.

The platform provided by the Internet has expanded this network significantly. With its proliferation as well as the accelerated development in personal technology came different, dynamic ways to interact with and access information and content in general.

In the beginning, the web was lauded for providing information, creating social networks, and allowing for hyper-linking, a way to stack logical connections between ideas or information that operates outside of linearity.

The onslaught of information, the sheer amount of it, coming at us each time we log on- the advertisements, the supplementary information, the unexpected information, the social connections and their bagged data- produces a human desensitivity to the internet process in general. This build up slowly effaces our expectations for any valuable experience online. "Going online" suddenly assumes a more navigational motivation or outcome, as in navigating content. But this should not be the directive of the Internet. Mihaly Csikszentmihalyi states that our online sessions should be focused on "staging experience"[1]. And indeed, the internet has the ability to provide some of the most robust, magical, and experiential immersions capable today.

Alternate reality games (ARGs) are one of the first narrative art forms to originate exclusively on the web. ARGs are

segmented story-games that involve hunting to uncover portions of the story (which evolve into more clues and more story revelations), all of which take place using reality as a platform, that is, the story unfolds through networked ability of email, cell phones, internet, real locations and real people (actors). You play the game as yourself, and as long as you're connected to the network, you are playing the game.

For the amount of punch they pack in a single game, they are oddly not well known. Admittedly, I never knew what one was until research was underway, even though they were attached to some of the largest popular cultural media phenomena of the decade. Most successful precedents were highly elaborate and expensive marketing campaigns for movies, bands, and video games: *The Beast* was a marketing ARG for the movie *A.I.*; *I love bees* was also a marketing ARG for the video game *Halo 2*. Both of these were lauded for high quality content, user base, and eventual award winning status as not only well executed advertising, but as games themselves. The list goes on to include *The Lost Experience*, *Nine Inch Nail's Year Zero*, and *Why So Serious?* for the *Batman* movie, among others.

ARG narratives tend to present information matter-of-factly in a way that is more subtle than hyperbolic, revealing its story to the player as the player themselves and not as someone else, a method used in most role-playing games (RPG). The design behind this is to not make any plot clue so obvious. Playing detective in a challenging, normal environment leads to player satisfaction and esteem through real life problem solving.

A cursory journey to the Google Chrome Experiments website yields a wonderland of things not thought possible on the Internet

[2]. A webpage that suddenly assumes the law of physics finds its elements, text, and images fall to the browser floor in a crash. A music video maps the location of your hometown to a digitally created person running through your neighborhood, all in a staccato of opening and closing browser windows that is beyond your control.

Browser extensions have the ability to manipulate, add, and subtract content on the web that the user previously thought untouchable. They allow for content to be played with, searched for, defined, and a plethora of other manipulations and augmentations. Some of the more popular browser extensions concern typical advertisement space on websites. Adblock is a browser extension that takes the space occupied by these advertisements and turns them into dead spaces. Comic Sans MSify the World is a browser extension that can turn all readable fonts on all of the websites you visit to Comic Sans.

Understanding this, I drew a connection between what can be possible with browser extensions and how I could use it to solve my issue with ARG web presences: web sites built to exclusively house the ARG game play are unnecessary and antithetical to the guiding ethos of this type of game, alternating reality. If there is an alternate reality, then everything in this reality has a different alternative that is the same, but different.

The logical next step was to pit the traditional model of a web ARG against my ARG. The browser extension implemented in my version would allow for the infusion of fake game-related content inside actual web spaces, existing right alongside reality, the actual, the authentic.

THE CONNECTION

Immersion happens when we- the reader, the player, the user- connects with what we are seeing, watching, hearing, etc. This connection is facilitated by our own perceptions of what is real. We immerse in memoirs because we like to hear about real issues of real people; then we relate to it. We watch reality television because we can say we either want to be the people we watch or that we are better than them. That's not a feeling that occurs with scripted media. We are searching for how stories involve us somehow.

The goal of ARGs is to infiltrate reality, your reality. The basic concept is that if you play this game as yourself, you are connecting to the material, the puzzles, and the environment. You are immersing. By operating under the guise of an alternate reality, we bring the game closer to who we are, our actions, our constant networked selves.

If the premise of the ARG is to infiltrate reality, then the browser extension infiltrates the product, the property of reality. The seemingly private domain of web sites is publicly viewable, but not publicly changeable. Or at least so it's thought; this is what makes browser extensions so powerful in their own right.

Browser extensions have the ability to manipulate and distort reality for the viewer. That is what makes it such an obvious accompaniment to the goal of ARGs and the idea of immersion.

ShiftSpace, somewhat of a community driven browser extension housing many users' manipulations of web content- referred to as "shifts"- is an example what is achievable with this type of technology, academically, socially, and artfully.

Mushon Zer-Aviv, one of the founders of ShiftSpace has talked about this, "the web is referred to as a free revolutionary space capable of bridging geographical, political and cultural differences. It's not." His idea for allowing people to own the Internet leaves the possibilities open for further uses and development.¹

Much the same way we have open, public spaces for discourse and exchanges, Zer-Aviv was/is looking to expand that paradigm to the web, where currently there exists no truly public space, free of ownership and domain, to post, converse, or graffiti in some way.

It is hard to imagine what such a place would allow a user or visitor to do. Then again, if browser extensions offer any insight, it's that a user could potentially do anything. An interesting social experiment could arise if users were given access to the site to program the sites functionality freely. Who knows what sort of collaborations or inventions could come of that type of unorthodox live-site programming.

In his book, *Art of Immersion, Wired* journalist Frank Rose predicts the oncoming shift in these new art forms and technologies:

We stand now at the intersection of lure and blur. The future beckons, but we're only partway through inventing it. We can see the outlines of a new art form, but its grammar is as tenuous and elusive as the grammar of cinema a century ago."^[3]

¹ ShiftSpace (pronounced: §) is an open source browser plugin for collaboratively annotating, editing and shifting the web. [7]

THE ISSUE

ARGs are still innovative, but too many have failed and few are successful; the reasons are manifold. It's par for the course at such a fledgling time in ARG development to lay claim to game tactics and techniques. For example, *The Beast* was the first ARG to employ real people to play characters, require decoding of sound files to unlock plotlines, to reference the players themselves in game play. *I love bees* was the first ARG to use radio transmissions and calls directed to pay phones. Those ARGs that tried to replicate these tactics were viewed unfavorably since the real world the ARG uses as its playground was/is so vast with possibility.

By playing some ARGs, I too noticed something wrong. The Internet portion of game play- arguably some of the more affecting components of an ARG- could use some magical trickery to convince me of the alternative reality.

There is a perceivable disconnect when an ARG designer creates the web topography of the game from scratch. The player knows this site doesn't exist outside of the game and it will cease to exist after the game is over. However, by manipulating and subverting information on real websites via the browser extension, the player is convinced of this alternate reality, this infused layer that is both real in delivery and not real in substance.

THE TECHNOLOGY

A browser extension is a computer program that extends the functionality of a web browser in some way. They are self-contained web pages in that they have their own HTML, CSS, and scripting language attached. These elements can be pushed or

injected into a specific website or all websites, according to the content scripts included. This allows the site to be dynamically and statically manipulated.

There are browser extensions for every purpose, limited only by what the author can or cannot code. Otherwise, imagination has taken browser extensions to many levels. Some are aimed at productivity like displaying a calendar in the corner of the browser, or allowing for on site note taking; some are games- Asteroids and Katamari can be played as browser extensions; some serve reference purposes like dictionaries and pronunciation guides; some are cosmetic in that they change the way you visibly see a page; but I have not found one that attempts to take the user on a journey across pages in bits of segmented, narrative fun.

A browser extension gives the author/creator access to the document object model (DOM) of a page. The DOM is a platform and language neutral interface that will allow programs and scripts to dynamically access and update the content, structure and style of documents [4]. So, it just allows me access to most of the content on the page. If I have access to that, then I can change it.

The basis of ARGs is inlaying alternative content with actual content, or alternative realities with actual realities. This presents a harmonious relationship. By embedding this alternative content into the actual, we are further perpetuating the ideal ARG, and perhaps one that can exist mostly online, with the possibilities open to expand outwardly based on context and content.

THE PATH

Browser extensions can serve the purpose of helping a narrative experience become more immersive through presenting narrative elements in contextually subversive form. The genesis of this idea spawned from three disparate research and work projects: browser extensions, game and interactive-like works of fiction, and a supremely edifying class on Tactical Media taught by Dr. Steven Kurtz of the Critical Art Ensemble.

Through the research and development of a browser extension, I became enamored with the type of power and control a browser extension (and the author) could exercise over web pages. From the comical to the manipulative, if the structure of a web page was known, extra information or dynamic elements could be injected into the webpage, so long as this extension was running. At the time, I had not connected it with any future project. Rather, it simmered for a few months over the summer.

During a course I was taking at ITP, Games and Art, I re-realized my fondness for “choose your own adventure” games of yore. Actively participating in the evolution of a story using a medium rooted in traditional narrative (as in, an author writes a book and the passive reader reads it) is the precursor to much popular modern gaming as we know it. So I began to experiment heavily with what I found fascinating, the non-linear type of exposition. Working within the parameters of the assignments proved to be difficult. But assignment after assignment, heavy narrative elements kept slipping into my work.

By the end of the class, I had made a choose your own adventure flip book based on the principles and game dynamics of Rock Paper Scissors; a hyperlinked, branching narrative

that operated on the front pages of the New York Times website; and a sexually taboo game about threesomes and the choices we make under the covers.

One branched story of a Choose Your Own Online Adventure operating on the New York Times.

My experience as a student of Dr. Kurtz led me to develop an interventionist’s way of thinking; that is, I was encouraged to look for subtle, ulterior, temporary but effective ways to protest and shout. The difficulty of this yielded interventions that took place on the steps of city hall, altered advertisements on the subway, and fictitious web presences online.

I started this journey fully committed towards realizing a functioning, self contained ARG using a browser extension as the main-attracting, idiosyncratic feature to illustrate what could be done using specific internet technologies to cement the idea of subversive, alternate realities.

I had gone through the effort of conceiving a story; the old government-cover-up-alien-conspiracy trope oft used, but was warned by a games expert and ITP instructor, Greg Trefry, that such an undertaking would be too ambitious and too much work for one person. He added some grateful focus: my thesis was

not about the ARG itself, rather it was about what the extension could do for the ARG. If I made some excellent examples of my browser extension at work that would satisfy the problems my thesis attempted to solve.

But it did not, because at the time, my thesis did not identify a solid problem beyond the browser extension's existence and its non-use in the world of ARGs. I batted around sources for problems that seemed to take me further away from my central motivation. I presented valid concerns that plagued the process of the wholesale creation of new websites: cost, efficiency, marketability, and overhead.

I experienced a breakthrough when during my research I came across a book written by Richard Grusin and Jay David Bolter, an English professor and instructor of New Media, respectively, titled *Remediation*. More of a treatise on new media's deference and homage to their older ancestors, what I found particularly relevant was the partiality paid towards virtual reality as the heralded medium superior for communication and immersive experience. This is when "immersion" began to seep into my thesis' vocabulary [5].

THE EXPERIMENT

In devising the experiment that would test my hypothesis that browser extensions would serve an important purpose in narrative immersion by dint of accentuating the perceived authenticity or environment of the story, I figured that a traditional control and experimental group was in order, much like blind taste tests. The only caveat was, of course, that "blind" would act more like "unwitting."

I wanted to create a random-like sample of ARGs, half of which were actual, existing

ARGs (the control group) and half of which were ARGs that I had created (the experimental group). In culling the active samples together, it was important to create their analog so as to minimize any erratic variables that would come out of disparate contents. By this I mean the following: if a ARGs web space was a fake news website, then my analogue was also a news website. This would aid in analyzing differences of delivery versus delivery of content.

Thus, I presented the player with four mini-ARGs that I had created and injected into actual sites and four sections of actual ARGs. The breakdown of their web taxonomy is as follows: news web portals; corporate or product websites; educational institution websites; lifestyle homepages. These were experienced in random order, with the player receiving prompts or browser alerts as to any information needed to complete the task. The experiment was followed up with a carefully worded survey asking opinions on various elements of each ARG and how they felt about them.²

Questions were asked regarding the perceived level of engagement and why the student chose that level; whether or not the student strayed from the objective at all during the course of each game; the design rating; whether the differences in types of delivery (fully created ARG versus injected content ARG) were noticed; and other general comments on the ARG experience as a whole.

Thus far, the experiment has included thirteen, tech savvy graduate students operating from a specific laptop in an academic environment. The results so far are discussed in the next session.

² See Appendix A.

The objective was clear: to gauge how with the subversive abilities afforded to us by a browser extension, we may be able to tap into some reasons that seems to lead readers and players of narrative or narrative games into immersion, a connectedness to something perceived as real. In this experiment's case, using a news site to manipulate real news to news that fits within the content and objectives of the game; altering corporate websites to make them seem conspiratorial; creating paranoia in a familiar academic institution's journalism center; and enlisting a lifestyle page's search function to produce alternate results for a query.

THE RESULTS

The results, as should be noted, are inconclusive. It is too early to make any assumptions as to what, if any, cognitive difference was perceived between the two different types of ARGs.

There was a 10% difference in level of engagement between the control and injected group. The types of puzzles and tasks factored heavily in this question. This is reasonable and is well documented and theorized by Hungarian psychologist Mihaly Csikszentmihalyi in numerous publications. Csikszentmihalyi proposes the idea of flow, "a state of concentration or complete absorption with the activity at hand and the situation." [1]. He goes on to include that in order to reach this state, a balance between the skill level required by the task and the skill level of the user must be in harmony. Evidence of this is found in the responses as to why a particular ARG was not engaging: the puzzle was either too difficult or too easy, a simple mismatch of puzzle skill level to player skill level.

The familiarity of the site was noted as the second most popular reason why an ARG was engaging. This is encouraging, especially since the mini-ARGs took place over a few web pages, involving no more than a couple hyperlinks each, at most. If the feeling of engagement through subversion can be achieved with the browser extension with just a short period of play, perhaps an extended version could be a powerful storytelling medium.

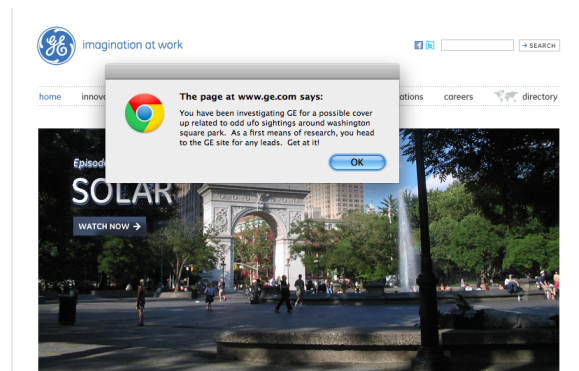
The second question inquired as to the locus of attention. Did the player ever stray from the objective at any time for any reason? Nearly a third of the participants claimed that when playing an ARG with injected content, there was some deviation from the task because the web spaces seemed real and were supported by real content. It seems that players tended to look around and double-check their environments before moving on. This suggests that there is a bit of wonderment that comes along with presenting a game or narrative in this way. Only 15% of participants strayed in the control group. I can only guess that maybe the material did not seem worthy enough to peruse outside of the task.

The next question in the survey asked about the design of the website. This may seem a bit odd question and out of the aesthetic element I am questioning, but part of the process of "hacking" or subverting existing websites means that the design domain is less controllable than traditional sites created to house ARGs, unless, of course, the intervention is to change the design of the site, which, through browser extensions, is a total possibility. In that case, however, the subversion would overturn the operating premise that immersion occurs through connectedness of the real and authentic, not the made over. There are no significant conclusions to include here as most of the

web spaces rated fairly high for design aesthetic.

The next questions were not individual to each ARG, rather the experience as a whole. Roughly two-thirds of the participants could tell the difference between each of the control and injected groups, that is, could tell when an existing web space was hijacked and a web space was not. The motivations for this question are grounded in the familiarity of the chosen web topography.

The locations of the injected group were AOL.com, HuffingtonPost.com, GE.com, and nyu.edu. I deliberately chose well-known sites so that the student would understand that actual content has been manipulated. Some participants were confused as to whether the actual ARGs were also part of the same group, even though the entire material presented was clearly fantastic (only a small portion of the whole of the injected group is fantastic as the rest is unaltered text and images).



An instructional prompt and injected photo on www.ge.com.



Sample page of an existing ARG for *Batman*.

After revealing which of the games was of what taxonomy, players were prompted as to which type of content was more positively viewed. Around 70% of players viewed the injected content more positively than the control group. When asked why, once again, the subversive nature and format was what the players gravitated to.

Referencing the amount of content shown and the number of pages and hyperlinks I availed to the player, I wanted to find out how much time, if any, would also play a part in immersion. Three quarters of the participants admitted that time was not an issue to enjoyment or engagement, though I am tempted to believe that a richer experience can be achieved more readily and craftily through time.

All in all, I'd say that the experiment and results are promising to proving my thesis, but, as admitted before, many more tests are needed for results to be conclusive.

THE FUTURE

In the immediate future, Experiments in Immersion Part One will iterate by length of each individual ARG, and modeling the injected ARGs tasks more closely with the actual. In order for me to assess my thesis, I will have to severely limit as many variables

as possible, so as to focus on the subversion only. Also, for general purposes of enjoyment, more attention will be paid towards making the experience less haphazard. Special care will go into ascending difficulty of the puzzles so as to not induce frustration at the experiment's onset.

The follow up survey will also be retooled and recalibrated to force answers so that motivations can be identified and classified.

As obviated in the title of this project and paper, I am currently working on Part 1 of what I see as a multipart experiment. The continuation of Part One will stay within the ARG realm with added dimensions to the test in hopes of a solid conclusion.

The second Part of Experiments in Immersion will focus on the story. We have experienced interactive narratives before, and there is a whole academic field devoted to such art forms of hypertext fiction, choose your own adventures, and other interactive fictions. Part Two takes the narrative, pulls it out of its typical vehicle (usually, as a blog post or entry, as an article, as a blank page, etc.) and injects it into contextually appropriate web spaces. The result is a story that has to be found and searched out. How this wresting of story dominion from the author to the reader will be perceived, I am not sure. My hope with enriching this experience is the same as Part One, encouraging immersion through connectedness to familiar, authentic territory.

Part Three of Experiments in Immersion will focus on a guided experience in empathy. An experiment like this has factored into how I saw this project developing. With a browser extension, I could have ultimate control over what the user experiences, in

this case, someone else's story. By recording actual user sessions, approximating them via the browser extension, is it possible for people to become immersed as someone else? We have an Internet presence for everything, so it's possible to achieve an acute understanding of someone through his or her trail or browser history. As exemplified to wild degree in the film *Being John Malkovich*, this type of empathic immersion is romanticized as an awesome, consuming experience. Is it possible to replicate it with the computer screen as the medium, the clicks as the actions and decisions, and the resulting page as the consequence?

I have thought about other vectors for the browser extension. Tactical media represents an apt market for this type of device, especially when considering the subversive, interventionist nature of a cleverly used extension and what sort of havoc, alternative reality havoc of course, it could reek on corporate offenders. Graffiti for corporate websites!

Marketing would be a fun, experimental area to explore with browser extensions. What if Nike were to create an instance of a shoe image each time the word "shoe" appeared in a body of text on any website? This sort of rebus is an easy, innovative way to bring brand awareness without a gigantic campaign. These types of low intrusion browser extensions could be more of a joy than blight on the Internet experience.

An educational browser extension might perform the duties similar to an ARG, but task the student with quests that appear within any given page. If a student is reading a passage and clicks on a next button, a prompt would appear, asking for the most relevant idea concerning the passage he just read.

Therapeutic applications of a browser extension could track and treat, with programmed doctor's recommendations and quotations, those with certain harmful Internet addictions. It's possible to extract and recognize a website's subject and prompt the user with words of advice, motivation, or warning.

THE CONCLUSION

Frank Rose opined in *The Art of Immersion*:

Like games, stories are rehearsals for life. We create a world in a microcosm, an alternate reality, a world we wish were true or fear could become so. And then we immerse ourselves in it. This much never changes. But our ability to indulge that impulse grows with each new medium and with it the stakes we are playing for. [3]

I cannot help but feel optimistic about stories, story games, and the narrative form as we begin to appropriate web technologies for creative uses not yet dreamed. Could we finally see the birth of a new interactive textual era with tangible, commercial success? I can only dream.

I'd like to leave with an eloquent, insightful, honest quote from a fan of the ARG, the Beast, as posted on a forum created to tackle the problems and puzzles the Beast gave rise:

You find yourself at the end of the game, waking up as if from a long sleep. Your marriage or relationship may be in tatters. Your job may be on the brink of void, or gone completely. You may have lost a scholarship, or lost or gained too many pounds. You slowly wake

up to discover that you have missed the early spring unfolding into late summer...yet now here we are, every one of us excited at blurring the lines between story and reality. The game promises to become not just entertainment, but our lives. [6]

REFERENCES

1. Csikszentmihalyi, Mihaly. *Flow: The Psychology of Optimal Experience*. New York: Harper and Row, 1990.
2. Google Chrome Extensions. <http://chrome.google.com/extension>.
3. Rose, Frank. *The Art of Immersion*. New York: W.W. Norton & Company, February 21, 2011.
4. Wikipedia: Browser Extensions. http://en.wikipedia.org/wiki/Browser_extension.
5. Bolter, David and Richard Grusin. *Remediation*. Cambridge. MIT Press, 1999.
6. Philips, Andrea. "Editorials: Deep Water." (July 26 2001) <http://cloudmakers.org/editorials/philips726.shtml>.
7. ShiftSpace. <http://www.shiftspace.org>.

APPENDIX A

8. The last mission took place on aol.com, and involved a nebulous hunt for something.

Was this mission engaging?

Why?

Can you note anything surprising about this mission?

At any point did you stray from or shirk your duties?

Why and what did you do?

Rate the design of the page from 1 (ugly) to 5 (design-y).

Any other comments?

+ Add Question ▼ | Split Page Here

Q8 ▼ | | |

9. This experiment was a test in immersive media. You were presented with 8 mini missions (each part of a larger mission). The missions were different though the delivery could be categorized in two ways: created content and manipulated content. Half were created and half were manipulated, that is, injected into existing sites.

Did you notice the difference between created and injected content?

Did it make a difference to you?

Do you think the length or duration of each mission hindered your ability to immerse yourself in the game?

What would add to the feeling of feeling immersed in regards to these games.

Snapshot of last individual ARG survey question (the preceding seven are the same but specific to the other ARGs) and overall experiential question.