

From Territorial to Temporal Ambitions: The Politics of Time and Imagination in Massive Multiplayer Online Forecasting Games

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Abstract

In 2010, the online forecasting game Urgent Evoke, produced by Jane McGonigal, former Director of Gaming at the Institute for the Future and the World Bank Institute, elicited praise by gaming critics as a model for “serious gaming.” The game promised to show how players could think about long-term solutions to urgent social problems like hunger, poverty, conflict, and climate change using the African continent as its test bed. Players imagined future temporal outcomes through remixing media. In a qualitative analysis of actual game play during the real-time introduction of the game for teaching organizational communication, Evoke became a platform for student inquiry for questioning its underlying design as an expansion of territorial and temporal conquest. Evoke served as a springboard for building a literacy of critical time among students in accessing stakeholder power to determine the future. Students challenged, created, and followed the cultural capital of promissory visions in circulation. The curriculum design for using serious and forecasting games like Evoke must account for the conceptual development of what Sarah Sharma calls critical time or chronopolitics, a hidden politics of time that shapes our approaches to cultures, organizations, and innovation. By placing spatial and temporal dynamics center stage, we investigated how serious games produce a chronopolitics of time differentiating among people by class and ethnicity. Alternative Reality Games offer the potential for building a literacy of critical forecasting time to understand the practices for anticipating the future as temporal networks of power, different and uneven.

Keywords

online gaming, critical time, foresight, temporal empire, temporal class

In 2010, the online forecasting and alternative reality game (ARG) Urgent Evoke (referred to as Evoke in the rest of this article) ran for 10 weeks. Produced by Jane McGonigal, then the Director of Gaming at the Institute for the Future and sponsored by the World Bank Institute, Evoke and earlier games similar to it by McGonigal elicited widespread media acclaim and praise by gaming critics as a model for “serious gaming” (Bogost, 2011; Dyer-Witheford & De Peuter, 2009; Ferrari & Bogost, 2013). The game promised to show how players could think about long-term solutions to urgent social problems like hunger, poverty, conflict, and climate change using the African continent as its test bed. As a form of serious gaming intended for college level critical thinking, Evoke promised to serve as a forum for collaboration, creativity, and leadership.

In a qualitative analysis of actual game play during the real-time introduction of the game for teaching organizational communication in 2010 and 2011, Evoke became a

platform for student inquiry to question its underlying design as an expansion of territorial and temporal conquest. Players imagined future outcomes by creatively remixing audiovisual and written media about local and global community initiatives to complete game missions. As our student players considered the long-term future of important issues facing the African continent and globally, we analyzed how they viewed themselves tied to the game’s assumptions about time. Evoke served as a springboard for building a literacy of critical time among students in assessing stakeholder power to determine the future. We considered how future visions of

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global order and promissory visions of game design were circulated and contested by student players of Evoke. Students could see how their lives were affected by time as it was embedded into the medium of the game. Students, through their own self-generated critique, demonstrated how time is a form of constructed media and therefore an important resource and tool of power.

Through Evoke, students determined how the game celebrated innovation and the future of the African continent. From the student and author perspective, Evoke had the look and feel of a relatively benign invasion of external global institutions in determining Africa's future. Where territorial conquest had once reigned, African nations were seen in the game as rife for managing their cultures by managing their futures. And in the imagining and implementing a culture of innovation with promises of future entrepreneurial abundance, Evoke offered implicitly to make an intervention into the daily routines of work and play. If the goal was to increase rates of innovations produced to confront African dilemmas, then the implicit notion of increasing and speeding up the tempo of work is one likely outcome. We can see a politics of time developing or what Sharma calls *chronopolitics* from three perspectives: (1) imagining the future through a crowdsourcing of ideas that Evoke facilitated as we will soon describe, (2) fostering a culture of innovation by pointing to and sharing stories of possible inventions, and (3) likely interventions in speeding up the tempo of life and the increase of capital flows of goods, services, and investment especially from the perspective of Evoke's principal sponsor, the World Bank Institute.

A Description of Evoke

In 2010, during Evoke's 10-week inaugural round, participants across the world logged onto the game's site via personal computers on the Internet, where available, but also over mobile telephones for those in developing countries lacking Internet access via desktop computers or laptops. Every Wednesday at midnight players went online to access a new "urgent evoke," or a description of a problem players worked to solve (Alchemy, 2011; Bauer, 2011). Evoke created a mythology based on the African continent. In a graphic novel/comic book interface, players were presented with a storyline each week connected with a particular mission. In the graphic vignette portrayed, an "urgent evoke" emanated from a secret network of change agents who would take on the mission and attempt to resolve it. Through the graphical novel created and online videos by the designers posted, players entered this network. As one video for Urgent Evoke proclaimed,

This is not a simulation. You are about to tackle real problems. Welcome to the EVOKE Network. There's an old saying here: "If you have a problem, and you can't solve it alone, evoke it." An evoke is an urgent call to innovation. (Alchemy, 2011)

The game presented 10 weekly missions that included a wide range of topics. Each mission carried with it a progressive logic to signal diversity, tolerance, and inclusivity (see Figure 1).

The missions comprised three major elements and active web links labeled as a Learn, an Act, and an Imagine. With each new "urgent evoke," players clicked the Learn icon providing an opportunity to research and learn about the issue, consider the challenge posed by the game's designers accompanying each "urgent evoke," and accept the mission. Unlike the fantasy immersion offered by *World Of War Craft*, Urgent Evoke did not present a fully immersive online video game experience. Accepting the missions did not bring players to any new, simulated world to carry out their quests; "rather, players were expected to Act" on the mission within their own communities and document their efforts with video, photos, or a blog post by clicking on the Act link (Bauer, 2011). This was a significant aspect of the game that confronted students' normalized expectations of what an online game was supposed to entail. Evoke's design challenged student notions of the gaming genre and prompted them to rethink and expand their notions of gaming. The game introduced them to alternative reality gaming, a genre not experienced by most students. Students had to confront how to learn, act, and imagine in this game as it reconstituted their usual patterns of attention, time, and ways of being within an online game.

The third and final step, the Imagine link, asked participants to consider the weekly mission, then to describe how energy for example might be obtained in the future or about new forms of currency that might evolve. Players earned points for completing each mission, and their peers could award them more points for various criteria such as creativity and collaboration. At the end of the 10 weeks, players were asked to submit their own "Evokation," or a plan to tackle a problem. Players who completed all 10 weeks of the game and submitted an "Evokation" received a certificate for social innovation; those players who produced noteworthy "Evokations" garnered consideration for funding to enact their idea, receive scholarships, and a chance to attend a social innovation conference in Washington, DC (Bauer, 2011).

Who Played Evoke?

Statistically, a majority of the approximately 5,000 players of Evoke were from Europe and the United States with only a few hundred African players in the game (total number of players: $n=4,693$, with an estimated 400 or 11% African). We confirmed these statistics based at the end of Evoke's initial game play in 2010 reported by the Evoke website and verified by academic researchers and media sources (Fiorito, 2011, p. 65; McGonigal, 2010b; Sutter, 2010). A total of 177,163 people visited the game with 19,324 registered to play and 4,693 who actively played the game. Based on this

1. Social Innovation	<p>You're ready, aren't you. Ready for a real challenge.</p> <p>It's not enough for you to read our story. You want to be part of the action. You want to know how you can make a difference. How you can change the world.</p>
2. Food Security	<p>We saved Tokyo. Now it's your turn.</p> <p>More than one billion people go hungry every day. This week, YOU have the power to change at least one of those lives.</p>
3. Power Shift	<p>Today, less than 10% of global electricity is produced by sustainable energy sources.</p> <p>This week, discover YOUR power to help change that number.</p>
4. Water Crisis	<p>Today, 1 out of every 6 people on Earth lacks access to clean water — and 2 out of every five people lack access to basic sanitation. As a result, water-related diseases cause the deaths of over 5 million people each year -- mostly children.</p> <p>This week: Take action to help save at least one of those lives.</p>
5. The Future of Money	<p>3 billion people currently live on less than \$2 a day.</p> <p>Your mission this week: Help invent the future of money.</p>
6. Empowering Women	<p>Out of 128 economies around the world, only 20 have equal rights for women and men.</p> <p>Your mission this week: Help empower women. Raise your voice in support of equal opportunity.</p>
7. Urban Resilience	<p>Today, half of the world's population lives in cities. By 2050, the UN estimates, humanity may well be 80 percent urban. Your mission this week: Develop your resilience superpowers -- and prepare for the volatile future of urban life.</p>
8. Indigenous Knowledge	<p>It's an old African proverb: "When an elder dies, a library burns." Your mission this week: Help ensure that traditional, local wisdom is put to good use today -- and not lost to future generations.</p>
9. Crisis Networking	<p>When a pandemic strikes, disease isn't the only enemy. Panic and denial can wreak extreme havoc. Your mission this week: Master the crisis networking skills of psychological first aid and virtual emergency response.</p>
10. What Happens Next	<p>In Season 1, more than 18,500 agents from over 150 countries worked together to successfully to complete more than 30,000 world-changing missions and quests. Your challenge this week: Help design and create our next great adventure: Season 2 of EVOKE.</p>

Figure 1. The list of missions to accomplish for the Urgent Evoke game (2010). The game emphasized the agency of players to imagine solutions and alternatives.

demographic makeup, Evoke embodied a Western-centric orientation celebrating innovation. Thus, although the game was designed with an African audience as the target, the user base and design are largely Western and US based.

Our students in the study ($n = 160$) represented a primarily working-class population with a large percentage of first generation college students. A smaller percentage of students were from middle- to upper middle-class incomes. Collectively, we gained a sense of student perceptions of their career aspirations based on our class discussion. Several students viewed themselves as partially marginalized in seeking Silicon Valley-style opportunities. At the same time, they voiced the hope that their education promised a route to enjoying elite, high status jobs. Many are not yet invested in this elite structure and have more acute, critical views of the market system. No single ethnic majority dominated statistically while a majority of the students were female. The demographic profile of our students provides an important base and vantage point for interrogating the politics of time that pervaded the game.

Evoked's Politics of Time

As scholars noted, studies of time usually focus on how people have uneven access to accomplish tasks based on the demands on their time (Agger, 1989; Brown, Rappert, & Webster, 2000; Harvey, 1991; Hassan & Purser, 2007; Lipovetsky, 2005; Tomlinson, 2007; Virilio, 1986). In various discussions, notably a Technology, Entertainment, Design (TED) talk in 2010 and during an interview with *New Yorker* magazine, Jane McGonigal discussed the need to harness the vast amounts of time people apply to *World Of Warcraft* (WOW) and how that time can be re-channeled to solve real world problems and envision better futures. In contrast, several of our students distanced themselves from gaming altogether and voiced their disinterest in playing games such as WOW in the first place because they viewed it as a waste of their time and not essential to their own career aspirations. Therefore, playing games for them was a temporal luxury they could ill afford.

Rather than simply focus on the pace of time, this study takes up and extends Sharma's notion of critical time to look at the implications when a serious game focused on building visions of the future fails to account for how time connects to institutional power. Evoke comprises an important initial step in serious gaming about envisioning the future. What happens when a game ironically about the future fails to question its own assumptions about time? After Evoke was created, the Institute For The Future created a string of forecasting games based on the Evoke model. Gaming associations such as Games For Change awarded Evoke with its Social Games for Change award in 2011. With this fanfare, the significance of not having a critical framework in place about time becomes acute as opportunities to challenge notions of time become less visible and easily recede into

taken for granted assumptions about how games, especially serious games address issues of time. Simultaneously, Evoke's notions of time are tethered to a specific and narrow vision of that future shaped by its sponsors. In Evoke, innovation as the future is leveraged to speed up the tempo of useful globalized capital by harnessing the identities and bodies of the players themselves.

Kligler-Vilenchik and Shresthova (2012) examined and documented participatory civic networks occurring through storied formats such as the Harry Potters Association in facilitating carrying out real life voter registration drives and donating books. However, in their discussion of ARG's and novel online network associations, research about developing critical reflection as a literacy capacity to question and examine the sociocultural production of these games and networks is less visible. Rather than extol and celebrate the civic virtue of participating in gaming, we exposed the messiness of a politics of time.

Initial student resistance to playing Evoke sharpened their critical faculties ironically and enabled them to take a far more grounded and insightful look at the game. Their stance influenced the direction of analysis by revealing how embedded our notions of time are bounded to multiple centers of power. Had students embraced the game's premises uncritically at the outset of their missions, the opportunity to explore time as a means of persuasion and placeholder for making claims about the future might have been missed. Students challenged, created, and followed the cultural capital of promissory visions in circulation about applying increasing rates of innovation to developing nations especially in Africa.

Our project recognized how student resistance, prompted the asking of critical-analytical questions of the game itself, about the nature of its corporate and nonprofit stakeholders and the players involved in the learning experience. For example, who made the game, created its temporal challenges, and for what purpose in shaping a likely set of preferred futures? This study yielded specific critical reflections asserted by students in blog posts, focus groups, and individual interviews. Our article identifies several of the most distinct and profound student insights. We explain how this feedback contributes to the expansion of a critical cultural rubric for evaluating student learning of serious gaming. We consider how students experienced time differently in playing a game about the future. Through game play, students became acutely aware of its temporal demands as a deeply embedded form of power (Freeman, 2010). Their wrestling with the format and content of the game raised significant implications for building an expanded literacy of temporal awareness where time is a means of power to constrain and create the possibilities of social change. Sharma (2013) notes how critical time is not simply an individualistic experience of time. Instead, we can explore critical time "as uncompromisingly tethered, in common while disparate" to larger collective institutions and societal dictates (Sharma, 2013, p. 312).

This investigation brings issues of critical time to the forefront and what Sharma (2013) refers to as power chronography, an approach that seeks to incorporate “various perspectival accounts of different types of labor which are understood as very particular positions” within multiple temporalized flows and time-spaces of globalization. Sharma (2013) observes how a “politics of time is hidden in the way we approach our objects and areas of inquiry. This includes media, organizations, social movements, technologies, publics, social spaces, identity politics and the environment” (p. 312). Student reaction and insights extended Sharma’s conception of critical time by revealing Evoke’s hidden politics of time as tethered to a circulating view of innovation. Evoke was designed to create a shared imagination and experience of temporal conquest. The dialogue between instructors, students, and their peers created a necessary intervention into the failure of Evoke to address any critical notion of how time is tied to a powerful hegemony for regulating daily cycles of work and play. The collective course debate over gaming provided a robust and emerging theory of critical time and temporal power.

With students in two college media courses, the authors explored how the game was conceived and designed. Students participated in the game play to offer an emerging redesign for this genre of serious forecasting games. We got more than we expected in terms of a critical exploration of the game. Students evaluated Evoke with a zealous mixture of critical lambast, skepticism, and hope. Indeed, student critique provided an opportunity to expand the scope of alternative gaming literacy practices (Bonsignore et al., 2012) that immerse students into greater serious critique than a celebration of game play in the classroom alone. We asked students to complete a journal detailing their involvement with each mission and only required the completion of 5 out of 10 missions. We analyzed student journals based on their reflection of their Evoke gaming experience ($n=102$ students) and conducted a focus group interview with 7 students.

Student Resistance to Evoke and Temporal difference

A number of students raised objections to playing Evoke as a serious game right at the beginning of the courses. Their discussion soon became a debate on the temporal demands of gaming, and some registered their objection to gaming as a form of learning. Some students asserted that the playing of games at all was a “waste of time.” Ironically, this statement connected to the larger issues of Evoke’s goal to transform wasted fantasy game hours into the productive service of solving global dilemmas that might impede people’s productive capacity for work and the flow of capital.

Serious gaming makes learning immersive, personal, and interactive. At the same time, this genre requires its own literacy in navigating student expectations and personal history with gaming. Jane McGonigal’s (2011) recent book, *Reality*

is Broken, demonstrates how games make us happy and engaged. By this reasoning, she asks: why not make our reality more like games? Her research echoes the work of Kurt Squire (2011) and Constance Steinkuehler (2008), who explain how games enhance and complement traditional pedagogical methods. However, as deWinter, Griffin, McAllister, Moeller, and Ruggill (2010) observe, introducing online games into the classroom has encountered resistance by students. We decided to leverage the resistance we encountered in introducing Evoke as a welcome element to build a critical cultural studies/perspective and as recent preliminary findings (Brooks, 2012; Rhabyt, Bicais, Brooks, McKenzie, & Hofstetter, 2013) document, some college students exposed to serious gaming initially resist accepting it as a pedagogical tool.

Students resisted how the game challenged traditional binaries of leisure and work by conflating work with play. They further rebelled or sought to place themselves in categories of time that re-affirmed higher, lower, or ambivalent status in terms of gaming pursuits. Advocates of serious gaming such as Jane McGonigal, concerned with elevating and shifting the focus of gaming from violent immersion or escapist fantasy into games that heal or solve real world issues, fall into a more than century old debate about urban renewal. At the end of the 19th and early 20th centuries, elite urban reformers advocated and built museums, symphonies, and libraries to institutionalize working class access to a formalized vision of cultural life based upon moral integrity and self-control (Kasson, 1978, p. 4). Cities, for designers like Law Olmstead, the architect of Central Park in New York City, were meant to teach, instruct, and uplift their multitudes of inhabitants. Urban planners wanted to teach and transform the newly formed industrial working class as they transitioned from their agrarian origins from the farm. Cities would teach workers how to become city dwellers.

In one sense, gaming is experiencing a similar aesthetic logic of virtual migration from violent and fantasy games to games that map onto urban and regional centers and concerns. McGonigal and the World Bank Institute’s efforts to elevate traditional first person shooter gaming and fantasy game quests into the resolution of real world problems are part of a long tradition espoused by urban reformists to elevate working class aesthetics of leisure. *Too Cruel to Be Kind*, one of McGonigal’s early augmented reality games, transformed urban space into a kinder space through the metaphor of assassination. People achieved their epic win by showering praise onto their human targets. As John Kasson (1978) documents in *Amusing the Million*, Law Olmstead envisioned Central Park as a scenic vista for the masses to enjoy rather than a venue for more visceral recreational sports and gaming. Olmstead sought to elevate, tame, and manage the democratic potential of spaces of mass leisure. He ignored a public desire for “manly and blood-tingling recreations,” although the reformists lost part of the battle to prevent fireworks, merry go-rounds, and baseball fields

(Kasson, 1978, p. 14). According to Kasson, “Central Park reflected a conflict in conceptions of culture and urban recreation that would become increasingly apparent toward the end of the nineteenth century” (p. 17). Evoke represented a similar logic albeit of virtual space that aligns leisure with an expansive capitalist logic of innovative work. McGonigal (2011) declared that our “reality is broken” and that we should embrace gaming as our daily practice. This logic carried a seductive charm: if innovation is treated as a game and gaming is fun, then work as an innovative game created to tap the potential of urban spaces and regions elevates our collective global and labor potential. Our students, similar to the working classes at Central Park and other venues like Coney Island, held other visions of less regulated and untamed urban and temporal space. They sought to brake, break, and hack the temporal ambition of Evoke.

Student resistance reminded us of Marcel Proust’s (1913) ruminations on time and memory in *Remembrance of Things Past: Swann’s Way*. Proust provokes us to think about time beyond its linear trajectory and instead to view time as a flowing together of moments. A variety of mundane activities from a taste of cake to going to bed at night can take us back to any particular memory of time, especially in the past. “These shifting and confused gusts of memory never lasted for more than a few seconds,” Proust (1913, p. 1, para. 9) notes. Proust (1913) at first did not really think about them as “when we watch a horse running, we isolate the successive positions of its body as they appear upon a bioscope” (Overture). As an early form of cinema, the bioscope was a succession of flipped images that created the illusion of motion. In Evoke, students had to confront their own pet theories of time and run them through a bioscope of sorts. They resisted isolating their own successive moments of leisure time in the future in terms of analyzing and conforming them to the rules of the game and perceived regulated commodification of their leisure time in the classroom.

Evoke in many instances literally evoked moments from students’ past where gaming was already used as an educational tool or as an escape from it. Evoke conjured memories for students of their own mixed perceptions of gaming as a promise, fantasy, and waste. Evoke interrupted the leisurely experience of the “slowing” of time that students articulated in our class discussion about gaming in general. Several craved that fixed boundary between their leisure time as an escape from real world problems precisely to deal with another set of challenges they perceived as not part of their daily life at all. Students, in their division into gaming time classist groups, acted out a struggle for defining their chronorights, their sense of freedom within a growing awareness and articulation of a politics of time.

McGonigal’s design of the Evoke quest resided within a deep historical legacy and battle for temporal ambition over our leisure time. Evoke carried a seductive banner of innovative gaming although based on the financial logic and rules someone else got to write. The student formation of temporal

classes and covert uprising among some of them against the temporal ambition of Evoke recalled Holden Caulfield’s rebellious spirit in the *Catcher in the Rye* (Salinger, 1951/1991). When his private school teacher told him life’s a game, Holden replied, “Game, my ass. Some game. If you get on the side where all the hot-shots are, then it’s a game, all right—I’ll admit that” (Salinger, 1951/1991, p. 8). In the practice and lived reality of playing Evoke, our students re-shuffled the rules of Evoke’s temporal bids to re-structure their leisure and in the process created a more critical version of the game than we could have anticipated.

The issue of the compelling interaction of game play, and the emotional stage when gamers are about to attain an “epic win” in the course of gaming, is the kind of “high” that McGonigal (2010a) wants to make as frequent in real life as it is in the online gaming world. This state of being that games have over people across a wide demographic range and its role in the lives of students became a lively contested dialogue and controversial topic in the classroom for how students spent their time.

While playing Evoke, the debate continued as students continued dividing themselves according to their allegiance to gaming and the time playing games demanded. Students found themselves categorizing and positioning themselves into various groups according to the amount of time spent on gaming. In effect, Evoke as a game confronted students by re-introducing time as a political artifact with a range of affordances and consequences. Students were eager to defend their positions that soon coalesced into quasi-class-like divisions of how they encountered and negotiated their relationship to time, especially in work and play. These divisions emerged as real dividing lines marking temporal difference and identity.

Students initially viewed themselves as either avid gamers who invested considerable time in gaming or felt pride in distancing themselves from gaming by identifying themselves simply as casual and uninterested nongamers. The recurrent theme in class discussion addressed time and temporal demands. How much time did gaming taking over one’s life? And why would we want gaming to invade our educational and work settings (Brooks et al., 2011, 22 April, in-class fieldnotes)?

Students expressed concern about former addictions to gaming or knowing others who do and viewed gaming as totally escapist fare and/or as hyper-violent. Some students who were active gamers already sought to reframe themselves as not being a typical gamer. In a focus group we conducted, one student identified himself as a long time gamer while distancing himself from gaming stereotypes:

I’d say games were a part of me but don’t define [me] you know like I don’t lock myself away for days just to play games. It just adds to my life instead of being my life. That’s the difference between myself and other gamers. I still consider myself a hardcore gamer at the same time. (Student 1)

Another student resisted the notion that Evoke would have any meaningful effect on the world at all. He resisted connecting gaming to solve real life issues and grappled with the meaning of media determinism and gaming:

But I do not believe this game affects real life. Once the game is turned off, we leave this virtual world and get back to reality. I believe we would have serious issues if people were that easily influenced by games . . . Most people know the line between what's real and what's fake, and even though Evoke tries to promote positivity and change, I do not believe it really has an affect on real life.

A number of students held the belief in the uselessness/time wasting attributes of recreational gaming. They continually expressed a fear of gaming's temporal demands from recreational use and then its temporal intrusion into the classroom as one student commented,

Let's see . . . how can I describe my experience playing Evoke? The best, most honest, answer I can give is that I considered it a huge waste of my (seriously limited) time. I have completed three missions on Evoke, and I did them all without leaving my computer, or raising a finger to fix any of the world's ills.

She expressed annoyance with Evoke as a form of arm-chair activism without real involvement and displayed her hostility toward Evoke as a game for people ignorant of world events. And finally viewed Evoke as a bogus "Let's save the world" game:

If a person never picks up a newspaper, watches the news [. . .], I can totally see how he/she might be enlightened by the problems presented here; however, if a person happens to keep up on available information, and applies even a modicum of thought or concern, not much will be gained by forced participation in this game [. . .]. I accomplish more by refusing to use plastic bags, and either making or buying reusable bags to give away than I ever could by playing a bogus "let's save the world" game.

A significant number of students adopted a "what am I going to get out of this" approach toward the initial stages of "serious" gaming. While some students registered their initial backlash and resistance, others readily admitted the power of gaming in their lives and expressed it as holding too much sway, especially in the more intimate space of the focus group:

My relationship with gaming . . . Gaming has been my third parent and like my extra brother . . . Lately, I've been getting into games a little too much. Like I played LA Noir and beat it in four days. (Student 6)

Students arrived with various experiences and attitudes toward gaming in general that elicited even stronger reactions when they were asked to engage in gaming to save the

world. They expressed surprising reluctance to enter into a serious fantasy space that promised to educate and engage them to act on pressing issues. Some students viewed playing Evoke as taking a step back in what educational experiences promised to offer.

We analyzed our students' reactions by understanding the scaffolding of ideas and building literacy within the game by referring to connected learning and Bakhtin's (1981) idea of chronotopes and its development by other scholars. Kumpulainen and Sefton-Green's (2014) definition of connected learning captures the spirit of entering and creating a learning space where "the learner is able to pursue a personal interest or passion with the support of friends, caring adults, and/or expert communities and is in turn able to link this learning and interest to academic achievement, career success, or civic engagement" (p. 10). Shared insights and literacy occur with everyone participating beyond the teacher, the curriculum, or outside experts. Playing Evoke with our students deviated from connected learning in a few important ways by confronting students with gaming as a required pursuit that made them feel uncomfortable and unsure at the outset about what community of gamers to join. Although the missions presented students with opportunities to pursue their personal interests, they had to decide on their stance and their relationship with Evoke that uses time as a central metaphor. Students did not have to play all 10 missions and were asked to choose 5. Some chose not to play all 5, and some students lied about going on missions and did not play any at all based on reviews of student profiles and their corresponding assignments about the game. We interpreted this as a rejection of engaging in the game within the classroom and as part of the risk we took by introducing a game that deviated from student expectations about a traditional college course.

Gonzalo Frasca's search for defining ludology, "the study of games and play activities," offers some insight into the temporal struggle Evoke ignited within our classroom. Frasca (1999) sought to define ludology by emphasizing two different meanings of play that philosopher Andre Lalande (1928) captured in his *Dictionnaire Philosophique*. *Paidea* is the wasteful abundance "of physical or mental activity which has no immediate useful objective, nor defined objective, and whose only reason to be is based in the pleasure experimented by the player." And "*Ludus* is a particular kind of *paidea*, defined as an 'activity organized under a system of rules that defines a victory or a defeat, a gain or a loss'" (Frasca, 1999). Play stops the minute you have to do it for a course assignment or you did not choose for yourself. As Hector Postigo quips, "A magic circle by any other name would still exist outside of time." The most resistant temporal student groups did not want Evoke to touch and invade their magic circles and their unaccounted for nontemporal gaps, the moments unlocked. For some student quests, critically arguing against Evoke's logic became the new ludus.

In our analysis of student withholding or engaging in game play, we observed a learning space marked by resistance, lying, critical reflection, and celebration of Evoke's premises and promises for innovation. The chronotope according to Kumpulainen and Sefton-Green (2014) allowed us to grasp the processes and development over time of connected learning by emphasizing how people understand and conceptualize "their collective and individual movements through time and space" (p. 12). Chronotopes are socially constructed practices closely interconnected in time and space (Bakhtin, 1981; Kumpulainen & Sefton-Green, 2014, p. 12). Chronotopes helped us to explain how critical time works as a temporal feature of a culture or subculture; they informed how the students shaped collective spaces and divisions of temporal difference (Lemke, 2004). Student chronotopes evolved into signs of temporal difference that represented the types of behavior usually associated with wealth gaps and labor and class divisions.

While chronotopes described the student's learning journey, Thorstein Veblen's (2007) "Theory of the Leisure Class" contextualized the temporal class divisions that erupted in class. As Veblen (2007) observed, the "utility of leisure" is "a means of gaining the respect of others" while the "performance of labour has been accepted as" evidence of "inferior force" and "base." Hence, those who played games as a hardcore pursuit were seen in multiple valences as either wealthier in terms of affording a life of leisure and/or possibly as part of a working welfare class that squandered the leisure time it could have used to elevate its cultural tastes. For the resistant student groups, games were seen as a nonnoble pursuit as emblematic of the "big shots" as Holden Caulfield noted (Salinger, 1951/1991, p. 2). Students who resisted games were struggling with finding a professional foothold into the leisure class and in some manner playing a game of delayed self-gratification. Other students who embraced Evoke saw its practical utility in securing their professional identity as well. Evoke outlined new paths for using gaming as a means to work. For this group, Evoke became an emblem of a new work elite that could afford to play it. The innovators idealized in the Evoke narrative were part of a new leisure class that played games to fix things as a new badge of a life of leisurely work. The promises of Evoke transformed into stark differences between student groups based on time as a commodity and as a means to make political claims about the world Evoke envisioned that marked their chronotopic trajectory in the game.

The Evolution of Temporal Differences in Student Game Play

As students continued to play the game over the academic term, the translation of Evoke into the classroom as a learning medium continued to run into the local temporal, gaming orientation-based divisions of the student players. After playing Evoke for its 10-week duration, three broad categories of

gaming orientations emerged: (1) students who were already comfortable and had the resources to play games, (2) those who viewed gaming as a waste of time or have discarded them as an intrinsic and extrinsic sign of maturity, and (3) those who embraced gaming as a bonding and learning medium.

Based on a review of student posts in the game and comments, we noticed further marked approaches to gaming. In the classroom, new markers of difference emerged as students channeled themselves into a variety of gamer classes based on their unique relationship to playing Evoke. These divisions were based on prior student experiences with gaming, the temporal demands on their time cited earlier, and their specific attitudes toward playing Evoke. In effect, new divisions became markers of temporal classes where time became a commodity, precious resource, and political stance: (1) the Anti-Evoke temporal class: those against playing the game (anti-gamers or resistant gamers) based on political assertions against the sponsors, (2) the Resisters' temporal class—students who were nongamers or casual gamers that were suspicious of the value of gaming, (3) the Resisters include the hardcore gamers who viewed Evoke as not quite a game, and (4) students who were withdrawing from gaming as a central aspect of their lives. The final class included (5) the Hopeful temporal class—those who embraced Evoke and aligned themselves with the innovators they read about in the game. At various times, we observed how age and ethnicity played a difference although we did not track this demographic data as rigorously.

The curriculum design for using serious and forecasting games like Evoke must account for the conceptual development of what Sarah Sharma (2013) calls chronopolitics, a hidden politics of time that shapes our approaches to cultures, organizations, and innovation. By placing spatial and temporal dynamics center stage, we observed how Evoke produced a politics of time differentiating among people and their temporal affiliation with gaming. Using chronopolitics as a useful positioning, we noticed how Evoke demonstrated an expansive reach of temporal empire by triggering the formation of these temporal gaming divisions of students. Similar to our spatial conception of classes divided by wealth, income, and neighborhood, Evoke became an important medium that students used to mark off their temporal differences. The game acted as a continuum for understanding Elizabeth Freeman's (2010) reflections on "chrononormativity, the use of time to organize human bodies towards maximum productivity" (p. 3). Students registered their resistance, challenge, and sometimes embrace of Evoke's central premises and assertions over the future and speeding up of innovation. In other words, their temporal difference expressed an identity related to the use of their time. Students registered their resistance to their bodies being organized as extensions of the game logic and algorithms or rules about learning, acting, and imagining. Without necessarily understanding why, students were searching for alternate formations of time that had the power to disrupt Evoke's core assumptions and promises. Their temporal

differences became a form of jockeying and making stakeholder bids on the future as a means of asserting power over their relationship to time (Berkhout, 2006).

Nick Dyer-Witthford and Greig De Peuter (2009) in *Gaming as Empire* discussed in detail the industrial reach of gaming and how its infrastructure affirms corporate power in the spatial context. They attempt to explore “virtual games with a system of global ownership, privatized property, coercive class relations, military operations and radical struggle” (Dyer-Witthford & De Peuter, 2009, p. xxix). Their work extended a notion of empire based on Michael Hardt and Antonio Negri’s (2009) work *Empire*.

Evoke marks the clear fusion of both gaming and temporal power as branches of similar dynamics cited by these explorations of empire. Where both of the studies cited earlier tend to explore the spatial and situated dynamics of gaming for instance, temporal issues play less of a role. Evoke offers a look at a temporal empire in the making.

Like a miniaturized version of Facebook, Evoke offered to facilitate people’s dreams of a better future with tools to re-imagine local and global innovation. Who would not think of that as a progressive idea? The deeper, uneven messiness of the politics of time in the classroom challenged Evoke’s narrower cone of future possibilities for how innovation occurs tied to a global logic of capital flows. Evoke provided an important lab for deepening our understanding of temporal difference as an issue of an expanding temporal empire facilitated by digital networks. Gaming studies would benefit from closer studies of temporal difference as Evoke and forecasting games like it continue to define and map key developments about our future. The ubiquity of new media ironically facilitates the reduction of other futures as we see the rush and speedup of innovation overtaking our ability to deal with change. The unraveling of social safety nets and societal institutions to deal with fears around the future of work and the perceived threat of idleness make games like Evoke important as simulations in preparing for a future world. Evoke actively sought the visions of supposedly amateur actors, that is, students, educators, and a general public arena through game play. These promises are not neutral, rather they are used in attracting the interest of necessary allies such as fellow game players who form innovation alliances in the game through liking, commenting, and working with other players. The game itself formed a larger circulating alliance with the producers of this immersive experience to leverage these promissory innovations into implementation. By the end of the game, a select group of winners became an actual in-real-time Evoke network by forming the social innovation conference they imagined. This elite group then received seed money and certificates for their effective game imagination and skill. This ritual marked the winners as budding innovators and forecasters of time, conferring defined roles and adding to a set of practices of obligations and agendas for temporally intervening in the construction of a shared future about developing regions such as Africa.

Evoke’s Promising Debut and Assumptions about Time

Along with winning Social Game of the Year by Games for Change in 2011, Evoke received critical acclaim for its unique focus for combining online games with real world action. The context for how Evoke was promoted and conceptualized is worth noting and sets up an important contrast with how students perceived, played, and challenged the sponsors of the game. The designers and sponsors of Evoke promoted it as a pathway for young adults to learn about leadership and social entrepreneurship. Prior to its debut and during game play, Evoke enjoyed a strong burst of public relations outreach in local and national media outlets from the local San Francisco Bay Area local news to CNN. Online and print media venues were eager to discuss serious gaming amid the sustained popularity of WOW. From a journalistic perspective, Evoke lent itself as the counter narrative to self-absorbed game play and responded to the moral panic of a populace lulled by “games and circuses” distracted from local and global dilemmas.

In 2010, Jane McGonigal became the public face of Evoke during a number of media appearances. With a central focus on the African continent as an emerging site for innovation, the sponsors of Evoke sought to reframe naive and overgeneralized perceptions of African nations as simply weak and poor. At the same time, their rhetoric portrayed the game as an intervention to empower Africans to leverage their local talent for repairing and bootstrapping broken equipment as a source of innovative enterprise. For the makers of Evoke, Africa still required a means to harness their innovative talent and looked to the massive multiplayer format crowdsource as a relatively inexpensive path to siphon innovative ideas with Africa as the ultimate challenge and experimental litmus test for the game. McGonigal commented to local TV news anchors how if the dilemmas facing Africa could find resolution, then we would be able to tackle our most daunting issues. Based on McGonigal’s interview with CNN, the reporter proclaims, “She wants to push people in Africa—a long-troubled continent where people might feel less empowered than elsewhere—to solve problems like environmental degradation, lack of food, water scarcity, poverty and violence” (Sutter, 2010). As this high-profile article by CNN reporter John Sutter (2010) further explains,

Bob Hawkins, senior education specialist with the World Bank Institute, said one big reason people in African countries aren’t as entrepreneurial and innovative as those in the West is that they don’t feel as empowered to create change. That’s largely why his international development group is funding McGonigal’s project to the tune of \$500,000.

News stories about Evoke placed a strong emphasis on the game as an intervention into reshaping Africa and characterizing it as a region in need of entrepreneurial innovation as if it were an extension of Silicon Valley startup culture. Hawkins reveals this premise as he confesses to Sutter (2010) the motivation behind funding Evoke:

“There have been studies, for instance, in South Africa that the public investment in universities isn’t producing the types of new ideas and innovation that industry wants,” he said. “What happens is that industry is importing ideas from outside the continent and outside of South Africa.”

The pitch by Hawkins is territorially and temporally constrained to position the African continent and its diverse nations’ universities as out of step with the tempo of global capital. His rhetoric reinforces a circulating discourse situating African universities and higher education in general as primarily a narrow pathway for innovators to supply industry with more relevant and educated laborers with practical, easily translatable ideas locally and globally. The pace of innovation Hawkins emphasizes is not at the rate or in the manner that industry requires and that forces corporations to seek innovation outside of the African continent. Evoke as a game holds a set of assumptions about time that confirm a deterministic view of the future.

Our students held no restraint in questioning Evoke as an extension of institutional power over time and the pace of change. What appeared curious to us about Evoke and what students hint at in their analysis of the game, is the underlying dismissal of African public institutional strengths in favor of elevating ad hoc solutions to service more rapid industrial demands.

Evoke’s debut in the arena of serious gaming and its positive embrace by media obscured more critical reception, especially about the makeup of who played the game. In considering the demographic and temporal standpoints of our own student players, important issues point to how Evoke ironically lacked a sense of critical reflection about time and the assumptions embedded in framing its forecasts. How did students view the demands on their time and ability to envision their future? How did they perceive the temporal influences on their present and future organizational identities?

The Anti-Evoke Temporal Class and Its Challenge to Evoke Hegemony

In another sense, translating Evoke into pedagogy invoked the contradictions of what has been referred to as the Californian ideology of innovation, the startup dream of aspiring entrepreneurship that is promoted as open to anyone with a computer (Barbrook & Cameron, 1996). Evoke makes similar claims with its emphasis on leveraging social activism into profitable innovation using a cheerfully embracing social media platform.

Astute students became suspicious of this circulating discourse as well since most are struggling to make sense of what professional networks mean and how to access them. Evoke opens up and makes this process seem playful and easy and confronts student expectations of what professional or anticipatory socialization into a career identity is supposed to or should entail. Evoke plays with the meaning of meritocracy

both in earning legitimate points for missions and in collectively sharing their ideas. Is it a popularity contest or a meaningful competition of ideas? As one student observed in making sense of Evoke’s scorekeeping for solving intractable problems,

I feel like I am achieving something by like scoring a touchdown or something like that but usually I play video games to pick myself up from a bad day.

Some students expressed a sense of Evoke transforming them involuntarily into a member of this virtual class. One student observed,

I found this to be a HUGE mutual admiration society. The Evoke “community” is an (albeit significant) enclave of people who, by chance, by choice, or by coercion (in my case) stumbled upon a way to, a) be armchair heroes, b) take advantage of the chance to garner new blood for an existing organization and c) provide effortless, warm fuzzy strokes to other [Inc] of the same ilk. Encouraging others is a great way to feel better about yourself. It was gratifying to not see any particular snarkiness.

Another student became antagonistic and railed against being transformed into an object of the service of the international and gaming economy. The “resistant gamer” passionately exclaimed how Evoke reproduced an elitist dialogue:

The International monetary Fund should be abolished, as well as the World Bank and the Federal Reserve. The World Bank purposefully devalues currencies and caused the economic depression we are currently experiencing worldwide [. . .]. The only thing that can happen is that we can live happily in pods like on the matrix while the world bank feeds every human through catheters to keep the race alive! [. . .] since Evoke was created by the world bank, i feel as if im a market research subject, and my comments will help the elite banksters decide their next “business” objectives.

This student’s comment suggests the resistant gamer remained suspicious of a digital economy that seems to only reify a Darwinian struggle and free wheeling work force where “work itself has become the main route to self-fulfillment for much of the ‘virtual class’” (Barbrook & Cameron, 1996, p. 49).

Gaming suggests a free for all contest for points bypassing the fairness implied by traditional hiring and career bureaucracies. In one of the graphic novel segments of the Evoke mission on the Future of Money, an Evoke agent who is in some undisclosed developing nation, comments to a younger person accompanying her, “Expats investing in communities, communities supporting local ventures. Just to walk down this street, you wouldn’t even know the national bank had failed” amid a bustling and colorfully etched street picturing a band with guitar and congas in the background (UrgentEvoke, 2010b). A sense prevails in Evoke of entrepreneurial initiative

that invoked the Californian Ideology of a seamless and frictionless trade. Students confronted the promises of technological augmentation, an extension of their power even as it changes the rules of professionalization. They too felt the temporal distortion of disruptive innovation and the ironic pangs of disenfranchisement of a game promising collective empowerment. What career visions did Evoke offer for them? From territorial to temporal ambition, Evoke became a liminal and contested space of temporal career disruption, distinct and uneven for students who critiqued its vision of the future of work and temporal dominance. We can recover and expand a critical perspective on Evoke. What we see missing from Evoke or other discussions of using games as a form of literacy building is the lack of reflection on the game itself as a game of temporal Empire. Although lauded for not being about conquest, Evoke falls into another category of temporal politics, conquest through imagining the serious elements of a shared future world. Evoke does serious rhetorical work in creating a fantasy of Africa as an extension of Silicon Valley startup land. Evoke works to make the continent attractive and pliable as a site of innovation and not just a site of resources to exploit. It is a story of motivating local development while attracting global talent. The story here is nuanced as a mix of colonial and temporal ambition and an attempt to circulate muted and less threatening images of Africa.

The Hopeful Temporal Class: Embracing the Promises of Evoke

The blog posts, focus group transcripts, and student journals yielded unique insight into how each player progressively acclimated to Evoke throughout various stages of their chosen missions. Specifically, we observed how each distinct player's temperament toward gaming as a pedagogical supplement evolved. For example, through game play both the non- and hard-core gamers acknowledged the usefulness and practicality of engaging with global communities to percolate and innovate solutions to world plight.

In Evoke, in discussing the future, a shared and contested dialogue was traced among students in this study. As a shared experience, this collective begins with students who questioned the game's purpose, followed by students' shared immersion into the game play, and students' post-game reflection. In their post-game discussion, students used past online gaming experiences as a bridge to understanding Evoke as a serious game and collective discussion of future spaces and the efforts to build nascent innovation efforts in Africa and other developing nations. Undertaking the mission on Social Innovation, students posted blogs completing the Learn element of the game. Their comments showed their understanding of the importance of locally grown innovation. They indicate their assimilation into the game and adopted a new subject position toward innovation as a flexible and malleable

platform. After reading about *Design in Africa* and its exhaustive list of 33 secret innovations, one student embraced one of them. Amy Smith's (2010) rules for design in the developing world advocated to "[p]rovide skills, not just finished technologies. The current revolution in design for developing countries is the notion of co-creation, of teaching the skills necessary to create the solution, rather than simply providing the solution" The student states,

This secret of social innovation stood out from the rest to me. It emphasizes sustained innovation by including the community in the creation of technologies. By doing so they "learn how to fish" for themselves and can sustain, as well as build upon, using their newly acquired skills. By helping to make countries self-sufficient an innovator transfers responsibility to them: giving them pride, eliminating egotism in the innovator which purifies the act of innovation, and insures that any direction the country takes will belong uniquely to the country itself. Transferable skills ensure resourcefulness in an area lacking resources. The future depends on adaptability.

Some of the student language evokes interest in how innovation is re-perceived almost as a ritual act that should be without ego and purified for local distribution. The logic of temporal empire is not about duping unscrupulous students here, but it does show how a benign logic extends itself into temporal lives of its subjects and redefines the discourse of what innovation means.

Other students discussed how they were excited about reaching out to other nations across the world:

And I think we need to maintain that aspect of socializing [. . .] instead of being introverted and I like it because I was having again to think critically and think of things that I never thought of before and . . . what I actually really liked about it was that somebody in the Philippines for one of my acts had basically came up with the same idea. And in fact they were able to elaborate on it. Wow, I can work with somebody over in, like half way across the world!

Many students assimilated to the game's logic by discovering how new innovation could not be imposed on the local communities in developing nations. Instead, innovation had to take advantage of local problems such as reusing old technology and making it robust and sustainable in the local context. In this manner, Africa became situated as a cutting edge lab for creating bottom up innovation. As one student remarks,

I like the part that says, "if you want to make something 10 times cheaper, remove 90% of what's in it." We can't make raw materials appear just because we want them, or just because we're used to them being there. We need to be creative when we make goods designed for another part of the world on a budget. Just because something like a stove has always sat flush on the ground doesn't mean it always has to. One could develop a stove that sits on four posts. Or there could be one designed to not use

posts or anything to raise it up at all. Maybe it could be designed to sit with the bottom of the stove flush on the ground. Maybe it doesn't need to be as big as the one's in America. Maybe the top could also be used for something else. There are many possibilities out there, we just need to find what works best for other parts of the world.

The major drawback of the game story was its lack of differentiation among African countries so students came away with how social innovation operated generally but did not gain much insight into Sub-Saharan Africa as a multitude of nations, tribes, languages, and customs. Africa in the game translated into a means for re-discovering and re-creating the continent as Africa Startup, local and tethered. Alongside this general narrative of shared imagination about the future of Africa and developing nations, student divisions into temporal classes were tethered to a larger narrative that students interpreted as a future at times simultaneously repudiated and embraced with attempts to bridge gaps of understanding to make sense of a temporal empire in formation. Playing Evoke assisted in developing a language of critical time, uneven, messy, and connected to a perception of political advantage.

A Mute Enactment of Africa as an Extension of Silicon Valley

Where Mukerji (2012) observes that “[p]laces are sites of imagination and power—at once physical and virtual spaces where architectures and artifacts support forms of life” (p. 509), Evoke takes Africa as a site of future imagination to encode and project chronological power over its potential for innovation. Mukerji (2012) discusses how the territorial space, ambitions, and power were encoded in the gardens of Versailles and a type of serious game (Ortner, 2006), where social agents strategically engage with the world around them. Ortner (2006) coined this term before it was applied to the genre of serious gaming. The French King used the gardens as a fantasy space to sway nobles to abide by his power in projecting France as an heir to the Roman Empire.

In Mukerji's (2012) study of the space and material performances of power in the gardens of Versailles built by King Louis XIV to impress and gain the noble aristocracy as allies, she describes “what Haraway (1989) calls ‘politics by other means’, or the use of empirical things-in-the-world to imply logics of power by analogy” (as cited in Mukerji, 2012, p. 511). Evoke similarly uses time as a politics of other means by re-presenting Africa as an extension of a Silicon Valley research lab in an enticing noncontroversial manner. The implicit goal is to align Africa with the tempo of Silicon-style innovation. Rather than adhering to older norms of territorial ambition, Evoke uses time to forward ideas of temporal empire.

Many elite and nonelite groups want to see signs and images of African nations free of war, corruption, terrorism, and rampant, viral disease. Through the visual graphic

narrative running through Evoke and visual multimedia segments of social entrepreneurship, the game provides easy and seductive comfort that Africa is part of a global pipeline for change and due for a Silicon Valley-style transformation.

The rhetorical work done in Evoke is to recast the continent's challenges as ideal for startup solutions and to project welcoming set of images and practices to replicate innovation spaces that promise a Californian ideology of casual and implied wealth, the airy freedom of blithe dialogue and social experimentation. The image of Marc Zuckerberg (or in other photos alongside his leading staff of White males) on the cover of Time magazine November 2014 issue aptly captures the export of this ideology, as “The Man Who Wired the World” (Grossman, 2014). The article discussed the innovative means Facebook and Google are aspiring to build in order to extend Internet connection to the billions of humans untethered to their networks. Whereas the French nobles of Versailles became enrolled into the displays of power through elaborate cultural works recreating a classical Rome that imbued French nobles with power, a number of vocal students in class challenged and pushed back at Evoke's similar attempts at muting the chronopolitics of time.

This process was not lost on the students participating in Evoke. For them, the persuasive compulsion of gaming was less mute and more of a temporal threat to their spaces of pleasure or forced immersion for a few of them into a medium they felt beneath their educational level. Did teachers of the past who wheeled TV carts into classroom subject themselves to similar chastising? Was this a similar phase to the teachers who wheeled in the TV carts in the 1970s and who were chastised as transforming their classes into public living rooms? The opportunity here was to pierce through the hype of celebrated play and convene a colloquium of student critique on the implications of serious gaming. The real work of translation took place here far from the TED talks and game conferences of the serious gaming crowd already converted to teaching games with purpose.

Evoke, as an exercise in exploring the future of Africa, treated the future as a shared and social product and space of the imagination, at once physical, social, and chronologically imagined. Shared views of this future become discursive sites of challenge and contest within the constraints of a discourse already about striving for innovation. Figured world theory (Holland, 2001), as Mukerji (2012) interprets it, explains “how people learn through experience from their environment, engaging in activities that are politically mute but pedagogical” where these activities teach us how to act, exercise power or not, and how to be in various social orders.

Evoke aspired to become a shared and serious form of imagination. As Mukerji (2012) observes, “[w]hen people coordinate their activities around shared fictions, they produce social relations that are not imaginary. They are cultural worlds of practices, political advantages, and materialities, including spaces” (p. 512). In Evoke, a contested discourse

occurred in the classroom as a result of the imagined political advantages potentially held by regular gamers might hold in the game compared to those who eschewed gaming. Evoke's 10 gaming missions to save the world took on a politically mute cast by rhetorically situating these missions as a benign means to move past conflict and to promote serious gaming as a literacy of practical action. Within this gaming practice, Evoke promised to create a safe space and a neutral trading zone of ideas, media remixes, and persuasive stories of innovative future solutions.

Evoke's graphical comics detailing a secret organization dedicated to intervene temporally and create alternative future worlds are the forms of "psychological tools" Holland (2001) theorizes about as "the means to 'evoke' figured worlds" (Mukerji, 2012). In the graphic vignette on the food security mission, we see a man, an official of some sort, on a video screen asking the Evoke network, "Why all the secrecy?" and the implied leader (also male) of the Evoke network responding, "We like our secrets, Mr. Governor. Our strategy is not up for negotiation. Secret is how we work" (UrgentEvoke, 2010a). The graphic narrative in Evoke becomes the shared artifact of a collective memory bringing and marking a developmental history into and of the future, materializing a future world of social activist provocateurs, a network of Evoke agents akin to the hacker group Anonymous to temporally hack out the future, here and now. The students of the Hopeful temporal class imagined themselves as part of this social activist group of students who felt as if they "got" the message of the game.

Except for one mission searching for indigenous knowledge, notions of innovation were imported from models of Silicon Valley-style entrepreneurship. While this pathway is not a surprise or necessarily a marker of clandestine or colonial conspiracies, the nature of the game's discourse in forecasting the future of possible solutions for the African continent and by extension to the global arena invites critique in the unforeseen consequences of its reception in the classroom and in popular culture. In addition, the temporal dilemmas the game raises in forecasting the future with a majority of non-African players suggests a temporal distortion where a set of practices about time and the future of a continent are still overshadowed by a dominant vision of more powerful others.

While the synergistic merging of video games and education continues, it remains vital for media scholars of various disciplines to acknowledge and archive the inherent advantages and disadvantages of gaming in the classroom. Our 2-year study of student reaction, affinity, and usability of this media platform yielded valuable insights for future research. First, studies in this realm should acknowledge student's level of expertise with gaming. We found how varying levels of previous experience with gaming strongly connected with student's willingness to accept this media as a legitimate educational tool and process. Second, studies in gaming research should specifically account for the socio-economic status of individual students, as an identifiable relation may exist accounting for disparities in gaming as a specialization

of media literacy. Computer games in pedagogy hold much potential for student growth as critical thinkers and leaders especially when the game does not fit neatly with student expectations. Evoke became that battleground of unexpected and passion filled critique.

Evoke was indeed ground-breaking and precedent setting—it set out to take alternative reality gaming and apply to the educational space and to issues of global concern. It promised to evoke collaboration, creativity, and leadership. From a pedagogical perspective, Evoke engendered critical thinking, even if and especially when it made students angry. Although Evoke represented a ground-breaking game by provoking thought about the future, it did not question its core assumptions about time. Further designs of games that address the temporal imagination must include critical time frameworks that acknowledge temporal difference. As our own students have demonstrated in their earnest critique of the game, challenges to expanding temporal empire became vital expressions for re-asserting temporal control over their own daily routines, identities, and bodies. We must understand how temporal empire takes shape while striving for more democratic expressions of ourselves in time to evoke other temporal configurations.

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