

The *Halo* universe

What constitutes the “universe” of a video game? Technically, the term usually refers to the story and back-story and imaginary settings, even across different works in a consistently imagined franchise. But who gets to decide on its exact boundaries? You might think it’s the “authors” of the game, the development and design team, including especially those initial designers often known as the creators; or perhaps it’s the specialist writers in charge of the game’s story, or the novelists who license paperback fiction telling the back-story; or the scriptwriters and directors for film adaptations. In practice, the universe of any successful game (by which I mean any game with fans) is more than its scripted story: it’s the amorphous and always shifting, contested space within which the game is given meaning, and this space includes broader paratextual events as well as actual formal gameplay. By convention, fans may debate the details of the story, but they usually look to a game’s creators for rulings on what counts as “story canon.” Some development teams create and keep what they call a “story bible” or set of storyboards, at least, which contains the larger story arc of a trilogy of games, for example, including the necessary facts about the gameworld(s): timelines, histories, multiple alien races, genealogies or family trees, locations in planetary space. Nevertheless, almost any successful game exists in a system of many worlds, only some of which are strictly story-worlds but all of which, I would argue, add to the sum total of the game’s universe. Some are created by fans, some by hired comic-book artists or writers or filmmakers, and some set in motion by marketers, and not always in perfect concert with the intentions of the official creators of the game. When you think about it, the very term canon implies its opposite, implies a need for policing the universe. If there is official story canon, then there is likely to be unofficial apocrypha, sectarian dispute, Gnostic reinterpretation—and at the outer reaches, fan fiction and slash fiction, mashups and parodies—all of which may be imagined as numerous other small planets or satellites or artificial worlds orbiting along in the collectively cobbled-together universe that

contains but is not entirely coextensive with that smaller subset of orderly authorial stories and characters, designs of maps and objects, not to mention the rules and formal constraints on potential gameplay events that are sometimes naively referred to as “the game itself.”

Consider Microsoft and Bungie Studio’s blockbuster hit *Halo*, which debuted in 2001 and as I write this exists as two science-fiction FPS (first-person shooter) games for PC (and Mac) as well as Xbox and Xbox Live, with a third game on the way for Xbox 360, and a fourth game planned outside the main trilogy, an RTS (real-time strategy) game called *Halo Wars*. In addition, there are special editions of the games, including, for example, one custom edition that allows players to add their own mods from a special editing kit, and a special booklet with a more detailed back-story. Console versions have been ported to PC (and the series began as a Mac and PC game recreated for Xbox), with separate companies hired to do the porting (the results can be seen in the multiple logos in the opening credits). There is a series of novels narrating the canonical story, there are official graphic novels and at least one book of artwork for the games, and there may or may not be a film. Outside the official circle of what the game creators, Bungie Studios, and their parent company, Microsoft, recognize as canon there are many, many objects and discourses circling in erratic and expanding orbits. Consider the by now well-known animated “machinima” films, *Warthog Jump* and *Red vs. Blue*, for example, made inside the gameworld using the *Halo* game engine with voiceovers. Or, an even more pertinent example, the fan-created 2-D side-scroller game, *Halo Zero*, with sprites who move against backgrounds. Clearly non-canonical (it fills in a part of the story of the battle taking place on the planet Reach, a prequel to the first official *Halo* game), it was nevertheless an extremely popular free download after it was released in December 2005.¹ The list could go on and on. At the very least we have to say that the borders of the *Halo* universe are always being re-negotiated by its creators and its fans.

At the center of the universe, however, there are the video games themselves, starting with the first, *Halo: Combat Evolved* (2001), set amidst an interstellar war in the year 2552. Someone unfamiliar with the game, watching the screen, would notice brightly colored shiny carapaces of armored fighters (of various species) scrambling over wreckage or driving fast or flying through sublime and eerie science-fiction landscapes, and (of course) shooting at one another with exotic weapons, with the indicators of the HUD (heads-up display) on the screen and the first-person gun looming in the player’s immediate foreground. But, even leaving aside any question of story (who are these fighters? where are they? what are they fighting for?), the colorful combat scenario would only be part of a larger story, and the story would only be one part of the complex array of possibilities surrounding and incorporating those

armor-clad fighters (and the trajectories of their crossfire), which is what makes *Halo* both popular and a lasting franchise. But how should we talk about what Gerard Genette might refer to as the paratext of a massive hit such as *Halo*, that cloud of extra media objects swirling around the game, without just using it as an excuse to avoid talking about the game itself, the action on the screen? That's precisely the interesting problem that game studies should address, it seems to me. What is the specific nature of the relationship between the formal game and its expanding universe, as defined by both the game's creators and its fans? That's surely what's involved in the reception of the game. That's where we begin to get at the *meaning* of a game like *Halo*, and it is the focus of this chapter.

The continuity of Cortana

First, a little of the *Halo* story, by way of a bit of marketing, the trailer for *Halo 3*. Early in 2007 it appeared in traditional media outlets, and from there was posted and linked to from official and unofficial websites, transcribed and discussed and dissected on multiple wikis. (At the time I am writing this, the third game has not yet been released.) The trailer opens with a piano chord, then fades in to an image of a ravaged Earth landscape as the music builds. A degraded, skippy video image flashes across the screen, a stylized female figure speaking in an electronically distorted voice, which fans of the game will recognize as the AI (artificial intelligence) construct, Cortana. "I have defied gods and demons," she burbles, as the transmission is interrupted. Then, "I am your shield; I am your sword—" and the cybernetic supersoldier, the Master Chief, appears in his battered metallic green armor with reflective visor, swinging a large gun into position. Then Cortana again: "I know you, your past, your future," and the scene speeds up, airships fly by in a huge lightning storm, the music builds, and the camera pulls back to reveal the Master Chief standing alone on a giant cliff like an epic hero, or like the Romantic figure in a sublime painting by Casper David Friedrich. A flash shoots up out of a strange giant object down in the desert and in the blackout that follows Cortana intones "This . . . is the way the world ends" as the *Halo 3* logo appears. That last is a line from T. S. Eliot's "The Hollow Men" ("Not with a bang but a whimper"), and in context it could mean "this is the way the trilogy concludes," but the point of the clip is as much visual as intertextual: Cortana and Master Chief are superimposed again. Only now (as we know from the previous game) they are physically separated; she is being held by the Gravemind. The third game, the trailer suggests, will be about reconnecting them.

The close relationship between the two has been at the heart of the *Halo* core story from the start. She's a shipboard AI who enters the fray, manifest in

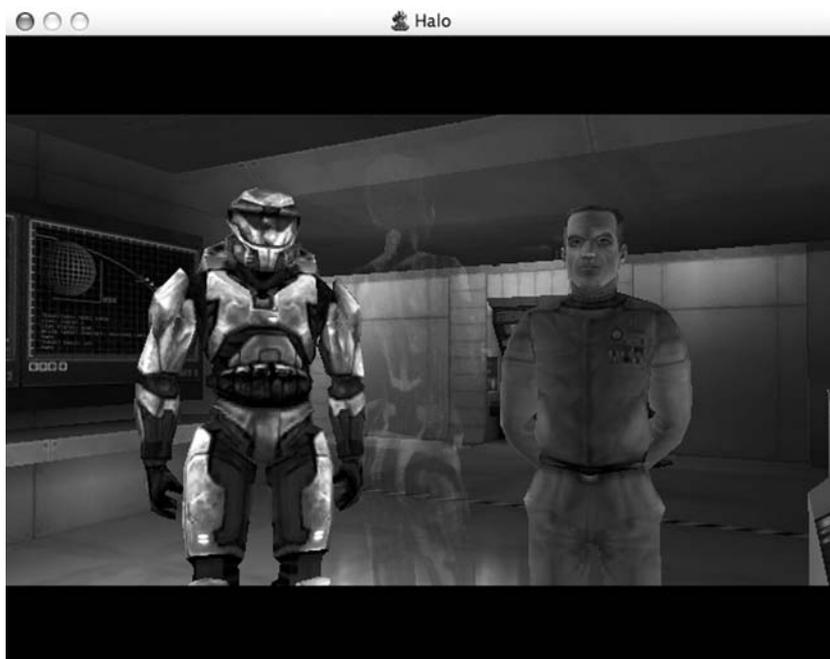


Figure 3.1 *Halo: Combat Evolved* screenshot: the AI Cortana, cybernetic supersoldier Master Chief, and human Captain Keyes on the bridge of the *Pillar of Autumn*.

a purple holographic projection of a diminutive manga-style female. He's an oversized, genetically engineered cybernetic supersoldier, a weapon-wielding avatar. Their combination is a sort of dual personification of the underlying structure of *Halo* and other games of this type. The first mission in campaign mode of the first game, *Halo: Combat Evolved*, really begins when she is pulled from the ship's controls and slotted on a cartridge into the back of the neck of his armor. The first real single-player mission of the *Halo* series is for you (playing as Master Chief) to get Cortana safely into a lifeboat and off the starship, the *Pillar of Autumn* (which is under attack by Covenant forces), and fly down to the surface of Halo, a giant artificial world in the shape of a ring, a little like a massive space station orbiting a gas giant. If the enemy aliens capture her, the captain warns, "they'll learn everything" and Earth will be endangered. After she joins Master Chief (you) in a cutscene on the bridge, the two characters engage in some comic dialogue and then your mission begins with the motto: "AI Constructs and Cyborgs First!"

As the dedicated *Halo* wiki suggests, Cortana may have been inspired by the fairy Morgana in the legend of the hero Charlemagne (hence "I am your shield;

I am your sword”) (<http://halowiki.net>). In the larger back-story of *Halo*, as told in novels such as Eric Nylund’s *Halo: The Fall of Reach* (2001), she was created out of the cloned brain of the troubled scientist behind the UNSC (United Nations Space Command’s) SPARTAN-II program, the origin of Master Chief and others like him, Dr. Catherine Halsey. Halsey served as a kind of surrogate mother-figure to the young Master Chief as he was being formed, and her AI “avatar” (in another, more literal sense than in most game situations), Cortana, is therefore a complex and ambiguous character in relation to the Master Chief, one who may even be headed for “rampancy,” a kind of rogue leap into AI autonomy and insanity. She fights alongside Master Chief in the first two games, ultimately helping to destroy the Halo ring-world before it destroys all sentient life in the galaxy, and outwitting another AI, the mysterious rogue 343 Guilty Spark. *Halo 2* ends with a cliffhanger, revealing that Cortana has been separated from Master Chief, detained by the Gravemind creature, which is hosting the parasitic lifeform known as The Flood.

Notice that my explanation has had recourse to a dedicated wiki, the series of novels, and the trailer for the third game, not to mention actual gameplay. Only some portion of that story, probably only uncertain fragments of Cortana’s role, can be gathered from the gameplay itself, and then only by an



Figure 3.2 *Halo: Combat Evolved* screenshot: Cortana.

assiduous player who played both games through to the end and has stayed with the franchise for years. Even then, he or she would not be able to discern the complete story of Cortana and Master Chief from the sometimes ambiguously depicted situations of gameplay and cutscenes alone. This participant-observer's account of the role of the story in gameplay describes many players' typical experience: "Trying to follow the story of *Halo 2* amidst all the action is akin to trying to read *Moby Dick* while sticking your head out of a car driving 75 miles per hour." You have to try to understand the rules, make sense of the gameworld, and test various strategies for achieving your goals, all while playing (navigating, shooting, and being shot at). The "grand theme" of the "narrative," according to this player, is "washed away" as you become absorbed in the "interactive trial and error," the looped routines of gameplay.²

In a moment I'll turn to that actual gameplay, the "interactive trial and error" (not to mention the increasingly common social interaction) that makes up most sessions of actually holding the controller (or mouse) and playing *Halo*. But first, I want to stick with the story and its "grand themes[s]" for a bit, because I think it *does* matter to gameplay, even if any individual player, like the one quoted above, is more or less unconscious of some part (or most) of the story while playing. Player and fan intelligence is by its nature modular and distributed, at its best when it is collective. A notion of the ideal collective audience for a game franchise such as *Halo* is built into, self-reflexively present in, the game and its expanding universe. The dual personification of the Master Chief and Cortana figures the essence of the game: the improvised interplay (and tension) between action and intelligence.

NPCs (programmed non-player characters) that serve as companion or helper figures like Cortana are common in action RPGs (role-playing games). Midna in *The Legend of Zelda: Twilight Princess*, for example, is another small "onboard" helper with special knowledge of the story and maps who provides tips and encouragement. Midna literally rides on Link's (the player avatar's) back when he is in wolf form and in turn resembles the 1-inch tall artist, Issun, in another game with a wolf avatar, Capcom's *Okami* (and Issun is later revealed to be the primary narrator of the game). Both are clearly descendants of Navi in a previous *Zelda* game, *The Ocarina of Time*, whose name suggests "navigator" and who looks like a blue fairy (not unlike some manifestations of Cortana). It's possible (though perhaps not all that helpful in the end) to expand the type into other forms of story to include, very loosely, *Peter Pan*'s Tinkerbell, for example, or the animal-form "daemons" of Phillip Pullman's *His Dark Materials* series of novels. Cortana, however, is explicitly an artificial intelligence, a kind of diegetic, in-game helper, and she is thus implicitly a metaphorical figure, a personification of both the authorial intelligence behind the gameworld and the literal AI programming code that runs the NPCs and other features of the

environment in *Halo*. Cortana is an important reminder of that something else—the supplemental intelligence, broadly defined—that makes interesting (by adding meaning to) the combat maneuvers of anyone who plays as the Master Chief, or another soldier, or member of an alien species.

Compare the conventional role of the HUD, which, like the helper NPC, also conveys to the player helpful or necessary information about the game in progress. Some combination of icons and numbers on the screen, showing health and ammunition levels and so on, is conventional across a wide variety of games; in *Halo*, as in some other first-person games, the fictional device of a helmet-mounted display allows the information to be at once outside the fictional gameworld and inside it, part of the user interface that is also diegetic, in the narrative, because it is shown on the inside of the visor of your character (Master Chief, for example), who sees the same display that you, the player, see. Arrows appear to point to advancing enemies, who also show up as dots on the radar, crosshairs help you aim, levels of ammunition and health are indicated, you see the status of your defensive shield. In *Halo 2* the health status bar is removed, but most of the rest of the display remains constant. In a boon to makers of machinima films, picking up a certain skull in *Halo 2* makes the HUD invisible during campaign mode, so a director can get cleaner screens for filming. Some see the traditional display, a kind of screen between player and gameworld, as a distraction hampering immersion or the suspension of disbelief, but it seems to me it is an essential part of the particular kind of engagement (not immersion) a gamer experiences, as opposed to a theatergoer, for example, a reminder that gameplay is in the foreground, literally and figuratively, of his or her experience.

The *Halo* HUD, because it is fictionally part of the Master Chief's armor and part of his point of view, while also providing the player with information on the ongoing gameplay, refuses to be placed entirely inside or entirely outside the fictional gameworld. The same is true for a helper-NPC such as Cortana. Though she might seem more firmly embedded in the fiction of the gameworld, because she's written into its primary story arc, so is the helmet of the MJOLNIR armor written into the sort of the SPARTAN-II project. Cortana, too, is pretty transparently "artificial" in her role as the AI conveyer of special "intelligence" about the game. She offers intelligence in the military or espionage sense of the term, mission-critical semi-secret data and point of view. Cortana's presence onboard your player-character, her voice inside your head, is the internalized voice of the game itself, as it were, reporting things detected before you can sense them, recommending action, warning and reminding you, speaking from knowledge of a larger slice of the game's universe than you can know during any given instance of gameplay. As she says in the *Halo 3* trailer, she really is your shield and your sword.

Many of the portentous recitations in that trailer, including the T. S. Eliot line, are self-quotations of the very earliest appearance of Cortana, as the unknown writer of email “letters” sent out in 1999 to fans of an earlier game by Bungie, *Marathon*, posted to a prominent fansite.³ (The Eliot line was deliberately changed in the letters to “this is *not* the way. . . .”) It’s now known that a Bungie employee wrote the letters under the name of Cortana in order to create a sense of mysterious anticipation, to generate buzz about the as-yet-to-be-released *Halo*. He responded in character to challenges from some fans, quoted William Blake, and made oblique references to alien invasion: “The fear of not being the only sentient species in the universe was forgotten in the giddy excitement of a new era for humanity. No one was prepared for their arrival.” Bungie has since cautioned that the letters were written before *Halo* was finished and that their content should not be taken as canon. But by returning to and quoting from them for announcing *Halo 3*, they have apparently connected the earliest thread of Cortana’s story with the final installment in the main trilogy, at least suggesting that the Cortana character, and the whole idea of the AI as a threshold character, is central to *Halo*, whether considered as a saga or as a franchise.

“This medium will metastasize”

The Cortana Letters were in effect an early version of viral marketing, were on their way to being an example of what have come to be called ARGs (alternate reality games), like *The Lost Experience* discussed in Chapter 1. Like a virus, such campaigns use an existing networked community—usually an existing fanbase, whether for a TV show like *Lost* or, in this case, for the game *Marathon*—to spread a message generating interest in a new product. The basic idea of viral marketing—to exploit the social energies in existing communities of interest, was also behind the fad for flash mobs in the early 2000s, when groups of spontaneously assembled people (one might as well call them players) showed up in a public place at the same time, a mall or city square or the atrium of a skyscraper, in response to networked communication via cellphones, web pages, and e-mail. Sometimes there was a topical or political occasion for the mob, but in most cases the gathering itself, a kind of acting out of artificial life and species-evolution games, *was* the event, and the media event was the halo of interest and documentation surrounding the mob meeting. The Cortana Letters attempted to generate some of the same kind of attention and spontaneous excitement, but they took the form of a textual mystery to be solved, a back-story to the back-story, a game played on the web. Admittedly, this remained in crude form: the textual fragments never really resolved into more than a handful of themes (among them, alien invasion and the

complications of an AI becoming sentient) that foreshadowed the story of *Halo: Combat Evolved*.

The next time around, the game development company Bungie had been for some time fully ensconced in the headquarters of their new parent company, Microsoft, and the viral marketing campaign for the sequel to *Halo* was raised to an entirely new level. In the summer of 2004 theatrical trailers for the then forthcoming *Halo 2* concluded with a logo for Microsoft's Xbox including, running below it in a smaller font, an URL (xbox.com) that, just for a second, flickered, warped, and morphed into another address: ilovebees.com. For alert viewers who noticed it flickering on the screen (or saw it reproduced by fans soon after on the web), the second URL was a mysterious first clue, hidden in plain sight. It led to what looked like an amateur-designed small-business website ("Margaret's Honey"). This site turned out to contain the fictional beginnings of a cross-platform or transmedia game that at first refused to give away the fact that it *was* a game. This was an ARG for marketing *Halo 2* in advance and called *I Love Bees*, a sprawling game deliberately designed to bleed over into the real world.⁴ To many alert viewers the game would have revealed itself to be a viral marketing campaign for the video game (its initial clue did after all appear in the Xbox trailer for the game), but it remained effective at generating attention, including press about itself. A game on this scale had first been used successfully in *The Beast*, an ARG created as part of a 2001 advertising campaign for, interestingly enough, Steven Spielberg's movie, *A.I. I Love Bees* was the product of the same innovative advertising and gaming group behind *The Beast*, 42 Entertainment, though no one knew that for sure at the time. As all successful viruses do, *I Love Bees* quickly took on a life of its own and spread throughout its host, the web and the social networks behind it, as its fictional website spawned wikis and blogs and specialized groups of players following the unfolding story of a mysteriously menaced webmaster, Dana, for her aunt's honey business site.

The website soon began to erode, defaced by what looked like a hacker attack using a computer virus, but by decoding what was there and comparing hints posted on other sites (including Dana's own blog), players could gradually discover clues, including eventually over 200 GPS coordinates for real-world locations. Over time, the players collectively determined that these were locations of payphones all over the U.S. There, on set dates, they could take phone calls at these locations, speaking live with fictional player-characters delivering what were in effect individual fragments of a distributed drama, sometimes winding up with their pictures on the web, but at any rate finding themselves inside the game in a vivid way. Legendary examples included a fan's taking a call from a public telephone booth in Florida during a raging hurricane, and a group of players holding up an "I love bees" sign, an image that



Figure 3.3 I Love Bees Web page (www.ilovebees.com).

made it into mainstream news reports, during a campaign event of the fall 2004 presidential election. Completed phone calls caused new MP3 audio tracks to be posted on the game's website, like the disordered and distributed fragments of a lost radio play. (Orson Welles's 1938 radio adaptation of H. G. Wells's 1898 science-fiction classic *The War of The Worlds*, which was also about an alien invasion and also worked by crossing fiction with reality, is an ancestor of *I Love Bees*.) Pieced together through the editorial work of the fan/player community, the fragments added up to a coherent six-hour audio drama, a story running in parallel as it were with the back-story of *Halo 2*. It involved alien invasions and an AI named Melissa, who was created from the cloned brain of Yasmine Zaman, a member of another iteration of the same SPARTAN-II program that created cyborg supersoldier Master Chief and his AI companion, Cortana. Like Cortana, Melissa was a shipboard AI; she was herself corrupted by another viral program, then was blown apart in an explosion that sent the fragmented pieces of her intelligence, including the viral addition, like multiple personalities, traveling through time, coming to rest on—of all places—the Margaret's Honey website server, from which platform the AI began to broadcast cryptic messages. Melissa's fragmented parts played different characters in different voices in the ARG materials. The story was attached by several tentacles to the main back-story of the *Halo* games but focused in part on Earth in the twenty-first-century present (there was also a plotline that takes place in the future) and was self-consciously about the problem of fragmented bits of meaning that needed to be reassembled in order to reveal an

overarching narrative meaning. Which is, of course, how the ARG itself was to be played.

The fictional story of *I Love Bees* was distributed across and in a real sense took place on actual networks, on websites, including the fan-created ones, and out in the phone booths and public locations via GPS coordinates. The game-universe of *I Love Bees* was the real world, re-imagined in an act of collective make-believe to incorporate—and thus make more real—the co-extensive fictional universe of *Halo*. The ARG extended the universe of *Halo*, demonstrated that it was infinitely extensible, in a way that neither the narrative alone nor the gameplay alone ever could have accomplished. The effort required of its players resembled nothing so much as the collaborative, distributed labor of putting together a scholarly edition, discovering, assembling, and sorting the relationship of disparate texts, annotating, interpreting, making them into a coherent, meaningful whole, a model of the work in question. Or perhaps the collective effort of playing a cooperative-mode game.

The endgame of the ARG closed the circuit and reconnected it to the video game. It rewarded the successful players of *I Love Bees* (and some additional gamers) with the opportunity for what it mysteriously called “combat training” at one of four real-world locations. This turned out to be a chance to be among the first to play a pre-release version of *Halo 2*, but also to come together in one place as a community. All of this happened before the video game itself even appeared on the market on November 9, 2004, when fans lined up overnight in great numbers to purchase their copies, helping to drive sales to a record \$125 million (reportedly nearly twice the box office take for the hit film *Lord of the Rings: Return of the King*).⁵

A phenomenon such as *I Love Bees* might seem at first to derive from the kind of deliberately oblique or ironic strategy of marketing seen everywhere in the tech-boom years of the late 1990s, in which ads avoided direct reference to the product and instead produced a series of affective associations, involving participants in the company’s demographic targeting while offering them the illusion that they were maintaining a cool resistance to the product tie-in. Even once the connection was made, oblique ads gave the consumer enough ironic distance to make participating (and buying) seem reasonably cool. These ads still usually appeared in print or TV or other traditional media, though some experimented with the web. In most cases, however, they were still following the traditional top-down broadcast model, targeting a particular kind of consumer with emotionally manipulative content. In recent years, a different model of marketing has emerged by taking careful note of how fan culture already works. Henry Jenkins has cited TV shows such as *Survivor* and *American Idol*, linked closely to the fan communities they foster and to whom they advertise, as examples of this new model, harnessing the energy of what

Pierre Lévy calls “collective intelligence” towards the “mutual production and reciprocal exchange of knowledge.”⁶ In this model, fans form communities that in effect collectively co-produce what they also consume as entertainment, along the way accepting various linked forms of marketing as part of the deal. According to the lead designer behind the ARG, Jane McGonigal, even the plot-points of the story of *I Love Bees*, not to mention numerous smaller details, were altered on the fly in response to gameplay moves on the part of the player community, a true circuit in Lévy’s and Jenkins’ sense, and one created by canny designers and writers with a sense of how to stage a flash-mob-like happening, and an experienced-based sense of how to serve as hidden “puppetmasters” for a massively multiplayer real-world game.

Viral marketing has from the start been like a game, with obscured objectives that must be uncovered, hidden rules that must be figured out, artificial obstacles to overcome, and social cooperation or team play encouraged. But more recent campaigns, culminating in *I Love Bees*, have deliberately modeled themselves not just on fan culture but more specifically on game-fan culture and its collective modes of play, rule-discerning, problem solving, knowledge-making and world-building, the structures and skills that game fans already have for creating and sustaining and extending a make-believe paratextual universe around a chosen media object. Actually, this effect is less paratextual in Genette’s more limited, literal sense, and more a way of allowing the very idea of the paratext, the threshold as a grid of different possible receptions, to take over the primary functions of the text itself.

Paratextual fan culture is the subject of William Gibson’s 2003 novel, *Pattern Recognition*, which some players of *I Love Bees* immediately recognized as an influence on the ARG. On the fictional Dana’s blog (written by Jane McGonigal; <http://ilovebees.blogspot.com>, August 2004), one user, “Sorcerer” (if there ever was such a user), posted this winking comment early on in the game: “Anyone here ever read William Gibson’s ‘Pattern Recognition’? Seems like someone has.” Gibson’s protagonist, Cayce Powell, is a gifted marketer who works as a “cool hunter,” a consultant on elite corporate logos and ad campaigns. She makes the most of her tendency to apophenia—obsessive pattern recognition—in order to read the trends in popular culture. She is also in her private life a member of a worldwide online fan community, people who “follow the footage” of fragments of serially released video clips from a mysterious underground film. Cayce ironically encounters, with a certain disorienting cognitive dissonance, a viral marketing campaign invading her beloved subculture of “footageheads.” Presumably 42 Entertainment would have been very interested in Gibson’s explorations of the ambiguous relationships between fan culture, art, and commerce that constitute viral marketing. Moreover, Gibson is also the author of the influential original cyberpunk novel,

Neuromancer (1984), in which two parts of an emergent AI reunite in order to evolve into self-consciousness and infect the global network (“the matrix”). The hero is pursued by the AI through a series of mysteriously ringing phone booths, an uncanny image of communication networks haunted by an artificial presence that shows up again in different forms in the later films, *Lawnmower Man* (1992) and *The Matrix* (1999). This image, ultimately descended from *Neuromancer*, seems a likely influence on the use of phone booths in the *I Love Bees* ARG, and the original cyberpunk novel is a likely influence on the story of *Halo* as a whole, which has its own version of fragmented and “rampant” AIs working with and against human agents.

At one key point during *I Love Bees*, the AI Melissa sent out an ominous-sounding message from the Margaret’s Honey website: “This medium will metastasize.” Though it had meaning inside the story, this was also clearly a self-reflexive or metatextual manifesto on behalf of *I Love Bees* itself and ARGs in general (this campaign is not just viral but rampant). *I Love Bees* and *Halo 2* represent a kind of media packaging designed from the first to extend itself everywhere throughout the existing host-body, throughout the larger media universe. 42 Entertainment’s own mission statement says that they aim “to carve the client’s world into the cultural landscape so that, like Middle Earth or Hogwarts, it becomes a priority destination for the audience’s imagination.”⁷ They do this by creating “communities passionately committed to spending not just their money but their time and creative energy in the worlds we represent.” But of course also their money. The company seems to be serious about simultaneously trying to provide with its marketing the kind of entertainment associated with gaming. *I Love Bees* jumped the species boundary of marketing, as it were, just as it was designed to do, when some players found themselves immersed in playing the game for its own sake. Then that outcome became part of the lore that contributed to the campaign. All viral marketing campaigns aim to exploit existing networks in order to create “buzz”—one can imagine these bees being “hatched” as a pun on the familiar marketing term; and even, perhaps, “you can catch more bees with honey . . .?” The first move on the part of the puppetmasters was to mail actual jars of honey to members of the game-fan (and especially ARG-fan) community, jars that contained letters that spelled out *I Love Bees*. Meanwhile the pre-game was afoot.

Jane McGonigal has referred to the “distributed fiction” of *I Love Bees*, which she tellingly characterizes as “a kind of investigative playground, in which players could collect, assemble, and interpret thousands of different story pieces related to the *Halo* universe” (7). The players act as detectives or editors, reconstructing fragments into meaningful texts, thus collaborating to write the “bridge” between *Halo: Combat Evolved* and *Halo 2*. Note that it’s the production of this bridge, rather than the consumption of it, that’s distributed

and collective. She has also described the designers' deliberate use—in the game and in thinking about the game—of the cyberpunk metaphor of the “hivemind” (again, bees) to describe the desired collective effect. Along with the announcement that “This medium will metastasize,” a counter appeared on the website to mark the days until an ominous-sounding event: “Countdown to Wide Awake and Physical.” Clearly the ARG arose from a rich, suggestive stew of thinking about the meaning of AI in the *Halo* story and in gameplay, starting with Cortana and other in-game AI characters, but perhaps leading to speculation on CI (collective intelligence), in a way another kind of “artificial” intelligence because it *is* an artifice, is collective and is deliberately fostered and constructed, the cooperative social group producing together a gamelike capability for search and analysis, for uncovering and sifting through “intelligence” in several senses, that is more than the sum of its distributed parts. Fan culture always works in this way: as a collaboratively embodied knowledge base, a massively multiplayer network for making new stories—and new or extended universes—through acts of collective make-believe. And as McGonigal points out, Bungie/Microsoft's assumption in 2004 was that games were moving increasingly to networked collaborative modes of play. This imperative shaped the emphasis in *I Love Bees* on collaboration and community building (9–10). In the end, like any successful ARG, *I Love Bees* exceeded its creators' intentions and became more than mere training for cooperative play on Xbox Live, though it was that as well. The thematic content—beginning with a multi-personality AI spreading virally—as well as procedural design of *I Love Bees*—the CI of ad hoc cooperative groups—corresponds to the desired essential character of the *Halo* games as they were designed and marketed, especially with the advent of *Halo 2*, as based in a networked and collective, loyal fanbase, a multiplayer community inhabiting and helping to perpetuate the *Halo* universe.

“Space Invaders in a tube”

What does all of this—the ARG and the extended back-story—have to do with holding the controls, whether the WASD keys (the navigation keys of PC computer gaming) and mouse or the multi-button and thumbstick controller, and playing *Halo*? For some players, as my accounts below will confirm, it would seem to mean next to nothing—at least nothing of which they're consciously aware. However, the fact that mere action-based, story-innocent gameplay seems to be fairly widespread doesn't diminish the importance of the universe-building going on behind the scenes or at the margins of any given casual night of shooting at aliens (or at your friends who are playing as aliens). As Henry Jenkins has said in a discussion of the virtual world *Second Life*, we

need to be careful about assuming that cultural significance correlates directly with statistical numbers of people involved.⁸ Even if, as seems a safe bet, no single player of *Halo* exists who has mastered knowledge of the whole *Halo* universe, or is even interested in vast reaches of it, even if many or most players know only an outline of the back-story and keep it in the back of their mind during gameplay, that does not mean the *Halo* universe doesn't matter to the meaning of the game. To be sure, for some players the detailed story of the fight against the Covenant (and the threat behind the Covenant, the parasitic Flood) is merely a pretext for play, like the premise of an improvisational drama. Actual gameplay takes off from there and sometimes doesn't think twice about the story once it has begun. On the other hand, for some few fans, every novel and epitextual media artifact related to the game matters and must be experienced. Like the individual bees in the concept of the hivemind, each contributes something to the collective intelligence of the whole fanbase and its collective constructions of the game universe. The meaning of *Halo* lies in the complex picture of the range of possibilities represented across the whole spectrum of *possible* engagements by players.

The *Halo* series began as a single-player FPS (originally for the Mac), and it remains essentially an FPS. The point of view begins with and inevitably returns to the first-person combination camera-gun, as Rune Klevjer has explained it (though the camera switches to third-person shots for vehicle-driving and during most cutscenes); in this way it retains a close family resemblance to earlier shooters such as *Wolfenstein-3-D* or *Doom*.⁹ In *Doom* you play as a space marine—not unlike the Master Chief or the UNSC Marines of *Halo*—as the last surviving human hero fighting non-human enemies, in this case demons and zombies, on Mars and its moons. In *Halo* the enemy is the multi-species coalition of aliens, a civilization known as the Covenant, made up of Prophets, Grunts, Jackals, Hunters, and Elites, and so on. Weapons can come from both sides of the battle, allowing for a more diverse and task-specific arsenal.

Even the very earliest arcade-style shooting games can be included in the broad generic family to which *Halo* belongs. What some consider the first real computer video game, as it came to be understood, complete with multiplayer mode, a CRT (cathode ray tube) graphical display, and keyboard or peripheral controller, was *Spacewar*, developed by 23-year-old MIT student Steve Russell (with Alan Kotok, Peter Samson, and Dan Edwards) on the PDP-1 mini-computer in 1961. In a scenario directly inspired by science fiction novels, two players maneuver two spaceships on the screen, shooting at one another. Though the first version was, technically speaking, third person (you control your own rocket, but the combat is viewed from a distant point in space), a later version experimented with a true first-person point of view. Clearly this



Figure 3.4 *Halo: Combat Evolved* screenshot: first-person gun.

early third-person shooter paved the way for the FPS proper. The rockets are drawn on the screen against a 2-D backdrop of stars. (In a 1972 interview, Russell revealed that having the stars was necessary in order to create a better sense of range and motion, an early example of the importance of physical/fictional setting and background imagery even in a simple shooting game.¹⁰) A kind of black hole or gravity well at the center of the screen pulls the ships toward it as they fire torpedoes (little lines of light) at each other; firing your thrusters at just the right time in order to use the gravity to swing an arc around your opponent is part of the game, as is entering hyperspace (jumping to another entry-point on the screen) and cruder back-and-forth evasive actions. In this ancestor of most video-game shooters, the trigger key is already all-important.¹¹

The developers of *Halo* are aware of their own place in gaming history, and one of them once joked that their game could be seen as “*Space Invaders* in a tube.”¹² The joke contains a double-edged insight: on the one hand, *Halo* is first and finally about shooting aliens; on the other hand, even the 1978 2-D arcade shooter, *Space Invaders*, designed by Tomohiro Nishikado for the company Taiko, is more interesting than that would suggest. Interestingly, Nishikado later said that he considered tanks or airplanes as targets for his shooter, and considered

human enemies, but that he “felt it would be immoral to shoot humans, even if they were bad guys.”¹³ Inspired by H. G. Wells’s *The War of the Worlds* and the popularity of *Star Wars*, he decided to target an invading alien horde. Wells was the source for the squid-like or spider-like design of the different alien species, who “march” back and forth and down across the screen in waves while you shoot at them from behind “degradable” barrier arches with your laser canon, sliding back and forth along the bottom of the screen to fire or evade missiles and bombs dropped by the aliens. Besides picking off aliens from their descending ranks, you can shoot through the cleared lines at the occasional bonus-point spaceship passing “overhead.” The heartbeat-rhythm synthesizer music keeps pace with the marching aliens, who speed up as the game progresses, increasing tension and requiring new levels of shooting skill.

Game theorists Jesper Juul and Ian Bogost have commented on the role of even this very simple back-story in *Space Invaders* (keep shooting in order save humankind from an alien invasion).¹⁴ Even in an FPS, and even when a player is only half-conscious of them, such story elements serve as what psychologists studying altered states of consciousness call “set” and “setting,” the contexts that partly determine the mood and feel of the gameplay experience. At the very least, the story “lend[s] flavor” to the gameplay, as *Halo* Project Lead Jason Jones has said, working along with music and other cues to enhance the player’s sense of immersion in the gameworld.¹⁵ They may also increase replay value, since any given player may learn a little more about the game’s universe over time, thus altering his or her perceptions of the context of gameplay. Or the story may be more important between gameplay sessions, or as a way of

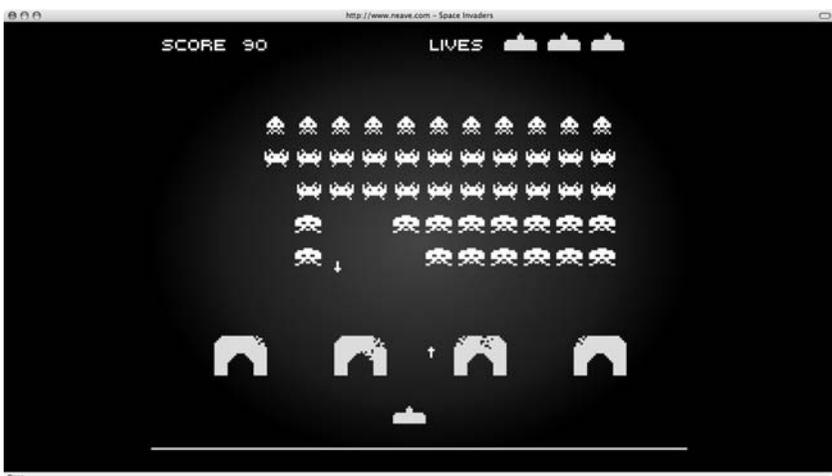


Figure 3.5 *Space Invaders* screenshot (online emulator).

holding together a diverse community of gamers with different styles of play and different levels of commitment. Actual play sessions mostly involve more immediate tactical decisions about territorial control, evasion, targeting, and shooting.

In the sixth chapter of *GAM3R 7H30RY*, McKenzie Wark discusses “targeting,” using as an example the experimental cult game by Sega, *Rez* (2001; interestingly enough, the same year *Halo* was published), precisely, one imagines, because of its differences from mainstream shooters such as *Doom*, *Quake*, *GoldenEye 007*, *Half-Life*, *Counter-Strike*, *Resistance*, or *Halo*, its more extremely abstract and psychedelic, unrealistic mode of representation.¹⁶ These features allow Wark to bracket-off questions of mimesis—of what it means to simulate violence and war—though these questions arguably return to his chapter under the sign of the “alien” or other. In *Rez*, an on-rails shooter, your “missiles seem more balletic than ballistic.” You fly or swim along and press the trigger to lock on and “target” things that swoop by, but the experience is more like a “night-club” than a “war” (126–7). Targeting is a way of extending one’s presence in gamespace, which is why a similar effect can be achieved with a targeting grappling hook (see Nintendo’s *Zelda*) or a targeting virtual ink brush, for example (see Capcom’s *Okami*). Wark argues that targeting is a way to first extend and then to cut off the connection—a way to carve out one’s identity vis-à-vis the alterity of the “enemy” and the gamespace in general. The goal of any shooter, Wark writes, is “the overcoming of death through the targeting of the other” (138). But even that highly abstract goal is usually pursued against the “backdrop” of a back-story. You’d think the story would be least necessary in a shooter, but stories persist in FPS games and have a reason for being, even when the player ignores them. They frame the action, establish the enemy, excuse the shooting, among other functions (141). With this summary I agree. Even a dim awareness of the existence of an extensive back-story subtly alters the “feel” of an alien landscape in *Halo*, lending it an intuitive sense of depth, of a world beyond what’s in front of you on the screen.

This role of targeting in context was vividly illustrated by Wark himself during a kind of book-tour interview on the online video show *This Spartan Life* (episode 4.3).¹⁷ The show, filmed inside *Halo* as machinima using the game engine, is itself an example of the explosion of mods and appropriative extensions of the *Halo* universe. Probably the best-known examples are the machinima videos, *Warthog Jump* (in which military vehicles are blown sky high in interesting ways) and *Red vs. Blue*, a comedy series made inside the game-world using recorded voiceover dialogue to match the actions of game avatars. The episode of *This Spartan Life* is a strange and often funny mixture of talk-show book-tour interview and game demo, using two cameras in a professional way, as the host and Wark move around live in *Halo* maps discussing Wark’s

book and game theory concepts, including the idea of targeting in *Rez*. Significantly, given his theory of the dynamic of alterity in shooters, Wark chooses to appear as a Covenant Elite. As they walk and talk (or their colorful avatars do), vehicles fly by with whooshing sounds, other players occasionally pass in the background, sometimes pausing to take and return fire, grenades explode. When the discussion turns to the concept of targeting, we see the camera-gun of the interviewer lock-on to Wark's avatar. And at one juncture in a vast cave the host uses his gunfire to point out a ledge high above them near a sunlit opening he has never been able to reach, as if to reinforce Wark's theory of abstract targeting in gamespace. The interview concludes with Wark reading from the book, his avatar standing on a high balcony before a live audience of gamers, who (of course) break into noisy combat in the cave beneath him as he reads. Vehicles fly by, firing missiles at soldiers who are running past firing guns. The segment ends, comically, but also appropriately in terms of Wark's theory of targeting, when Wark himself is shot: "Ow!" he cries, and falls to the floor of his balcony, his reading evidently concluded.

This show and Wark's theoretical and theatrical appearance on it may be a paratextual phenomenon related to *Halo*, but it's not really *playing Halo*, is it? Those gamers in Wark's audience are arguably playing the game, running and jumping and diving for cover, shooting or flying by in vehicles, when they engage in combat while he reads. What is the difference between that and any other instance of gameplay in which they might engage? The host jokes at one point about how he and his crew are *not* playing the game inside which the show takes place, but when you think about it, why not regard the actions of Wark and his host as they move around the map, exploring, shooting, even talking to one another, as yet another instance of gameplay, if a rather eccentric one? On any given night, many Xbox Live sessions contain even more radically unstructured (if less talky and academic) exchanges, instances of such relatively limited-objective gameplay, one-on-one death matches, for example. Even in games based on actions as direct as targeting and shooting, in practice the lines between text and paratext, gameplay and story, between extending the *Halo* universe and playing *Halo*, are not as clear as some formalist accounts might lead one to believe.

"Countdown to wide awake and physical"

In earlier times, children's games of "war" involved multiplayer action of a physical sort, collective make-believe in which "Bang—you're dead!" was a performative linguistic act based on the temporary social contract that is the magic circle of such games. Or one could play with loud and smoking cap guns or with plastic water pistols. In more recent times, laser tag took up similar

conventions, more technologically mediated. In video games today, there are single-player FPS games galore, and basic targeting is everywhere on Flash- or Java-based online casual games, often in nostalgic and/or ironic imitation of arcade classics. Though graphics and programming may grow more sophisticated, the history of gaming conventions is not progressive in any simple way. *Halo*, at least as most players encounter it these days, is a social experience, usually fundamentally more like laser tag than, say, Nintendo's *Duck Hunt* (1984). At this point in the history of the game, "playing *Halo*" almost always means playing with other people—matching wits and reflexes with other players. Often they are physically present in the same room with one another (which was all that was possible in the first game).

Even when playing *Halo 2*, the physical proximity of two- or four-player cooperative or competitive play is the norm for one avid player I interviewed, John (not his real name). He definitely considers himself a fan of *Halo* but plays it mostly with his college roommate and their guests. They sit on the couch with two or four wireless controllers and a split-screen layout, playing regularly and keeping track of their competitive standings, but mostly in straightforward competitive head-to-head death-matches (the winner has the most kills) or, less often, online in team games of capture the flag, one team defending a location while the other moves in and tries to take it. John's roommate is an even more dedicated player: his nickname is "Halo Dave," and everyone knows he holds first place in their circle of players. Others may play in larger system-link LAN (local area network) parties, in rooms with multiple large-screen TVs, but for John and his friends the cost of such a setup is too great. He says he's interested in what he knows of the back-story of *Halo*, and he knows the basic canonical plot arc in its entirety. John's a fan of science fiction in general and a more serious, dedicated fan of MMORPGs (massively multi-player online role-playing games), especially *World of Warcraft*, in part because he values a complex game universe and finds it easier to sustain in the MMORPG's persistent world, where you play with the same guild and meet the same people week after week. In *Halo*, by contrast, "people come and go" and so the fictional gameworld (and by implication the back-story that helps to create it) seems to matter less. It seems significant that John's engagements with different versions and experiences of *Halo* on different platforms are determined in large part by the material conditions under which he can play (which is also the case with "Jacob," whose interview I discuss below). His friend's large-screen TV, his roommate's console, lapsed subscriptions to Xbox Live, the absence of the infrastructure to allow for system-link LAN parties, all determine what part of the *Halo* universe is available (and perhaps interesting) to him, and these have further effects based on the different processors and different sound cards of the different systems. John prefers PC games for other reasons, too, but it

may also be the case that the barrier to entry is lower with the PC he already owns and the broadband connection that comes with his dorm room.

Another serious gamer I interviewed via email, whom I'll call Jacob, uses the online version of the game on Xbox Live primarily as a convenient way to stay in touch with out-of-state friends from college days. They log on separately from their distant locations and spend the first ten minutes in the pre-game room chatting about comic books and movies, then play relatively casually for a while, a not-uncommon appropriative middle ground, not a mod but a modified form of gameplay. But—interestingly enough—as far as Jacob is concerned, this counts as “playing *Halo*.” He says he cares a good deal about well-developed back-stories in most games but doesn't take *Halo*'s story very seriously, and doesn't seem to know much about it beyond the idea of an alien invasion. Jacob says he “despises” what he perceives as the mostly adolescent (and, he says, trash-talking and often gay-bashing) chat on many of the *Halo*-themed message boards. Again, though even more strikingly than with the case of John as described above, Jacob's gameplay is determined by financial considerations that in turn determine his platform. As he put it: “When I play H2, it's always online. The hardware requirements—and sheer logistics—of setting up LAN play is prohibitive for me and my friends.”

A third player I interviewed, whom I'll call Cole, is a more dedicated, serious fan, someone who admits to collecting “an embarrassing amount of stuff,” including action figures (he focuses on the alien Grunts), T-shirts from Bungie.net and *Halo 3*, and the first *Halo* graphic novel. He even made his own silk-screened hoodies printed with his *Halo* clan's logo. He was aware of *I Love Bees* and thought it was “an amazing concept,” but didn't delve into it very deeply himself. For a long time, his own homepage was set to Bungie.net. Mostly Cole plays on Xbox Live, using the game to stay in touch with his brothers who live elsewhere. But when he can, he enjoys LAN play, for instance at an annual party sponsored locally by the gaming website for older players, *2 Old 2 Play* (<http://2o2p.com>). He also appreciates the level of discussion at that site, because like Jacob he finds the majority of what goes on around *Halo* out on the boards “rather juvenile.” When asked about the role of the *Halo* back-story, the whole universe, when it comes to his gameplay, Cole replies:

I think that the effort Bungie puts into deepening and detailing the *Halo* universe really makes a difference. I don't know that it affects the mechanics of my gameplay, but it certainly adds entertainment value. There are plenty of generic shooters out there, but not many with an entire universe and history attached.

All of the gamers I talked to, despite their different styles and circumstances,

are clearly drawn to the multiplayer modes of *Halo*. From the release of *Halo 2*, the game has been marketed as being all about social play. Its developers bragged from the start that it “redefines the social experience of online gaming” and its release was very closely tied to Xbox Live, treated as a “system-seller” that would cause people to buy the console and subscribe to the service. Subscriptions to the online service roughly doubled, it was reported by Microsoft, from about one million to about two million, after the introduction of the game in late 2004. Bungie has on its staff a “Community Manager,” as any large game company is likely to have nowadays. It would seem that *I Love Bees* thematized its client’s goals even more explicitly than has been appreciated. The ARG’s creation of a metastasizing community of “loyals,” of dedicated fans ready to play not only one game but also to help construct the universe in which the game is situated, mirrored the simultaneous push by Microsoft during 2003–2004 to redefine “the social experience of online gaming,” to build a community of loyal subscribers to Xbox Live, ready to inhabit the *Halo* universe. To do that, they knew (and clearly 42 Entertainment knew) that they would have to create a universe of many possible thresholds bridging from the game to the players’ worlds, with plenty of opportunities to blend elements of the back-story with action gameplay and with the emergent events, improvisations, and surprises that can still be created most reliably by human social interaction. The game design seems to have aimed at combining multiple opportunities to configure social gameplay with procedures for having players interact with multiple AI-driven NPCs. The thematic obsession of *I Love Bees* with various forms of artificial intelligence was no accident but a reflection of the formal goals of the design team for *Halo 2*.

In a Powerpoint presentation given at the Game Developers Conference in March, 2002, *Halo* developers Chris Butcher and Jaime Griesemer discussed specifically their use of AI in the first game and while working on *Halo 2*.¹⁸ AI is a complex theoretical and applied field in computer science. Game AI is more like an artisanal craft, with something more of a hacker ethos. As the developers make clear, the goal in a game such as *Halo* is not to create truly intelligent programmed objects but only to create the *illusion* of intelligence in the NPCs, and they reveal some of the tricks for doing this. For example, the different species or “races” of alien enemies are type-characters whose basic behaviors are determined by their profiles: Grunts are always comical and cowardly, running away and making excited noises when fired on, whereas Elites are always tough and aggressive. What follows from this, for example, is that when you kill an Elite, Grunts will run away in distress at the loss of their braver leader, creating a scenario among the NPCs that feels like the display of different kinds of intelligence. The basic goal for the alien AIs is to have them react during combat in ways that foster this sense that one is interacting with smart

opponents, so that they duck when fired upon, dive for cover, approach you cautiously (or not), and so on, depending on the variables in any given situation, such as distance from the player's character, whether there is clear line of sight, what level of difficulty has been set by the player (Easy, Normal, Heroic, or Legendary), and so on. Butcher and Griesemer point out that, paradoxically, an AI can be too intelligent to work in the heat of actual gameplay. They deliberately avoided making the NPCs "psychic," for example, allowing them only to know what their senses would tell them in a given setting. Their behavior should not be too complex; they learned that too much in the way of hidden states (or inner motives) can make it difficult for a player to "read" the AI as intelligent, making it appear merely opaque and confusing. Random behavior is not the goal, but some degree of unpredictability is, by which the developers mean "not repetitive" behavior. The idea is to make a virtue of necessity, to make the human player, rather than the NPC, the truly unpredictable element in the equation.

The developers' model for how to achieve a sense of emergent behavior on the part of the AI draws upon the real intelligence of the human player, who is inevitably going to react in different and unpredictable ways each time he or she plays. They say they exploit this relationship to create a "cascade effect":

Unpredictable player
puts the AI in unpredictable situations
which causes unpredictable reactions
and this leads to a unique experience.

This causes a feedback loop because the unique experience leads to more unpredictable Player reactions and starts the cascade all over again.

As they say, this kind of feedback loop "allows small changes in the situation to be amplified by the AI to yield large changes in behavior", using many small predictable effects "that combine and cascade" to provide the player with a sense of "fluid and deep gameplay".

The developers opportunistically use the combination of AIs and the designed features of the gameworld to produce an experience that is more than the sum of its parts. The world of *Halo* is simulated with enough complexity, they argue, with enough lavish images, dynamic animations, detailed maps, features such as destructible buildings and vehicles that really do get shot up and wrecked, and in-game elements from the story, that any given AI doesn't have to behave in overly complex ways to *seem* intelligent in such a context. The sense of being immersed in a complex and intelligent, meaningful environment is produced by the *distributed complexity* of designed world + AI behaviors + player actions. This can be seen as exploiting a form of distributed

intelligence, part artificial and part human. At the beginning of the second mission in the first game, the lifeboat has crashed on the surface of the Halo world and you find yourself standing amidst dead marines (by now you know to pick up their weapons and ammo). The landscape is sublime, with the rising arc of the ringworld you are on soaring up into the alien sky overhead (you can look almost straight up at it as animated comets shoot overhead), and nearby, mountains, rocks, a high waterfall (whose sound shifts around ambiently as you move). Almost immediately, however, before you have too much time to admire the view, Cortana reminds you to (literally) head for the hills, since incoming Covenant ships have been detected. Your HUD reveals enemy on the radar as you spot a log-shaped narrow bridge and take off, looking for cover just as the ships begin swooping in, looking for *you*. Or not. It all depends on you. If you don't listen to Cortana and just stand around too long admiring the view, or make the category error of thinking you are in a *Myst*-like environment to be explored at will, you will be shot down fairly quickly by the Covenant forces, die on the wrong side of the river, and have to start the level over in order to try again to evade the enemy.

This scenario, combining the player's human intelligence with the fictional AI's, pitting both against the AI-driven enemy forces, is just one of countless instances of the basic principle of distributed intelligence that runs throughout *Halo* and outward into the *Halo* universe. That universe now includes *I Love Bees*, with its fostering of CI through hivemind gaming aimed at reconstructing a story about an AI (Melissa) attempting to assemble its own distributed intelligence into something "wide awake and physical," something real in the world. This successful resonance between the ARG's CI, the game's in-game AI, and the company's drive to create distributed intelligence in the form of a community of users for Xbox Live, is surely one reason Bungie has now openly "embraced" *I Love Bees* as official story canon.¹⁹ This is how a game universe begins: not with a *fiat* (let there be *Halo*) but with a cascade of distributed and cooperative constructions. Just as any individual AI-driven NPC enemy may know only a few things (be afraid; run for cover; stick together in cluster) while the game universe as a whole knows many things, so any individual player of *Halo* may know only a limited portion of the game's universe, but himself or herself makes up, in large or small ways, a portion of that universe, the overall ongoing reception history of the game. Starting with *Halo 2*, the ideal player of *Halo* has been a social player in precisely this sense. Even a relatively casual player may, in the context of many social interactions, come to have a sense, if only in the back of his or her mind, that there are depths of meaning, multiple possibilities, just beyond the interstellar horizon of any particular battle.

The social text and the game universe

When D. F. McKenzie argued that textual studies scholars were shifting their attention away from questions of the authority of texts, of which particular verbal readings their authors intended, and toward questions of texts' patterns of dissemination and reception, of how they were produced and received by readers, how they made their way through the world, he anticipated the inclusion of other forms of media.²⁰ So we can now understand that "a video game" can be substituted for "a book" in his claim that "a book is never simply a remarkable object" (4). Like books, games are never merely remarkable objects. Nor are they merely formal structures. They are, as Espen Aarseth has argued, simulations, systems of rules-based possible acts, abstract structures consisting of the vectors of people's engagements with the games' possibilities, acts of gameplay.²¹ Those acts, however, are always performed in cultural contexts of one kind or another, including the blend of make-believe and actual contexts that constitutes the game's universe. Contextualized gameplay acts *are* the meaning(s) of video games. Every text is a social text in this sense, and in this sense, so is every game. McKenzie and others have shown that it was necessary to break the hermetic seal of the text, to interpret across the boundary dividing the formal aesthetic object from the social world into which it is received. Similarly, game theorist Ian Bogost has decried the "functionalist separatism" of much of game studies today, which he calls "essentialist and doctrinaire" (52, 53). There is little to gain by walling off game studies from the humanities in general, Bogost insists. He calls instead for a procedural criticism that is the "practical marriage of literary theory and computation," a potentially more "useful framework for the interrogation of artifacts that straddle these fields" (ix). Instead of just looking at the formal structures of games, he suggests, we should "turn to what they do—how they inform, change, or otherwise participate in human activity . . ." (53).

Meanwhile, textual-studies theorist Jerome McGann has called for using digital simulations to represent the social text as McKenzie described it, not the verbal object but the dynamic social acts that make up the text's reception, what it does in the world.²² The idea is for textual scholars to build models not of textual objects, whether rare manuscripts or the first editions of poems, but of complex reception histories, of what they have done and are doing in the world. "[Y]ou will not want to build a model of one made thing, you will try to design a system that can simulate all the realized and realizable documentary possibilities—the possibilities that are known and recorded as well as those that have yet to be (re)constructed" (parag. 37). You would build a simulation, a virtual machine for recreating and creating textual history—for playing out the possibilities.

Think of it this way: there are many models in many scales of Shakespeare's Globe theatre, where many of his plays were performed in his lifetime, whether made from cardboard on in a 3-D drawing program or as a large building on the river Thames. Recently, Edward Castranova has begun to develop an experimental Shakespeare-centered MMORPG, "Arden," which will model a construct—Shakespeare's "world"—*World-of-Warcraft* style, but with the plays serving as "the back-story, the lore, the culture."²³ But any traditional book-based edition of *King Lear*, say, scholarly or popular, is another kind of model, a different kind from these physical replicas and themed virtual worlds. It is a textual model of the work, and the paratextual apparatus—the notes and encoded lists and collations of variants, stemmatic diagrams relating documents to one another—testifies to the constructive editorial acts that went into building it and serves as a set of cues for its ongoing reception. The apparatus of an edition is thus a kind of virtual grid of possibilities for extending the work's life in the world. A digital-era textual model (or edition) of *King Lear*, according to McKenzie's and McGann's theories, might want to extend this simulation function, implicit in all editions, to model the socially-embedded production and reception history of specific texts, including ephemeral "performances" of those texts, by critics and readers as well as actors and directors. The result would *not* be a multimedia archive of textual objects, however remarkable, but a simulation machine that would map any number of possible meaning-making acts, vectors of meaning radiating outward from the work known as "*King Lear*," including responses to versions, physical books, responses to adaptations in film and other media, critical and popular interpretations by scholars and "groundlings" (those in the cheap seats at the Globe) and fans. A model or a map of the physical Globe theatre might be included in such a system, but it would only be represented for the purposes of enabling historically-informed interpretive performances. Such a system would map what game designer Will Wright calls the "possibility space" surrounding the work known as *King Lear*.²⁴ It would amount to something like a map of the *King Lear* universe, to use the fan-culture term, an open-ended field representing any number of possible moves or (re)interpretations in response to the work.

Such a model sounds like a gamespace, and it's no accident that McGann has in recent years begun to call for serious gameplay as a mode of humanities scholarship. His interest in modeling the social text as a critical-discourse field has led to the experiment of *Ivanhoe*, a gamelike space for dynamic digital simulations of the ongoing reception histories of literary works.²⁵ It's a way of visualizing on a pie chart the critical "moves" a group of players make in interpreting or rewriting a selected literary text (one early version was played with Sir Walter Scott's *Ivanhoe*). It's also a kind of RPG: players must play in character, whether a character chosen from the text in question, or the author,

or a later critic, or book dealer, or historical figure, or someone purely made up. The relation of the character to the text and its whole semiotic field of versions and competing interpretations is what you, as the player, have to establish. That relationship is what matters and what makes gameplay interesting. A dynamically updated graphic tool represents the moves of multiple players. As innovative as *Ivanhoe* is within the humanities, conceptually speaking, this form of modeling—mapping the actual and possible moves of avatar characters in relation to each other, in a shared digital space that visualizes the results of actual moves as a set of feedback loops—is of course what video games already do, and at a much more sophisticated level, just in terms of their computational power and the power of their visualizations.

During development for *Halo 3*, Bungie observed, recorded, and analyzed gameplay patterns of hundreds of players in a laboratory setting, including mapping where they were at every stage of the game and what happened to them there, especially where they died. These maps reveal players actually exploring the game's possibilities (and reveal glitches in making that feasible).²⁶ As with the complex verbal texts we study, we need to understand games such as *Halo* as existing at the center of a kind of spreading possibility space, a multidimensional virtual grid running off in many directions, the imagined vectors of any number of possible moves, performances, or instances of gameplay, all of which are contained, in potential, within the "code" of the object itself, whether or not any particular state of the game or sector of the grid is activated at any particular time. The whole possibility space, then, would be a

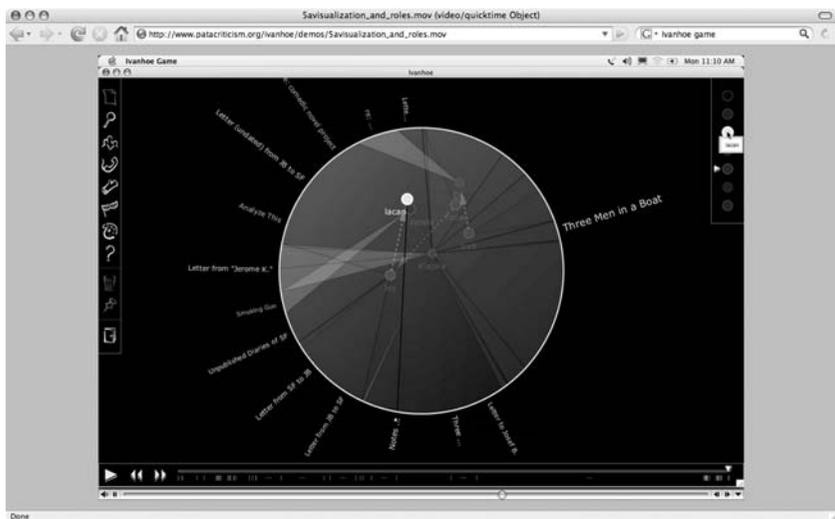


Figure 3.6 *The Ivanhoe Game* (www.patacriticism.org/ivanhoe/).

model of the game's own reception history waiting to happen. Such a grid of realized and realizable possibilities seems to me the most accurate way to imagine what we mean when we speak of the *Halo* universe.

McGann and a number of other textual-studies scholars have been experimenting with using gamelike environments to study the interpretive universe surrounding texts; the implication is that the social text is like a game. I simply want to suggest that the converse is also true: games are examples of the social text, and they can and should be studied in the same way *Ivanhoe* can be. Games are *already* complex digital models of engagements with their own possibilities. This is why I have been arguing that truly studying *Halo*, for instance, has to include more than the formal features of "the game itself"—that anyway, those features, when properly understood, are thresholds to the possibilities represented by vectors of the expanding *Halo* universe, including the artificial and real intelligence driving the engagements of players and NPCs and fans and scholars of various disciplines who might be playing in and studying that universe, helping in their own ways to construct its meanings. Understood in this light, video games are social texts with a vengeance.