FIGURE 1 **Marcel Duchamp and Raoul de Roussy de Sales, 1925 by Man Ray,** 6" x 9" vintage gelatin silverprint from The Sandor Family Collection.

CELIA PEARCE

The Aesthetics of Play

Prologue: Portrait of the Artist as a Young Gamer

"[What is art?] That little game that men have always played with one another."
MARCEL DUCHAMP

"It can even be argued that much of Duchamp's oeuvre constitutes a series of moves designed to rewrite the rules of the art game."
ANTOINETTE LAFARGE (SHIFT-CTRL)

IN 1922, ANDRÉ BRETON WROTE THE FIRST MAJOR ARTICLE ON the work of Marcel Duchamp for the French review *Littérature.* Breton regarded Duchamp as "the most intelligent man of the 20th Century," but was dismayed to find that the artist spent the majority of his time playing chess. But clearly Duchamp's fascination was more than a mere distraction. Among the last works painted before completing his landmark *Nude Descending a*

1 VISIBLE

Staircase in 1912, Duchamp did a series of studies and paintings attempting to depict the inner processes of the opponents in a chess game. He played with a personal chess set he carved himself by hand, and his close friend and partner in Dada, Man Ray, earned his living for a time by making chess sets. At what was arguably the height of his art career, he "retired" to become a professional chess player. Photographs of Duchamp depict him playing chess more than any other single activity. One of the most famous of these shows him deeply engaged in a chess match with a naked Eve Babitz in the midst of a 1963 retrospective of his work at the Pasadena Museum of Art. The fact that he chose to make this statement in particular at a retrospective is telling.

Was Marcel Duchamp really an artist, or was he in fact what today would be called a "gamer" whose art was merely a hobby, or perhaps even a game itself? The fact is that Duchamp started with painting and ended with games; his later work appears more and more game-like. The following pages will explore phenomenon of games as an art medium, drawing corollaries and contrasts between the Fluxus movement's neo-Dadaist passion for games, and the emerging contemporary practice of digital game based art. In so doing, I hope to demonstrate that the spirit of Fluxus lives on and may in fact be even more at home in the context of cyberspace.

What Is A Game?

I SHALL BEGIN WITH A DISCLAIMER/CONTEXTUALIZATION. I AM a game designer/writer, a sometime artist and an "accidental theorist." Due to a number of recent trends in culture and academia, I can now situate these disparate activities under the general rubric of "game researcher," a role that has remarkably quickly shifted from pariah to *"oeuvre du jour."* The majority of contributors within this issue are well qualified to discuss "art," from the perspective of practice, history or criticism. As will soon be revealed, I have spent a great deal more time thinking about the nature of games, from both theoretical and practical angles, than I have about art.

In 1983, I began working as a game writer and designer in New York City. I was immediately plunged into the role of scribe, writing descriptions of game concepts being developed by a vastly multidisciplinary group of people, none of whom were game designers. I had the intuitive sense that some of these concepts were games, and some were not. But as I had no prior experience in either the design or the study of games, my methodology was con-

fined to: "I don't know what it is, but I'll know it when I see it." Feeling this to be inadequate, especially given my inexperience, I put forth a question to my employer at the time, Edwin Schlossberg (himself somewhat tangentially associated with Fluxus): "What, exactly, is a game?" His characteristic response: "Why don't you find out."

Based on the premise that there must be qualities that all games have in common, I did a systematic study of a wide range of game types and genres: popular board games, strategy games, card games, sports, children's games and the then emerging category of computer games. Having subjected these games to a rigorous analysis, I was able to identify the common features that seem to distinguish games from other sorts of activities.[1]

1 Paraphrase from Pearce, Celia. 1997. *The Interactive Book: A Guide to the Interactive Revolution.* Indianapolis, IN: Macmillan, 420–425.

- *Parameterized play* consisting of *rules* by which a group of players agree to abide for the duration of the game.
- *A goal,* sometimes expressed as a series of sub-goals that collectively lead to a meta-goal.
- *Obstacles* that create challenges to achieving the goal(s).
- *Resources,* initially provided to players at random or symmetrically, but later more often as rewards for overcoming obstacles.
- *Consequences,* which come in the form of either *rewards* (sometimes as resources) or *penalties* (sometimes obstacles.)
- *Information:* both known and unknown to the players (individually or en masse); progressive information that is revealed over time; and randomly generated information, such as a dice throw or a dial spin.

Although this description may sound mechanical and reductive, throughout my subsequent two decades as a game designer, artist and theorist, I have found this outline to be consistently useful in discussing the nature of games. The craft of making games, whether they are art games or commercial "mass media" games, can be measured in the designer/artist's ability to create a balance between these parameters. Even experimental art games have an innate understanding of this structure and its function, and so are able to undermine it by subverting, overriding or rendering the game's parameters recursive, redundant, comical/satirical and in some cases, impossible.

Games are first and foremost about play. A game is a dynamic system, a system designed to create what Alan Kay, the original designer of the windows-based computer interface, calls "hard fun." The notion of hard fun is important because it is germane to understanding why an artist might want to engage in games as an art medium.

Why Game Art?

REGARDLESS OF WHETHER THE ART MEDIUM IS ANALOG, PERFORMATIVE, digital or mediated in some other way, creating something that is framed as

VISIBLE LA

a game expresses a certain attitude, a particular posture toward not only the work itself but the "audience, and the practice of art-making in general."

The selection of games as an art medium involves suspension of certain artistic prerogatives. In the worlds of John Cage, it requires you as the artist to "give yourself up." This does not mean abdicating either control or even aesthetic direction; indeed the craft of game-making lies in the ability to create a balance, to locate the "sweet spot" between constraints and freedom. The game artist makes a conscious choice to *share* the art-making process, putting at least a part of the creative act in the hands of the player/participant. The prospect of this frightens many artists because they believe if they hand over their creation to the audience, their own "voice" will somehow be compromised. But part of the secret of doing this effectively means knowing the size and shape of space to carve out for the participant(s). As we will see, in many cases, the artist's absence can be more powerful, more palpable, more distinctive, and in some instances, more personal than his or her presence. Sometimes, the artist's silence speaks louder than words. Clearly, we can distinguish a John Cage piece from that of another composer, even though he may have surrendered a certain amount of its implementation to chance or to the creative urges of others.

In creating game art, the artist is making a choice to invite the viewer in as a co-creator of the work. Although it can be said that all art does this, game art does it in a very explicit way. It questions the relationship of art and artist to the viewer/spectator. It asks for the viewer's engagement not only intellectually but literally. Swedish artist Öyvind Fahlström, inventor of the "variable painting" technique, which placed magnets on a surface that were moved according to a set of rules, put it this way:[2]

2 Heon, Laura Steward, editor. 2001. *Game Show.* (Exhibition Catalog). North Adams, MA: MASS MOCA Publications, 12.

> *The association of disparate elements to each other thus makes game rules*
> *and the work of art will be a game structure. This, among other things, leads*
> *to presupposing an active, participating spectator who—whether he is*
> *confronted with a static or variable work of art—will find relations which will*
> *make him able to 'play' the work, while the elements that he does not relate and*
> *in general his individual disposition make for the chance, the uncertainty that,*
> *when clashing with the 'rules' create the thrill of a game.*

Game art also fundamentally questions the role and value of the art object. There is deep and tragic irony in going to an exhibition of Fluxus artifacts today. Objects whose entire purpose was to ellicit play exist now only as the corpses of their former selves, trapped in a "Mausoleum" within the object-centric commodity-based world of Art with a capital A.

The FluxKits and FluxGames that emerged out of the 60's and 70's were beautiful objects, but their object-ness represents a state of dormant play. Just as a chess board is a beautiful object, its true value is in its potential energy,

which is actuated when the game is played. It is in the playing that a chessboard comes alive, and the game object becomes a catalyst for play. Duchamp understood play as a process that can require at least as much intense concentration, creativity and skill as making art. Duchamp's *The Chess Players* and *Portrait of Chess Players* (1911), depictions of the inner lives of people playing chess, was an attempt to capture on canvas the dynamic flow of thought and social transactions that occur within the domain of a chess match. In particular, the work was trying to express the notion that you are creating a mental model of the game in your mind that combines your own moves with the anticipated moves of your opponent. "Each becomes the other as he tries to anticipate what his opponent is planning."[3] Will Wright, designer of hit computer games *Sim City* and *The Sims*, describes this process in the classic Chinese board game *Go*, "… both players have a model of what's happening on the board, and over time those models get closer and closer and closer together until the final score."[4]

Games as "Low" Culture

GAMES ARE AN OFT-MALIGNED FORM OF POPULAR CULTURE. BOARD GAMES, in spite of their perennial popularity, have never been taken seriously as a creative medium, even though their appeal consistently outlives other media. *Monopoly*, the most popular board game in the world, has sold 200 million copies since it was first published in 1934, five times the measly 40 million copies sold by the most popular book of fiction, J.R.R. Tolkien's *The Hobbit*, published in 1937. Although *Monopoly's* theme arose out of a particular cultural moment, it still persists as an engaging system for interaction, and its metaphors continue to be relevant. Computer games are perceived as even more lowly than their analog forebears, conjuring up images of bleary-eyed nerds in seedy game arcades endlessly "twitching" their way through "thumb candy" in the form of pixelated alien landscapes or airplane simulators. Nonetheless, Nintendo's *Mario Bros.* games have generated twice the revenue of all five *Star Wars* films combined, even though *Star Wars* has been around a lot longer.

At the same time, games are considered one of the highest orders of computational challenge. In computer science, chess is a long-standing paradigmatic artificial intelligence problem. The task of beating a human at chess is considered the ultimate manifestation of the Turing test, precisely because it involves a dynamic process integrating planning, pattern recognition and anticipatory strategy in a way that appears to be uniquely human. If you imagine the interior of Deep Blue, the chess-playing computer, as Marcel Duchamp's *The Chess Players*, which attempts to depict this interiority, you can begin to get a hint at the complexity of this problem from a computational perspective.

Games are deeply wed to the history of computation precisely because they are procedural, or rule-based, in nature. They are based on elegant mathemat-

3 Cabanne, Pierre. **1997.** *Duchamp & Co.* Paris: Editions Pierre Terrail, 46.

4 Pearce, Celia. **2002.** "Sims, Battlebots, Cellular Auomata, God, and Go." *Game Studies Journal*, 22, July.
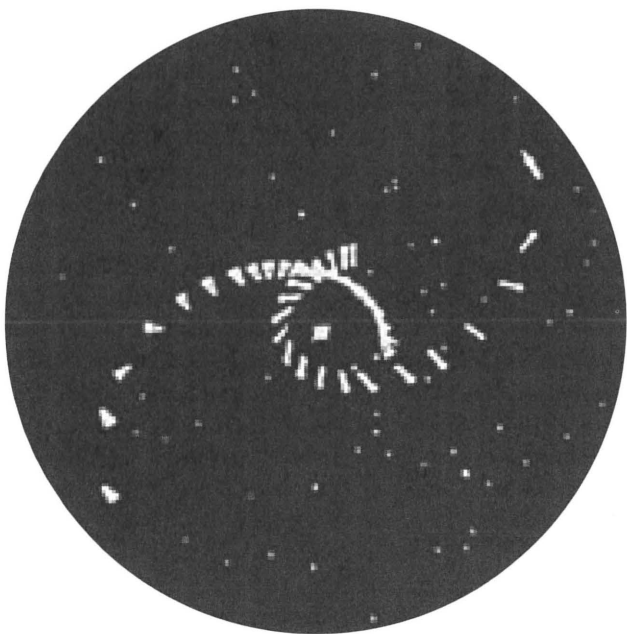
FIGURE 2 *SpaceWar!* Created by students at MIT in 1962 is generally credited as the first computer game.

ics and geometries that render not merely objects or visual representations, but dynamic, responsive systems. The only analog medium that is comparable to computational media in this regard is games. Games, whether digital or analog, function precisely the same way computers do: they are derived from a system of rules that sets forth parameters or constraints for dynamic interactions. And in spite of their ill repute, hacking games has been a favorite pastime of some of the brightest computer scientists since day one. *SpaceWar!*, created in 1962 as a game hack by programmers at MIT, is widely regarded to be the first computer game.[5] For them, hacking at play was a compelling technical problem as well as a fun, albeit geeky, hobby.

George Maciunas and the Fluxus artists embraced games for their very lowliness. Games provided a sort of "ludus populi," a play of the people that provided the perfect platform for bringing art to a mass audience. The making of FluxKits and FluxGames was itself a kind of game: create play patterns from found, e.g., "readymade" objects; create kits that can be reproduced easily and sold cheaply. Unfortunately, this utopian strategy did not succeed as hoped, but it did lead to the prolific creation of a wide range of artistic expressions that we enjoy today, if not for the play potential they embody, at least for their cleverness, aesthetic merit and conceptual innovation.

5 Herz, J.C. 1997. *Joystick Nation, How Videogames Ate Our Quarters, Won Our Hearts, and Rewired Our Minds.* New York: Little Brown and Company, 3–8.

MODern Art: Digital vs. Analog

"We are not involved in ownership but in use."
— JOHN CAGE

HISTORICALLY, FLUXUS AND VIDEO GAMES CROSS PATHS AROUND 1972, but do not seem to intersect. This was the year that Nolan Bushnell founded Atari Games and released *Pong*, the first big video game hit. In the intervening thirty years, computer games, in the words of videogame historian and journalist J.C. Herz, "ate our quarters, won our hearts, and rewired our minds."[6] Since 1999, they have gone neck-and-neck with film as a mainstream entertainment medium, and are poised to surpass it in the near future. In the process, they have also given rise to a new art genre, one that is being harnessed in much the same way Fluxus art harnessed analog games, but with some interesting new twists.

The digital context of contemporary game art presents opportunities that extend the tradition of Maciunas and his band of merrymakers, with some notable differences. Digital art, by definition, is not a "thing." It does not exist within the "art-as-object" paradigm, but exists as pure "score." With digital art, score means code, and code is at once something and nothing. It does not "exist," except in a conceptual sense, until played. It thus eludes the traditional methods for assigning economic value to art from which Fluxus game art was never entirely able to free itself. The recent flux in the value of Fluxus "works" (and indeed it is debatable whether the objects alone are works at all) bears witness to this controversy: How do we monetize a conceptual ready-made object, versus a handcrafted "work of art?" Code is essentially math, rules, procedures. The fact that the art is itself made of pixels and code, purely instructions, pure "score," without an overt physical manifestation, completely reframes the distribution infrastructure, the economic equation and the gate-keeping authority of the art world.

A fundamental obstacle stymied Maciunas' goals and undermined his vision of "ludus populi." Manifest through his FluxShops and mail order enterprises, they demonstrated the production law of supply and demand.[7] Because of the Internet, digital art on the other hand has no such obstacle. Most digital game art is available via the Internet as free downloads, creating a self-propagating distribution infrastructure. You can generate an infinite number of copies at no cost to either the artist or the player, thus rendering the industrial framework of supply and demand irrelevant.

Furthermore, the primary crucible for digital game art is a phenomenon known as "Open Source" culture, a natural milieu for exploiting some of the fundamental values of Fluxus. Even within the commercial game industry, there is this spirit of "gift economics," especially around making "the tools of production" available to a mass audience. Open Source culture also has a long-standing tradition of collaboration, collectivism and multiple author-

6 Herz, J.C. *Joystick Nation.*

7 Armstrong, Elizabeth and John Rothfuss. 1993. *In the Spirit of Fluxus.* (Exhibition Catalog). Minneapolis, MN: Walker Art Center, 33.

ISIBLE LANG

ships. Maciunas would have embraced Open Source culture as a paradigm, because it overrides some of the challenges he faced in the tension between the seductive powers of artistic individualism and a desire to form collectivist art practices.

The Network and Medium, Venue and Collective

For the uninitiated, Open Source is a communal methodology for software creation which does not have any proprietary ownership, but which a community of programmers can advance collectively in various ways, such as the operating system Linux. "Pure" Open Source philosophy is based on these premises: a) that code belongs to everyone, b) that everyone should have access "under the hood," c) that people should be able to extend a program's functionality and d) that those new features should then be returned to collective ownership so others can use them. Most Open Source systems have a more constrained framework. Some are open on both ends — any applications created with the source code should be open to everyone as well. A more typical schema, popular with the software industry, allows people or entities to "close" the application software at the outgoing end so that products developed can be proprietary. In either case, commercial products made with Open Source programs are generally developed under some kind of licensing agreement that returns some revenue back to the "source," so to speak.

Game companies have a slightly different though surprisingly open model, compared to their counterparts in more traditional media. While software pirating is still a major concern, many PC games today come bundled with game editing tools. Players are free to build their own game levels, create "patches" (small programs that sit within existing games), "skins," (textures that change the appearance of existing games, sort of like digital wallpaper), and even build their own new games from scratch to run on the underlying game "engine" (a piece of software that allows a virtual game world to run on a personal computer in real time.) If these games become popular, they produce more business for the game company, because use of the game *engine* still requires purchase of the game on which it was based. In addition, there are a wide range of Open Source tools, engines and assets (3D models, textures, etc.) that can be downloaded for little or no money off the web. This practice of building off existing consumer game technologies is called "modding," short for "modifying." The products of this practice are referred to as "mods."

The use of consumer grade technologies seats this practice squarely in the center of the lowbrow realm of hijacking popular culture toward artistic aims. But added to the populist flavor shared by Fluxus is the infrastructure of a massive online community of gamers, game artists and Open-Sourcers who frequently and freely exchange code, ideas, tools and cultural contexts, all with the complicity of the game industry.

This collectivist ethos is integral to Open Source and game hacker culture, as well as game art practice. It is what I call "autodidactic communalism," the notion of a peer-to-peer model of knowledge exchange, rather than a traditional teacher-to-learner didactic pedagogy. This methodology accelerates the learning process because it revolves around contextualized learning-on-demand ("I only need to know what I need to know to do this task"), collaboration ("I will share this task with another and we will each contribute our knowledge") and lateral co-learning ("When I learn this task I will make this information available to others"). Because computer hacking is such a fast-paced process, much faster than industrial software development, this is a much more efficient means of acquiring and distributing information, knowledge and skills.

Some have described this process as a game unto itself, and given the parameters of "game" set forth earlier, an argument could certainly be made that this is the "meta-game." Both value skills acquisition, and competition and cooperation can often work in concert to achieve individual and collective goals.

Counter-Strike: Anatomy of a Game Mod

A GREAT EXAMPLE OF THE POWER OF THE COLLECTIVE IS THE 1999 FIRST-person shooter (FPS) mod *Counter-Strike*, a complete rebuild of the popular commercial game *Half-Life*. Created by a group of about seventeen geographically disparate modders lead by Minh "Gooseman" Le and "Cliffe," *Counter-Strike* was made available as a free download that took the game world by storm when it surpassed its progenitor *Half-Life* to become the most popular network FPS game. This suited Valve, the publishers of *Half-Life*, just fine since each *Counter-Strike* player had to purchase the original game in order to have access to the engine needed to play. *Counter-Strike* ultimately earned its creators not only cult-status as modders, but also garnered them a number of awards, including the coveted "Best Rookie Studio of the Year" from the International Game Developer's Association. Eventually, Valve offered the team a publishing deal. This constituted a fall from grace in the eyes of some gamers, who now no longer consider it a "mod." *(www.counter-strike.net)*

Revolutionary as it was, *Counter-Strike* is still a very conventional game in a very convention genre, and could just as easily be called "Son of *Half-Life*," both literally and figuratively. In spite of its altered theme (anti-terrorist operations vs. *Half-Life's* "alien experiment gone awry"), the basic play mechanic differs little from the original and follows the tried and true combat simulation genre. And herein lies the challenge of mod-based art. Modding tools for first person shooter games such as *Quake, Unreal* and *Half-Life* (the three most popular commercial modding engines) are biased towards this well-establish game genre. Yet most game artists are not content to frame their work within
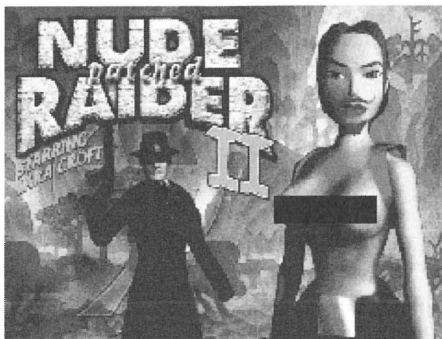
FIGURE 3 **Robert Nideffer's 1999** *Nude Raider Patched* **is a patch to a patch and an ironic tribute to Duchamp.** ©Robert Nideffer with permission.
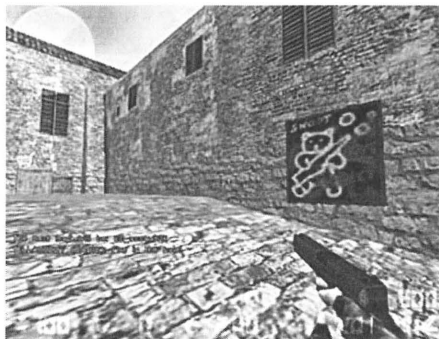FIGURE 4 *Velvet-Strike,* **anti-war graffiti patch for** *Counter-Strike,* **by Condon Schleiner et al in 2002.** Copyleft 03.02.02 Anne-Marie Schleiner with permission.

the "status quo" narratives of combat, good vs. evil, human vs. alien, "good guy" vs. "terrorist," wizard vs. dragon, etc. To escape from these themes and structures means that certain biases and genre predilections of the main-stream game industry must be strategically overridden, subverted or, in some cases, exploited.

The Game within the Game: Digital Readymades and Public Interventions

ONE MEANS OF SUBVERTING MAINSTREAM GAME CULTURE IS BY "PATCH-ing," which makes patches both a cultural intervention and a form of "digital readymade." For the most part, the term "patch" is used to describe a plug-in that sits *on top* of another game, which makes them ideal for interventional strategies. They are frequently used to make strong statements about game culture, media culture and culture in general, and do so in particular because they live inside existing popular culture paradigms. One of the best examples of this is Robert Nideffer's *Tomb Raider I & II Patches* (1999). These are actually patches to a patch, namely *Nude Raider,* which allows you to play Lara Croft, the female protagonist of the popular *Tomb Raider* game series (Eidos), buck naked. *(Nude Raider* is rumored to have been created by the game's develop-ers as a publicity stunt or possibly a means to sell more games, since you have to buy the game to play the patch.) Nideffer's patch bestows the denuded Lara with a moustache and goatee a la Duchamp's infamous L.H.O.O.Q., (1919), which depicted a moustachioed and bearded Mona Lisa. The Nideffer patch serves a triple-threat post-modern statement, paying homage to the uber-gamer, while confronting popular art culture and corporate practices, as well as gender representation in games, a popular subject of game hacker art.

Another patch is *Velvet-Strike: Counter-Military Graffiti for* cs (2002, ongoing), organized by Anne-Marie Schleiner through her web site Opensorcery. net, a collection of anti-combat patches for the *Counter-Strike* mod. Much has been made of the prevalence of militaristic themes in computer games, which have flourished in part because they have a core market (mostly males in their teens, twenties and thirties) that finds this play pattern particularly addictive. Each of the *Velvet-Strike* "sprays," which can be submitted by anyone online, transforms a weapon into an artistic tool that shoots graffiti rather than bullets at a targeted surface. The array of sprays includes Brody Condon's *love1, love2, and love2,* showing soldier game characters in homo-erotic embraces, GUI's *"Give Online Peace a Chance"* and an array of images that run the gamut from cute and bizarre, to downright perplexing. Another example of "peacenick" patches are a series of digital peace signs and posters for the top-selling PC game *The Sims,* available at downloadpeace.com.

Interventions into "public" cyberspace are frequently used to call attention to its very virtuality. There is a long tradition of leveraging both text-based and online graphical communities (such as ActiveWorlds and OnLive) as a context for public art and performance. Desktop Theater, lead by Adriene Jenik and Lisa Brenneis, orchestrates improvisational scenarios within the graphical chat world The Palace. The group exploits an interesting feature of public cyber-space—the ability to change identity or persona in mid-stream, switching avatars (player representations) to enhance the drama.

We see analog precursors of this persona-bending in Duchamp's female alter-ego Rrose Selavy, and Maciunas' *John Lennon & Yoko Ono Masks* (April 1970), which were given to participants of a Flux party for Lennon. The masks were meant to honor the couple, while at the same time rendering them anonymous in a sea of clones. A different twist on cloning comes into play in Feng Mengbo's *Q4U* (2001). This *Quake 3* mod replaces all the game characters with models of Mengbo himself, thus everyone in the game is a Mengbo clone shooting at other Mengbo clones.

Another public venue for cyberspace intervention is massively multiplayer online role-playing (mmorpg's.) A number of these games are essentially graphically enhanced variations of text-based "MUD's" (Multi-User Dungeons/ Domains) and MOO's (Multi-User Domains Object-Oriented), which were based on the popular "live action" role playing game *Dungeons and Dragons* (TSR.) In games like *EverQuest* (Verant/Sony) and *Ultima Online* (Origin/Electronic Arts) players create and develop fictive personas in an alternative fantasy medieval universe. They are highly engrossing for hundreds of thousands of players, who can log on for forty or fifty hours per week. Artist Eddo Stern's *Summons to Surrender* is an ongoing experiment within the *EverQuest* world. Initially, Stern created a series of autonomous characters, or preprogrammed "bots," disguised as player avatars that perform mechanical, often illogi- IBLE LANGUA
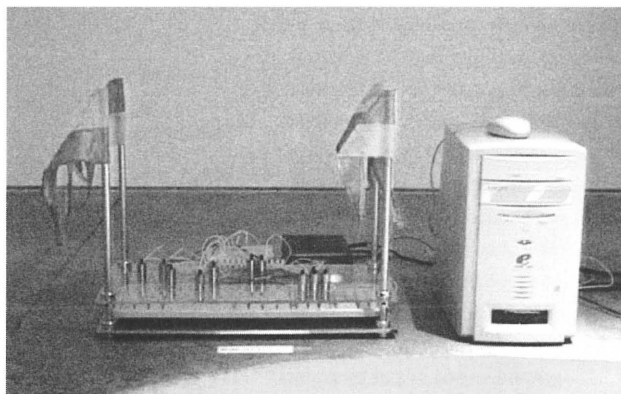
77

cal actions. Later, he replaced the software bot with a mechanized keyboard that automatically presses the keys required to perform the preprogrammed actions. The intense piston-like movements of the solenoids on only a couple of keys highlights the mechanistic repetition required of players to interface with these fantastical game worlds. It also confronts the question of identity in cyberspace, in a case where a human-controlled character is technically indistinguishable from a mechanically-generated bot.

Stern has also contributed to the practice of machinima (digital films made in game environments), which we will only touch on here, but also represents a major component of the game art movement. The Israeli-born artist has stirred quite a bit of controversy with *Sheik Attack* a machinima film that documents the history of Israel and Zionism as reenacted within games such as *Civilization, Sim City 3000* and combat-based First-Person Shooter and Copter Simulation games.

New MODels

ALTHOUGH INTERVENING OR EXPLOITING EXISTING GAMES IS A KEY PRAC-tice in game art, creating complete ground-up mods, especially with designs that differ dramatically from the source games, is the favored practice of most game artists. Anne-Marie Schleiner's *Cracking the Maze*[8] was one of the first online collections of downloadable game art. Schleiner, like many game artists, frequently straddles all three roles of artist, curator and writer. *Cracking the Maze* introduced a number of game art works that later appeared in gallery and museum shows such as SHIFT-CTRL at UC Irvine's Beall Center for

8 Schleiner, Anne-Marie. 1999. "Cracking the Maze: Game Plug-Ins and Patches as Hacker Art." Art & Games Issue. *Switch Magazine.* http://www.switch. sjsu.edu/CrackingtheMaze/

See also Huhtamo, Thomas. 1995. *Fluxus.* London: Thames and Hudson Ltd.

Trippi. Laura. 1999. "Cracking the Maze: Deep Patch." Art & Game Issue. *Switch Magazine.* http://switch.sjsu.edu/Crack-ingtheMaze/
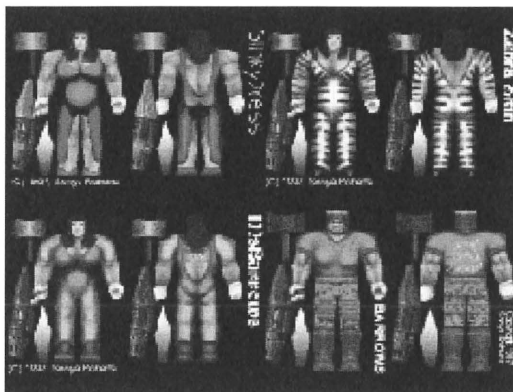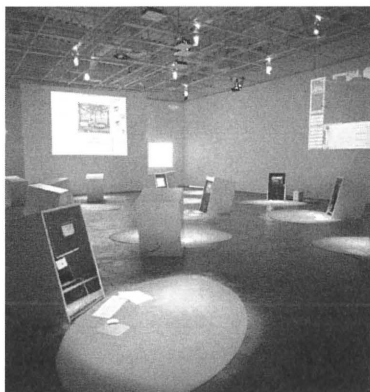
FIGURE 7 Game Exhibition *Shift+Ctrl* at UC Irvine's Beall Center for Art and Technology, 2000.
Beall Center for Art and Technology with permission.

FIGURE 8 Female skin pack excerpts from *Cracking the Maze* by Sonya Roberts creates a disturbing form of trans-gendered representation. ©1999, Sonya Roberts with permission.

Art & Technology,[9] and *Gameshow* at MASSMOCA. One of these, *SOD*, by Dirk Paesmans and Joan Heemskerk, who work collectively under the moniker jodi, subverts game aesthetics by transforming the *Castle Wolfenstein* engine into an abstracted world of black, white and gray planes. *SOD* confronts game aesthetics by breaking down the illusory convention of 3D, which is the mainstay of mainstream games.

Video games are infamous for their female characters, killer kick-fighters going hand to hand in combat lingerie, or gun-toting babes like Lara Croft who embark on archaeological adventures in hot-pants-and-holster and gravity-defying "silicon" breasts. Needless to say, gender representation is a ripe domain for game hacks, and *Cracking the Maze* feature a few of these. In addition to Nideffer's *Nude Raider* patches, mentioned earlier, Sonya Roberts' *Female Skin Pack Excerpts*, is a series of female texture maps designed for male game character models. This transgendered effect is eerie, and calls to mind examples of renaissance female nudes painted or sculpted from male models. Starrs and Omielewski's *Bio-Tek Kitchen* (also a *Marathon Infinity* mod) has become something of a game-art classic, transmogrifying the shooter game into a kitchen overrun with mutant produce.

Analog Interlude: The Many Faces of Chess and Other Flux Mods

THE PRACTICE OF GAME MODDING OR HACKING OF COURSE PREDATES DIGital art, and is a prevalent motif among Fluxus artists. It is not surprising that Marcel Duchamp's beloved chess was a favored Fluxus mod. The most prolific Fluxus chess modder was perhaps Takako Saito, who explored the

9 Nideffer, Robert. 2000. "SHIFT CTRL: Mediating the Process of Academic Exhibition." *SHIFT CTRL.* (Online Catalog for Game Art Exhibition). Irvine, CA: Beall Center for Art & Technology. http://www.bealcenter.uci.edu/shift/
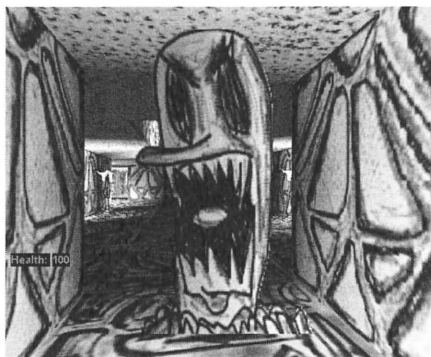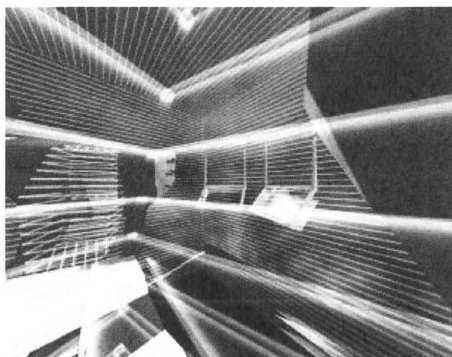
BLE LANGUAC

FIGURE 9 *Quilted Thought Organ* by Delire, creates an abstract audio-visual environment reminiscent of the *Fluxlabyrinth*. Reproduced by permission.

FIGURE 10 Chiselbrain's *Pencil Whipped* by Lonnie Flickinger, aka Chiselbrain Software 2001, with permission.

genre to the greatest degree of any of her contemporaries. Between 1961 and 1970, she produced a number of mods that were reproduced and sold under the moniker "FluxChess" through the Flux Mailorder Warehouse (Maciunas, short-lived concept for a decentralized art distribution mechanism). Each is an exquisite twist on both the aesthetics and play mechanic of the game.

Examples such as *Grinder Chess*, featuring red and blue grinder bits placed in an 8x8 grid of peg holes within a wooden box, and *Jewel Chess*, jewels in clear plastic boxes, are beautifully conceived design variations on the classic board game. But other Saito chess mods also introduced new play mechanics and tactile properties. *Liquid Chess* (aka "Smell Chess), consisted of viles of liquid to be identified by smell; *Sound Chess or Weight Chess*, featured in the collective work "Flux Cabinet," consisted of opaque white plastic boxes containing items to be identified by weight or sound when shaking. *Spice Chess* (aka "Smell Chess") appeared in several different iterations and featured corked tubes filled with spices in a rack. These provide a beautifully articulated sense of the aesthetics of play operating on a number of different levels.

An exceptionally notable chess mod was Yoko Ono's *White Chess Set* (1971), in which the opponents' pieces, all white, sit on each side of an all-white board, making the warring factions indistinguishable from one another. This elegantly placed anti-war statement, particularly taken in the context of the Vietnam War, can be seen as culturally analogous to *Velvet-Strike's* post-9/11 "Give Online Peace a Chance" theme. Both pieces also draw attention to the deeply militaristic metaphors embedded in both analog and computer games by conscientiously objecting to their implicit narratives of combat and enmity.

In addition to its political content, *White Chess* can be grouped within the modding category of unplayable games. Of course, the master of the strategically unplayable mod is uberfluxgamer, George Maciunas himself. *The Same Card Flux Deck* (1966–1977), is a deck of cards composed of 52 examples of the same card, all 3s or all aces — one deck consisting of all jokers (essentially a deck of wild cards). This was more of a one-liner than an experiment in play aesthetics. Much more sophisticated and perhaps less glib were his series of modded (or in Flux parlance, "prepared") pairs of *Ping Pong Rackets* (1966–1973). Rather than rendering it unplayable, these added awkward, bizarre, almost slapstick obstacles into the game.

Maciunas' love of dysfunctional play mechanics is perhaps at its height with the *Multicycle*, which Maciunas described in the *Fluxnewsletter*, April 1973 as "16 bicycles connected into one unsteerable vehicle."[10] While bicycles themselves are not games, configuring them in this fashion, thereby adding the challenge of manueverability, turns them into one. It also highlights a really interesting point about collaboration. Clearly collaboration was both Maciunas' passion and perhaps to some extent the bane of his existence. The beauty of this piece is that it simultaneously celebrates and satirizes the benefits and drawbacks of collectivism.

10 Hendricks, Jon. 1988. *Fluxus Codex.* New York: Harry Abrams, Inc., 367.

Virtual Realty

DIGITAL GAME ART COMES IN ALL SHAPES AND SIZES, AND REMARKABLY (considering how much work it can often be to produce this type of work) "21st Century" game artists are as prolific as their analog forbears. The diverse array of mod-based art games bears testimony to both the versatility of game tools and the cleverness of the artists.

Reality can be dispensed with just as easily as it can be reframed. *Quilted Thought Organ* by Delire (aka Julian Oliver) is a real time audiovisual performance environment that draws you into an abstract world. *qthoth*, as it is also called, bears more resemblance to immersive VR experiments from the 1980's than it does to *Half-Life*, the game from which it was modded, or any "real space" for that matter. The architectonic geometry creates a kind of meditative and abstract suspension of reality, recalling both Russian structuralism and William Gibson's description of an imagined cyberspace from his classic 1984 cyberpunk novel *Neuromancer*.

Lonnie Flickinger's delightfully creepy *Pencil Whipped* (2001), a *Quake* mod that has won accolades from the mainstream game industry and the game art world alike, takes the complete opposite tack. Rather than a computery, architectonic aesthetic, as we see with *qthoth*, the piece subverts the mainstream computer game aesthetic with child-like black and white pencil drawings, a bizarre keyboard layout and hokey, voice-generated sound effects. Although the game uses a more traditional FPS play mechanic, it transforms

a usually high-tech experience into a hand-drawn simulation of a child's nightmare.

Keeping "Score"

THE NOTION OF A "SCORE," OR SET OF INSTRUCTIONS THAT IS OPEN TO A wide range of interpretations, has been a convention in music for centuries, but this sets the stage for a wider range of *un*conventional experimentations in which the score becomes a broader gesture.

Fluxus artists and their contemporaries, even those who were not composers per se, integrated the conceptual notion of score as a framework for performance and conceptual art. George Brecht, Ben Vautier and Yoko Ono are just a few Fluxus artists who took this as a strategy, using the score as a structure for improvisation, as a schema for implementation of an art work, and also for its intrinsic poetry and conceptual merits.

A musical or art score, like a game, can be appreciated "at rest," but its true power is manifest when it is activated by player(s) into a unique event. Here the word "player" has multiple connotations: a musical instrumentalist; a stage actor; a performer; a person engaged with a game; and perhaps, in the derogatory sense, one who manipulates social situations to his advantage. Play in all of these senses involves a certain measure of virtuosity. The "serious" game player, like Duchamp, is always striving to achieve a higher level of skill. This refutes the disdainful impression that play is a form of idleness, triviality or time wasting, as Breton construed in Duchamp's case. Yet clearly Duchamp's obsession with chess was in no way an indication of idleness or laziness, but rather the love of a process that was both playful and challenging.

Virtuosity is integral to the playing of both music and games, especially computer games. In digital game culture, there is less and less of a boundary between virtuosity as a player and virtuosity as a creator. In the dynamic of a play-based artistic domain, there is a fluidity, a continuum between play and creation, and in this way, the "player" of a game or score is also a co-creator or performer of the work. Within game culture itself, play and creation often fuse such that playing the game is a form of consensual performance. In multiplayer role-playing games, such as *Ultima Online* or *EverQuest*, the players are engaged in the ongoing construction of a massive collaborative fiction. In these contexts, it is not that great a leap for players who have achieved particularly high levels of game skill to graduate to being level-builders, skinners, modders, patchers, etc. John Cage describes this as "... wanting to turn each person into an artist ..."[11]

Pieces for "prepared piano," by composer/artists such as Cage and David Tudor demonstrate a musical analog to the digital mod by creating modifications to a piano to constrain or alter its output. Augmenting conventional performance with unusual and inventive obstacles recapitulates earlier examples

11 Kostelanetz, Richard, editor. *John Cage, Documentary Monograph in Modern Art.* New York: Praeger Publishers, 29.
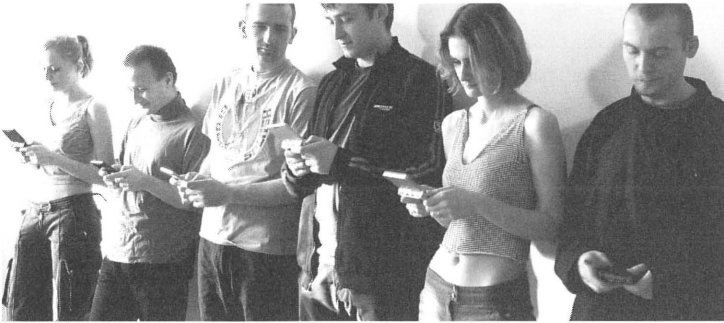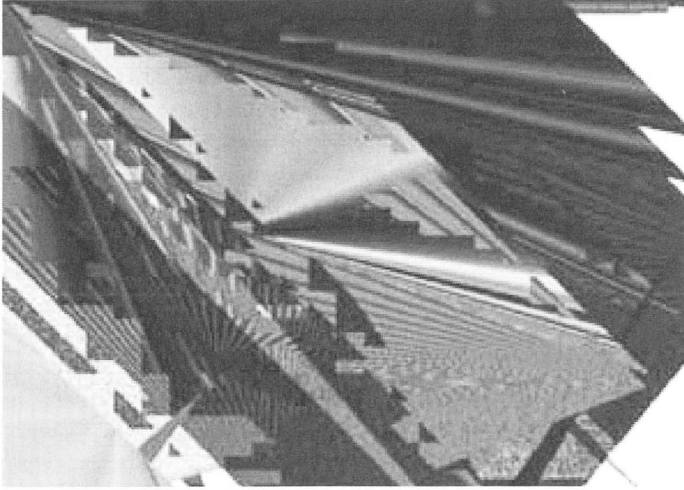
FIGURE 11 *Max-Miptex*, created by Oliver and Chatterton in 2001, runs software on the wrong graphics driver. Photo with permission.

FIGURE 12 Gamboyzz Orchestra play Nintendo Gameboys as musical instruments, creating compositions by playing games. Photo with permission.

of Maciunas' modifications to sports and transportation vehicles. Nam Jun Paik's integrated game and music in his delightful *Prepared Toy Pianos* (1963) was a series of children's instruments outfitted with extraneous objects and electro-mechanical hacks that caused the keys to activate external devices such as radios and vacuum cleaners. In the collective *FluxLabyrinth* (1976), Paik's *Piano-Activated Door* presages puzzle-based computer games with a door that can only be opened by playing the right combination of keys. This echoed Duchamp's two-way door at 11 Rue Larrey (1927), a door hinged so that it could be shared by two different doorways. These types of modifications have the effect of "gamifying" a process through the integration of obstacles that alter an

E LANGUAGE

activity in a range of ways. Preparation, especially of the sort practiced by Cage and Tudor, call attention to the everyday, especially by using common objects or implements to alter an instrument. Paik's toy piano and door pieces swing these practices to the brink of game art, if not entirely into its camp, especially in the pleasure they derive from the vaudevillian sensibility of Fluxus.

The Gameboyzz Orchestra Project has its own approach to toys and music. The Polish ensemble has toured the world playing Nintendo's Gameboy portable gaming machines as a musical instrument. Part of the group's aim is to celebrate the low tech, and also to reframe the toy as an instrument using special software, including Nanoloop.

Chance Operations: Digital Entropy as an Aesthetic Strategy

THE USE OF CHANCE AND RANDOMNESS AS A CREATIVE MEDIUM IS ANOTHER strategy shared by Fluxus, experimental music and digital game art. We begin to see chance emerge as a component in Duchamp's infamous "roulette experiment," as well as 3 *Standard Stoppages* (1913–1914), which involved the use of dropped string to create form for a work. In *Erratum Musicale* (1913), he cut a piece of sheet music into individual notes, placed them in a hat, then drew them out to form a new chance-determined musical composition. The lyrics were pulled from a randomly selected dictionary definition. In true Duchampian fashion, his response to the 1926 breaking of *The Large Glass* (1918) was to glue the broken pieces back together, integrating the resulting spider web pattern into the piece.[12]

12 Lebel, Robert. 1959. *Marcel Duchamp*. Paris Trianon Press, 54.

A particularly elegant example of chance-based work with a decidedly "gamey" bent is George Brecht's *Incidental Music—Five Piano Pieces*. In one piece, the performer is instructed to pile a stack of blocks on the piano strings, one by one, as high as possible, to form a tower. The piece is completed when the tower collapses (always at a variable point), scattering the blocks across the piano strings. What is interesting about the game's formulation is the inverted game mechanic: it is at the moment that you "lose" the game that the music itself is created. Thus the resulting work is the outcome of failure. This is philosophically aligned with Cage's notion of giving oneself up, as well as his ideas of un-intentionality. There is most certainly an aspect of Zen philosophy to this approach, wherein the act of creation is precisely the act of letting go.[13]

12 Lebel, *Marcel Duchamp*, 27, 31.

In computational game-based art works ideas around chance, failure and letting go of results often takes form through harnessing the inherent unpredictability of computers. While in theory, computers are devices that compute elegant mathematical procedures, in reality they are often unreliable, inconsistent and quickly obsolete, while software is often unstable, incomplete and riddled with "bugs." These inherent failures or glitches in computational media can often lead to unforeseen results that arise out of accidental or deliberate technological anomalies.
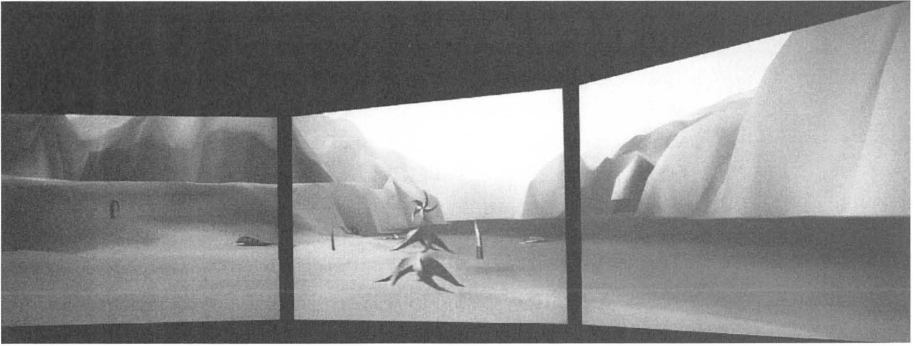
.1   VISIBLE

FIGURE 13 **Rebecca Allen's 1998** *Bush Soul* **virtual reality installation.** ©Rebecca Allen, with permission.

Max-Miptex, by Julian Oliver (aka Delire) and Chad Chatteron (2001), is described by the artists as "Part hack, part accident." A Kyro II [graphics] card is convinced it's possible to run a Quake II mod on the wrong GL drivers. Textures are split across the rendering, fanning out in an impossible art-nouveau-cum-Kandinsky ovation. During the error, 'Max-Miptex' was returned by the screaming engine. Edited machinima documents the experiment." *(Selectparks. net)* This type of play with the dysfunctional machine, especially when the machine is pushed past its limit, as this one apparently was, can often produce aesthetic results far more interesting than those originally intended.

Aside from cultivating errors, artists can also take advantage of other forms of chance operation that computers are particularly good at. One is the phenomenon of "emergence," that is, unpredictable outcomes that occur as a result of the implementation of a rule-set. A-Life and artificial intelligence are common domains for experiments in emergence, and it is also a major factor in networked digital game environments. A number of digital artists have exploited emergence as a form of chance operation. Whether or not all of this work classifies as "game art" may be debatable, but it certainly has game-like qualities and informs on some of the ways in which computer art and games have merged. Rebecca Allen's installation *Bush Soul* (1998) draws a single player into an alien terrain populated by unusual and highly responsive creatures. The creatures, though not anthropomorphic, have distinct personalities that manifest as transformations, abstracted choreographies and sensual interactions with the landscape itself. The ensuing emergence and its resulting experience arises from the intersection of the creatures, landscape and player.

As we've seen, a common tactic of game artists is inversion. Entropy can be seen as emergence in reverse, a procedural approach to decay rather than regeneration. Procedural entropy can be used as a means of simulating or stimulating computational breakdown. An excellent example is *Gameboy_ultraF_uk*

LANGUAGE

85

by Tom Corby and Gavin Bailey (2001), a Free Software GameBoy emulator whose rendering system has been, as *Trigger* curator Rebecca Allen puts it, "pathologically rewritten to degenerate over time." She also adds, with a nod to Fluxus and Dada practices: "The binary, source code, and documentation can be considered as component parts of the work. Rather than written from scratch, the code may be considered a 'readymade,' an artistic intervention has been made."

The New Collectivism

ALTHOUGH DIGITAL GAMES HAVE MANY PARALLELS WITH FLUXUS GAME art and music practices, they also represent what could be considered evolutionary steps to bring some of the tenets of Fluxus to fruition. The Internet provides a broader canvas, so to speak, for populist and collectivist strategies. One of the reasons Fluxus artists embraced games as an art medium is precisely because of their "commonness." Games, associated with popular culture, with (by implication, child's) play, as well as with ease of production and distribution provided a fantastic framework with which to question the preciousness of the art object. The Internet provides a means to supercharge this type of practice. As a rule, digital game art is created with consumer grade (e.g., low-brow) or Open Source game engines, and is downloadable for free via the Internet. Among digital artists, there is a certain amount of ideological discourse about the availability of tools and the perceived elitism of first- and second-generation virtual reality. In contrast to this, the younger generation of game artists use everyday digital tools and media, i.e., games. But game hacker culture has its own flavor of elitism. Access to and proficiency with technological tools are de rigeur for participation. "Nerds rule" is the new social order. But if Bill Gates is to the information age what Henry Ford was to industrial age, then "nerds rule" is as much the rule as it is the exception. We have already seen this David-and-Goliath drama played out on the battlefield of Napster, but any way you dice it, it is still the battle of the nerds.

At the same time, game hacking can also be seen as a game in and of itself. If Marcel Duchamp saw art as the meta-game in which he was engaged, then game artists use the Internet and its various structures of engagement in the same way. Hacking culture can be codified in terms of the game parameters described earlier: the corporate culture of IP (intellectual property), copyright and control of the media is rendered impotent in the face of shrewd hacking tactics. But what is really interesting is that, unlike the music and film industries that have attempted to squelch rebellion by lawyering it to death, the game industry plays back. Embracing and designing for game modding and hacker culture turns out to be a smart business strategy, so the industry has harnessed gift economics as a means of expanding its profits. In a sense, mainstream game designers are also contributing

to the design of this meta-game. As it turns out, most forms of game hacking are good for business, and with a few exceptions, they are not only tolerated but encouraged.

Digital Game Art Goes Mainstream

ANOTHER QUALITY THAT GAME ART SHARES WITH FLUXUS IS ITS ABILITY and desire to remain outside the standards of measurement of the mainstream art world. Anne-Marie Schleiner's 1999's online exhibition *Cracking the Maze* certainly paved the way for web-based as well as exhibition-based distribution of digital game art, followed closely by SHIFT-CTRL in 2000 at the Beall Center for Art & Technology at the University of California Irvine. Curated by digital artists Antoinette LaFarge[14] and Robert Nideffer, it was one of the first large-scale *physical* exhibitions devoted entirely to game art and embraced not only consumer game-based works, but significant installations by some of the influential VR artists cited earlier. The inclusion of their work was refreshing and vital in a culture that tends to suffer from historical amnesia.

Although isolated installation works have appeared in museums over the years, shows focusing on game art practice didn't really hit the mainstream until 2001. This makes perfect sense alongside the concurrent dubbing of computer games as "the medium of the 21st Century," not a particularly prescient revelation considering that computer games had already been well ensconced in popular culture for over 20 years.

The relationship between the gatekeepers of "Art with a capital A" and the sorts of artists we have been discussing has always been an uneasy one. From the moment Duchamp set down an inverted urinal in a museum, Dada to Fluxus to contemporary game artists have never been entirely at home in the hallowed halls of Art. The fact that the first major game art exhibition took place online highlights the perceived obsolescence of museums in the digital age—distribution at every level is no longer the sole domain of the gatekeepers—whether they be music publishers, game distributors or art institutions. We do not need curators to decide which art will be seen and which will not.

MASSMOCA's *Game Show*, curated by Laura Steward Heon, was the 2001 exhibition that most unabashedly (and comprehensively) embraced games in a museum context. In addition to contemporary game art, the exhibition was complemented by two concurrent shows, *Öyvind Fahlström*, organized by the Museu d'Art contemporani de Barcelona (MACBA) and *Fluxus Games* from the Gilbert and Lila Silverman Fluxus collection, organized by Tara McDowell. *Game Show* successfully eschewed the unfortunate temptation to isolate digital game art as a trendy "new" phenomenon: instead situated it along a historical and contemporary continuum of related art practices.

These pieces are quite at home along side works such as Perry Hoberman's *Cathartic User Interface*, which invites participants to throw soft rubber "porcu-

14 LaFarge, Antoinette. 2000. "WINside Out." SHIFT CTRL. (Online Catalog for Game Art Exhibition). Irvine, CA: Beall Center for Art & Technology.

pine" balls at a wall of computer keyboards on which are projected annoying error messages, such as "The operation has failed. Would you like to try again? It will only fail again." with choices "Again," "& again," "& again," or "Click OK to agree to something you can't possibly understand." Hoberman is another artist with a long history of integrating game-style interactivity into his playful VR and interactive pieces: this piece is perhaps one of the most satisfying send-ups of PC interface aesthetics and culture. *Game Show* also included a number of digital game pieces, such as Jodi's *SOD*, Lonnie Flickinger's *Pencil Whipped*, and Natalie Bookchin's *The Intruder*, to name a few.

A number of the works mentioned earlier also appeared in the 2002 exhibition *Trigger*, curated by Rebecca Cannon at GammaSPACE in Melbourne, Australia.[15] *Trigger* produced an online archive/catalog which provides for downloading the works on exhibit. Cannon, incidentally, is also one of the instigators, along with Julian Oliver, Chad Chatterton and Andrea Blundell, of Selectparks, the most extensive *ongoing* archive of digital game art. Selectparks has been posting games since 2001 and continues to add new works to its archive on a continual basis. (The majority of PC-based digital game artworks mentioned in this article can be found there.)

The addition of a virtual "wing" or online galleries, pioneered by museums like Minneapolis' Walker Art Center' with Adaweb and the Whitney Museum of American Arts with the Whitney Artport, is now becoming a more commonplace feature of museums. Given this, we can anticipate the appearance of more game art within the traditional museum's purview.

Nonetheless, it is likely that, like Fluxus, digital game art will continue to have a certain amount of unease with the constraints of the museum context. This is because the essential mission of the museum is to collect, preserve and display "things"—this is at fundamental odds with the ethos of game art, which is play. Like an excitable child trapped within a starched-and-pressed Sunday suit, these art forms are not meant to sit still on a hard bench, but long to be released onto the streets to explore their potential in action. Digital artists have one great advantage over Fluxus artists, however, in that they have the infinite playground of the Internet as their social, collaborative and creative context.

15 Cannon, Rebecca. 2002. *Trigger Online Catalog.* http://www.gammaspace.com.au/trigger/

References

Additional Online Resources

Opensorcery: www.opensorcery.net

Select Parks Game Art Archive: www.selectparks.net

Activeworlds: www.activeworlds.com

OnLive: www.onlive.com

Author Note   **CELIA PEARCE** IS A RESEARCHER, WRITER, ARTIST

and award-winning game designer living in Venice, California.

She is the author of *The Interactive Book: A Guide to the Interactive*

Revolution (Macmillan, 1997), as well as numerous papers and

articles on interactive media, art and computer games.