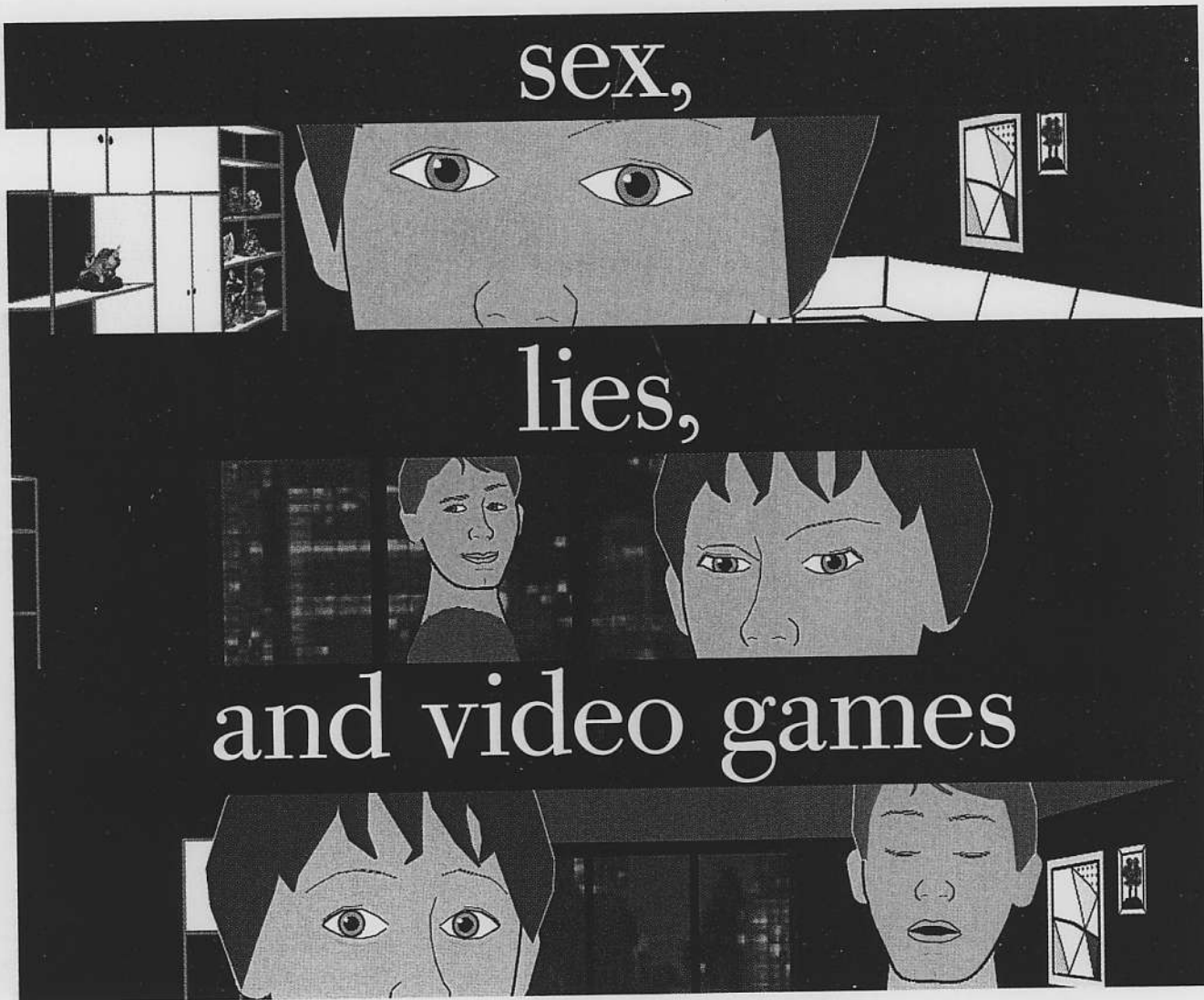


*What if a computer program combined the action and graphics of a video game with the emotional power of great art? The result could revolutionize interactive entertainment—and even change the meaning of “play”*



*Grace and Trip, from Façade*

BY JONATHAN RAUCH

Michael Mateas is the sort of person who once built an artificially intelligent(ish) robot houseplant that monitored your e-mail and changed shape to reflect the mood of what it read—if that sort of person can be said to be a sort. This was in 1998, when Mateas was a doctoral student with some avant-garde ideas. *Office Plant #1*, as the creation was called, grew and shrank and blossomed and hibernated and waved its piano-wire fronds as it “fed” off e-mail traffic. Naturally, it also whistled, sang, moaned, and

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complained. Not long after building *Office Plant #1*, however, Mateas set it aside. He became interested in bigger things, like creating a new art form.

Meanwhile, Andrew Stern, a programmer and designer at a now-defunct video-game studio, was building artificially intelligent(ish) virtual pets. They were called Petz, and for a while they were a hit in the video-game industry. First came Dogz, in 1995, then Catz, and eventually Babyz, all adorable animated creatures that lived on your computer’s hard drive. As Stern worked on

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making the virtual creatures emotionally appealing and realistic to play with, he began giving them artificial minds: goals, personalities, memories. It dawned on him that he wanted to work with adult characters in lifelike relationships. He became interested in bigger things, like creating a new art form.

Not long after Petz debuted, Stern began attending some of the same conferences on artificial intelligence that Mateas haunted. It was probably inevitable that Stern, presenting his intelligent(ish) virtual pets, would run into Mateas, presenting his intelligent(ish) robot plant. It didn't take long for them to recognize each other as kindred spirits.

In certain rarefied circles of AI academia and video-game design, people sometimes theorize about a computer program that would combine the graphical realism of a modern video game with the emotional impact of great art. "Interactive drama," the concept is called. It might contain artificial people you could converse with, get to know, and love or hate. It might engineer dramatic situations, complete with revelations and reversals. Entering this world, you would feel as if you had been thrust into the midst of a soap opera or a reality-TV show.

"I had some idea how to do it," Stern says. Mateas, for his part, had dreamed since childhood of building artificial humans. It occurred to him that he could advance his dream by building artificial actors. What better way to teach a computer to act human, after all, than by teaching it to act?

In 1998, emerging from a hot tub at a conference in Snowbird, Utah, Mateas and Stern decided to collaborate. "As Andrew and I talked," Mateas recalls, "we sort of egged each other on to jump as far out of the mainstream as possible." They resolved to create a game that would put a *not* in front of every convention of today's video-game industry. They looked upon their game as a research project and figured that building it would take two years. It took more than five. Now they are starting on a larger version, this time a commercial game.

They think interactive drama has the potential to be to this century what cinema was to the last. When I spent a couple of days getting to know them recently, I asked why they're not trying something more modest, such as making the characters in today's video games more lifelike. "That's a sort of incremental innovation that I think neither of us is interested in," Mateas replied. "We're interested in revolutionary innovation."

If today's video-game industry were a person, it would be at what people used to call "that awkward age." Suddenly, like a teenager with long legs and short pants, it finds itself grossing \$31 billion this year in revenues worldwide, according to the business consultancy PricewaterhouseCoopers, and nearly \$10 billion in the United States alone. If the industry keeps up its growth, Pricewaterhouse expects it to rival the global recorded-music business by about 2010. Yet the video-game industry, for all its swagger and success, remains something of a niche player. In the United States, it is smaller than the theme-park and amusement-park industry; according to Pricewaterhouse, its rapid growth would still leave it, in 2010,

about a third the size of the film, radio, or book industry, and about a seventh the size of the television industry.

A lot of people play games now, and not just kids: the average gamer, according to the Entertainment Software Association, is thirty-three years old. But while just about everyone regularly listens to music or reads books or watches movies, many adults never pick up a joystick. Only about a seventh of game titles sold in 2005 were the racy or violent stuff that draws an *M* (for "mature") rating; the stereotype that video games are nothing but antisocial savagery is just that—a stereotype. Puzzles, pets, strategy games, and social games abound. But it's true that the adrenaline-pumping, youth-oriented genres dominate. According to the ESA, almost three-quarters of the best-selling games on the market are in the fighting, shooting, racing, action, and sports genres. A sexist commentator might call it boy stuff.

The graphics of the best modern games are stunning, and their "physics"—their power to create a world that feels real as you move about in it—hardly less so. But the industry is rife with game designers who complain of "sequelitis" and creative underachievement. "Will we address an excruciatingly audience-limiting lack of diversity in our content?" wondered Warren Spector, one of the industry's leading developers, in a recent article in *The Escapist*, a video-game magazine. "I can see us limiting ourselves to the same subset of adolescent male players we've always reached. And if we do that, it's back to the margins for us."

"There's no drama genre, there's no comedy genre," Andrew Stern told me recently. "What exists right now are action movies, basically." He might have added: *silent* action movies. The video-game industry's annual trade show in Los Angeles, called the Electronic Entertainment Expo, or E<sup>3</sup> for short, is one of the loudest places I have ever been. Also one of the most silent.

This year's show occupied all of L.A.'s cavernous convention center. Its thousands of microprocessors and liquid-crystal displays and sound systems burned enough electricity to power a good-sized suburb. Take the crowds of Times Square, add the high-tech dazzle of Tokyo and the floor-shaking decibels of surround-sound cinema, throw in Vegas-style showgirls (known in the trade as "booth babes"), and you have some idea of E<sup>3</sup>.

Drifting through the show last May, I saw many shallow games and many derivative games: superheroes dueling with giant robots, skateboarders flashing Nike logos, boxers throwing punches amid showers of sweat and spittle, warriors trudging through jungles and snowscapes. Joining one particularly long line, I found myself in a small, darkened room where a designer was debuting Midway's John Woo Presents: Stranglehold. Fighters were demolishing everything in sight. "Look at the state of the teahouse, just massive destruction," said the designer lovingly. "And it never looks the same twice." As he emphasized how realistically each bullet splintered the walls, a male connoisseur in the audience called out, "Aim for the head!" (The audience in this demo, and at the show generally, was at least 80 percent male.) Even the schlock, however, exhibited striking craft

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and ingenuity, and I came across some astonishingly imaginative games, including an alien-invasion shooter (Capcom's *Lost Planet: Extreme Condition*) whose visuals were so compelling that I was helpless to tear myself away.

It was only after I left the hall that I realized there was something odd about all the noise. The thunderous sound effects were masking the absence of conversation. In real life, much of what's interesting involves talking to people. The characters in games could deliver scripted lines like "I'm ready to kick some ass!" or drop prerecorded comments on the action, but conversing with me or each other was completely beyond them. It occurred to me that if video games seem inhuman, that is because they lack humans. Their esoteric syntax is an artifact of a stunted environment in which blasting someone's head off is easy but talking to him is impossible.

A month later, I asked Andrew Stern what he thinks of E<sup>3</sup>. "I shake my head a little," he replied. "All this effort and money being poured into all this derivative and uninspired work. I'm bored and slightly disgusted." Few in the mainstream industry would express disgust with their product, but many designers,

into any American crowd. Nonetheless, as the three of us talked it was Stern who emerged as the dominant personality, partly because he has an artist's fierce sense of aesthetic rectitude. Economy, elegance, formal coherence: these are personal matters to him.

Stern is thirty-six and lives in Portland, Oregon. He grew up in various cities along the East Coast. Mateas is forty and grew up in Carson City, Nevada. In some respects, their childhoods ran in parallel. Both discovered video games as children, in the 1970s, when the very first games appeared. They haunted the arcades in the malls; they pounced on the Atari 2600 console when it appeared, in 1977. Not content with playing games, they soon began programming them. At fourteen, Mateas wrote an adventure game. Stern, whose brother kept a pet rabbit named Bonny, made a game called *Bonny Attack*, in which the player flew the rabbit around and dropped turds and urine on jumping cats. In a high-school essay, Mateas announced his intention to become a big-time designer building games on a "new kind of digital logic circuit based on three-valued logic." Stern, meanwhile,

**"Twenty years from now," the most prominent American game designer says, "video games will be as emotionally deep and meaningful to you as your dreams."**

being intelligent and creative people, feel they have made much less of their powerful medium than it could be. They are vexed by a sense of underachievement. As Will Wright, the most famous and successful American game designer, told a crowded session at E<sup>3</sup>, "Interactive design is a really large box, and we've really only explored one little tiny corner of that box." David Cage, another prominent designer, told another audience, "What strikes me in this industry is, there's just a real lack of meaning in general."

Meaning is the catalyst that turns action to drama. Meaning requires words, not just sounds. It requires characters, not just figures. It requires dramatic shape: a sense that the action is leading to some transformation or resolution. It is what Stern and Mateas resolved they would bring to video games.

**M**ichael Mateas is an assistant professor in the computer-science department of the University of California at Santa Cruz, where his duties include launching a new undergraduate-degree program in games. He wears two earrings and keeps his bushy brown hair tied back in a long ponytail. His body is small and his head is large, so from a distance one could almost mistake him for a boy. His pale green eyes are piercingly intense, though their intensity is leavened by his beaming smile. He thinks of himself as equal parts artist and computer scientist, and he manages to look both roles.

Stern, by contrast, is so average-looking that he is hard to describe: medium height, thinning brown hair, soft features, an introvert's undemonstrative manner. He could vanish

was getting interested in film and computer animation. Using a Handycam, he began making movies that blended live action with animation.

Then, in college, they both lost touch with video games. "I would still play them," Stern says, "but they started to feel a little juvenile. I was getting into filmmaking, stories with real characters, adult characters, about psychology and emotion, and games weren't addressing those things. Once you get into your late teens or early twenties, you realize there's a lot more out there in terms of art and literature and you lose interest in action-oriented entertainment."

Mateas decided he would be a scientist, pursuing his longtime dream of artificial intelligence, and he went for his doctorate. Stern was rejected by film schools and wound up taking a job at a game studio. His work on the *Petz* games kindled his interest in artificial intelligence, the essential ingredient of believable characters, whether animal or human. Mateas's work on artificial intelligence, meanwhile, had rekindled his interest in games. The AI dream was about building believable virtual people, and games seemed the ideal stage to test them on.

By the time their paths crossed, their thinking had already converged. They soon began plotting their anti-game. Instead of making a game about action figures in elaborate but childish game-worlds, they would make a story about adult characters and adult relationships. Instead of firing bullets at the characters, the player would fire words. The player would *talk* to the characters—in ordinary English, input with a keyboard rather than a joystick. And the characters would talk back, to

each other and to the player. This meant—and they gulped to think of it—that their game would need to speak and understand natural language. That, in itself, is one of the great challenges in AI. But they didn't intend to stop there.

Conventional games create vast, immersive physical environments. The new game would all take place in a single indoor space, like a black-box theater stage. Instead of taking fifty hours to play, their game would take twenty minutes. Instead of advancing through levels without telling a story, the game would provide a compact, complete dramatic experience, like a one-act play. "We envisioned something where you could come home from work and play it from beginning to end, just like you come home from work and watch a half-hour television show," said Mateas. "You could come home and have a half-hour interactive-drama experience. It's complete in itself, it takes you on an arc. It entertains. But then the next day, you could come home from work and play it again and make something different happen." Instead of offering the player menus of quests or options, their game would seem to flow as naturally as life.

When Mateas, still a graduate student, told his adviser what they intended, the adviser replied that such a game would take a team of ten people ten years to build. The technology didn't exist. Commercial game design often employs teams of dozens, and here were two guys, one a grad student and the other self-employed (Stern eventually quit his job to work on the game full-time), expecting to build a whole new kind of game with their own four hands and no budget to speak of.

Before they could build the game, they had to build a programming language in which to write it. They spent more than two years constructing what they called ABL (for "A Behavior Language"), which encodes and controls virtual actors. "The actors' minds are written in ABL," Mateas explains. ABL itself has a sort of mind: enough artificial intelligence to decide how a particular character might, for example, simultaneously mix a drink, walk across the room, and yell at her husband, as a human actor could do.

That done, they built, again from scratch, another piece of AI, which they call a drama manager. It is a sort of artificial dramaturge and director, which looks at what the player and characters are doing and makes plot and dialogue choices intended to ratchet up and then release dramatic tension. Then they built a natural-language engine, which "listens" to what the player types in, looking for emotional and dramatic cues that the in-game characters can react to.

The game, by now, packed massive amounts of experimental technology under its hood, but what would it be about? They needed to create an intense drama in a confined space and with only a few characters. Influenced by Edward Albee's play *Who's Afraid of Virginia Woolf?* and also by several movies (Steven Soderbergh's *sex, lies, and videotape*, Woody Allen's *Husbands and Wives*, and Ingmar Bergman's *Scenes From a Marriage*), they decided to drop the player into a marital crisis. They hired actors to record five hours of dialogue, raw material from which the drama manager would build twenty minutes of game play.

In the end, they accomplished, they reckon, about 30 percent of what they had hoped to do. "We shot for the stars in hopes of getting to the moon," says Stern, "and we made it into orbit." In July 2005, standing together over Stern's computer in Portland, they pressed the button that "shipped," over the Internet, a new game called *Façade*.

When I set out to report this article, I thought I would bone up on video games and present myself as a suave expert. After all, I used to play a lot of Tetris. My aspirations to coolness lasted about three minutes, which was how long it took to load Electronic Arts' NBA Live 06. Jake Snyder, a twentysomething employee of the Entertainment Software Association, handed me the controls of a Microsoft Xbox 360 game console while two startlingly realistic basketball teams took shape before my eyes. As I stabbed at the unfamiliar buttons, I could barely control the ball. Flailing, I became aware that the game's color commentators were talking about ... *me*. No, correction: they were *mocking* me. "Nice easy attempt, but they just can't make a shot," they said. "Totally disorganized," they sneered. I realized, face burning, that I had just lost the respect of a software product.

Determined to endure any further humiliations in private, I bought a copy of a critically acclaimed single-player game called *The Elder Scrolls IV: Oblivion*, a big hit from Bethesda Softworks and a new threshold of accomplishment in its genre. It came with a fifty-page manual full of instructions like this: "DISPEL: Removes Magicka-based spell effects from the target. Does not affect abilities, diseases, curses, or constant magic item effects. The magnitude of the Dispel must exceed the spell's resistance to dispel (based on its casting cost) in order to dispel it." I despaired. This sounded about as fun as learning Microsoft Windows.

Entering the game, I was at first mystified and frustrated, but before long I was slaying goblins and pilfering valuables and casting spells and exploring caves. As the hours went by, I felt myself drawn in, then immersed, then reluctant to leave. I felt I was in the presence of a powerful medium, nothing like Tetris.

*Oblivion's* world is vast. A company spokesman told me I could explore for 500 hours before seeing everything. The game enfolded me in lush, cinematic landscapes. It populated the cities, changed the weather, cycled through day and night. Looking down I saw grass rendered in granular detail; looking up I saw skies swept with feathery clouds; all around me I found innumerable creatures and towns and terrains. The illusion was magical.

But then it would all collapse. Approaching one of the characters, I would click for dialogue. The character would give a little canned speech introducing itself. In response to another click, it would mouth several bits of prerecorded dialogue. State-of-the-art games render action and environment with eerie realism and genuine aesthetic distinction. But their characters are dolls, not people.

It took me no more than a couple of minutes to see that *Façade* would be different. Grace and Trip, a married couple and old friends of mine, invite me over. He's blond, she's

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brunette, they seem to be in their thirties. As I arrive, I hear them arguing behind the door. After I knock, I'm cordially admitted by Trip into a small, sparsely furnished apartment with a view of towering apartment blocks glowing against a night sky.

Typing "Hi, Grace, you look great," I begin chatting with the couple. They try to draw me into their simmering argument, nudging me to take sides. I can say anything I like; there are no rules. I can be sullen and unresponsive (that got me kicked out of their apartment), or I can talk nonsense, but in most of my visits I try to behave like an improv actor, picking up on their lines and shooting back cues of my own—agreeing with one, criticizing the other, flirting with either or both. No two plays are identical. In a typical game, however, Grace and Trip will argue with each other, one may flatter me while the other questions my friendship, and the tension between them will build until feelings are raw and the story reaches a revelation or a breaking point. Here I'm playing as Ed:

TRIP: Okay, you know what, Ed, I need to ask you something.

GRACE: Trip—

ED: What?

TRIP: Grace, let me ask our guest a question. Ed, yes or no—

ED: Let him ask, Grace.

TRIP: Each person in a marriage is supposed to try really hard to be *in sync* with the other, right?

GRACE: *What?*

TRIP: I mean, when you're married, to make it good, you need to always be positive, and agreeable, and *together*, right?

ED: [Hesitates.]

TRIP: Yes or no.

ED: No, not always.

GRACE: What?! Oh, all right. Yes. Just admit it, Trip, admit it, we have a shitty marriage! We've never been really happy, from day one! Never, goddammit!

Here the drama manager is raising the tension to prepare for a revelation; notice how it demands my participation. The game can end in reconciliation or a split or, sometimes, neither. This time, Grace reveals that she let Trip stop her from becoming an artist, and Trip realizes his mistake, and they reconcile. "Ed, thanks for coming over," Trip tells me, his voice now subdued. "You—I think you helped us." I exit; the game is over. Next time, something quite different will happen.

Façade won the grand jury prize at this year's Slamdance independent-game festival and has drawn wide notice from industry journalists and bloggers. If you want to play it, you can download it for free, at [www.interactivestory.net](http://www.interactivestory.net). So far, more than 350,000 people have done so. Play and decide for yourself—but for me, playing Façade was both uncanny and frustrating.

Uncanny because Grace and Trip, despite being simply drawn, are at moments shockingly natural. "It was so subtle, was what impressed me," Will Wright, the prominent game designer, said when I asked him about Façade. "Most games beat you over the head with explosions and life-and-death situations and saving the world. And this is so subtle!" Trip, he marveled, can be slightly annoyed. "The fact that a character could be *slightly annoyed* in a game!"

Frustrating because, for all their innovative AI-driven mechanics, Grace and Trip remain too dumb to sustain the illusion of humanness. When I played as a woman (I could choose my sex) and announced I was pregnant with Trip's child, Grace and Trip thought I was flirting with them. They really only guess at a player's meaning, and they don't guess very well. "It *kind of* works," says Doug Church, a respected designer with Electronic Arts, the 800-pound gorilla of U.S. video-game publishers. "It has moments of awesomeness. It has moments of *Wow, if I could play that, I'd be so excited!* But then you try the next step and bam! You hit a wall and the wrong thing happens."

Yet when it does work, when the game flows and the player has figured out how to collaborate with Grace and Trip, there *are* those moments. After a successful performance (to call it a game seems wrong), I jotted this note: "I feel a strange desire to please these characters and, despite my better judgment, touched when Grace reveals she's scared of painting and they reconcile." Façade feels like the small-scale, no-budget, first-try research project that it is. But it was still capable of working on my emotions.

**I**n January, at Slamdance, Mateas and Stern met some investors who were excited about interactive drama. Many phone conversations later, they had a deal to raise \$2 million for a commercial game. This was a crucial step for them. Stern, in particular, sees himself heading a commercial interactive-drama studio. Both he and Mateas believe that today's video games occupy only a fraction of the potential market for interactive-video entertainment.

"Most people—your sort of regular Joe or Jane on the street who loves television and movies—don't really get a whole lot out of games," Stern said, when I asked who would buy interactive dramas.

"I think there's a real market for more character-rich, story-centered interactive experiences," Mateas added. "I think potentially it's a market that dwarfs the entire current video-game market. There is a huge untapped market for experiences that are not about action adventures, quests, killing monsters, and solving puzzles."

They have given their next game the working title "The Party." It is still in the conceptual stage, but they expect that, where Façade had two computer-generated characters, The Party will have ten, a far more complicated proposition, but dramatically richer. It will require not just two programmers but, once it enters production, ten or more. The graphics will be more detailed and polished. The action will take place in a larger space. The game will last about forty minutes, rather than twenty. It will support more physical action, allowing the player to do things like rendezvous with characters in a private room, lock doors, carry things around, and fire a weapon. It will, they expect, understand the player better than Façade does, and support many more player moves.

And its aesthetic will be different. If Façade is a psychological drama, The Party will be a darkly comic social melodrama, along the lines of *Desperate Housewives*: In the prototype scripts, you find yourself cohosting a dinner party with your wife

(or husband, if you play as a woman), who begs you to keep the conversation and liquor flowing smoothly. As guests arrive, the party fills with characters who have various designs on you and on each other. Your ex-girlfriend may try to break up your marriage; her angry husband may deck you; your neighbor may be snooping and your boss fishing for excuses to fire you. You can try to keep everyone happy, or you can hurl insults, or seduce your best friend's wife, or announce that you're gay, or refuse to admit guests (in which case your wife may let them in while shooting you angry looks), or lock your boss in the basement. You can try to mind your own business and be left alone. At every stage, however, the other characters—and behind them the drama manager—are conspiring to draw you in. Madcap complications ensue.

There will be sex in the game, and there will be violence. There will be a gun, but only one bullet, so no shoot-outs. Here again, the designers invert the conventions of Video-Game Land, where shooting people is easy but talking to them is hard: in *The Party*, violence will be rare and dramatically meaningful, ricocheting through the game, as in life, with unforeseen consequences. Sex, likewise, will be dramatic rather than pornographic. It may disrupt a marriage or get someone killed. The sex will not be X-rated, but it will be realistic. "You may not literally see it, but the characters will be moaning," Stern said.

Mateas and Stern expect work on *The Party* to take two and a half years, at least. They hope to make the game a paying franchise and use the proceeds to push on toward their real goal: a game that understands natural language and generates its own drama.

*The Party*, like *Façade*, will assemble bits of prerecorded dialogue and preauthored plot points; the drama manager, as if stringing beads, will sequence the bits as it monitors the action. In the end, the game can be no bigger than its supply of prefabricated dramatic possibilities. The door to a world of truly open-ended drama will unlock only when a computer learns to write its own dialogue and plot twists, using rules that teach it to emulate a human playwright or screenwriter.

I raised an eyebrow. Can it be done? A simple prototype, Mateas said, is "totally doable within twenty years."

"We have every intention of doing those projects," Stern added.

The mainstream video-game industry is interested in hits, not research. On the business side of the industry, none of the executives I talked to had heard of Mateas and Stern, and the executives tended to regard the interactive-drama project, when I described it, with polite skepticism, or—off the record—not-so-polite skepticism. "People love to blow shit up," one told me. He acknowledged exceptions, but said, "Blowing shit up is fundamental, because

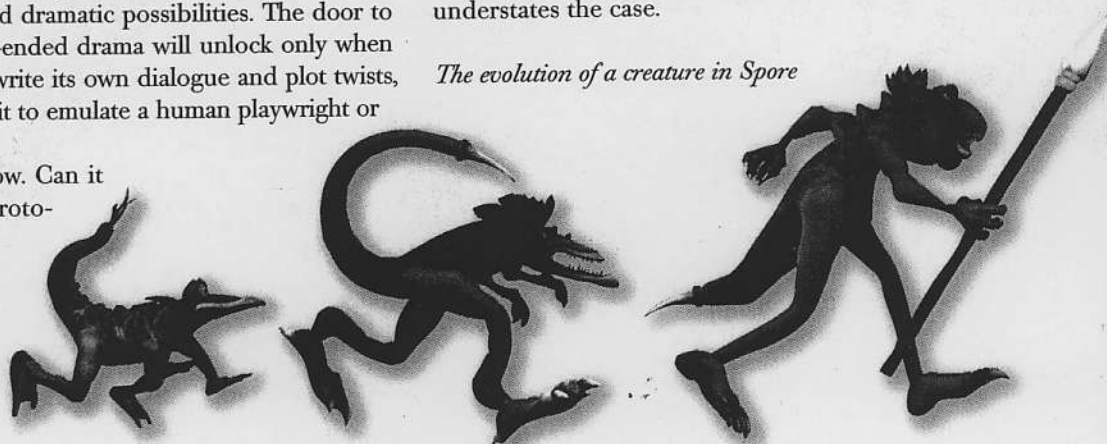
verbs are what make video games work. These guys are not going to succeed." At E3, I mentioned the Mateas-Stern project to Mitch Lasky, who himself has defied industry skepticism by making a fortune on cell-phone games. (He is now with Electronic Arts.) By way of response, he took a long drag on an imaginary marijuana joint. Good luck, was his attitude—but he wouldn't invest.

In the smaller world of game designers, by contrast, Mateas and Stern are a known commodity and are regarded with something like respectful curiosity. Designers have seen too many artificial-intelligence failures to expect any kind of revolution, but at this point they would be happy if characters just got smarter. "A lot of people have worked on it," Doug Church, of Electronic Arts, told me. "Every year we're like, 'We're going to design incredibly intelligent, fluid humans who act realistically.' We try to take this huge step—and we fall all the way back down. At least," he said of Mateas and Stern, "they ended up somewhere new. It doesn't all work, but it is at least a step."

"It's a really hard problem, but it's one that we're incrementally going to solve," Will Wright mused, when I asked him about creating believable characters. "It's a very tall mountain we're climbing." Mateas and Stern, he added, don't have the answer, but they have found a path uphill.

At the moment, all industry eyes are on a project of Wright's, one that enjoys EA's multimillion-dollar backing. (EA owns Wright's studio, Maxis.) Wright is nearing completion of a game called *Spore*, expected some time next year. His last game, *The Sims*, was the biggest computer-game hit of all time and a major innovation in its own right. *Spore*, as a feat of creative imagination and technical prowess, outdoes *The Sims* handily. It has enjoyed extravagant media hype for a game that has yet to ship a single unit. All I can say, having test-driven it, is that the hype understates the case.

*The evolution of a creature in Spore*



Like *Façade* and *The Party*, *Spore* inverts traditional industry rules—but a different set of industry rules. Instead of outfitting the computer with a vast, prefabricated world for the player to explore, it leaves the designing of worlds to the players. But there is nothing, really, to "play": no need to win or compete. Instead, the player begins with a microbe, then helps it evolve into a creature of the player's own design. The creature spawns and becomes intelligent.

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eventually forming tribes and populating the planet; the player can then zoom out to explore a universe of planets and creatures, all created by other users and downloaded into his game from a mighty central server at Electronic Arts. In *Spore*, as Carl Sagan might have said, there are millions and millions of planets, all the fanciful, scary, inspired, or insipid handiwork of thousands or millions of players.

At *E<sup>3</sup>*, after watching Will Wright demonstrate the game to a couple dozen people in a small room with black walls, I was shown into an even smaller black room, where I sat down in front of an ordinary PC and went to work designing my own creature. To my astonishment, within five minutes I was comfortably building a scaly, beaked alien, as lavishly detailed and three-dimensional as anything one might see in a Pixar movie. Once I had given it enough body parts to move, it began ... moving! It hopped. It walked. It made me giggle. *Spore's* most notable technical achievement is to teach the computer to animate whatever sort of creature anybody might design. Five legs? A buzz saw-tipped tail and eyes astride the neck? No problem; the software, as if channeling Chuck Jones, looks at what you build and brings it to life, complete with characteristic movement, expressions, and even babies of the species. With not much more effort, I next terraformed a planet, giving it candy-colored mountains and icy lakes. It was as if I had a whole animation studio in my right hand.

*Spore* looks nothing like *Façade* and *The Party*. It is mainstream and big budget instead of independent and cheap, free-form in structure and timescale (you could play forever) instead of tightly woven and compact, visual instead of verbal (there are no people or words in *Spore*). It is, however, in some respects another bite from the same apple: born partly of frustration with the crippling limitations of existing video games, all three products seek to create a new audience for video-game play by redefining the meaning of video-game "play": *play* not as competition within rules (as in "play Tetris"), but *play* as creative fun (*Spore* is, at heart, a fantastically powerful toy) or *play* as dramatic performance (*Façade* and *The Party* are, at heart, interactive theater). *Spore*, if it succeeds, will evoke in the player a feeling of magical delight. Interactive drama, if it succeeds, will evoke emotional catharsis.

**B**ut how many consumers of entertainment actually want catharsis, especially after a long day at work? What most consumers of entertainment want is fun. The story goes that Will Wright was once approached by a designer who pitched a game that featured an elaborate new enemy system. As Heather Chaplin and Aaron Ruby relate the incident in their history of video games, *Smartbomb*, Wright heard out the pitch and then deflated the guy with one devastating sentence. "Hmm," he said, "that doesn't sound very fun."

*Façade* is ingenious, but it is not fun. It isn't really meant to be. *The Party* may turn out to be fun, even funny. But authoring fun is hard, and it is not obvious that interactive drama is a natural route to funness.

When the question of fun comes up, Mateas and Stern turn a little defensive. They are quick to say that games like

Tony Hawk's *Pro Skater*, *X-Men Legends*, and *Destroy All Humans!* will always be with us, which is fine by them. They just want to do more. Mateas said, "When you go and see an intense movie or a seriously intense play, you don't walk out and go, 'God, that was fun!' It was a valuable experience and something you wanted to do and got something out of, but what you got out of it wasn't 'fun.' It was thoughtful, reflective, made you think about your own life, made you think about the human condition, moved you. And I think interactive media can do exactly the same thing, and potentially more powerfully than noninteractive media."

I asked what sort of aesthetic experience they had in mind. "Making players feel a true connection to characters on the screen," Stern replied. "You'd feel like you're immersed in an actual relationship with these characters."

"Yeah," added Mateas. "Having the player actually care about the characters."

They may be wrong about the commercial market for whatever they wind up creating, but they must be right about the human appetite for characters. A game, even a great game, is finished once played, but a great character, once met, lives forever. Think of Sherlock Holmes and Mr. Spock, Don Quixote and Captain Ahab, Holden Caulfield and Humbert Humbert, Scrooge and Gandalf, Charlie Brown and Severus Snape.

In your mind, then, take the animation intelligence of *Spore* and the dramatic intelligence of *Façade*, increase their sophistication by orders of magnitude, and extend both vectors until they intersect. Imagine a game that could conjure a Holmes or a Spock, or that could create, or empower the player to create, all manner of original characters, each character not only animated but personified: *acted*. Imagine a game that not only conjured the cobblestones of Victorian London or the red sky of Vulcan but that charged each city, each planet, with a quantum of dramatic potential. Imagine, at last, entering those dramas and encountering those characters. Games, if such they were, might be as short as a sitcom episode or as long as a soap-opera season; characters might be ones you created, bought, traded, or downloaded on a friend's recommendation; genres might span everything from comedy and fantasy to mystery and tragedy. You might not even need to choose: the software might watch how you play, learn your taste, and create dramas and characters and worlds to order. "Twenty years from now," Will Wright likes to say, "games will be as personal to you as your dreams, and as emotionally deep and meaningful to you as your dreams."

We can't know where the quest to build interactive drama might lead, but we do know that the dramatist's tools are the oldest and most potent of all emotional technologies. Sooner or later, drama will converge with the video game, the newest and most vibrant of all entertainment technologies. And then? Not long ago, I attended a stage performance of Aeschylus' *The Persians*, the most ancient work in the dramatic literature. Even in translation and at a remove of 2,500 years, it left an audience of modern Americans feeling stunned and disembodied, as if the intervening millennia had disappeared. *Wow*, I heard myself think, *if I could play that, I'd be so excited!* ▣