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Survivance Among Social Impact Games

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Abstract

Studying social impact games can result in many outcomes, such as awareness or action around a social issue. Research can help inform best practices for the design process, strategies for reaching players, game mechanics for aligning with social impact outcomes, and methods for identifying the impact of the game on players and the wider community. One such research project is *Survivance* (http://www.survivance.org)—a social impact game that addresses healing from intergenerational historical trauma experienced by Indigenous communities. *Survivance* was designed collaboratively with Indigenous game designer/researcher Elizabeth LaPensée and the non-profit organization Wisdom of the Elders, Inc. This paper seeks to contextualize the area of social impact games within the Games for Change movement, compare perspectives on social impact games, and create connections and comparisons with *Survivance*.

Author Keywords

Games for change; social impact games; game design; game research; collaborative design; co-design; Indigenous; Native American; First Nations; Aboriginal

Introduction

Social impact games, which largely belong to the area of Games for Change, are on the rise as a means of encouraging social change through gameplay. These games can have many possible outcomes, such as creating social awareness around a particular issue, educating players about the depths of an issue, changing the attitudes and/or behaviors of players, and/or promoting activism and social engagement (Whitson & Dormann, 2013). For example, *Survivance* is a social impact game that uniquely addresses the long-lasting effects of historical trauma on Indigenous communities of Turtle Island (otherwise known as the continent of North America). The game seeks to create social awareness around colonization and residual issues passed on through intergenerational trauma, educate players about traditional ways of knowing that can address these issues, and promote engagement in self-determination through self-expression in any media.

Survivance was designed collaboratively with Indigenous community members involved with Discovering Our Story—a multimedia health and wellness curriculum created by the non-profit

Wisdom of the Elders, Inc. in Portland, Oregon. As an Anishinaabe, Métis, and Irish game writer, designer, and writer, I sought self-determination in game development. I participated as a researcher, designer, and collaborator seeking to meet the needs of the community. Conversations with Haida elder and storyteller Woodrow Morrison Jr., whose words resonate in Discovering Our Story, led *Survivance*'s design into the Games for Change space. Luminaries such as Jane McGonigal (2011)—a game scholar and designer best known for her work on Alternate Reality Games—inform this growing area of design and scholarship. Her work was some of the first to push Games for Change more specifically into social impact games, which *Survivance* has shown itself to be. This paper seeks to elaborate on the multifold definitions of "Games for Change," explore definitions of "social impact games," describe *Survivance* and comparative social impact games, and discuss connections and comparisons that will help inform perspectives on social impact games.

Games for Change

"Games for Change" can refer to a movement, a subset of serious games that are focused on social change, as well as a non-profit by the same name. Ludica, a women's game collective devoted to exploring alternatives to the dominant culture of games, proposes that we are currently revisiting the historic New Games Movement, which emerged in the 1960s and 1970s as a response to the Vietnam War and civil unrest (Pearce, Fullerton, Fron & Morie, 2007, p. 261). The collective considers Games for Change an area of the New Games Movement, which has returned in the context of digital games (p. 262). Scholars Mary Flanagan and Helen Nessenbaum continue related work with Values at Play, which features Eric Zimmerman and other game designers who are inspired to integrate human values in their games and game-based systems.

Before the Games for Change Movement was named, work such as Ben Sawyer's Serious Games Initiative, Ian Bogost's Persuasive Games, and Jane McGonigal's work in Alternate Reality Games provided pathways of interest. The Serious Games Initiative brought the Games for Change Movement to life after a gathering of developers, academics, non-profits, and foundations in 2004. The non-profit supports this area of games through resources including events, publications, and game incubators. Efforts such as youth workshops, games of varying genres, and research projects all contribute to the Games for Change Movement.

Since games for change are considered a subset of serious games, they are expected to involve some form of learning (Susi, Johannesson & Backlund, 2007, p. 1). Serious games are generally understood, thanks to Charles Abt, as games to inform, train, and educate. This is consistent with The Serious Games Initiative, which defines serious games as projects that involve "exploring management and leadership challenges facing the public sector" (n.d). Meanwhile, Ian Bogost (2007) dismisses the "serious games" term as "high brow" and instead uses "persuasive games" to promote games that persuade players through gameplay. Even more recently, he suggests using the term "earnest games" instead in a call for developers to be earnest about the games they make and how they are made (Bogost, 2013).

While the term has been debated, most agree that serious games are not to be correlated with "edutainment games" which are seen as "… the combination of one of the lowest forms of education (drill and practice) with less than entertaining gameplay" (Charsky, 2010, p. 178).

Rather, serious games encourage higher order thinking skills through engaging gameplay (p. 180). However, it should be understood that different games create different learning outcomes (van Eck, 2006). Rao (2011) adapts Kinneavy's classification to break down serious games as "newsgames ([to] persuade, express, or inform), art games (to be beautiful, to express), educational games (to inform), health games (to inform, to persuade), persuasive games (to persuade), training (to inform), advergaming (to persuade), [and] political games (to inform, persuade, express)" (p. 8). Overall, serious games are mostly applied to military, government, educational, corporate, and healthcare sectors (Susi et al., 2007, p. 1). For example, *Making History* (2006) is a strategy game used primarily in classrooms that educates players about history leading up to the Second World War.

Games that are considered games for change are understandably diverse in design and point more to the design process, motivations of the game, and/or outcomes of gameplay rather than game genre or mechanics. In contrast with *Making History* (2006), *Food Force* (2005) enables players to learn about food aid distribution while playing multiplayer social games and directly contributing to providing real meals for children around the world. The Ludica collective considers any game in which "the player experience and community are placed first" and that "has affordances to adapt to the player as the game evolves" (Pearce et al., 2007, p. 274) as participants in the New Games Movement and thus the Games for Change Movement by extension. *Food Force* (2005) could be seen as a game for change and even more specifically a social impact game, since the game creates social awareness and directly integrates action (Whitson & Dormann, 2013, p. 1).

Survivance as a Game for Change

Racism, discrimination, and unresolved grief from the loss of land, lives, and traditions continues to cause emotional, mental, physical, and spiritual imbalances for Indigenous people (Yellow Horse Brave Heart & DeBryun, 1998; Yellow Horse Brave Heart, Chase, Elkins & Altschul, 2011). *Survivance* hopes to restore balance for players through gameplay that honors storytelling, art, and self-determination. Aligning with feminist game designers and scholars who promote collaborative game design such as Jessica Hammer (2013), design and research on *Survivance* recognizes that change comes from players, rather than from the game. The game's title is inspired by Anishinaabe scholar Gerald Vizenor's definition of "survivance." Vizenor (1994) defines survivance as "an active sense of presence, the continuance of native stories, not a mere reaction, or a survivable name. Native survivance stories are renunciations of dominance, tragedy, and victimry" (p. vii). Survivance is more than mere survival—specifically, the survival of Indigenous peoples in the face of colonization, victimization, and attempted dominance by settlers—it is a way of life that nourishes Indigenous ways of knowing. It is survival and resistance that acknowledges we create and expand on tradition today.

Survivance in its game form is an intergenerational exchange of knowledge for the purpose of restoring Indigenous wellbeing, which involves balancing mental, emotional, physical, and spiritual health. The game is shared online as a website to ensure that it is available to communities on the outskirts of Internet access. The game opens: "Welcome. Stories inform us, empower us, mobilize us." The phases of the game trace the path of our life journey in relation to

Indigenous teachings— The Orphan ("questioning our circumstances"), The Wanderer ("wandering in search of answers in unfamiliar places"), The Caretaker ("befriending and caring about others"), and The Warrior ("confronting a challenge"), and The Changer ("returning, transformed, to help others start their journeys"). The Elder continues the journey but exists beyond gameplay and translates to our continuous lives.

Gameplay is non-linear—players may select any quest that appeals to them in their perceived phase of the journey and play or revisit quests in any order. Each phase of the journey has three unique quests. Every quest involves watching a video of an Elder and/or storyteller, such as Elaine Grinnell (Jamestown S'Klallam), Roger Fernandes (Lower Elwah S'Klallam), or Woodrow Morrison Jr. (Haida). Players then complete the quest, such as The Searching Quest, which begins by watching a video of Roger Fernandes, who explains the Hero's Journey and the place of the Wanderer (WISDOM, 2010). He relates the importance of stories and storytelling to our ongoing self-determination. The quest then challenges players to: "Seek out a story from your tribe/nation/peoples. It can be any form of story, such as traditional or historical. You can hear stories by attending events, asking relations, or even looking online!" Players reflect on the questions: "How do you identify with the story? What is its meaning to you?"

As a path to healing and reflecting on their experience during the quest, players create an "act of survivance." An act of survivance is self-determined expression in any medium, such as oral stories, songs, poems, short stories, paintings, beadwork, weaving, photography, and films, to name a few. The acts of survivance are shared online with the community, and in some cases have entered galleries and film festivals, such as in the case of Toma Villa—a fisherman and artist from the Yakama Nation raised in Portland, Oregon—who chose The Searching Quest.

Prior to playing *Survivance*, Toma had an existing interest in the revitalization of traditional stories. He described that he often asks "about old times and things of the river." However, he "never seem(s) to get the whole stories, just bits and pieces." Toma is motivated to pass on complete stories to the next generation: "I take it upon myself to make sense of things and finish off the stories so I can mainly tell them to my little girls." His quest selection was informed by his passion to revitalize traditional stories as closely as possible to their original form, understanding that some elements have been lost. He took on the challenge of recreating a traditional story and spent an entire summer seeking its elements.

For his act of survivance, Toma first spent the summer piecing together the story by listening to relatives while fishing. He chose to adapt the oral tradition to a written story "Wilups and Wawúkya" (Villa, 2012). After finishing the story, he created a linocut print for the "visual aspect" (Figure 2). He described the process as "long" but "great." He started by drawing Elk and Sturgeon together in different ways, and when he came to "what would work best," he "finally got it" and started carving. Although written stories are not widely seen as tradition, carving certainly is. Toma combined both, motivated by passing the story on to his daughters in words and visuals. He wanted to show in the linocut how Elk and Sturgeon are connected, and thus he literally connected the two figures in his act of survivance.

Figure 2. "Wilups and Wawúkya" by Toma Villa

Since finishing his act of survivance, Toma has created prints to tell the story to other people. He shared: "I printed out some on my small press at home and took them around to show people and tell the story, they would listen with full attention and loved it…" In addition to sharing the linocut print online and using it as a visual to pass on the story in-person, he also donated a print to the Northwest Indian Storytelling Festival's auction, which is hosted by the Northwest Indian Storytellers Association, a sister organization of Wisdom of the Elders. His work through *Survivance* encouraged him as a storyteller and artist. He gifted his work directly to the community so that they could receive funds through the auction. His artwork has since been featured alongside master artists such as Lillian Pitt. Identifying the effectiveness of *Survivance* as a social impact game has been informed by comparisons with other social impact game research.

Social Impact Games

Social impact games "unlock the potential of gameplay to teach or inform about social issues" (Ruggiero, 2013, p. 597). They have been contextualized as a subset of persuasive games (Ruggiero, 2013) or alternatively referred to as persuasive games, activist games, social change

games, and documentary games (Whitson & Dormann, 2013). Whatever term is used, these games create social awareness around a specific issue, educate players, change the attitudes and/or behaviors of players, and/or promote activism and social engagement (p. 1). Overall, they seek to inspire transformation in players beyond the "game world" (Schreiner, 2008). For example, *Survivance* embeds awareness about the historical trauma of Indigenous peoples caused by colonization, which leads to self-awareness about how this trauma has intergenerational effects on the player and/or player's community. Players are actively encouraged to make changes in attitude and/or behavior through self-selected quests that take place in the "real world." Each quest concludes in creating an act of survivance to process the experience, which can then be shared on the website and through social networks as a form of social engagement.

Overall, social impact games emphasize civic engagement, which can involve "helping or guiding other players, thinking about moral or ethical issues, learning about a problem in a society, and learning about social issues" (Ruggiero, 2013, p. 597). In the case of *Survivance*, players reflect on the Indigenous experience of colonization with the understanding that it continues still today. *Survivance* involves layers of history, storytelling, and healing in the Indigenous sense of balancing mental, emotional, physical, and spiritual health. Other social impact games address such diverse topics as genocide and refugee experiences (*Darfur is Dying*, *Escape from Woomera)* as well as environmental degradation and disasters (*Hurricane Katrina: Tempest in Crescent City*, *World Without Oil*).

Social impact games have several characteristics that inform the design process, design, and effects. First and foremost, they facilitate learning through guided decision-making (Squire, 2002). They take into consideration authentic problems that relate to the real world for players to work through (Ruggiero, 2013, p. 597). Thus, they tap into players' "natural curiosity," which increases their interest and assists building new knowledge frameworks (Ray, Faure, & Kelle, 2013, p. 63). Gameplay can also elicit empathy by immersing players in new perspectives, which contributes to "interest, motivation, and knowledge retention" (p. 68). Since each player has an individual base of knowledge and experiences prior to playing, they always have a unique personal understanding that emerges from gameplay (p. 63). *Survivance* educates players about historical trauma when they experience watching a video of a storyteller that relates to the quest they have chosen. Each quest takes place in the real world and embraces individual reflection by concluding with the creation of an act of survivance (again, being a form of self-expression such as a painting, a short film, a poem, a short story, and so on).

Given the context of addressing social issues in the game space, social impact games benefit from careful attention during development. In addition to game designers, programmers, artists, sound designers, and producers, teams should also include what are referred to in the game industry as "subject matter experts" (Swain, 2007, p. 806). They should also be included from the very beginning, contribute directly to the design, and playtest the game thoroughly (Swain, 2007, p. 806). In some instances, the experts may be a whole organization rather than an individual. Before adapting Discovering Our Story project into *Survivance*, I served as a producer for Discovering Our Story's multimedia content and facilitated the curriculum. The design grew from conversations with Haida storyteller Woodrow Morrison Jr., whose videos are embedded in one of the quest lines. This can also be understood as collaborative or co-design, an emerging area of interest that often occurs in the development of social impact games.

Social Impact Game Design

Social impact game design should be social, ethical, and effectual. Social design involves some form of social interaction and very likely cooperative game mechanics. Ethical design can refer to credible, perceivably objective, and/or respectful content as well as game mechanics that promote ethical actions in the real world. Effectual game design relates to engaging gameplay that provides players opportunities to expand their knowledge in an experiential manner. While the specific content and mechanics of various games is diverse, these three aspects are congruent across social impact games that are designed purposefully.

Social Design in Social Impact Games

Most researchers agree, of course, that social impact games should have social interaction and cooperative game mechanics (Bandura, 2004; Whitson & Dormann, 2011; McGonigal, 2010a). Game design should integrate community since gameplay calls on players to, in some cases, take civic action or implement awareness that intends to lead to change (Swain, 2007, p. 807). However, some feel that social impact games lack human interaction since they are often played alone (Whitson & Dormann, 2011). This thinking neglects to recognize the communal sense of self that is inherent in Indigenous ways of knowing. From an Indigenous perspective, individual gameplay does not imply absolute aloneness since community is always present in our actions.

Furthermore, there are indeed several strong examples of social game design in social impact games. Alternate Reality Games (ARGs) may especially support this design since they require collaboration from many diverse players who work toward a common goal in the context of a narrative (Bonsignore, Hansen, Kraus, & Ruppel, 2011). For example, Jane McGonigal's *EVOKE* (2007) is an ARG that begins: "YOU can make a difference." Although players may physically connect to the game as an individual through an electronic device, the gameplay connects people across the world. Players were inspired to share personal experiences about cultural diversity and debate whether any culture has a right to impose its social norms and values onto another (Bonsignore et al, 2011, p. 20). Importantly, high school and undergraduate students pointed out that missions encouraged them to take up responsibilities in their communities (p. 20). One particular episode and mission was able to raise awareness about issues such as domestic abuse, according to a high school player who blogged about his experience playing *EVOKE* (p. 20).

Survivance also embraces social gameplay, despite the appearance of an individual experience. In Indigenous ways of knowing, we constantly live and act as a community. Some of these ways have been damaged through colonization perpetuated mostly at residential schools/boarding schools where an individual sense of self was taught and consequently detached youth from their families and communities (WISDOM, 2010a; WISDOM, 2010b). However, many of these ways of knowing live on and the quests in *Survivance* are one way in which players can reconnect with traditional teachings. Namely, The Giving Quest within The Caretaker quest line challenges players to give to themselves, then to someone close to them, and then to someone they are familiar with, and finally to someone or an organization that they are unfamiliar with. Jamestown S'Klallam storyteller and elder Elaine Grinnell (WISDOM, 2010c; WISDOM, 2010d) guides players by telling a story about communities sharing natural resources, language, and education to help one another. She contextualizes community and thus people as natural resources

themselves. The challenges in the quests constantly reinforce a communal sense of self and actively connect players with the real world.

Social game mechanics can also involve social networks. Researchers Jennifer R. Whitson and Claire Dormann (2011) suggest that social impact games should adapt game mechanics from Facebook social network games to maximize social interaction and cooperation. Facebook and Twitter were integrated into the game design of *Survivance* shortly after the prototype and initial study phase and prior to the validation phase. Although it took place beyond the focal point of the study, there are clear implications in its outreach for *Survivance* and possible impact for other games. Using a Facebook group, Facebook posts, and Twitter posts, acts of survivance reached other players, the local urban Indigenous community, as well as a global Indigenous community strengthened by the Idle No More Movement. Since the study, some players have connected with one another, others have made valuable community connections, and most have continued their work in areas such as art or film beyond gameplay. "#Survivance" is a hashtag on Twitter recognized in relation to its origins from Anishinaabe scholar Gerald Vizenor as well as in connection with the game. These elements pull players together and provide a complex yet delicate narrative for players and people who are watching to follow. Social networks offer strong existing spaces for integrating social game mechanics.

Design in Social Impact Games

Some researchers suggest that game mechanics are most credible when they attempt to present a social issue objectively. Chris Swain (2007), a professor from University of Southern California's Interactive Media Division, believes that the game system and variables of games for change should refer to facts and present more than one point of view. He states that players should gain an "unbiased understanding" of how a social issue works and then "experiment with solutions" (Swain, 2007, p. 807). His viewpoint leverages the simulation game genre that is common across serious games. For example, in *Peacemaker* (2007), players experience photos and footage during game events based on real incidents in the Israeli-Palestinian conflict as they strive to create a simulation of peace in the Middle East within the game (Swain, 2007, p. 807). In *Food Force* (2005), players gain a practical understanding of the effectiveness of various actions on worldwide food support, which are informed by objective statistics from U.N.'s World Food Programme (Swain, 2007, p. 807).

Both *Peacemaker* (2007) and *Food Force* (2005) include another layer of what can be considered ethical game design—respectful gameplay intended to promote ethical choices beyond the game space. In *Peacemaker* (2007), players are encouraged to consider the value of peace, while in *Food Force* (2005) players are persuaded to take direct action in the real world by donating to the World Food Programme and spreading the word (Swain, 2007, p. 807). Along with these simulation game examples, ARGs such as *EVOKE* (2010) and *World Without Oil* (2007) have a natural affinity for ethical game design since interactions between players in ARG game design promote respect for diverse opinions and cultures (Bonsignore et al., 2011). Since ARGs are enacted in the real world (McGonigal, 2010b), players are constantly challenged to reflect on and modify their own behaviors within the context of a narrative. In this genre of game design, openness and a willingness to explore diverse opinions replaces the concept that game content should present "facts" "objectively." For example, designers of *World Without Oil* (2007) facilitated positive and supportive interactions between players by minimizing guidance and encouraging "well-conceived and well-expressed ideas" when imagining living in a world in

which oil resources have been depleted (WWO, 2007). *EVOKE* (2010) brought forth human rights issues by including a graphic novel episode on "Empowering Women" with missions where players had to learn about and take direct action on domestic violence problems in underrepresented communities (Bonsignore et al., 2011, p. 19). Blogs and forum posts from players reflected a shift in thinking about "survival" in relation only to practical human needs to culturally and ethically meaningful needs (p. 19), which relates to the concept of survivance.

Survivance most certainly contributes to ethical game design, although not necessarily aligned with all of the requirements in Swain's definition. While the stories told in relation to quests in *Survivance* come from credible storytellers and elders, the game is not objective, that is, it does not present the voices of colonizers or descendants of colonizers alongside storytellers who are living acts of survivance. As far as the Discovering Our Story Advisory Council is concerned, this *is* what makes *Survivance* ethical. For far too long, Indigenous voices have been obscured or skewed in the service of colonizing or romanticizing Indigenous peoples. This continues still today in media such as films and commercial video games, which are wrought with misrepresentations of Indigenous peoples and cultures (Dillon, 2004; Dillon, 2006a; Dillon, 2006b; Dillon, 2008; Lameman, 2010). *Survivance* is a game in which Indigenous players are given the space to represent themselves as they see fit and to explore the representations that other players put out into the world in the form of acts of survivance. The quests encourage ethical behaviors in a way that is intrinsic—the game does not literally tell players "make ethical choices," but rather walks players through a process of exploring their communal wellbeing in a way that leads to culturally relevant ethics. This inherent design is what makes true change possible.

Effectual Design in Social Impact Games

Game research shows that gameplay can affect attitudes and behaviors (Delwiche, 2007). Effectual game design refers to the process by which these changes happen and points to the way in which social impact games bring about change in players and consequently world. These include mechanics that engross players in experiences as well as motivate and empower players.

More specifically, "affective learning" in games "addresses important societal issues such as managing conflicts, caring for the environment, and fighting prejudices and stereotypes" (Dormann, Whitson, & Neuvians, 2013, p. 217). For example, *Elude* (2011), although self-identified as a game for health, raises awareness about depression by integrating a complex system of representing emotions (Dormann et al., 2013, p. 217). In *A Force More Powerful* (2006), players are challenged to overcome oppression through non-violent choices. Also akin to simulation, *A Force More Powerful* (2006) employs realism and accuracy about the options available to activists when working to work through oppression in the real world (Swain, 2007, p. 808). Players are immersed in tactics such as writing manifestos, holding fundraising parties, and occupying buildings during missions which can take hours to complete and require deep consideration and planning (p. 808). In *Peacemaker* (2007), players become leaders on either side of the Israeli– Palestinian conflict and seek out a peaceful resolution. In all of these games, players are motivated to take real world action or experience simulations of real world action and are thus empowered in a direction of change (Dormann et al., 2013, p. 231).

Survivance calls out for players to explore various facets of their identity, their communities, the history of colonization, and the long-lasting intergenerational effects of trauma. The player is

welcomed into the game as a pathway of listening to and telling these stories. They are challenged to make steps such as recovering or revisiting language, traditional stories, family stories, and historical stories; taking care of themselves and others; and taking direct action for their own wellbeing and consequently the wellbeing of the community, given that Indigenous cultures are communal. They then process the experience of the quest by making an act of survivance, which, as study findings show, leads to a sense of self-empowerment. When acts of survivance are shared, players experience recognition from the community and encouragement to continue on a long path of healing. Change is not expected to happen solely within the game, as this healing is a life-long and continuous process and thus extends beyond the timeline of the study emphasized in this research. Effectual design is what most prominently contributes to the myriad forms of impact observed in social impact games.

Comparative Research

Research on *Yegna*, a game club for young women in Ethiopia, and *Smoke?*, a smoking cessation game with a version for Māori players, offer the most parallels to *Survivance* since they follow the projects from concept to implementation with collaborative and culturally responsive design in mind. This review addresses the full scope of each project, including how the game came to be, what the intention was, the way in which researchers evaluated the game, and the results of the game when implemented, since each of these points are also considerations in research on *Survivance*.

Yegna

Yegna is a transmedia project aimed at changing cultural attitudes around the roles of girls in Ethiopia from ages 10-16. Concerned about the way in which social norms such as requiring girls to speak in hushed voices shape the community, the government initiated *Yegna* with components including a radio talk show and game clubs. Similar to the design process for *Survivance* that superseded the study emphasized in this thesis, *Yegna* involved communities in collaborative co-design. Jessica Hammer (Mellon Interdisciplinary Research Fellow at Columbia University) worked alongside a team and ten groups of girls either living in the capital or the rural Northern community to co-design games that would enable them with the power to change their circumstances, to change their lives, and to change their communities (Hammer, 2013).

The team approached the *Yegna* game clubs as an exploratory design-based study. During the study, the team focused on providing players with opportunities, since Hammer (2013) feels strongly that "games don't change the world; players change the world." The game clubs also needed to fit within the existing culture. Thus, they incorporated brightspots methodology, which looks for the places within an existing community where members are succeeding and then amplifies those areas (Hammer, 2013). Qualitative methods were found to be the most appropriate approach for the study to ensure respectful game design (J. Hammer, personal communication, September 10, 2013). Hammer and the team were then able to access players individually and look more closely at individual experiences, which was also essential in the *Survivance* study. Prior to the design-based research conducted by the team, ethnographers had gathered data about the girls' activities and roles, which helped inform methods such as discussion questions during the study (J. Hammer, personal communication, September 10,

2013). In the case of the *Survivance* study, design was informed by research related to the Discovering Our Story project. Later, prompts for written reflections were informed by playtesting the prototype with Indigenous friends and family.

The team was given four months to produce four games. During this time, they observed, audiotaped, and videotaped ten groups of girls during phases of sessions. First, the girls played existing cultural games. The team then conducted discussions about these games with open-ended questions such as whom they play these games with, where they play, and when they are able to play (J. Hammer, personal communication, September 10, 2013). In the discussions, they used talking objects, which is similar to the Indigenous method of talking circles where participants may use a talking stick to signify who can speak while others listen. They asked questions such as, "What's easier for you to do in a game rather than in real life?" In other sessions, the team played games with the girls. Of particular interest to the study on *Survivance*, the team held focus groups in which girls played new games designed around the girls' input. The groups played the same game repeatedly (often at least three times in a row) with variants on the gameplay. Immediately afterward, they held discussion groups, which helped determine the best gameplay choices (J. Hammer, personal communication, September 10, 2013) and suggested how the games might influence the players and the community. During the design of *Survivance* and its three years of design and development and one year of playtesting, wording for the quests and instructions on how to play were fine-tuned after discussions with Indigenous friends and family who played the prototype.

The team ran into several constraints that transformed into opportunities, such as when girls could play, what they could include in play, and how they could play. At first, the team intended to co-design a mobile game, but very few Ethiopian girls have access to mobile phones (Hammer, 2013). Even games involving paper were an issue, since girls only receive one notebook for the year, and only if they are in school (Hammer, 2013). Games needed to use elements such as words, rocks, sticks, scraps of cloth, and tin can lids. *Survivance* also needed a platform that leveraged accessibility and playability anytime, anywhere, in the real world. While the game involves a mobile-friendly website, the quests themselves can be played without technology and the acts of survivance can be created with any materials available to players, which encourages traditions such oral storytelling.

Girls in the game clubs wanted to interact with each other more often. Since girls are culturally not allowed to play, having friends is difficult (J. Hammer, personal communication, September 10, 2013). Ethnographers found that 21% of the girls reported having 0 friends (Hammer, 2013). They do, however, have storytelling games and riddle games that can be played hands-free while working or quietly while sitting for tea or ceremony. They also have brief time at the well where they can play games in safe spaces (J. Hammer, personal communication, September 10, 2013). Girls expressed that play needed to be productive to be accepted by the community. Throughout the process, the team provided expertise in game design and encouraged girls to determine the gameplay. They adapted cultural values respected by the community, such as being kinder, smarter, tougher, braver, and happier (Hammer, 2013). Similarly, the *Survivance* game draws specifically from Native American cultural values and storytelling structures, which makes gameplay accessible and culturally relevant to the community.

Although there has not been a formal study on the *Yegna* game clubs enabling players to change themselves and the community, gameplay sessions with observations and open-ended discussions pointed to important possibilities. During discussions, girls expressed the value of the game clubs. Even just the act of being given responsibility and power over game design drastically changed their perceptions about their roles. They also found that gameplay gave girls opportunities to express themselves in safe spaces with their peers. For example, one girl stated: "It's easier to tell people they're treating me badly in the game than in real life" (Hammer, 2013). Gameplay in the game clubs also created situations in which girls could stand up, speak up, and make eye contact, which are not typically culturally acceptable. Stepping into another role in the safety of gameplay has an immediate influence on the player.

Girls discussed how vital it is to teach the games to other girls and family members. One girl stated that she would bring the games back to her mother to help her with issues she was having in their home (Hammer, 2013). Several girls stated that it was their "obligation" to teach other girls these games and to create new games to help one another (Hammer, 2013). Community members also encouraged the clubs since girls kept beaded bracelets with different beads that represented the different values. The community could see, for example, how kind a girl was based on the amount of kindness beads on her bracelet (J. Hammer, personal communication, September 10, 2013). Game clubs thus offered a way in which girls could help one another—another highly esteemed cultural value. *Survivance* also had a clear outreach in the community, given that two validation players came to the game entirely thanks to the core players informing them about the game. These echoes suggest possibilities for long-term change in these communities.

Smoke?

Smoke? is a persuasive game about smoking cessation for players in New Zealand that can also be considered a social impact game. Smoking is a documented health concern in New Zealand, particularly for Māori people (Khaled et al., 2006, p. 215). The game's goal is to "persuade people who are contemplating quitting smoking, or have recently quit smoking, that quitting permanently will be beneficial for themselves and their immediate communities" (p. 215). Rilla Khaled (2006), along with a team based out of the University of Wellington, proposed that persuasive games should be culturally relevant in order to maximize effectiveness. With virtually no comparative studies available at the time, they investigated their hypothesis by designing two separate games for two different audiences—denoting European New Zealand players as "individualists" and Māori players as "collectivists." Similar to *Survivance*, they designed, prototyped, and playtested *Smoke?* in a series of related studies. Their research resulted in fine-tuning two games that were shown to have significant effects on players. Although *Survivance* is not a persuasive game, cultural relevance is essential to the design—from content to mechanics—especially where health is concerned. The *Smoke?* studies offer interesting comparisons in game design, study design, intentions of research, and outcomes.

The *Smoke?* team defines European players in New Zealand as "individualists" and Māori players as "collectivists" (p. 213) in phased studies that took places over more than three years. Briefly, individualists emphasize looking only after themselves and their close family, being self-motivated, and being goal-oriented, while collectivists are integrated in cohesive groups and seek harmony within the group as they maintain traditions (pp. 213-214). In contrast, the *Survivance*

study doesn't seek to define its players, given the context of colonization that has influenced family structures, communities, and traditions.

Before designing the games, the team conducted interviews with members of an existing smoking cessation project for Māori people to determine interest. Once interest was established, they ran two separate focus groups for students from Victoria University of Wellington who self-identified as New Zealand European or Māori and were between the ages of 18-35 (p. 215). The European group included 3 men and 4 women, and the Māori group included 5 women. During 90-minute sessions, they discussed "smoking, perception of smoking, smoking cessation, cultural and societal attitudes towards smoking, marketing, and social marketing" (p. 215). They transcribed and coded the discussions after the sessions. The themes informed the design of *Smoke?*, which resulted in simulation as the primary mechanic.

In *Smoke?*, players are introduced to the main character, MC (who can be male or female). MC has set a quit date, thrown out cigarettes, set a boundary that no one can smoke in his/her room, reached out to Quitline phone counseling services for support, and looked for alternative activities to replace smoking (p. 217). In a game that is not possible to win or lose, players journey with MC over his/her first six weeks after the quit date. The player's decisions during the game result in a report on MC's smoking status in the future. The Māori version integrates cultural references, such as practices including family days and extended family shared meals, as well as visual symbols (p. 219). The team's collectivist-oriented design strategies adapted from cross-cultural psychology research include "harmony: presenting social density cues to users; group opinion: providing users with opinions of other ingroup members; monitoring: sharing a user's tracking information with a support group; disestablishing: training users out of practicing behaviors they do not wish to perform; and team performance: rewarding or reprimanding a group of users for the actions of an individual user" (Khaled et al., 2009, p. 37). In the case of *Survivance*, Anishinaabe scholar Gerald Vizenor's vast literature on the concept of survivance alongside the content from the Discovering Our Story project inspired the game's mechanics. The team collaborated with Toihuarewa, the Māori academic forum of Victoria University of Wellington, to ensure cultural appropriateness (Khaled et al., 2006, p. 219), much like the initial design phases of developing *Survivance* included feedback from the community involved in Discovering Our Story. However, *Survivance* was developed first and foremost for the community, whereas *Smoke?* was developed with the intention to validate culturally relevant design strategies.

After the game was developed, the team conducted a study to determine whether individualist players would find the European version of the game more persuasive than the Māori version and conversely if collectivist players would find the Māori version of the game more persuasive than the European version (Khaled et al., 2009, p. 35). Due to time restraints, they chose to evaluate only the short-term attitude changes resulting from gameplay using quantitative methods. These included pre- and post-surveys adapted from cross-cultural psychology research, which were implemented with players recruited from Victoria University of Wellington who played a randomly selected version of the game (p. 35). The pre-survey asked specifically about self-identified ethnicity and included questions that would reveal individualist or collective tendencies as well as pre-existing attitudes towards smoking. The post-survey followed up on "positive beliefs [about smoking], negative beliefs [about smoking], resistance to smoking, intention to quit, and temptation to smoke" (p. 36). The *Survivance* study (more thoroughly

detailed in another paper) also included interaction with players before and after gameplay, but with a qualitative approach that involved players writing reflections based on open-ended prompts.

The *Smoke?* study includes 141 participants from various ethnicities (including European, Māori, Pacific peoples, Chinese, and Indian) between the ages of 17 and 25, whereas the *Survivance* study looks very closely at 10 Indigenous players and 2 Indigenous validation players. Randomly allocated, 71 of the participants in the *Smoke?* study played the European version of the game and the remainder played the Māori version (p. 35). Based on comparing pre-surveys against post-surveys, they found that indeed individualist players leave gameplay with higher intention to stop smoking after playing the European version of the game, while collectivist players will have more positive change in intention to stop smoking after playing the Māori version of the game (p. 36). Thus, the team determined that culturally relevant design improves persuasion objectives. The *Survivance* study builds on this work by focusing specifically on the impact of the game on its intended community of players. However, *Survivance*, much like *Yegna*, takes the work a step further by continuing the game beyond the purposes of research.

Conclusion and Future Work

In cross-comparisons of *Yegna*, *Smoke?*, and *Survivance*, it is clear that early collaboration with players and communities shapes games that have more apparent purpose for the players. Similar to the games mentioned – and pushing further into the unique considerations of protecting Indigenous knowledge, traditions, and stories – the design process for *Survivance:* involved storytellers in early discussions that shaped the initial design prototype; developed quests that were adapted directly from the Discovering Our Story project as its multimedia curriculum was refined; responded to feedback from close community members including friends and family; and later involved the Discovering Our Story Advisory Council to assist in developing research directions for the multimedia curriculum and offer *Survivance* as an extension for the youth version of Discovering Our Story. As players reflected on experiences with *Survivance*, the importance of involving Indigenous voices and Indigenously-determined game design became clear.

As Swain (2007) suggests, knowing the intention of the game early on improves the ability to determine the impact of the game. *Yegna* is a game club where it is understood that the players change the world (Hammer, 2013), as opposed to the perspective that games change players, which McGonigal typically opts for (Zetter, 2010). So far, immediate impact is seen in the reactions of players and promises to pass on the games to other girls and women, as well as create more games. *Smoke?* was developed in order to determine whether game design should be culturally informed, offering up comparative versions of the game for “individualist” players and “collectivist” players, proving that indeed culture of players is imperative to consider in games for change (Khaled et al., 2006). *Survivance* has the potential to create awareness about history, contemporary stories, and holistic Indigenous wellbeing in relation to self and community, as well as encourage players on a path toward positive change for self and myriad forms of community.

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