

Sustainable Play: Towards A New Games Movement for the Digital Age

by Ludica

Celia Pearce
Ludica &
University of California, Irvine
430 East 15th Street
Long Beach, CA 90813
USA
+1 310 390-8014
celia@cpandfriends.com

Tracy Fullerton
Ludica &
University of Southern
California
George Lucas Building/Room
310
850 West 34th Street
Los Angeles, CA 90089
USA
+1 310 390-5520
tfullerton@cinema.usc.edu

Janine Fron
Ludica
1441 Butler Avenue #12
Los Angeles, CA 90025
USA
+1 310 592-0351
janine@ludica.org.uk

Jacqueline Ford Morie
Ludica & University of
Southern California Institute
for Creative Technologies
13274 Fiji Way, Suite 600
Marina del Rey, CA 90292
USA
+1 310 574-5700
morie@ict.usc.edu

(Additional images will be submitted upon acceptance.)

ABSTRACT

This paper suggests a revisitation of the New Games Movement, formed by Stewart Brand and others in the early 1970s in the United States as a response to the Vietnam War, against a backdrop of dramatic social and economic change, fueled by a looming energy crisis, civil rights, feminism, and unhealthy widespread drug abuse. Like-minded contemporaries, R. Buckminster Fuller (*World Game*), Robert Smithson (*Spiral Jetty*), and Christo and Jean-Claude (*Valley Curtain*), responded in kind to these environmental and sociopolitical quandaries with their "earthworks." As digital game designers and theorists embark upon developing new methods to address the creative crisis in mainstream game production, against a similar backdrop of climate change, a controversial war, political upheaval and complex gender issues, we propose a reexamination of the New Games Movement and its methods as a means of constructing shared contexts for meaningful play in virtual and real-world spaces.

Keywords

Games, digital cultures, game studies, New Games, play, ludology.

1. INTRODUCTION

The study of digital cultures often fails to reach beyond the narrow history and influence of the digital itself. This paper, authored by Ludica, a women's game collective devoted to exploring alternatives to the current anthropocentric, male-dominated and techno-centric culture of digital games, proposes an examination of the historic New Games Movement and some

related activities of the 1970's which used games as a way to challenge the status quo and explore alternative ways of being in the world.

The New Games Movement, created in response to the Vietnam War and the civil unrest of the 1960's and '70's, has much to offer both the creation and analysis of digital games. While the cultural context is different, our contemporary era shares with theirs a sense of political malaise and frustration with the forces of the military industrial complex and vast media conglomerates. This paper provides the reader with an introduction to the original New Games movement, describes a case study of introducing New Games into a game design curriculum, outlines some examples of how New Games sensibilities are beginning to emerge organically in contemporary digital game culture, and concludes with a proposal for a creation of a "new new games movement" that integrates some of the key principles of New Games with contemporary digital forms.

2. THE NEW GAMES MOVEMENT: HISTORY & CONTEXT

Stewart Brand, author of the *Whole Earth Catalog* and *The Clock of the Long Now* theorized "you can't change a game by winning it, goes the formula, or losing it or refereeing it or spectating it. You change a game by leaving it, going somewhere else and starting a new game. If it works, it will in time alter or replace the old game." [1]

A prolific activist and counterculture provocateur, Stewart Brand explored uncharted territories to progressively empower people via multiple frameworks that would give them voice towards *real* change. The *Whole Earth Catalog*, awarded the 1972 National

Book Award, provided a toolkit of practical instructions people could readily implement to construct environmentally conscious and socially sustainable lifestyles. Drawing on the widespread success of his book combined with protest of the Vietnam War, Brand explored how people interact with each other through the games they played, and devised a new "set of meta-strategies to learn"[2] through the development of *New Games*. "I felt that American combat was being pushed as far away as the planet would allow, becoming abstract and remote. It suggested to me that there was something wrong with our conflict forms here . . . I invented it because all the peaceniks I was dealing with seemed very much out of touch with their bodies in an unhealthy way. Consequently, they were starting to project heaviness on a personal level that was just as bad as the heaviness we were projecting in Vietnam. What I wanted was a game which would involve fairly intense physical interaction between players." [3]

The first multi-player game Brand and his cohorts set in motion was ironically called *Slaughter*, in which 40 players competed with each other on a large wrestling mat over four moving balls and two moving baskets. Anyone could be arbitrarily eliminated from the game by being jarred over the mat by the other players. The experience was described as "intense, energetic, with much body contact and almost no injury. To the players surprise, it was also fun." [4]

The next game played was a battle for control over Mother Earth. Similar to a rubber pushball used in military training exercises, hundreds of people collectively inflated a canvas covered ball measuring six-feet in diameter that was hand-painted to resemble the Earth, with its vast continents, deep oceans and atmospheric swirls. The rules were simple: "There are two kinds of people in the world: those who want to push the Earth over the row of flags at that end of the field, and those who want to push it over the fence at the other end. Go to it." [5] Players mobilized the re-imagined Earth from all sides and whenever a team neared a goal, it was noted that players from the winning team would defect to help the other side. In *The Grasshopper: Games, Life and Utopia*, Bernard Suits muses "If players in games were found to be both cooperative and antagonistic with respect to the same end, this might well warrant our calling the joint possession of such aims paradoxical." [6] The first *Earthball* game was played for an hour, without a score, thwarting zero-sum game mechanics into a state of Suits' utopian paradox, where the goal was not to win, but simply to play.



Players at an early "New Games" event play the Lap game.

Games were previously used as a means of personal expression during times of war, political uncertainty and socio-cultural isolation. Surrealists, Fluxus and Dada artists invented their own games to address similar issues later explored by Brand. In *The Shock of the New*, venerable art critic Robert Hughes noted that Dada "stood for a wholly eclectic freedom to experiment; it enshrined play as the highest human activity, and its main tool was chance: 'Repelled by the slaughterhouses of the world war,

we turned to art,' wrote [Jean] Arp, the most gifted of the Zurich Dadas." [7] In 1971, R. Buckminster Fuller designed *The World Game: Integrative Resource Utilization Planning Tool*, using a large-scale "Dymaxion Map" illustrating world resources for players to propose solutions to global problems by matching human needs with available resources. [8] Robert Smithson's *Spiral Jetty* (1970) and Christo and Jean-Claude's *Valley Curtain* (1970-72) are also worth noting as examples of environmental works that were designed to mod the Earth, with considerable support anchored from their respective communities.

Stewart Brand continued to propagate his vision in the digital domain with the December 1972 launching of *Spacewar*, sponsored by *Rolling Stone* magazine, photographed by Annie Liebovitz. Brand rhapsodized the game in an article he wrote as "The youthful fervor and firm dis-Establishmentarianism of the freaks who design computer science; an astonishingly enlightened research program from the very top of the Defense Department; an unexpected market-Banking movement by the manufacturers of small calculating machines, and an irrepressible midnight phenomenon known as *Spacewar*." [9] In 1985, he established a virtual community known as The WELL, an acronym for "Whole Earth 'Lectronic Link," which can be considered an idealistic modeling of Marshall McLuhan's concept of the global village, designed as a third space for people to make connections with each other through their ideas.



Knots demonstrates the physicality of New Games.

The semiotic nature of the Earthball recently re-emerged in 2004 with *Squidball*, co-developed by Sally Rosenthal at the NYU Media Research Lab. *Squidball* is a massively multiplayer, motion capture-based game comprised of 12 helium-filled weather balloons measuring four-feet in diameter, that were covered in reflective jackets as part of the input device that drove the gameplay. By way of cooperation, thousands of players attending the SIGGRAPH computer graphics conference collectively and simultaneously eliminated projected targets on a 40-foot video screen by tossing, pushing and bouncing the weather balloons all over the enclosed playing field. Rosenthal produced similar games in the 1990s with Loren and Rachel Carpenter.

Other key figures from the New Games Movement include Pat Farrington and Bernie DeKoven, who added a humanistic element to Brand's work, making the games all-inclusive, based on trust. Farrington believed that games could encourage players to

celebrate their abilities, rather than compete with them. DeKoven is currently advocating “Junkyard Sports,” authentic, cooperative games designed in part by the players with recycled, found objects. [10] With this iterative design approach to the already established *New Games*, DeKoven is empowering people to become cultural producers of deep play, embedded with values that resonate with timely forms of activism and environmentalism. DeKoven’s work is heroic, and he is a genuine open-source guru of play. His exemplary efforts beg consideration of not only how players engage with games, but most importantly, their accountability of how they interact with each other. It is critical for digital game designers and theorists to address the creative crisis in mainstream game development by examining the human element of what it means to truly play with other people, perhaps even more so than how to play with games. For the very heart of the New Games Movement is not merely *play’s the thing*, it’s about the *players as people*: “Play Hard. Play Fair. Nobody Hurt.” [11]

3. CASE STUDY: NEW GAMES DAY AT USC

In October of 2004, as presidential candidates George W. Bush and John Kerry bickered bitterly about the cost and conduct of the war in Iraq, social security reform, tax cuts and same-sex marriages in one of the most divisive U.S. elections in decades, a group of University of Southern California (USC) students, faculty and staff looked to New Games as a source of inspiration and political empowerment. The idea that playing together in a public forum could be considered a political act was intriguing to several of the students, who had read *The New Games Book* and *The Well-Played Game* [12] in a recent seminar on game studies. Kellee Santiago, a graduate student in Interactive Media, first approached the USC Game Design Community with the idea of holding a New Games Day, and then, joined by Chris Hanson, a graduate student in Critical Studies, and Frank Kearl, an undergraduate student in Philosophy, set about to plan the event. With all confidence, a date in November was set and publicized, and Janine Fron, Program Manager for the USC Annenberg Center’s Institute for Multimedia Literacy, set about finding reference material and game props, such as Earthballs and parachutes.

All was not as simple as it sounded; it turned out that finding a vintage Earthball was nearly impossible. The only one available was “broken” and the two people from the old New Games Foundation in charge of restoring it were in a fight. “The Earth (ball) is broken,” Janine reported to the team, disconsolately, “and the baby boomers are fighting over it, so what can we do?” In a stroke of serendipity, Tracy Fullerton, faculty advisor for the Game Design Community, was introduced to Bernie DeKoven, one of the key players in the original New Games Foundation and the author of *The Well-Played Game*, a week before the event was to take place. Bernie listened carefully to the enthusiastic plans for the event and then offered to come over to USC to train the team as New Games Referees beforehand. During Bernie’s visit, he talked about the history of New Games, and cautioned the group that these games came from a very specific moment in time, an historical and political context that could not be recreated by simply playing the games today. While Bernie meant this as a warning, it was clear from the reactions of the group that many

felt they were living in an environment of extreme political disempowerment and hyper-aggressive nationalism that mirrored the original inspiration for the New Games. The training day was held November 12, only 10 days after the 2004 Presidential Election, and a number of participants expressed a sense of defeat and disenfranchisement in the wake of Bush’s re-election.



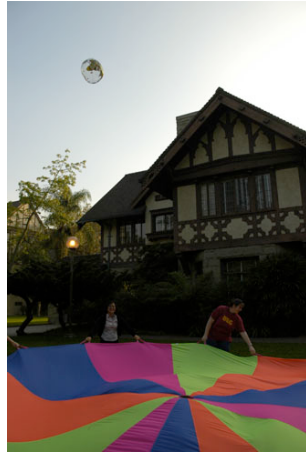
At the USC New Games event, a substitute cage ball was found for the damaged Earthball

During this initial training session, however, something quite amazing happened to the Game Design Community. This small group, a rather loose organization of people from various backgrounds and disciplines, united by an interest in games, became a true community of play. Bernie’s training created a safe environment for students and faculty alike to put down their serious, intellectual baggage and interact at an entirely different level. All of the games required touch and trust, while fostering laughter and fun. During one early game of *Pru*, in which players blindly wander the playing field to find their leader, one of the participants changed the rules inadvertently, so that the outcome of the game was not as expected. In spirit of the New Games vision, combined with a dose of Surrealist prankish humor, she protested the chosen *Pru* and became the self-appointed *Pru*, essentially breaking the rules of the game. “These things happen,” Bernie told the group equably, “Sometimes you have spontaneously generating *Pru*’s. There’s no harm in that.” It was clear from the beginning that these were not your normal schoolyard children’s games. And it was also clear that the goal was not to win or lose, but to re-learn how to play well together.

By far, the group favorite was a game called *Rock-Paper-Scissors Tag*. In this game, two “teams” face off across a line. On the count of three, each group shows rock, paper or scissors, having huddled beforehand to decide on a strategy. The team that shows the losing sign turns and runs to their home base, about 15 feet behind. The team that shows the winning sign gives chase. Any person tagged by the winning team transfers to that team for the next round of play. The key to the game lies in the fluidity of the teams. While you may have started on team one, soon, you will be on team two, then back to one, and so on. The game goes on until there is only one team or until everyone is too exhausted to continue. This game is rousing good fun, highly competitive in the critical moments of play, and yet overall declares no winner and encourages a “global allegiance” to the play of the game itself, rather than to the success of any particular team.



Rock-Paper-Scissors Tag



Playing with the parachute.

Other games that Bernie taught the group included *Dum-Dum-Da-Da*, *Hug Tag*, *Panther-Person-Porcupine*, and *Knots and the Lap Game*. *Hug Tag* is just like regular tag, except that players who are hugging cannot be tagged “it.” Players must hold their breath while they hug, and must let go when let it out. This crazy game of fiercely clinching friends and brief acquaintances alike, while not as popular as *Rock-Paper-Scissors Tag*, set the group up for the final game of trust: the *Lap Game*. In this game, the entire group stands in a tight circle and, all at one time, sits down until each person is sitting on the lap of the person behind. Done right, the circle is stable and everyone is supporting each other as they sit comfortably. Rising on another count, everyone gets up together and the circle is gone, but not broken.

At the finish of the training day, the team was extraordinarily aware of the gift they had been given by Bernie. While he could not attend the following week’s event, the core group now knew that their job would be to create a safe atmosphere of play and social interaction for the attendees. When the day of the event arrived, several interesting things occurred. A large cage ball, a colorful replacement for the Earthball, arrived just in time for the event. Also, the team was able to borrow two large multi-colored parachutes from the elementary school next door. Joining the core group were students from engineering, anthropology, cinema-television, interactive media, communications, and many other disciplines. The students ranged from undergrads to Ph.D. candidates. Later in the day, the students from the elementary school even joined in.

The cage ball and parachutes proved to be a great icebreaker, as Bernie had predicted, explaining to us that props help people to focus their play. The group played all of the New Games that Bernie had taught us. After lunch, however, a new spirit struck some of the attendees and several spontaneous games were created. Chris Hanson remembered a game called *Lifeboat* from his childhood, in which two teams had to race across the yard stepping only on strips of cardboard, the “lifeboat.” Chris Swain, a professor from Interactive Media, came up with a pantomime game and a competition involving the cage ball. Soon, the group began to diverge into separate play circles, with some people preferring the more aggressive, physically active cage ball competition and others revisiting the more creative, cooperative *Dum-Dum-Da-Da* and parachute games. A small blow-up globe

was found and the parachute group bounced the Earth as high as it would go.

One of the key revelations that participants came away with was the importance of subjective engagement in the game experience. It is as easy to get ensnared in theoretical intellectualism as it is to become preoccupied by the technical demands of game making. This exercise brought us back to the central purpose of creating a satisfying player experience, and awakened in the participants the possibility that there might be more to gaming than the marketing departments of mainstream game companies would have us believe. The group parted with a sense of renewed hope and enthusiasm for the enterprise of game making that could only have been arrived at through a highly personal experience of play.

4. NEW GAMES IN A DIGITAL CONTEXT

4.1 Digital Seeds of New Games

While New Games were largely about outdoor, physical sports, we can begin to see their spirit manifest in the digital sphere, even without the advent of a movement per se.

Digital games create a particular inhibition to reinscription of rules due to the fact that the rule structures are encoded in the game construction itself. Unlike board games or even sports, the rule structure of most digital games is opaque—like the ubiquitous “man behind the curtain” they constrain players’ actions without recourse to alteration. Nonetheless, players manage to find unique and inventive ways to reinscribe rules, often hijacking features or flaws, or making a superfluous frill a central part of a game mechanic.

In *Lineage 1*, (NCsoft) for example, players turned a somewhat annoying feature of dropped objects appearing on the ground into a creative tool. The most commonly dropped item, a candle, had little value in the game. Yet players would arrange these objects that otherwise comprised litter to create elaborate designs and décor for ritual events, such as in-game weddings. This provides a glimpse of the potential a form of “Digital Junkyard Sports” and other New Games genres in a digital context.

Players in the now-defunct *Uru* (Cyan/Ubisoft, 2003) invented their own games within the *Myst*-based massively multiplayer online game (mmog.) The original *Uru* game revolved around restoring the lost culture of the D’Ni people, who feature throughout the *Myst* games. Some of these games, like hide-and-seek, mimicked real-world children’s games, amplified by the complex and fantastical environments of the game. When, some months after *Uru* closed, players arranged to run their own servers, a plethora of new games emerged, resulting in the formation of the D’Ni Olympics. Events in the D’Ni Olympics are very site-specific and arise out of unique properties of the game world. For instance, a particularly tricky stunt involved walking your avatar up a rope that was part of a tent structure in the ruins of the D’Ni Ae’Gura, the mysterious abandoned city whose restoration is at the heart of *Uru*’s primary game play. Another game, avatar bowling, involved exploiting a collision-detection flaw to sink your avatar into the floor and run as fast as possible with only your head popping up through the floor. In a sense the ruins of D’Ni became a playground in which players could inscribe their own rules and game activities. *Uru* players also

immigrated to other games, bringing the game's culture into player-created worlds such as *Second Life* (Linden Lab, 2003) and *There* (There Inc., 2003). *Uru*'s Guild of Greeters has now extended into a virtual-worldwide newbie greeters guild, with sects in other games, including *The Matrix Online* (Monolith/Sega, 2005). It is interesting to note that the *Uru* demographic, due to its roots in *Myst* fan culture, skews both older and more gender-balanced than most mmog's, with players' average age in the 40's and 50's and about equally split between males and females.

There are a number of games that allow for player level-building, but generally with the same core mechanic of the primary game. Even some console games, such as *Halo 2* (Bungie/Microsoft, 2004), allow for creation of custom rule sets, giving players the ability to create their own mini-games using available "materials," (i.e. features) within the existing game. Technically astute PC players can create entirely new games through the art of modification, such as the *Half-Life* (Valve/Sierra, 1998) based *Counter-Strike* (Counter-Strike Development Team, 2002) which began as a mod, but was later released as commercial game. Through *Counter-Strike* introduced the new game mechanic of team-based play, its basic play activity actually differed little from the original game, suggesting that niche players will tend to make more minor, successive modifications rather than take a radical departure from an original game's intent. In the end, both games are First-Person Shooters, and *Counter-Strike* makes no markedly subversive statement about its precursor, or about war games in general.

It is just such subversion that we are advocating in digital games—the turning on its head of traditional, competitive and combat-based models of game play. And there are few contexts in the digisphere with allowances for this type of subversion. The two current examples that now exist are the aforementioned *There* and *Second Life*. The former is highly constrained, but still allows for the creation of entirely new games within the limits of the game code. An excellent example is a game created by *Uru* immigrants in *There*: Buggie Polo is a team-based, soccer-like game using dune buggie vehicles, which can be modded with enlarged wheels and custom textures. The ball is a large, translucent sphere inhabited by an avatar. While the game is underway, the player in the ball remains passive, allowing her to be knocked around at will by the two teams of dune buggies. However, if the ball should go out of bounds or get stuck in a tree, the person who is "driving the ball" becomes active, steering it back onto the playing field. Thus the ball, being a player, has its own role to play in the game.

Probably the best example of the "open architecture" approach to game worlds is Linden Lab's *Second Life*. This somewhat anarchic environment allows for elaborate object creation and scripting, and boasts a wide variety of player-created artifacts, environments and games within a single shared server grid. When left to their own devices, players will generate everything from First-Person Shooters and Role-Playing Games, to various sorts of unusual sports and board-game derivatives. One entire Island is devoted to a life-sized board game. Immigrants from *Uru*, cited above, recreated the entire game in *Second Life*, as well as building a completely new *Myst*-themed game. Linden Lab's boldest experiment was to modify their membership policy to allow players to own their own intellectual property (IP) created

within the game. This led to an increase in player productivity, which culminated in one of *Second Life*'s most popular games, *Tringo* (a multi-player puzzle game combining aspects of Bingo and *Tetris*) obtaining a real-life publishing deal. Part of what is interesting about this environment is that there is a built-in community to serve as players for a diverse array of gameplay experiments. While *Second Life* embodies its own set of values, especially in terms of how it views economics and property, it has the widest range of affordances for the reinscription of rules of any digital game to-date.

All of these examples suggest a longing among players to "take back the rules" and break free of the oppressive constraints of commercial games, which offer a very narrow array of options and little flexibility within those. Like children in a playground, some digital gamers yearn to play free—rather than be confined within "worlds that they never made."

4.2 Digital New Games

Commercial game culture notwithstanding, we continue to see new attempts at works that could be characterized as "New Digital Games." These games are specifically designed around radically different concepts than traditional digital games, and in some cases, blend the analog and the digital in a unique and intriguing way. Three in particular are cited below. In each case, the player experience and community are placed first, and each game has affordances to adapt to the player as the game evolves. The focus is on humans, rather than code. As Bernie DeKoven would say, the game does not measure the value of the people, but the other way around.

While the alternate-reality game *I Love Bees* [13] was originally developed as a marketing tool for *Halo 2*, it took on a life of its own during its limited run. The game propelled clues out into the real world via phones, web pages and other means. *I Love Bees* followed in the footsteps of *The Beast*, developed to promote the Stanley Kubrick/Stephen Spielberg film *AI*, and *Majestic*, the ill-fated suspense thriller by Electronic Arts whose slogan was "the game that plays you." These games were designed to blur the boundary between game and reality, creating fissures in the "magic circle" of the game. Part of what was particularly interesting about *I Love Bees* was the employment of "Puppetmasters," members of the development team who deployed game memes on a daily basis to the player community. This introduction of a live person changes the cadence of the game, and introduces something that looks more like the traditional sports referee—a real human charged with monitoring and interpreting the game rules.

The Big Urban Game, created by Nick Fortugno, Frank Lantz and Katie Salen for the University of Minnesota Design Institute in 2003 [14], may be the best example we've seen of a New Game style experience. Part of what distinguishes it is its highly physical nature, capturing an essential part of the New Games' attention to scale and perceptual alteration. This game, focusing on the best means of getting around the Minneapolis/St. Paul Twin Cities area entailed the use of three giant inflatable game pieces carried by a crew of people. Players could register for a team online, then vote on the best route for that playing piece to take. This became a highly public event as teams carried the pieces through traffic from point A to point B. Participants at checkpoints greeted and

cheered for their team and rolled a pair of giant dice for a time advantage.

Another project in development by one of Ludica member Celia Pearce, is the *Spaceship Earth: The Game*, being created with the Buckminster Fuller Institute. Fuller's *World Game*, created around the same time as the New Games movement, can, in some ways, be classified as a New Game of sorts. The *World Game* had two unique features of relevance. It was originally developed to demonstrate Fuller's hypothesis that there were enough resources on the planet to support all its inhabitants in a sustainable fashion, but that this could only be accomplished through cooperation, rather than competition. Its second unique feature was its use of a basketball court-size map of the world, the so-called Dymaxion icosahedral globe map developed by Fuller to create a more accurate scale between continents. This scale shift allowed players to inhabit the Earth in a different way than traditional globes or maps during this highly engaging experience.

Spaceship Earth: The Game is an mmog whose goal is to save the actual physical planet. Participants play within a global simulation that allows experimentation with various solutions at various scales to see what kind of effect they might have. Once an effective solution is found, players can deploy it in the real world and are rewarded for how many individuals they are able to reach with their planet-sustaining solutions. The developers characterize it as "reality" game, but it is also an activist game, whose primary aim is to instigate real-world action.

Ludica is also in development on a number of projects that draw on key concepts from New Games, as well as Dada, Surrealist and Fluxus art movements. These emerging projects strive to create forms of play that are malleable and transparent, so that players can take back the rules and play on their own terms.

5. CONCLUSION

Ludica proposes the initiation of a "new, new games," movement. Such a movement would generate games that use the innate potential of both the technologies we are exploring, *and* the players who put the games in motion. One of Bernie DeKoven's key points in the *Well-Played Game* is that the game should not measure the players, but serve as a focal point for social interaction. Players should *adapt* the game *as they go* in order to create opportunities for everyone to play well together.

Imagine games in which what emerges is not the victory of a single player over a digital construct—a set of encoded rules dictated by some sort of Artificial Intelligence (AI)—nor a victory for a group of players over the game's AI; but a game that is created by and for the players within a safe digital environment built not to wield authority over them, but to provide an even playing ground in which they themselves are empowered to play; a temporary world that encourages a new, participatory relationship with each other, rather than to a machine. We begin to see signs of this in some digital context, as cited in some of the examples above. But we can imagine such a movement emerging much like a stadium wave. We just need to rise at the proper moment and before you know it, it's a phenomenon. Emergence in its most interesting form — not from the interaction of rules, adjudicated by a machine, but from the interaction of thousands of players, adjudicated only by their own sense of play. Can we imagine new forms of digital culture that put the player front and center, in command of her own play experience? Can we play by our own rules?

"How we play the game may be more important than we imagine, for it signifies nothing less than our way of being in the world."

—George Leonard, *The Ultimate Athlete*

6. REFERENCES

- [1] Fluegelman, A. (ed.) *The New Games Book*. Headlands Press Include, Tiburon, California, 1976, p. 137.
- [2] Ibid., p. 7
- [3] Ibid., pp. 7-8
- [4] Ibid., p. 9
- [5] Ibid., p. 9
- [6] Suits, B. *The Grasshopper: Games, Life and Utopia*. University of Toronto Press, Toronto, Ontario, 1978, p. 76.
- [7] Hughes, R. *The Shock of the New*. Random House, Inc, New York, 1980, p. 61
- [8] Brand, S. Spacewar. In *Rolling Stone*, December 7, 1972. http://www.wheels.org/spacewar/stone/rolling_stone.html
- [9] DeKoven, B. *Junkyard Sports*. Human Kinetics Publishers, Champaign, 2004.
- [10] DeKoven, B. *The Well-Played Game: A Player's Philosophy*. Anchor Press, 1978.
- [11] Terdiman, D. I Love Bees Game a Surprise Hit. In *Wired News* (Oct. 18, 2004) <http://www.wired.com/news/culture/0,1284,65365,00.html>
- [12] *Big Urban Game*. <http://design.umn.edu/go/project/TCDC03.2.BUG>