get to real experience, the better. This sentiment corresponds directly to the vividness spectrum, with the best interactivity coming closest to real experience. But meaning in videogames is constructed not through a re-creation of the world, but through selectively modeling appropriate elements of that world. Procedural representation models only some subset of a source system, in order to draw attention to that portion as the subject of the representation. Interactivity follows suit: the total number and credibility of user actions is not necessarily important; rather, the relevance of the interaction in the context of the representational goals of the system is paramount. Videogames offer a particularly good context for this selective interactivity.

Finally, I will admit that I have a particular fondness for videogames. I am a videogame critic and a videogame designer, and I am devoted to the process of connecting videogames with the history of human expression. In my previous book, *Unit Operations*, I argued for a comparative understanding of procedural expression, using the concept of unit operations to define the elements of procedural representation common across media. In this book, I argue for a similar understanding with respect to rhetoric. As I have already suggested, rhetoric in its contemporary sense refers to both persuasion and expression, and so a study of procedural rhetoric shares much in common with a study of procedural expression. Despite my preference for videogames, I should stress that I intend the reader to see *procedural rhetoric* as a domain much broader than that of videogames, encompassing any medium—computational or not—that accomplishes its inscription via processes. I hope my choice of videogames as examples of procedural rhetoric inspires both an increased appreciation of that medium and inspiration to study procedural rhetorics in other media.

Persuasive Games

I give the name *persuasive games* to videogames that mount procedural rhetorics effectively. Before addressing persuasive games in this sense, it is worth diffusing some of the other ways videogames and persuasion have intersected, so as to distinguish my approach from others'.

Starting with Bushnell's *Computer Space*, arcade games have shared much in common with pinball and slot machines.[110] They accepted coins as payment, and one of their main design goals entailed persuading players to insert (more) coins. In the arcade industry, this is called "coin drop." Andrew

Rollings and Ernest Adams have discussed the effect of coin drop on the design of such games: "Arcade operators care little for richness, depth, and the aesthetic qualities of a game as long as it makes a lot of money for them. This requires some fine balancing. If a game is too hard, people will abandon it in disgust, but if it is too easy, they will be able to play for a long time without putting any more money in."[111] Procedural rhetoric might be deployed in such games, but more often persuasion is accomplished through more basic appeals to addiction and reinforcement. Shuen-shing Lee explains such persuasion via Geoffrey R. Loftus and Elizabeth F. Loftus's 1983 study *Mind at Play*:[112]

> [*Mind at Play*] sorts out two types of psychological configurations embedded in game design that aim to get players addicted to gaming. The first type, "partial reinforcement," is that utilized by slot machines which spit out coins intermittently to reward a gambler. The experience of being occasionally rewarded often drives the gambler to continue inserting coins, in hopes of another win or even a jackpot. Arcade game designers have cloned the same reinforcement strategy in their games. Surprises such as score doubling, weapon upgrading, expedient level advancing may pop up randomly during the gaming process to heighten the player's intrigue, stimulating continued playing.[113]

Partial reinforcement is certainly a type of persuasion, but the persuasion is entirely self-referential: its goal is to cause the player to continue playing, and in so doing to increase coin drop. Despite its relationship to gambling and other addictive activities, partial reinforcement is an interesting and worthwhile area of inquiry that can help game designers understand how to produce experiences that players feel compelled to continue or complete. However, this kind of persuasion is not my concern here. Instead, I am interested in videogames that make arguments about the way systems work in the material world. These games strive to alter or affect player opinion outside of the game, not merely to cause him to continue playing. In fact, many of the examples I will discuss strive to do just the opposite from arcade games: move the player from the game world into the material world.

As arcade games suggest, there are reasons to leverage videogames for goals orthogonal to those of procedural expression. The increasing popularity of and media attention paid to videogames means that merely producing and distributing a videogame may have its own persuasive effect. When Gonzalo

Frasca and I co-designed *The Howard Dean for Iowa Game* in 2003, it became the first official videogame of a U.S. presidential candidate. While the game did deploy procedural rhetorics (see chapters 4 and 11 for more), the very existence of an official Howard Dean game served its own rhetorical purpose, further aligning the candidate with technology culture.[114] In another, similar example, Elizabeth Losh has reflected on the government's creation of *Tactical Iraqi*, a learning game designed to teach U.S. soldiers Arabic language and customs in order to help them accomplish military missions in the Middle East.[115] Losh, who studied the game as a field researcher and has written lucidly about her moral and rhetorical conflicts in doing so, later mused about its true rhetorical function in an online discussion forum:[116]

> In the wake of all the publicity that *Tactical Iraqi* has received in the last few months, I find myself with an even more serious reservation about the game, which crystallized after reading Max Boot's article, "Navigating the 'human terrain,'" in which Boot, a senior fellow at the Council on Foreign Relations, enthuses about visiting "the Expeditionary Warfare School, where captains study Arabic by playing a sophisticated computer game complete with animated characters." It was then that I realized that the purpose of the game might be rhetorical not pedagogical. Despite what the researchers thought they were doing, perhaps it was primarily intended to SHOW the teaching of Arabic to policy makers and the general public not actually TEACH Arabic more effectively. Traditional classroom teaching doesn't make for a good media spectacle, but a video game might.[117]

Tactical Iraqi cannot be accused of sporting low process intensity. As an engineering effort, it deploys sophisticated procedural models of language understanding, simulated gestures, and cross-cultural communication. But, Losh suggests, as an expressive artifact, the project might serve an agenda different from its primary one, namely drawing attention to a videogame training system to distract critics from America's military occupation of Iraq. Again, such a gesture is undeniably rhetorical, but its rhetoric is accomplished through media speech, not through processes. I will return to the substitution of procedural rhetoric for audience correlation in the context of advertising in chapter 5.

Videogames created with a more genuine interest in expression and persuasion may still underplay procedurality in favor of visual images. The commercial game industry dazzles buyers with high-fidelity images of

increasingly greater verisimilitude, but these images do not necessarily couple with advances in procedural representation. In 2004, the American Legacy Foundation commissioned *Crazy World*, a game in service of their ongoing antismoking campaign, best known for its rhetorically powerful "the truth"-themed television ads. Built around a satirical carnival world that coincided with the foundation's advertising campaign at the time, the game sports very high production values, visuals, and sound—the very factors that contribute to vividness, according to Charles Hill. But the procedural rhetoric in the game is weak. In a press release, one of the creators describes a mechanic in the game:

> The game, which is aimed at a wide audience, ages 18–50, was created to show both smokers and non-smokers the dangers of cigarettes using humor and irony. Players score points by avoiding moving green puffs of radioactive smoke. If they get caught in the smoke, they mutate into an alien-like form. "The idea is to attract people to entertain themselves and keep the message within context—to play for fun," [Templar Studios president Peter] Mack said.

A game like *Crazy World* may speak through visual rhetoric alone, or at least principally. The use of highly polished visual and sound design builds an expectation of authority. Images hypnotize many consumers, and even the largest videogame companies often repackage the same games with improved (or simply different) graphics. Considerable attention and investment has gone into improving the visual fidelity of commercial games, including the move to high definition and higher polygon models on the now-current Xbox 360 and PlayStation 3 consoles. Visual fidelity implies authority. Likewise, simplistic or unrefined graphics are often taken as an indication of gameplay quality. Just as a poor or "generic" package design can turn consumers away from a quality product, so the skin of a procedural rhetoric might influence player enticement. The 2004 Republican National Committee game *Tax Invaders*, which barely succeeds in replicating the rudimentary graphics of the classic arcade game *Space Invaders*, is an example of the latter (for more on this game, see chapter 3).[118]

The tenuous coupling between visual appearance and procedural rhetoric also hinders videogames that seek to make persuasive statements about issues in the material world, but fail to adopt effective procedural representations for those issues. One common pitfall is borrowing a procedural form from an

existing game or game genre and skinning it with new graphics. Such a one is *Congo Jones and the Raiders of the Lost Bark*, a game about deforestation sponsored by the nonprofit Rainforest Foundation.[119] The game borrows its gameplay from 2D platform games of the *Super Mario Bros.* variety.[120] The player controls a monkey who must find and defeat the president of the World Bank. The player must jump from platform to platform to avoid flying chainsaws, while attempting to reach and defeat the bank president.

Congo Jones adopts no procedural representation—and therefore no procedural rhetoric—of its own. Instead, it borrows the notion of progress through abstract obstacles as an object lesson for deforestation's struggle against the World Bank (who had supported logging in the Congolese rainforests). The game makes no claims about possible reasons to oppose the World Bank, nor how to do so, although it does succeed in positing the World Bank as an archetypal opponent, the "boss monster" of the game. The game might or might not be effective in building "awareness" about the issue, but it certainly does not mount a procedural argument about the topic. Or more precisely, it does not mount its *own* procedural rhetoric; it adopts processes of obstacle avoidance and goal pursuit from platform games and reinscribes them onto deforestation.

Congo Jones borrows gameplay and applies a graphical skin—a visual rhetoric—atop it. Another common technique is to borrow gameplay and apply a textual skin—a verbal rhetoric—atop it. An example of such a game is *P.o.N.G.*, created by the Global Arcade art collective.[121] The game's website explains that the game features "a few different variations of the classic Pong, each with just a little different play on the language of globalization."[122] The result is a direct copy of *Pong* in which the ball is replaced by words that might arise in discussions of globalization (*neoliberalism*, $$, etc.). The player must bat these back and forth with the paddle, as one might "exchange words" in a conversation on the topic. While the Global Arcade's mission statement announces their commitment "to make information about globalization interesting, engaging and interactive," *P.o.N.G.* serves as little more than a sight gag, perhaps not even articulating expression adequate to warrant the moniker of *digital art*.

The notion of adopting *Pong*'s back-and-forth procedural mechanic or *Super Mario Bros.*' platform mechanic as rhetorics for discourse might have promise, but *P.o.N.G.* and *Congo Jones* do not make meaningful use of those processes in their arguments. *Tax Invaders*, which I mentioned

above and discuss in detail in chapter 3, is an example of a game that borrows a videogame form and successfully mounts its own procedural rhetoric atop it.

A more successful procedural rhetoric can be found in the 1982 title *Tax Avoiders*, an unusual game for the Atari Video Computer System (popularly known as the Atari VCS or Atari 2600).[123] Conceived by Darrell Wagner, a "Licensed Tax Consultant and former IRS Revenue Agent," the goal of the game is to become a millionaire by amassing income and avoiding red tape and audits.[124] The player controls a human character, John Q, who must collect income (represented by dollar-sign icons) and avoid red tape (represented by an abstract tape icon). After each fiscal quarter the player has the opportunity to shelter income in investments, which are represented as sprites on screen, or to store income in a portfolio, represented as a briefcase sprite (see figure 1.4). A second sprite oscillates between an IRS agent, a CPA, and an investment advisor. The player always loses an audit, and 50 percent of his income is lost to taxes. A CPA charges a small fee but always makes new

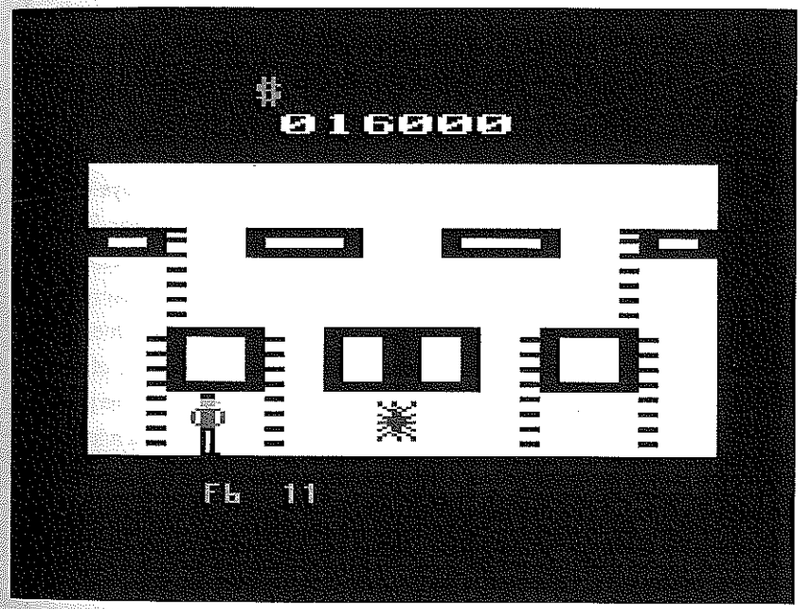

Figure 1.4 Although the Atari VCS title *Tax Avoiders* may look simplistic, it constructs a sophisticated procedural rhetoric about tax strategy.

tax-sheltered investments available. The investment advisor can maximize returns on sheltered investments. At the end of this interstitial phase, the player's remaining income is taxed and he returns to work.[125]

Tax Avoiders mounts an interesting and relatively complex procedural rhetoric about tax avoidance strategies. The fact that these techniques are mapped onto movement, a graphical logic, is perhaps not ideal, but it is also not detrimental to the argument. The player must run around to collect income, literally *avoiding* red tape. Likewise, he must avoid the IRS agent while racing to *catch* investment opportunities before their window of opportunity closes. These metaphors of locomotion correspond quite well to the abstract processes of work, investment, and taxation.

Finally, I would like to make a distinction between persuasive games, procedural rhetoric, and the rhetoric of play. In contemporary game studies, considerable attention has been paid to the relationship between games and play—and this is a worthwhile pursuit. However, my interest here is not in the function of play, nor in videogames as a subdomain of play activities. Rather, my interest is in the function of procedural representation as it is used for persuasion, and in videogames as a subdomain of procedural media. In particular, I should draw a distinction between procedural rhetoric and what Brian Sutton-Smith has called "rhetorics of play," or ways "play is placed in context within broader value systems."[126] While we both use the term *rhetoric*, we use it in different contexts, although not in entirely different ways. Sutton-Smith discusses the rhetorical modes of play itself: the ways theorists present play as a human cultural activity. As Katie Salen and Eric Zimmerman explain, Sutton-Smith's rhetorics of play "identify how games and play embody ideological values and how specific forms and uses of play perpetuate and justify these values."[127] Sutton-Smith's project is a general one, focused on the cultural role of play, not the culturally embodied practice of playing specific games. He identifies seven rhetorics of play, including play as progress, fate, power, identity, the imaginary, the self, and frivolity, each of which orchestrates play in different ways and for different ends under the same ostensible name (hence the ambiguity).[128] Sutton-Smith musters these rhetorics to attempt to explain the reasons people play, and the cultural function of that play.[129] His approach is broad and macroscopic, investigating play itself as a cultural activity that serves multiple purposes, purposes which often complicate one another.

I am discussing the rhetorical function of procedural expression in the tradition of representation rather than the tradition of play. This said, Sutton-Smith's rhetorics may prove useful in contextualizing procedural rhetorics among the values of play. This is not an effort I will attempt here, but which Salen and Zimmerman attempt in their text on game design, *Rules of Play*. The two suggest *The Landlord's Game* (the conceptual precursor to the popular board game *Monopoly*) as an embodiment of Sutton-Smith's rhetorics of power and progress. Unlike *Monopoly*, *The Landlord's Game* opposes land monopoly, instead advocating the single tax proposed by economist Henry George. As Salen and Zimmerman explain:

> Despite the strong similarity between The Landlord's Game and Monopoly, there are distinct (and wonderfully incongruous) differences in the rhetorics each evokes. While the play rhetorics of progress and power apply to both games, The Landlord's Game was distinctly anti-capitalist in its conception. The game's conflict was not premised on property acquisition and the accumulation of monopolies, but instead on an unraveling of the prevailing land system. Because properties in the game could only be rented, there was no opportunity for domination by a greedy land baron or developer.[130]

Without realizing it, Salen and Zimmerman helpfully clarify the difference between Sutton-Smith's *rhetorics of play*—the global, cultural roles for exploring themes like ownership and property—and the *procedural rhetoric of a game*—the local argument *The Landlord's Game* makes about taxation and property ownership. Salen and Zimmerman do not actually apply Sutton-Smith's rhetorics of play, a gesture that shows how macroscopic the latter's approach really is. On the one hand, they admit that progress and power "apply" abstractly to both *The Landlord's Game* and *Monopoly*. On the other hand, their analysis relies not on these higher-level categories, but on the specific function of the rules of each game, for example rental as collective equity versus ownership as individual leverage. When Salen and Zimmerman say that there are "distinct . . . differences in the rhetorics each evokes," they refer not to Sutton-Smith's cultural rhetorics, but to the procedural rhetorics of the two specific games, *The Landlord's Game* and *Monopoly*. In fact, Salen and Zimmerman's analysis of the procedural rhetorics of these games is quite mature, revealing the way the rules of the games make fundamentally different

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arguments about land ownership, despite having apparently similar boards and gameplay dynamics.

The difference between rhetorics of play and procedural rhetoric should now be clear. Sutton-Smith's rhetorics of play characterize broad cultural contexts, while procedural rhetorics express specific patterns of cultural value. Despite their invocation of Sutton-Smith as a figure at the intersection of rhetoric and games, Salen and Zimmerman are actually invoking the more ordinary notion of rhetoric as persuasive and expressive discourse.[131] Although they claim to "take the word 'rhetoric' from Brian Sutton-Smith's remarkable treatise *The Ambiguity of Play*," really they take the word from its more general classical and modern roots, applying it to the analysis of games.[132] There may be value in applying Sutton-Smith's rhetorics of play to specific procedural rhetorics, perhaps for comparative anthropological purposes. But as Salen and Zimmerman unwittingly demonstrate, the more useful intersection between rhetoric and play is one that unpacks the particular rules of a particular game in a particular context, not the more general intersection between modes of play in general. This distinction mirrors the one that separates representational discourse from sociological discourse. Clearly cultural context influences the creation of and interaction with games. But the games we create can also support, interrogate, or oppose those cultural contexts.

Persuasive Games versus Serious Games

Topics like taxation, deforestation, and globalization are not the usual subject matter of videogames; furthermore, the games about these topics discussed above are very arcane, so much so that I doubt many readers would have chanced upon all three before. Procedural rhetoric is not limited to such anomalous specimens; in the following pages I discuss numerous commercial games that have enjoyed great market success. But one often uses persuasion in the context of domains like economics, business, and politics. As it happens, an entire subdomain of videogame development has erupted around such topics, known as *serious games*. What, if anything, differentiates persuasive games from serious games?

Interrogating the relationship between seriousness and play is nothing new. Dutch anthropologist Johan Huizinga struggled with the ambiguous link between seriousness and play in his classic study *Homo ludens*. On the one hand, Huizinga notes that play "is the direct opposite of seriousness."[133] But on

Furthermore, the National Guard can control the growth of protest movements through intimidation.

Once sent overseas, troops are very hard to keep motivated. Officers can encourage disaffected soldiers, but too many orders will cause the troops to revolt against their leadership. This mechanic invokes the estrangement of the Vietnam draft and suggests a correlation between the contemporary war in the Middle East and the Cold War. Once the player's troops start capturing oil fields, violence ensues. The press sends images of the bloodshed back to the media at home, which results in additional protest and reduced approval. Officers can control the press, but they can't fight, so the player must send more troops overseas. Killing foreign civilians creates more foreign troops, accelerating the violence. As more conflict takes place, foreign interests threaten more terrorist attacks. Withdrawing troops is one control against homefront attacks, but temporarily increasing foreign aid is another.

Antiwargame's procedural rhetoric emerges through the player's performance of political gestures that produce unexpected effects. It suggests relationships between political domains that are not explicitly construed as related. The game claims that military and business interests are identical, and that the overseas war is one of controlling resources to support business (there is no representation of foreign democracy, freedom, or "regime change" in the game whatsoever). Foreign aid serves no humanitarian end; rather, it is a war tool that temporarily pacifies enemies and the international community, as well as homeland critics. Furthermore, the media and the National Guard are not support networks, but tools for sedating the population. Together, the game's rules form a systemic claim about the logic of the war on terrorism, namely that the purported reasons for war—security and freedom—are false. Unlike other pacifist arguments, the *Antiwargame's* opposition to war is not based on antiviolence; rather, it opposes war by claiming that a broken logic drives post-9/11 conflicts.

The Rhetoric of Failure

Antiwargame's procedural rhetoric works because it forces the player to make and enact decisions that might not otherwise seem logical or obvious. By connecting the causal ties between business, war, and civil unrest, the game deploys procedural enthymeme. Once the player completes these rule-based syllogisms, *Antiwargame* offers a procedural representation of how its authors

perceive U.S. foreign policy to be broken. If procedural rhetorics function by operationalizing claims about how things work, then videogames can also make claims about how things *don't* work.

As it happens, this technique has been especially popular in political videogames, perhaps because such games are often conceived as critiques of dysfunctional political practice. Shuen-shing Lee compares such a strategy to tragedy: "A 'you-never-win' game could be considered a tragedy, for example, a game with a goal that the player is never meant to achieve, not because of a player's lack of aptitude but due to a game design that embodies a tragic form."[56] But tragedy also carries historical baggage, especially that of the very particular linear narrative of tragic drama. I want to suggest that such games operate by a common procedural rhetoric, the rhetoric of failure. Tragedy in games tends to find its procedural representation in this trope.

Lee offers two examples of unwinnable political games, both responses to the 9/11 attacks and their aftermath. In the first, *New York Defender*, the player shoots down airplanes flying toward the World Trade Center towers.[57] The planes approach at an increasingly rapid rate, making the task increasingly difficult. The second, *Kabul Kaboom*, is a commentary on the post-9/11 U.S. attack on the Taliban in Afghanistan.[58] The player controls an avatar borrowed from Picasso's *Guernica* to catch hamburgers (representing air-dropped food) while avoiding bombs (figure 2.3). The game highlights the simultaneity and inconsistency of aggression and relief. Eventually and inevitably, the player contacts a bomb, and the game depicts a scene of dismemberment.

Although both games have no winning condition, they don't represent failure itself. As Lee points out, *Kabul Kaboom* and *New York Defender* borrow a technique common to arcade games: the game continues until the player can no longer keep up with the onslaught. The actions necessary to play the games do not themselves produce failure. Rather, the inevitable breakdown of player attention or reflexes causes it. In fact, *New York Defender* feels much like an arcade game, albeit a rather simplistic one. *Kabul Kaboom* radically increases its starting difficulty to emphasize its rhetoric of failure. Whereas it is possible to play *New York Defender* for several minutes before it becomes difficult, then impossible, one can scarcely play *Kabul Kaboom* for more than a few seconds. The barrage of bombs simply makes it impossible to collect the food. This message, of course, is precisely the designer's intention.

Compare these two games with another political game designed by *Kabul Kaboom* creator Gonzalo Frasca.[59] In 2003, Frasca launched Newsgaming.com,

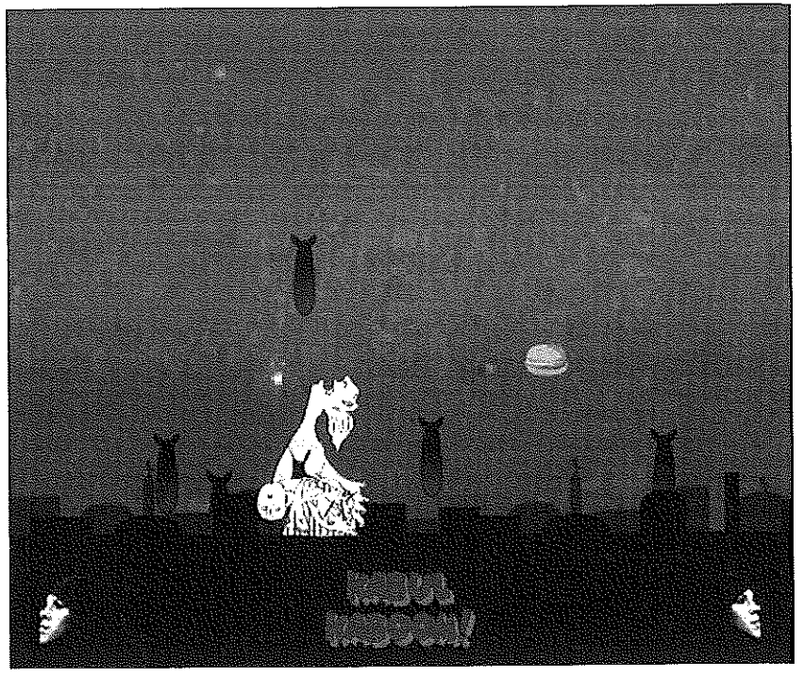

Figure 2.3 Gonzalo Frasca's *Kabul Kaboom* borrows and amplifies the procedural rhetoric of failure common in arcade games.

a website to host games about current events. Frasca called newsgames a merger of videogames and political cartoons, and offered a first example of such a one, *September 12*. The game depicts an anonymous Middle Eastern town with civilians, dogs, children, and terrorists milling about. The player is faced with the problem of what to do about the terrorists. The latter perform no actual terrorist activity during gameplay, but their threat is implied. The player controls a reticle on the screen, which he can move around to target. Clicking the mouse fires a missile, which arrives after a short delay, destroying buildings in the vicinity and killing anyone within its blast radius. When citizens are killed, others gather around and weep, before becoming terrorists themselves (figure 2.4).

Whereas *Kabul Kaboom* and *New York Defender* eventually end, *September 12* continues indefinitely; no goals or completion states are suggested or imposed. A variety of rules drives the simulation: the people in the village traverse it

Figure 2.4 *September 12* proceduralizes a position on U.S. geopolitics and the war in Iraq.

by a particular logic; once destroyed, buildings reconstruct themselves over time; citizens mourn their dead and then become aggressors. But most importantly, the tool the game provides for combating terrorism is revealed to be a sham—using missiles to root out terrorists only destroys innocent lives. The interface between missile, terrorists, and citizens works, insofar as it produces a result in the game world. However, the result it produces is undesirable, the converse of claims that long-range precision warfare is "surgical." Thus *September 12* claims that this logic of counterterrorism is broken; no one is made any safer by following it, and in fact many more innocent lives are lost.

Lee suggests that games like *Kabul Kaboom* and *New York Defender* "are meant to morph the player from an in-gaming loser into an off-gaming thinker (I lose therefore I think)."[60] And indeed, both games do produce crisis that can lead the player to subjective insights. But there is a key discrepancy between the rhetorics of *September 12* and *Kabul Kaboom*. Videogames that deploy rhetorics of failure make a subtly different statement than those that are simply unwinnable, or that actively enforce player loss. In *Kabul Kaboom*, the rules inscribe a playable game that eventually and inevitably ends in loss,

similar to arcade games like *Pac-Man*. In *September 12*, the rules depict the impossibility of achieving a goal given the tools provided. Nodding to critics who argue that games must, by definition, be winnable, the creators inscribe a disclaimer in the instructions: "This is not a game. You can't win and you can't lose."[61] In *Kabul Kaboom*, the player fails to win the game, but in *September 12*, the represented procedural system fails to perform the service it alleges to provide. One cannot play and hope to succeed.

Madrid, the second game in the Newsgaming series, is frequently mistaken to deploy a rhetoric of failure. Created less than two days after the March 11, 2004 terrorist attacks in Spain, the game depicts a candlelight vigil.[62] A group of people faces the player, each wearing a shirt that pays homage to a city that has suffered a terrorist attack. One line of instructions is adequate: "Click on the candles and make them shine as bright as you can." Each candle's strength diminishes over time, and the player must achieve a minimum total luminescence to win (figure 2.5).

Owing to the precise, rapid mouse movement required to play it, the game proved particularly difficult to complete successfully, especially with non-standard input devices like laptop trackpads. Given this distorted perspective

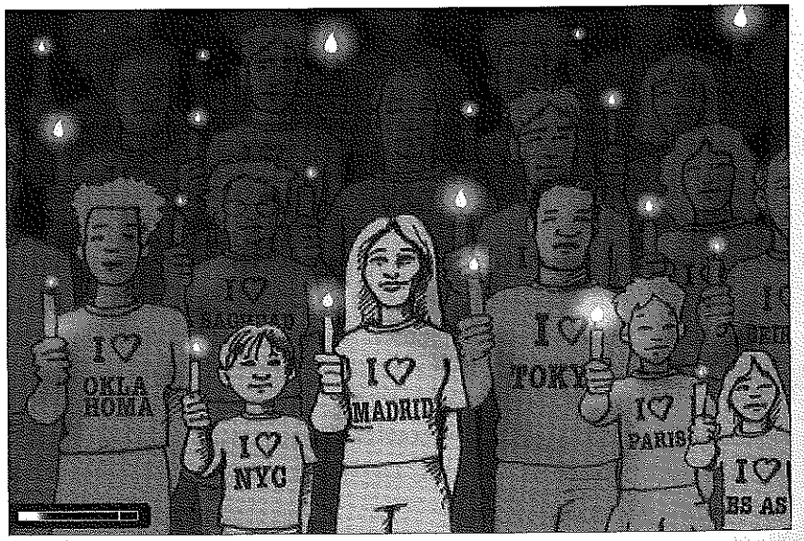

Figure 2.5 The "newsgame" *Madrid* was created less than 48 hours after the March 2004 terrorist attacks in that city.

on the game, it is possible to read it as an effective use of the procedural rhetoric of failure: no amount of mourning is ever adequate; we must keep lighting the candles eternally.[63] In fact, the game *is* winnable, and a meter at the bottom of the screen depicts the player's progress toward the win condition. Once reached, the screen depicts a visual elegy for the victims of the Madrid bombings. Thus the procedural rhetoric of the winnable *Madrid* is more subtle than a straightforward rhetoric of failure: reverence and memory fade, and we must use precision and diligence to keep them alive. However, such a strategy is worthwhile and can lead to overall social change.

Skinning Politics, Simulating Politics

Videogames have a strange and sundry history with politics. Many games grafted political visuals or themes onto existing procedural mechanics, another example of what Wardrip-Fruin calls *graphical logics*. In the heyday of the Atari VCS, a trio of political games were planned whose proceeds were to benefit environmental groups. The first was *Save the Whales*, a game about Greenpeace. The player controls a submarine that fires projectiles at nets dropped from a whaling ship at the surface (figure 2.6). The game was

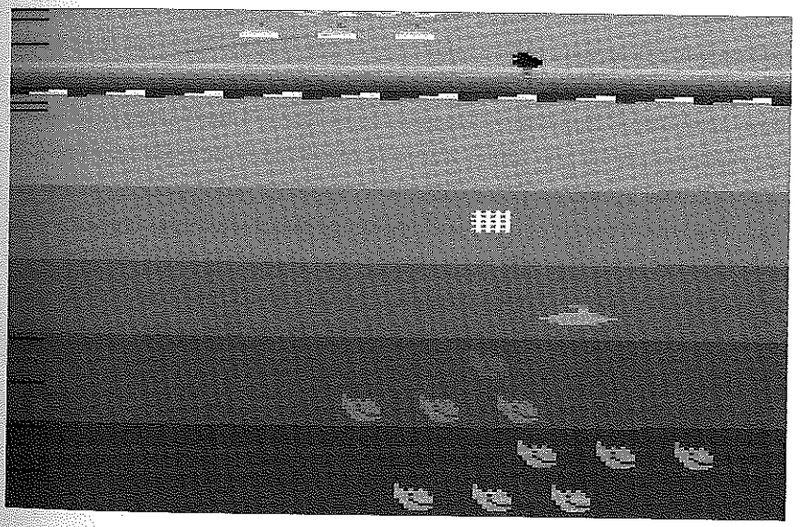

Figure 2.6 Never commercially released to the mass market, *Save the Whales* offers an early example of a videogame about a social issue.

never released, although a version of it was repackaged for the 2002 Classic Gaming Expo, a gathering for collectors and creators of videogames on early platforms[64] (the other games planned for the series were *Dutch Elm Defender* and *Attack of the Baby Seals*, although neither was ever programmed).[65] The promise of videogames as a carrot for charitable funding certainly bears promise; however, *Save the Whales* simply reskinned and adapted shooter games like *Space Invaders* and *Defender*. The environmental context for whale protection, or the commercial context for whale poaching, was abstracted out of the experience.

Admittedly, the Atari 2600's software affordances are limited; it was built to manage sprites and projectiles, not dynamic political systems. By the next decade, however, even though more sophisticated simulation was possible on console systems, political topics remained largely relegated to visual skinning. Among the more curious videogames never to see the light of day was *Socks the Cat Rocks the Hill*, a platform game in which the player pilots Clinton White House pet Socks past spies and politicians to warn the president about a stolen nuclear missile.[66] The game was never released and thus details remain speculative; some claim that Republicans George H. W. Bush and Richard Nixon appeared as level bosses in the game.[67] Like *Save the Whales*, *Socks the Cat* borrows gameplay dynamics from popular genres of the era, in this case two-dimensional side-scrolling platformers principally reliant on movement and collision detection.

As *Save the Whales* and *Socks the Cat* suggest, not all videogames about politics are political. Political videogames in the sense I have articulated above are characterized by procedural rhetorics that expose the logic of a political order, thereby opening a possibility for its support, interrogation, or disruption. Procedural rhetorics articulate the way political structures organize their daily practice; they describe the way a system "thinks" before it thinks about anything in particular. To be sure, this process of crafting opinion toward resignation has its own logic, and that logic can be operationalized in code. In fact, a great many videogames have employed this strategy.

The clearest examples of these games are political election simulators. Among the first such videogames was *President Elect*, a 1988 turn-based campaign management game (figure 2.7).[68] The game allowed the player to run in any U.S. presidential election from 1960 to 1988, supporting both historical and ahistorical matchups. *Power Politics* appeared in 1992, allowing even more historical revisionism, such as matching up real presidential candidates

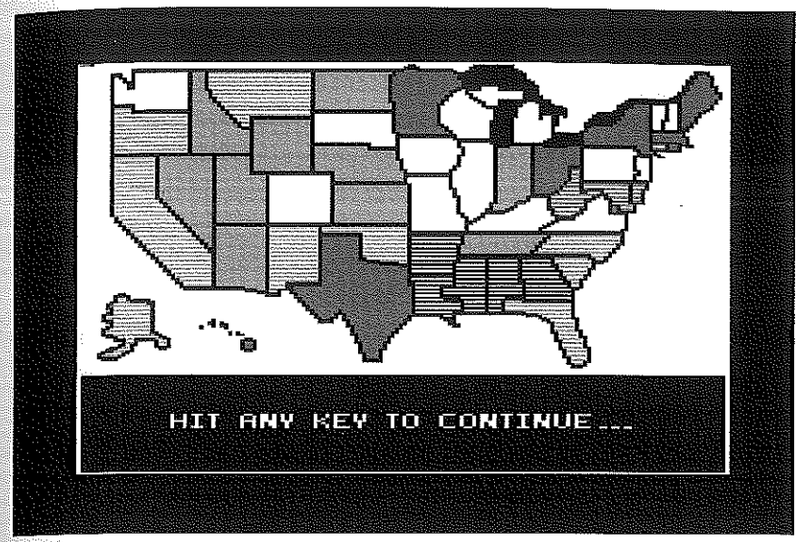

Figure 2.7 Like most campaign games, *President Elect* simulates electioneering, not politics.

from different eras.[69] *Power Politics* was retooled and rebranded as *The Doonesbury Election Game: Campaign '96*, although publisher Mindscape reportedly pulled the title within months after release.[70] By the 2004 U.S. election, no fewer than four such games were on the market: *The Political Machine*, which enjoyed the best distribution;[71] *Power Politics III*, a new version of Randy Chase's previous *Power Politics* and *Doonesbury Election Game*;[72] *President Forever*, sibling in a series that also includes *Chancellor Forever* and *Prime Minister Forever* (British, Canadian, and Australian versions);[73] and *Frontrunner*,[74] which focuses on the last ninety days of the campaign.[75]

These numerous simulations all have their own particular takes on the election process. *President Elect* focused on realistic representations of demographic trends and voting patterns. *President Forever* and *Power Politics* and its sequels focused on what-if scenarios. *The Political Machine*'s high graphical production values aimed for mass-market appeal. And *Frontrunner* focused on the anxious final weeks of the election.

But all of the games follow a common procedural rhetoric: elections are won by electioneering, not by politics. Players choose or customize candidates to play and oppose. The player builds a campaign staff to provide advice. Then the majority of the turn-based gameplay entails checking national and state

support maps, choosing where to run fundraisers, planning and running ad campaigns (including smear campaigns), and managing debates.

In election simulations, public policy is irrelevant. Players choose or adopt positions on an issue, typically a rudimentary choice between support and opposition. *President Elect* quizzes players on their preferences and builds a profile based on responses to (now dated) policy topics. In these games, the presidential election process is revealed to be one of proper promotion and marketing; the political reality of social, economic, or foreign policy issues collapse into singular measurements of future performance based on past voting records and local demography. Otherwise put, election simulators assume political stasis: politicians seek to find the properly shaped tabs to suit the slots in popular opinion. The election games after *President Elect* allow the player to generate random demography rather than using historical data, but such revisions only remix political opinion for the purpose of election strategy. A conservative California or a liberal South now becomes the new static system for which the player crafts a candidate response; no political goals are at work here.

Of course, one could argue that games like *President Elect* and *Frontrunner* intend to make precisely this point: politics means election strategy, not public policy. But a postmortem on *The Political Machine* for *Game Developer* magazine underscores instead the developer's fear of procedural representations of policy itself:

> In a political strategy game, especially in a hotly contested year such as this one with Bush vs. Kerry [2004], we had to put a lot of effort into making sure the game was fair to both sides. People would be looking for bias in the game, and probing for any hidden agendas. We wanted the game to be accurate enough to the real world that political junkies wouldn't be turned off, but we wanted to also make sure it was a fun game. This is a strategy game, not a simulator.[76]

That is to say, the game is not a simulator *of political policy*. Rather, it is a simulation of political *strategy*, which has nothing to do with policy.

In other words, the mechanical function of political orders like states, corporations (discussed in chapters 5 and 9), schools (discussed in chapters 8 and 9), and other institutions that found everyday experience is not identical to the logics that drive such institutions. To be sure, the two are related; the goals of the state are expressed, sometimes indirectly, in its method of

operation. But the state works primarily to ensure its own future. As Badiou puts it, "The modern state aims solely at fulfilling certain functions, or at crafting a consensus of opinion. Its sole subjective dimension is that of transforming economic necessity . . . into resignation or resentment."[77] If election games make any political statement, it is one about the utter divestiture of politics from elections, such that electioneering's replacement of policy has become ideology.

Other games use political symbology, imagery, or verbiage but still avoid simulating the processes of political life. Games created explicitly about the election process (rather than election strategy, as in the case of *President Elect* and its kindred) offer instructive examples. The videogame that Gonzalo Frasca and I designed for the 2004 Howard Dean for America campaign, is one such example.[78] *The Howard Dean for Iowa Game* simulated grassroots outreach, arguing for local, individual action as the primary mode of campaign support. After considering several possible designs, the campaign commissioned one intended to address the power of grassroots outreach.[79] They hoped to win commitment from citizens who were sympathetic to the candidate but who had not yet contributed to or participated in the campaign. The game modeled the logic of grassroots outreach as well as the actual activities a grassroots supporter might partake of, in order to concretize the activities. Here the procedural rhetoric argues for a particular type of campaign activity as most likely to maintain ongoing support for the candidate.

In a similar vein, the Discovery Channel television network created *Staffers Challenge*, an advergame for their 2004 series *Staffers*.[80] The game put the player in control of a local campaign office, where he has to balance four simultaneous tasks: making coffee, answering phones, talking to walk-in visitors at reception, and stuffing envelopes. The goal is to keep all four stations running for as long as possible. *Staffers Challenge* is a clever and well-produced game that riffs on common resource management tasks in commercial videogames to mount its procedural commentary about electioneering: there's always more to do than there are people to do it; the campaign trail is tread by low- or unpaid volunteers whose idealism, youth, or ignorance forgives repetitive and thankless work. Like the campaign "mini-games" of *The Howard Dean for Iowa Game*, *Staffers Challenge* proceduralizes the individual experience necessary to yield the positive collective benefit of citizen supporters.

Other games manipulate political figures but fail to speak in any political register whatsoever, even one about the mechanics of political advertising like

the election simulations. At the height of the 2004 election, UK mobile game developers Sorrent (now Glu Mobile) took the *Fox Sports Boxing* game they had already developed, replaced the boxers' heads with those of G. W. Bush and John Kerry, renamed the characters "Bubba Bush" and "K. O. Kerry," and re-released the game as *Bush vs. Kerry Boxing*.[81] Although unleashing a well-timed uppercut on one's political opponent of choice might have yielded momentary solace from the political strife of the 2004 election, the game itself, once again, does not proceduralize the political. If anything, *Bush vs. Kerry Boxing* reinforces the metaphor of politics as personalities rather than as infrastructures for facilitating everyday life.

With the growing popularity of political games, many games follow *Bush vs. Kerry Boxing*'s use of political imagery as an attempt to associate a topic of popular attention or to rise above the noise of the online and mobile games marketplace. Using surface effects to appeal to a particular lifestyle is a common advertising technique known as associative advertising, which I discuss in detail in chapter 5; Sorrent hoped that the faces of Bush and Kerry would make their existing boxing game appeal to the politically minded as well as the sports-minded. Likewise, using politics as an unusual curiosity or *pique* may make an ordinary game appear less ordinary.[82] Such is the case for *White House Joust*, an online game from Kewlbox.com.[83] The game borrows its name and gameplay from the popular arcade game *Joust*, but replaces that title's ostrich-mounts with large heads of presidents and presidential hopefuls (Bush, Clinton, Kerry), heads of state (Tony Blair), and other vaguely political figureheads (Rush Limbaugh). Kewlbox.com is an online game site run by advergame developers Blockdot; the site makes money through advertising, so slapping political personalities may drive increased traffic thanks to curiosity alone.

Specimens like *Bush vs. Kerry Boxing* and *White House Joust* are not political videogames. If anything, they are poor simulations of political videogames. These games apply a political skin to existing procedural mechanics, without attempting to transfer those mechanics into rhetoric supporting a political argument. These *graphical logics* may or may not make visual arguments about the world, but clearly they do not make procedural ones.

Still other games represent the traces of a political situation, suggesting inroads its political logic without directly representing that logic itself. In late 2005, mtvU—the college network arm of MTV—announced a contest for university students. The unenviable challenge: design a videogame to end

the crisis in Darfur, Sudan, a conflict raging since early 2003 between the region's population and the Janjaweed, a government militia. The crisis is complex and just scratching the surface of it requires considerable study into arcane and complex historical tension between the region's non-Arab black population and its Arab settlers. Human rights violations, including mass rape and murder, have been blamed on both parties in the conflict, but lately the tide has turned in favor of the heavily armed and government-supported Janjaweed. The resulting imbalance of power has prompted increased concern from the international community, which fears the situation could easily escalate to ethnic genocide of the kind seen in Rwanda and the Balkans in the 1990s. However, the situation is further complicated by the "cold" nature of part of the conflict; for centuries, the non-Arab tribes have been sedentary farmers, whereas the Arab tribes are primarily nomadic herdsmen. The competing economic and material needs of these groups have often resulted in conflict. As of March 2005, the United Nations estimated that 180,000 people had died from illness and malnutrition in the region since the start of the conflict, that another 50,000 had been killed violently, and that some 200,000 more refugees had fled to neighboring Chad.[84] Some have criticized G. W. Bush for downplaying the Sudanese crisis in order to draw U.S. attention and support toward Iraq. The monetary and humanitarian solutions to the Darfur crisis are certainly within reach; however, it is unclear how long such solutions might last in a region blighted by centuries of similar conflict.

mtvU gave university students two months to design and submit a game based on this complex situation. In February 2006, the contest closed public voting for four finalists.[85] One of the finalists, *Guidance*, offers an abstract representation of U.N. aid. The player controls a U.N. symbol and attempts to guide conflicting tribes to food while preventing them from colliding. Despite its detached stick-figure abstraction of U.N. aid, *Guidance* makes a procedural claim for Western intervention. The solution does not take into account the centuries-old history of conflict in the region, nor does it account for the question of how and for how long to support such humanitarian efforts. However, according to the rules of *Guidance*, conflicting tribes can survive starvation and slaughter, so long as a U.N. intervention holds these conditions in check.

One segment of the winning game, retitled *Darfur Is Dying*, cast the player as a Darfuri refugee searching for a well from which to fetch water while

attempting to avoid the heavily armed and vehicle-aided Janjaweed, depicted in figure 2.8.[86] The game leverages a common videogame design model: the player as hero runs to avoid an enemy. Inverting the common videogame power fantasy, the game puts the player in the role of the powerless rather than the powerful actor in the struggle. This winning entry was created by a group of University of Southern California masters students, led by Susana Ruiz, who developed the game as a part of her M.F.A. thesis.[87]

Understanding the Darfuri experience by playing *Darfur Is Dying* may increase player empathy, but the game does not make a procedural argument for conflict resolution. mtvU might argue that the game fulfills one of its contest goals, to "raise awareness" about the conflict, but awareness is a tired, ineffectual excuse for the absence of fungible solutions. If the player hopes for perspectives on possible solutions, he must consult materials far beyond the videogame. If it succeeds at all as a political statement, *Darfur Is Dying* acts as a kind of videogame billboard for more complex verbal or written rhetorics on the crisis. As mtvU explains in an official statement, *Darfur Is*

Figure 2.8 Taking on the role of a Darfuri child foraging for water emphasizes powerlessness, an inversion of typical videogame role play.

Dying is intended "to engage users and provide a window into the refugee experience—offering a faint glimpse of what it's like for the more than 2.5 million who have been internally displaced by the crisis in Sudan."[88] This is not an undesirable outcome; empathy may lead players to interrogate the situation further.

But mtvU's assertion that the game is part of their "two-year campaign to give college students the tools they need to help end the genocide in Sudan" raises an eyebrow.[89] The website mtvU built for the game arrogantly enjoins the visitor: "Play the game. End the killing." In a rejoinder similar to the one Elizabeth Losh raised against *Tactical Iraqi*, journalist Julian Dibbell wonders if the nature of the videogame design even matters to the sponsor: "you might start to wonder which use of game violence is sicker: the game companies' exploitation of adolescent aggressive impulses in pursuit of unit sales, or MTV's exploitation of adolescent social conscience in pursuit of ad revenue."[90] As in the case of *White House Joust*, the active rhetoric in these games may be identical to the commercial rhetoric of MTV—it mainly serves as a call toward attention. mtvU can always claim success in its vague attempt to "raise awareness" about the crisis; their own press campaign around it has been tremendously successful. And such an effort may be a noble one, especially if the rhetorical use of videogames as a positive association for young people leads to new interest in issues of international politics.

But we must distinguish the rhetorical use of videogames for politics and the inscription of procedural rhetorics in videogames about politics. *Darfur Is Dying* proceduralizes the experience of the Darfuri villagers at a particular moment in the crisis, abstracting the historical dilemmas that partially explain such a terrible outcome. In his history of the Darfur crisis, Gerald Prunier complicates this simplistic understanding under the name *ambiguous genocide*.[91] Media representations of the conflict, argues Prunier, characterize the conflict as one of "simple" ethnic cleansing, where powerful governments persecute, rape, and kill powerless victims.[92] That persecution, rape, and murder is in fact taking place is undeniable. But the simplistic, mediatized "opposition" that Prunier criticizes does not explain why such persecution takes place, a seemingly important piece of information for activists. Despite the promise of *Darfur Is Dying* as an effective call to empathy about the crisis, the game abstracts the core of the problem: how to engage in a procedural rhetoric about how historical circumstance underwrote the conflict, and why that circumstance makes solutions so difficult.

Political Processes

The interrelated structure of political issues suggests that procedural rhetorics may offer more promising methods for exposing political ideology than verbal rhetorics. Verbal rhetorics require coherent and methodical movement between causal pairs: laissez-faire economics starved the Irish; federal incompetence sank New Orleans. The negative image of the deceitful soapbox politician notwithstanding, these claims tend to simplify and cover over the network of relations that contribute to final outcomes. But not all videogames rise to the challenge; indeed, despite the promise of videogames for representing political thought, proceduralizing politics is hard work, and work that is largely unexplored in commercial videogames. While games like *America's Army* and *A Force More Powerful* claim to represent imperturbable political positions, they also help expose the ideologies that underwrite those very positions. Games like *Antiwargame* and *September 12* proceduralize specific positions on political issues, acknowledging their inherent bias. The uniqueness of political videogames in the contemporary media environment has brought about games like *White House Joust* and *Bush vs. Kerry Boxing*, which appropriate political images for commercial, not political purposes. Somewhere in between the *Antiwargames* and *White House Jousts* are efforts like *Darfur Is Dying*, which earnestly attempts political speech but abstracts the most complex political relationships from its procedural rhetoric.

When we interrogate political issues as procedural systems—as the emergent outcomes of interconnected, independent rules of cultural behavior—we can gain a unique perspective on such problems. Diana Richards has adopted the concept of "functional nonlinearity" from nonlinear modeling to describe the role of complexity in political processes.[93] Such processes are not neat and tidy; they are, in Richards's words, "a big mess" that entails "sensitivity to small changes, nonequilibrium dynamics, the emergence of complex patterns, and sudden changes in outcome. . . . much less is static, stationary and fixed."[94] Richards's focus is scientific explanation of empirical models that can explain political complexity. But procedural representations of political processes also engender *expression* rather than prediction or validation. Procedural rhetorics in political videogames make claims about the particular interrelations between political processes, why they work, why they don't work, or how society might benefit by changing the rules.