The Warcraft Civilization

Social Science in a Virtual World

William Sims Bainbridge

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1 Entrance

I am Incognita, one of the Undead. I entered World of Warcraft, also called Azeroth, in the Shadow Grave crypt, deep beneath the ground near Deathknell. I understood that the time was midnight on the sixth of March 2007, but I knew little of my previous existence. Unlike a newborn child, I could talk, reason, read, and take complex actions, although there was much I needed to learn. I had some knowledge but few memories. My skills were terribly underdeveloped. It is said that Humans wonder what will happen after they die, but we Undead wonder what happened before we died.

The first thing I saw was the trash-strewn floor of the crypt, lifeless gray like the walls. Then the flickering light revealed two tiers of niches where disordered bones indicated that Human bodies had once lain. Each niche was decorated by a grim, carved skull, shaped from the same gray stone as everything else within my field of view. In one niche, a stout, oddly shaped candle kept vigil over a mound of dirt hinting at the flesh that once covered the bones. A torch on the wall behind me mirrored another across the shallow pit, lighting a stone staircase. I ascended, turned left at the landing where more carven skulls supported shallow arches, and ascended again past cobwebs and the dust of ages. The third flight of stairs brought me to the surface of my new world. Gross stone columns, with the same skull motif, framed the exit from the crypt into a desolate graveyard.

Waiting for me was the undertaker, who spoke: "About time you woke up. We were ready to toss you into the fire with the others, but it looks like you made it. I am Mordo, the caretaker of the crypt of Deathknell. And you are the Lich King's slave no more." Somehow I found myself thinking like an anthropologist, or perhaps a linguist. *Mordo*, I hypothesized, came from the Latin word for "dead," *mors* in the nominative or *mortis* in the genitive, related to *morbidus* meaning "deceased." I looked at his bared teeth and wondered if the word *mordere*, meaning "to bite," was a better derivation. Death bites, does it not? The German word for "murder" is *Mord*. Who was this Lich King, of whom Mordo spoke? A *lich-gate* is the place in a churchyard where the corpse waits for burial, and *litchfield* is an old word for "cemetery." Perhaps the Lich King was the king of corpses, cognate with the German word for "corpse," *Leiche*, Norwegian *lik*, and Dutch *lijk*.

Mordo told me to speak with Shadow Priest Sarvis, who could be found at the bottom of the hill, in a decayed chapel. When I entered the building, I saw no religious symbols, and the boarded windows admitted no daylight. Sarvis said to me, "No other race on Azeroth has suffered as much as our people, priest. To laugh in the face of death has become second nature for all of us." Then I realized that I, like Sarvis, was a member of the priestly class, although an untrained one. I noticed he was wearing red and lavender robes and holding in his right hand a staff topped with a symbol at the top vaguely reminiscent of a cross, but with four rods forming a diamond shape around a red gem. As I was admiring his finery, Sarvis explained that our new leader was Lady Sylvanas, who had liberated us from the Lich King. "The Dark Lady guides us in our war against the hated Scourge and the holdouts of humanity who dog our every step."

I then received my first combat task, exterminating the Mindless Ones, eight one-armed Wretched Zombies and eight Mindless Zombies, whose brains had been pierced by arrows. This was a sad task, because they were Undead like me, but lacking full consciousness. When I returned to the blasted chapel to report my success, Sarvis gave me a Hallowed Scroll written by Dark Cleric Duesten, the local priest trainer, telling me, "feel blessed that your spirit was not released to the Nether," and suggesting I learn to deal with the fact that "the people you once knew, perhaps even cared for, are no longer!" When I presented it to Duesten, he commented, "The Holy Light no longer concerns you, the spirits of your forefathers are fairy tales, and creatures from the Nether don't want you . . . There is only one thing you must know: we have survived through will alone. It is faith in ourselves that separates us from others, and with our powers, we will cause great change in all of Azeroth."

More grim tasks were given to me: collecting magically useful organs from animals such as bats and wolves, and exterminating more of my brothers and sisters who had failed to make the complete return to consciousness after death. I looted valuable items, which I exchanged for money, and I began to gird myself with worn pieces of armor taken from those I killed. I learned with mixed pleasure and revulsion that we Undead can gain sustenance by eating the corpses of those we slew. As I interacted with the other Undead in the ruined village, they gave me advice: "Embrace the shadows." "Trust no one." "Beware the living." Novice Elreth bestowed a blessing, "Dark Lady watch over you!" Executor Arren asked the chilling question, "What would you ask of Death?" (See figure 1.1.)

The nature of my opponents changed fundamentally when Executor Arren assigned me the mission of killing twelve converts and initiates of the Scarlet Crusade. These were healthy, young Humans who, unlike me, had never died. They stood straight, whereas I hunched over, and they seemed filled with health. Given these contrasts, it was easy to hate them. Then I intercepted a map carried by the Red Messenger, showing where they had infiltrated our territory with agents. Arren ordered me to leave Deathknell and take the map swiftly to Executor Zygand, in Brill, our main Tirisfal settlement. Here I learned more about the huge conflict in which we Undead found ourselves, hunted as traitors by

Figure 1.1
Incognita, an Undead priest, at the church in Deathknell, between Shadow Priest Sarvis and Novice Elreth.

the forces of the Lich King, and invaded by Humans, who resented that we had seized Tirisfal from them just a few years before.

Repeatedly, I encountered the religious fanatics of the Scarlet Crusade. Sometimes, as we fought, they would shout at me, but I could not understand their words. On four occasions, I had the presence of mind to write down what they said: *"Bur wirsh ras wirsh va ras faergas Sturume ko majis ras landowar skilde." "Ras Vassild Lithtos eynes majis ras valesh ash garde noth dana novas eynes." "Ras garde hamerung nud nud valesh noth Hir bur dana bor." "Ergin lo ti danieb nud bur Ras Lithtos eynes vassild nud nud wirsh ras firalaine wirsh."* At first, I thought they might be speaking Swedish, or some northern Indo-European tongue. But now, I am not so sure. It perplexes me that I cannot speak with the Humans, even though I myself seem to be the reincarnation of one of them. At the time, a general truce existed between our people and the Humans, but rogue groups like the Scarlet Crusade refused to recognize it. I wondered what drove them to annihilate us, and wished I could speak with them about the growing tragedy we shared.

In some of my Tirisfal assignments, I assisted Apothecary Johann, who was trying to develop new biological weapons to use against our enemies. I learned that the original Plague of Undeath had been used by the Lich King in his invasion of Human territory, and I guessed my own metamorphosis had been caused by it. Having declared independence from the Lich King's Scourge, we Forsaken needed our own bioweapon technology, both to counterattack against the Scourge and perhaps to defend ourselves if the Humans attacked in force. Johann had me collect the blood of darkhounds, vile murloc scales, and night web spider venom. Once he had brewed his new plague, we tested it on a captured Dwarf.

The scope of my labors expanded again when Magistrate Sevren sent me to Bethor Iceshard, a high-ranking mage in Undercity, the capital of the Forsaken Undead, hidden beneath the ruins of Lordaeron. I understand that *Lordaeron* means something like "the land of the peaceful people," or "the place of peace for people," combining three words from three different languages. But the Scourge killed the people in the Third War, and we built our metropolis in the sewers beneath it. The access elevators, ironically enough, operate from the crypt of King Terenas Menethil II, who had led the Alliance against the Horde in the Second War. As I stepped hesitantly into the elevator, on my first journey to the Undercity, I was filled with trepidation, but was curious to learn more about my place as a priest of the Forsaken, a member of the Horde, and a citizen of a vast and disintegrating world.

The Game

Incognita is a character in World of Warcraft (WoW), the most popular massively multiplayer online role-playing game (MMORPG), created by Blizzard Entertainment. By December 2008, WoW had eleven million players in North America, Europe, and Asia. It is a fantasy game, because it concerns an imaginary world where magic exists and historical events have taken a unique course. In this, for example, it is different from realistic online battle games set in World War II or some comparable historical context. WoW is similar in many respects to *EverQuest*, Sony's fantasy MMORPG. Indeed, it is solidly rooted in a rich tradition of fantasy stories and games, distinctive chiefly for its quality and massive size. Thus, WoW cannot be said to be terribly innovative, but from the social-scientific point of view, this is a good thing.

World of Warcraft not only represents but also includes within itself a great culture, on the surface as modern as the Internet itself, but reaching down to the very origins of European civilization. It is so complex, and offers players so much scope for action, that it transcends the game category to become a virtual world. As the editors of a special WoW issue of the journal *Games and Culture* write, "The World of Warcraft is a complex world indeed, an extraordinary mixture of art and design, technologies, economics, the social and the cultural. It is a game, a virtual world, and an online community."[1] As such, it is a laboratory where the social and behavioral sciences can

thrive and contribute to information science and technology by supporting innovations in human-centered computing.

Note the themes in Incognita's brief narrative. She is lost and seeking to discover who she is and what she must do within a mysterious environment. Some would say this is the fundamental human condition, merely exaggerated in her case. She lacks understanding and skills, so she must learn. She will do so in a world gripped by conflict, where the group she belongs to seeks to define her identity in terms of competition against other groups. Her identity is also defined by religion, as a member of one sect in conflict with another. She struggles to think social-scientifically about her environment, and this brief narrative highlights linguistics, because language is both a marker of group boundaries and a barrier to communication. She also reasons historically, laboring to understand the present as a consequence of past events. Technology is crucially important, in this case, biotechnology devoted to the development of weapons of mass destruction. The vignette ends as she is about to enter an underground city created by her faction in the ruins of a defeated civilization, symbolizing both the possibility of rebirth and the ever-present danger of annihilation. This is an allegory of the real world in which we find ourselves today.

World of Warcraft is usually called a *game*, but this word has multiple and ambiguous meanings. An example is the classic 1924 short story "The Most Dangerous Game," by Richard Connell, which has been adapted many times for movies, radio drama, and television.[2] A big-game hunter, Sanger Rainsford, washes ashore on a remote island ruled by General Zaroff, who also has an addiction to hunting. Zaroff confesses that he had become bored with hunting the ordinary and not very intelligent animals such as cape buffalo and tigers, and wanted a prey he could match wits with. So he set up the island as a hunting preserve for humans, where he chased and killed lost sailors lured there by false navigation beacons. Rainsford becomes Zaroff's latest prey: the hunter becomes the hunted. Only by outwitting Zaroff can Rainsford avoid becoming another stuffed head on the trophy wall. Thus, the word *game* in the title has two meanings: the prey in a hunt, and the play in a strategy contest.

In terms of sales over the years, *The Sims* is the most popular computer game, and yet by many definitions it is not a game at all. I feel a special connection to the Sims, not only because my middle name literally is Sims, or because people mistakenly think "Sims" is a computer moniker I adopted to express my interest in virtual worlds. Rather, I am interested because I have programmed artificial intelligence computer simulations of human interaction for a quarter century, and my daughters used to be avid players of *The Sims*. It simulates the everyday activities of virtual people, called "Sims," in complex but rather ordinary environments, starting with a home where the player can set up furniture and appliances like those in real American suburbs. There is, however, no real winning and losing. The originator, Will Wright, prefers to call it a "software toy."

World of Warcraft has the essential quality that people generally associate with games: competition. Players must struggle against adversity to increase many point scores, of which the most crucial is experience, which takes them up a graded series of levels. Attaining a high level is a source of pride. Leveling up faster than somebody else makes a player feel superior. Both blind chance and clever tactics are important in determining the outcome of many brief battles, and battles chain together into quests.[3] However, there is no ultimate victory. Thus, WoW is a virtual world that includes thousands of games, rather than simply being a game itself. As Cory Ondrejka has said, "No other medium provides such breadth and depth of experience, intermingling the social while encouraging exploration and discovery."[4]

If "game" is a complex concept, "role-playing" is even more so, and the combination of the two adds further complexities.[5] In the real world, we constantly play roles, some, such as "customer" and "teacher," that follow well-developed scripts provided by the culture, and others that we largely invent ourselves. Every mentally normal person is able to pretend to be someone else, as well as to play roles while being himself or herself. Perhaps there are three dimensions to role-playing. First is the *competence* a person needs to play a given role, and roles differ in the demands they make on players. I can do a pretty good imitation of a priest, although I have never taken holy orders, but I am quite incompetent in impersonating a ballet dancer. Second is the degree to which the role is pre-scripted rather than creatively *improvised*. An actor playing Romeo in the balcony scene when he courts Juliet must say certain exact words and is not free to improvise as the same actor must when he courts the actress offstage. The third dimension is *genuineness*, the extent to which the person's thoughts and intentions match those apparently associated with the role. The actor playing Romeo is genuine, because we all know the drama is fiction, but a question often arises about the sincerity of used-car salesmen, even though it is safe to assume they really do have cars to sell.

We explore the concept of role-playing more deeply in the chapter on identity, but for now it is enough to say that the player must take on the perspective of the character he or she is playing, with some degree of competence, improvisation, and genuineness. All these are matters of degree, and Blizzard Entertainment takes explicit notice of this fact. In a sense, World of Warcraft is not one virtual world but hundreds of them, called *realms*. Technically, a realm is a separate computer or Internet server maintaining one instance of the world. In computer lingo, this is also called a *shard* of the world. Players can interact only with players who are in the same realm, and each character is restricted to a single realm. A player can enter multiple realms, one at a time, but needs a different character for each, with the very rare exception of a player paying to move a character from one realm to another. Each realm develops its own qualities, reflecting the players who enter it, and a few have been officially set aside as "role-playing realms" by Blizzard:

If you enjoy role-playing (RP) and would like to imagine that you are an inhabitant of a fantasy-based world, then a role-playing realm may be for you. Players who choose to play on an RP realm should abide by the Role-Playing realm policies and remain in-character at all times. Role-Playing realms give players the chance to develop characters with a backstory who do not simply progress from quest to quest, but instead assist or hamper the efforts of others for reasons of their own.[6]

Given that role-playing has many dimensions in online role-playing games, it is worth noting a very different technical definition of *role-playing game*, or RPG. This does not concern the relation between the player and a character in the game but the mechanics of combat inside the game. Consider the difference between two classic Nintendo games for single players, *Super Mario World* and *Super Mario RPG*. In *Super Mario World*, a mustached Italian plumber needs to explore and fight his way through a number of levels, which are separate environments, more like the geographic zones of WoW than the experience levels. Along the way, he encounters many enemies. If one bumps into him from the side, Mario dies. If he hops on its head, the enemy dies. Sometimes Mario can get a *power-up*, which means he does not die the first time he is touched but the second time. However, interaction between Mario and an enemy is very simple.

In *Super Mario RPG*, interactions between Mario and his enemies are far more complex. Much of the time, Mario is wandering around the landscape, picking up resources, and finding his way toward goals, just as in his traditional Nintendo games. But when he encounters an enemy, the play switches to combat mode. Mario and the enemy take a series of turns. On each turn, one strikes the other or casts a spell. The amount of damage done by this attack depends on a hidden mathematical algorithm that can combine numbers representing several things: Mario's strength, the enemy's strength, the particular attack used, the defendant's armor, and a random number. Characters have a number, or a variable, called *hit points* or *health*, which is reduced after each hit by the number of points of damage that resulted from the algorithm. The damage numbers are typically displayed on the screen in RPGs, and the character's health may be represented by a number on the screen or a bar graph. When the health reaches zero, the character dies. When either Mario or his enemy is killed, the game exits combat mode.

Hit points are a very old concept. Electronic RPGs are very much influenced by the 1974 tabletop card game *Dungeons and Dragons*, which used hit points, but there is a much earlier example. In the early 1950s, my sister and I played a card game simply called *War*. We sat on the floor, shuffled a deck of cards, and dealt them all out so each of us had twenty-six, or sometimes we used two or more decks for a really long game. In each round of the game, each of us would place three cards facedown in a line, then one card face up. Whoever placed the higher card face up, took all those on the floor. If the two cards were the same value, we put three more cards facedown,

and another face up, again winner taking all. When one player had all the cards, the game was won. Notice that the number of cards I held were comparable to hit points, and when I had very few, I got concerned that I would lose. This was a pure game of chance, and we were not allowed to look at the cards in our own hands and make a strategy about how to play them.

In complex modern RPGs, the player does have choices during a combat, including running away, and there may not be explicit turn taking. But the basic principle is the same, a series of exchanges causing damage that is the result of a number of factors including random numbers. Modern RPGs enhance the player's experience by giving great freedom between combat episodes. Richard Rouse calls the outdated approach to electronic games "linear," because it allowed only one route from start to finish. In contrast, World of Warcraft is highly nonlinear:

> In terms of gaming, this means that the player is not locked into achieving different goals in a specific order or in achieving all of the goals she is presented with. Instead, the player is able to move through the game in a variety of paths and can be successful in a variety of ways. Nonlinearity leaves the player with more choice to play the game her own way.[7]

The greater the nonlinearity, and the greater the choices in general, the more the game becomes a world. Consider the evolution of Mario's environment. *Super Mario Bros*. was released in 1985, when the video game industry was in a slump, and it was instrumental in launching the genre toward its current high popularity. Mario has a single goal, to rescue Princess Toadstool. To do this, he needs to fight his way through a number of distinct levels, essentially running linearly from left to right, with many jumps and climbs providing the semblance of a second dimension. At the end of each level, he is ported to the next level, in a set order. *Super Mario World*, issued five years later, takes this approach to its logical extreme, a huge number of levels, most of which however are entirely linear. There are a few major choices, some hidden areas, a map through which the player may revisit old levels, and the possibility of finishing the game without accessing every last one of them. However, this is not yet a virtual world, despite the name. One reason is simply the limitations of the game console, the Super Nintendo, although a few games such as *Star Fox* went some distance in the direction of the third dimension, by means of additional computing power in the game cartridge.

Super Mario 64, released in 1996 for the more capable Nintendo 64 system, offered three dimensions of movement and gave the player many choices. Because it is nonlinear, it encourages the player to explore the world, thus gratifying a wider range of human emotions than a game that consists of one predetermined jump or combat after another. The game is won by collecting stars, but Mario can rescue Princess Peach without finding all of them. Thus, there can be two different definitions of winning: rescuing the princess or getting all the stars. *Super Mario 64* is very nearly a virtual

world. Most crucially, it lacks other people, because it is a one-player game. Also, it is a game rather than a world, precisely because it has an ending. A player can win games inside a virtual world, but cannot really win the entire world itself. Finally, an electronic environment is not fully a world unless it gives people the freedom to create things of their own design.

World of Warcraft is far more than a game. It contains in excess of five thousand completable quests, each of which might be considered a game, but WoW cannot be completed as a whole.[8] The nearest thing to an end goal, when it was released in 2004, was the highest experience level achievable, which was sixty. In 2007, the top experience level was increased to seventy, and in November 2008, the top level rose again to eighty. But even at the top level, there are many challenges still to meet, in the form of dungeons or instances, battlegrounds, and the collection of valuable virtual items to strengthen one's character in duels or to give one's character martial beauty.

There are many opportunities to interact with other people. No information system yet built could handle ten million people at once, and too many people competing to kill the same boss enemy would spoil one another's enjoyment of triumph. The North American region has nearly 250 separate, parallel realms (or computer servers), and each one can handle a maximum of 4,000 players simultaneously. A character is limited to one realm, but each player may have characters in multiple realms, or multiple characters in the same realm. A player cannot run more than one player at a given time, however, without purchasing a separate account for each character, and using multiple computers. Despite such limitations, social life in WoW is exceedingly diverse, and 4,000 characters are quite enough for a complex social structure.

The main area of limitation is the creation of virtual objects. A number of professions that players may choose for their characters involve assembling complex objects from multiple parts, but one cannot invent an object and construct it entirely from scratch. This contrasts with the popular nongame virtual world *Second Life*, in which one may use a graphics program to create a physical object, upload images to cover its surface, then write a script program to make it do things.[9]

There are two reasons WoW is limited in this way. First, all the graphic images reside on the user's computer, rather than being downloaded laboriously from the server as in *Second Life*. This means that the graphics are much smoother in WoW, allowing a character to run from one environment into another without pausing for the graphics files to download. A consequence of this design choice is that you cannot create your own graphics, because they would not be available to all the other players. Second, because WoW is still promoted as a game, the designers need to be very careful to prevent computer-savvy players from gaining an advantage over others with less programming expertise. If I could create any object I want, I could forge a sword that kills any enemy in a single blow. However, as we see in later chapters, the social software

included in the WoW user interface gives players wide scope for creating social groups, notably guilds, with user-defined membership ranks, evocative names, role-playing styles, goals, and memberships. Thus, the opportunities for creativity are significant without being infinite.

WoW retains many features of a game while being more than a game. It is worth noting also that many social scientists view the real world in gaming terms. The influential 1944 book *Theory of Games and Economic Behavior*, by John von Neumann and Oskar Morgenstern, launched game theory as a branch of economics, social exchange theory, and an analysis of society more broadly.[10] However, this was far from the first influential classic that considered society in terms of games. *Homo Ludens*, written in 1938 by Johan Huizinga, argued that humans by their very nature play games, and that cultural innovations generally arise in play.[11] Indeed, we should consider how World of Warcraft is also something between a game and a world, namely, a civilization. Every major civilization is an integration of multiple societies and cultures, and thus it presents huge challenges for social science.

Social Science in a Virtual World

Contemporary social sciences are fragmented, undecided about fundamental issues of theory and methods, and rather low in social status. Superficially, the computer and information sciences appear to enjoy demonstrable success and high social status. Beneath the surface, however, these apparently separate fields have much in common. Most important, they have much to contribute to each other.

Arguably, sociology was the most computational of all the sciences a century ago, but ironically, it has been left out of some of the most sociological developments in recent computer science. The roots of computational sociology were firmly planted by Herman Hollerith's work to analyze the data from the 1900 census of the United States.[12] To analyze social data, Hollerith developed the entire system of punched cards, complex programming of counting machines, and automatic tabulation that dominated information processing for three quarters of a century. Most sociologists still think of computing in terms of rectangular data sets in which columns represent variables, and rows represent cases, and they have been slow over the past quarter of a century to adopt new methodological perspectives.

At the same time, an increasing number of scientists with training in such fields as physics or who otherwise have little connection to sociology have been encroaching upon "our" territory, because they are able to handle computers creatively and have become interested in social issues. For example, to a classically trained sociologist who happens also to program computer simulations, it is alarming that the leading textbook *Simulation for the Social Scientist*, by Nigel Gilbert and Klaus Troitzsch, fails to cite more than a handful of computer simulation studies published in standard social

science journals.[13] Many such articles exist, but the broader simulation community ignores them. However, despite numerous examples of good social computer simulation research, it remains a peripheral method, largely exiled to the outer reaches of social science publications.

A quarter century ago I was exploring multiagent systems, in some ways reminiscent of the programming that controls the herds of beasts in World of Warcraft, to explore the way religious faith spreads through a human community by social influence and communication. In 1987, I was able to publish a set of neural network and multiagent simulations, but only disguised as educational software.[14] With great difficulty, I was much later able to get a couple articles based on the research into marginal sociology journals, and only in 2006 could I publish a scholarly book reporting that work in expanded form, even including a table I generated way back in 1984.[15] The gap between the social and computer sciences is so vast that few people on either side see any reason to take account of those on the other, let alone collaborate with them.

My perspective is quite different: social science is an information science, and information science is a social science. Both are radical movements aiming to transform society, as well as being sciences. Humanly meaningful data—whether we call it *information* or *knowledge*—can be articulated only within an appropriate culture. Like other cultural products, therefore, information is a socially constructed phenomenon.[16] Properly understood, twenty-first century sociology needs to draw heavily upon computer science as a means for developing theory as well as for tools of data analysis. Most important, only by combining can they achieve their revolutionary potential.

In the early 1980s, the National Science Foundation considered creating a new Directorate for Social, Behavioral, and Information Sciences, but then bowed to disciplinary chauvinism and established first the Directorate for Computer and Information Science and Engineering (CISE), and then the Directorate for Social, Behavioral and Economic Sciences (SBE).[17] Following the principle of "back to the future," I suggest that it is high time to merge social and information sciences. Having worked for years in both SBE and CISE, I believe I have a clear perspective on how their fields relate. In the cover article of the July 27, 2007, issue of the journal *Science*, I explained how virtual worlds like World of Warcraft could be laboratories for uniting these fields.[18]

Many scientists and scholars are already conducting research about virtual worlds, and they are beginning to use them as environments to ask general social-scientific questions. Economist Edward Castronova argues that an increasing fraction of human life, economy, and culture will take place in these novel environments, so they need to be studied as important phenomena in their own right.[19] In a study of social and economic coordination, Castronova has shown that it can be fruitful to compare results from research in different virtual worlds, just as is true for nations on Earth.[20] There is some evidence that they serve as hatcheries for new cultural movements—for

example, facilitating the consolidation of post-Christian religious ideologies[21]—and are substituting for disintegrating social institutions in the real world.[22]

It is especially important to study virtual worlds now because the current period of transformation may not last much longer and because it may be impossible to reconstruct its key processes and phenomena entirely from historical records that are naturally preserved. Practically all of the classic one-player electronic games can still be played, either because computer emulators of the old systems have been created, or because the games have been ported over to new systems. But the same is unlikely to be true for today's virtual worlds because they depend on the extensive social infrastructure of the companies that support them and on the current population of people who inhabit them.

Virtual worlds are good environments in which to explore wider issues related to emerging technologies, such as intellectual property rights and the sociotechnical implications of online misbehavior.[23] Research concerning the cultural boundaries of virtual worlds includes studies of the following issues: the extent to which gender-specific behavioral norms transfer to these nontraditional environments;[24] comparisons with role-playing games that are not electronic, such as *Dungeons and Dragons*;[25] the human impacts of alternative architectural philosophies;[26] the social processes through which cooperation emerges;[27] the possibility of addiction to virtual worlds;[28] and the different meanings that participants attach to virtual life and death.[29] There has even been research on how World of Warcraft and other virtual worlds can illuminate social factors implicated in the spread of disease epidemics.[30] To date, much of the research has followed the twin qualitative paradigms of anthropological ethnography and sociological participant observation,[31] but quantitative approaches using rigorous statistical and computational techniques show very great promise.

WoW is a very conducive environment for quantitative research because it encourages individuals to write "mod" or "add-on" programs, and scientists can use some existing software as research tools or write their own. These range all the way from very simple sequences of character behaviors constructed using macros built in to the WoW user interface, to long programs written in the Lua language. For example, one widely used program called Auctioneer analyzes prices on the WoW virtual item auction system, and CensusPlus tallies all the players currently online by several characteristics. With census data on more than 200,000 WoW characters, a team centered at the Palo Alto Research Center analyzed the factors associated with the upward status mobility of individuals and the dynamics of social groups.[32]

This book uses qualitative rather than quantitative methods, and I save my more technical studies for journals that regularly publish statistical research. I hesitate to say that this book is more oriented toward theory, because the very word *theory* conjures up images of dry abstractions, as if hundreds of pages of desert lay ahead rather than the lush jungles that WoW has actually prepared for us. On one level, this book

analyzes World of Warcraft from multiple standpoints of the history of social thought. By doing so, it suggests a second level, on which information-science design of virtual worlds must take account of the nature of human beings and the societies they construct. And on a third level, the book seeks insights about life in the so-called real world.

Why would WoW be an especially good place to look for insights about Western civilization? One reason is that it bridges past and future, rooted in a major Western cultural tradition, yet aiming toward the virtual worlds we can create in times to come. WoW is tremendously eclectic. Consider the ten races. Orcs are derived most directly from J. R. R. Tolkien's *The Lord of the Rings* tetralogy, and Tolkien was a leading scholar of historical linguistics who based his fantasies on the legends of Britain.[33] Tolkien told us that Elves were especially tall, as the Night Elves in WoW are, but shorter ones are found in *Grimm's Fairy Tales*, along with very short Dwarves including seven who lived with Snow White.[34] The brothers Grimm, Jacob and Wilhelm, were scholars who collected folk stories as later anthropologists would, and who contributed substantially to the advancement of linguistics. Gnomes were made familiar to modern audiences in the Oz books of L. Frank Baum, which also pioneered the mixture of fantasy adventure and cultural parody we find in WoW.[35] The mountain king in *Peer Gynt*, a drama by Henrik Ibsen with music by Edvard Grieg, is a troll. WoW's Tauren are minotaurs, familiar to us from the ancient Greek myth of Theseus, Daedalus, and Icarus. The Undead are reminiscent of zombies, but they especially resonate in popular movies about semidead humans, notably George Romero's *Night of the Living Dead* (1968) and the three movies based on a science fiction novel by Richard Matheson: *The Last Man on Earth* (1964), *The Omega Man* (1971), and *I Am Legend* (2007).[36]

Dwarves also feature in Richard Wagner's titanic cycle of four grand operas, *Der Ring des Nibelungen*. For Wagner, *Nibelung* essentially means *Dwarf*, and the magical ring was forged by Dwarves from pure gold. Based on Norse or Germanic mythology, but also modeled after ancient Greek dramatic cycles, *The Ring* cast long shadows over the political and cultural future of Europe. One can still debate whether Wagner was at all responsible for the rise of the Nazis, long after his death, or whether his popularity was merely exploited by them. We could also debate the extent to which *The Ring* influenced Tolkien's rather different ring tetralogy, the music in *Star Wars*, and World of Warcraft. Remarkably, in 1849, Wagner prophesied that the future of art would go in a direction that today looks rather like WoW.

In 1848, a wave of largely unsuccessful revolutions swept Europe, and Wagner was rather unsuccessfully involved in a radical movement in Germany. As soon as he had settled in exile in Switzerland, he began writing *The Ring* and developing an aesthetic justification he called *The Art-Work of the Future*.[37] This little book really presents two ideas: the concept of a total work of art, and the notion that great artists could speak with the voice of the people.

A total work of art, or *Gesamtkunstwerk* in German, is an artwork that combines multiple different arts. Wagner wrote both the poetry and the music for *The Ring*. He also felt a *Gesamtkunstwerk* would combine the visual arts of painting and dance, although the sets in traditional presentations of *The Ring* look like uninspired landscape pictures, and the singers on stage hardly move at all. One innovation that tied together Wagner's poetry and music was the leitmotif, a melody that represented a specific character or concept. All these principles apply to World of Warcraft, as they do to *Star Wars*. Each of the main cities or geographic areas in WoW has its own leitmotif, particular music that plays when a character arrives there. Although it is hard to find much dancing, the characters all move, often in ways that are both subtle and pronounced. One can invest marvelous hours documenting the particular spasms with which each kind of enemy dies, for example. The varied environments of nature and architecture are often quite beautiful and express the particular nature of events that take place in them. Weaving everything together are the threads of a tapestry of myths, as complex as any in the ancient sagas.

A *Gesamtkunstwerk* derives its strength from the *Volk*, according to Wagner, the common people conceptualized as an ethnic or cultural group. The Nazi era and World War II largely discredited this part of his thesis, but at the time Wagner wrote, the distinction between right-wing populism and left-wing populism was not yet clear. Wagner assumed that the common folk shared a traditional culture, and that great artists could refine it to produce the greatest works of art. This is what the builders of World of Warcraft have done. Drawing upon deep popular traditions of fantasy and science fiction, they have created a virtual world that attracts millions of ordinary folk, while at the same time posing a radical critique of the dominant culture of their society. Note that *Der Ring des Nibelungen* and World of Warcraft are saturated with supernatural phenomena but have absolutely nothing to do with Christianity. The political systems in them are feudal, with occasional hints that capitalism is wicked or distorted, and the dominant elite acts largely from selfish motives. Without granting Wagner's ideology any special privileges, I must note that World of Warcraft is the most perfect fulfillment to date of his vision of a total work of art, combining many artforms while expressing popular criticism of the existing society.

As Georg Simmel pointed out a century ago, strangers can often see a society more clearly than its members.[38] By visiting the very strange world of WoW and making sense of what we find there, we are able to look at our own world with fresh eyes. Indeed, WoW is in great measure an allegory, so its exaggerations can call our attention to facts we tend to miss as we go about our habitual activities in the real world. Because it is a complex, functioning civilization, WoW takes account of human nature and the implicit laws of human interaction. Following Simmel, my prime research method has been to send several virtual explorers into the world of WoW, then to

dialogue with them about the meaning of what they discovered and what it says about our own civilization.

Research Methods

I studied World of Warcraft through ethnographic participant observation for two years, from January 2007 through December 2008, totaling more than 2,300 hours in this virtual world.[39] My goal was to explore the entire territory, which covers a subjective area of hundreds of square miles of diverse terrain, and to observe social relations among players of all visible kinds. Socially and culturally, this world is extremely complex. A series of disruptive wars and religious schisms has produced many fault lines along which conflict rages. The characters operated by players are divided into two hostile factions, the Horde and the Alliance, who have a somewhat shaky truce between them. The world also overflows with dozens and dozens of groups of nonplayer characters, or NPCs, only some of whom belong to the factions. Characters take on quests, either for their factions or for other individual or grouped NPCs, that send them gallivanting out into the virtual world to hunt enemies and gather resources. All this takes place in a complex, interwoven set of mythic cultures and the society created by the players, as they cooperate in short-term raiding parties and long-term guilds.

When I began this study by entering my first character into Elwynn Forest, World of Warcraft boasted 8,000,000 subscribers, but the number had reached about 11,000,000 before my data collection was done. A major upgrade, The Burning Crusade, was released in January 2007, and 2,400,000 copies were sold the first day. The second major upgrade, Wrath of the Lich King, came in November 2008, and 2,800,000 copies were sold the first day. Although quite affordable by individual players, in the aggregate, serious money is involved.

I did not interact with all the other players by any means, because I worked in only 6 of the roughly 250 North American realms (computer servers or *shards*). Two were so-called normal servers: Shandris was low in population and Hydraxis was high. Three were role-playing servers: Earthen Ring, Scarlet Crusade, and Sentinels. The sixth, Emerald Dream, was not only a role-playing server but also a player-versus-player (PvP) server, which meant that combat between the Horde and the Alliance was encouraged. On regular servers, whether role-playing or not, both players usually must agree before a member of the Horde can fight a member of the Alliance. On PvP servers, outside one's own starter zones, one is always open to being attacked.

On each server, I had at least one Horde and one Alliance character, and I initially placed four additional Alliance characters on Shandris so I could study the details of interaction between members of the same faction. To make it possible to run two characters at once, I had two World of Warcraft accounts and sometimes used two

computers, side by side. My initial seventeen characters covered all ten *races*. The five races of the Alliance are Human, Night Elf, Dwarf, Gnome, and Draenei. The five races of the Horde are Orc, Troll, Tauren, Undead, and Blood Elf. The characters covered all nine *classes*: priest, shaman, mage, druid, warlock, rogue, paladin, hunter, and warrior. To explore the diversity of supernatural cultures, I ran seven priests, two shamans, and two druids, but initially just one of each of the other classes except for two rogues to explore "deviant" behavior. At least one character practiced each of the following professions: mining, herbalism, alchemy, enchanting, skinning, leatherworking, tailoring, blacksmithing, engineering, jewelcrafting, fishing, cooking, and first aid.

In late March 2008, I decided to stage a scientific conference inside World of Warcraft. The suggestion came from John Bohannon, who creates the Gonzo Scientist feature of the journal *Science*, published by the American Association for the Advancement of Science, who had been inspired by the cover article about virtual worlds that I had published in *Science* the previous July. To help with the preparations and the aftermath, I created three new characters, moved one of my best-established characters across servers, and did the same with a nonentity character I had started merely as a tool for running census analysis software. The conference produced new knowledge, some of which I have incorporated in this book, and brought my total number of characters to twenty-one (see figure 1.2). When the Lich King expansion came in November 2008, I added one more character, a death knight.[40]

Because World of Warcraft is a role-playing game, it seemed appropriate to use role-playing in the research. Early in my career, before ethical issues had been raised about role-play research in the real world, I had in fact infiltrated a number of radical groups in order to study them, pretending to be a real member. My most extensive research in this vein consisted of two full years inside a more-or-less Satanic cult, called the Process Church of the Final Judgement, and six months inside Scientology, but I had also done this with Transcendental Meditation, the Hare Krishna movement, and the John Birch Society.[41] The Process, in particular, was immensely theatrical and reminds me of the Scarlet Crusade sect in WoW. I viewed my WoW characters almost as real people—my research assistants or native informants—who helped me do my ethnographic research. I found this was the easiest way to think and talk about them, although each of them developed a distinctive personality in my mind. I felt very differently about them, and experienced different moods through them. As I explain more fully in chapter 7, "Identity," they were largely me, but also beings somewhat different from me. I found them very effective role-playing tools for carrying out participant observation.[42]

I ran two of the priests, Maxrohn, a Human, and Catullus, a Blood Elf, all the way up to level 70, the highest possible experience level during the main period of my research. Then, when the Lich King expansion came, I ran one of them up to level 80. Three other characters reached level 30: Lunette, a Night Elf priest; Minotaurus, a

Figure 1.2
Scientists and scholars meeting in the Undercity sewer, for the May 2008 academic conference.

Tauren shaman; and Etacarinae, a Draenei shaman. Sixteen characters reached level 20: Papadoc, a Troll priest; Incognita, an Undead priest; Price, an Undead warlock; Zodia, a Draenei priest; Lusea, a Dwarf priest; Adalgisa, a Tauren druid; Vadvaro, a Human rogue; Marcya, a Troll rogue; Aristotle, a Human mage; Ozma, a Human mage; Alberich, a Dwarf hunter; Stephie, a Gnome warlock; Folwell, a Night Elf druid; Llana, a Blood Elf paladin; Sciencemag, a Blood Elf hunter; and Tarkas, an Orc warrior. As a death knight, Annihila, an Undead, started already at level 55, and was still inching her way up the ladder toward 80 when this book went to press.

This range of races and levels allowed me to experience each of the sixty-two major zones of this virtual world with the proper level and faction. There are eight widely separated starter zones suitable for characters around levels 1 through 10. The Dwarves and Gnomes begin in the same place as each other, as the Orcs and Trolls do in another location, but each of the other races has a distinctive origin. Beginning characters or players are called *newbies* or *noobs*, and the first two areas they experience

are *newbie zones* especially designed to be less difficult and to contain quests that must be described as training exercises.

My main tool of data collection was saving about 22,000 images off the computer screen, what are commonly called *screen shots*. Initially, the WoW software system saved the images as very large uncompressed files in the .tga, or Targa, format, but thankfully I was soon able to switch to the more conventional and much more efficient .jpg, or JPEG, format. For this project, I did not take advantage of the "/chatlog" method of recording text from the interplayer communication system, because I found that saving the whole screen provided the context for the words, as well as recording all kinds of nonverbal information. The automatic name of each file was the exact time and date the screen was copied, so I did not attempt to give them descriptive names. Rather, I saved the screen shots into folders for each of the characters, then later arranged them by topic, and put them in "used" subfolders after writing out what was useful for this book.

The virtual world itself was by no means the only source of data. I also collected and read all serious publications about World of Warcraft I could find, including novels, graphic novels (manga), instruction manuals, scientific journal articles, and conference papers. Huge troves of rather reliable information are available on the web, notably vast databases like wowwiki.com, wowhead.com, thottbot.com, and wow.allakhazam.com. Excellent maps of the virtual world are available at mapwow.com. As my higher-level characters joined major guilds in WoW, I gained access to their own websites. The authoritative World of Warcraft website includes much official lore, a vast array of forums where players discuss the game and its mythology, and an astonishing database called the Armory with detailed information about every guild and every one of the millions of characters that had reached level 10.[43] As a computer programmer interested in artificial intelligence and multiagent systems, I also paid close attention to WoW's simulated animals and people.

Nonplayer Characters

Many of the "people" and other creatures in WoW are not operated by players, but are nonplayer characters, or NPCs. Another word for *NPC* often used in the electronic game community is *mob*, short for *mobile*. Given its origins, this word should properly be pronounced *mobe*, but players tend to pronounce it *mob*. Some of the WoW NPCs don't move very much—the vendors and guards from which a character may buy things or get information—but most of them walk around a set territory, then react violently either when an enemy character comes within their *aggro* range, or when attacked.

An insignificant but fairly common category of mobs are the many *critters* found outdoors, like rabbits, squirrels, snakes, and the like. These are very weak, will not

attack, and cannot even defend themselves. Far more important are the *beasts*, all of whom will at least defend themselves, and many of whom will attack if one comes too near. While some of these are fanciful, many are familiar, such as boars, wolves, big cats, owls, and vultures. A character possessing the skinning skill can take hide from many of these beasts, generally the mammals, after they have been killed and their corpses looted of any items they may be carrying. *Humanoids* are intelligent—possessing culture, religion, and often speech—and they cannot be skinned. They include NPCs representing all ten races that players may use as characters, plus several others. Two nonplayer races that logically could be used as player characters in future versions of WoW are Goblins and Furbolgs, both of which have extensive settlements and interact in complex ways with players.

These categories are rather separate. The distinction between beasts and humanoids is very clear inside WoW, and hunters have a mapping tool that allows them to see the locations of all nearby beasts or humanoids, but not both simultaneously. The distinction between player character and NPC is also clear. True, fighting one may not seem very different from fighting the other, but the consequences are different. For example, one may earn honor from killing a character, but not from killing an NPC guard. When a player's character is killed, it reappears at a nearby graveyard and can *resurrect* (or *rez*). It may then seek vengeance against the killer. A few minutes after a beast or humanoid NPC dies, another takes its place, not resurrecting but *spawning*. The logic would seem to be that this is a new tiger or guard, who has merely been born at the same place as the old one. However, the word *spawn* is used even for NPCs that have individual names, such as the boss NPCs, whose killing is the goal of many quests. Notably, a spawned NPC has no memory of the prior death, whereas a rezzed character starts out with greatly diminished health and other damage, as well as the player's own memory of the defeat.

NPCs may be described as artificial intelligences or AIs, but they are really rather stupid. The realism of these artificial characters is enhanced by their physical movements and occasional speech, which are based on motion capture and voice recordings of real people. Look closely at a guard standing in one spot, and you will see that he appears to be breathing. Vendors and trainers often speak prerecorded messages, typically gesturing as they do so. What they say is appropriate to their role. In the Cathedral of Light, Priestess Josetta gave Maxrohn two salutations based on their shared faith: "Light be with you!" "Light bless you!" When Maxrohn visited the Elven zone of Moonglade during the 2007 lunar festival, trader Lorelae Wintersons gave him two salutations from her very different religion: "May the stars guide you!" "Goddess watch over you!" Members of the Horde who visited the throne room in Undercity may hear Sylvanas, the Dark Lady banshee who rules the Undead, spit out the words, "What are we if not slaves to this torment?"

When battling an NPC, a player often hears the opponent shout or grunt, suggesting it feels emotions. A very simple programming trick, undoubtedly involving a random number and triggered when the opponent's health drops below a set level, allows many enemies to simulate either rage or fear when the fight is going badly for them. When Stonescythe Alphas have nearly lost their lives, they enter a condition of "desperate rage," during which the damage caused by each of their blows is increased by twenty points, and their attack speed increases 10 percent. Other enemies run away, as if they were afraid. However, they always return to the battle, often after having snared some allies to help them. For example, when battling a murloc on a beach, it may run away, go sideways a distance, then return. If it happens to come near enough to another murloc, that second enemy will come along and give the player a rather rough time.

In general, only very simple programming is required to get very complex behavior from swarms of enemies. Typically, territory is divided into a number of neighborhoods, each with its own mixture of mobs. Some may stand still unless approached, while others will patrol a small territory at random, and others will patrol a wider territory or walk along a set route. This is quite enough to challenge the analytical abilities of all but the most experienced players. The big danger, of course, is that one will get deep into a battle with one enemy, suffering depleted health, when another will wander along at random and enter the fight. Experienced players learn to psych out the NPCs, mentally modeling the complex patterns created by the interactions of their individually simple programming.

It is easy to program NPCs to walk in a particular direction until reaching the limit of their territory, then turn at random and walk back across the territory. Only a couple of trivially simple program lines are required to give it a set probability of pausing at any point, after which it may turn and resume walking. At each step, the program can check how near the NPC is to enemies in the vicinity and attack one if the distance is less than the set aggro range, what ethologists studying real animals call *reaction distance*.

Such simple programming principles can give NPCs the illusion of free will.[44] Both Dorana and Korelor are Alliance NPCs that patrol the road near Sentinel Hill. Aristotle followed them both one day, noticing how they occasionally ran off the path to attack a buzzard or other NPC enemy. On the east-west Duskwood road, north of Yorgen Farmstead, a young black ravager wolf can occasionally be seen killing a rat. At several locations, it is easy for the player to engage an enemy and then *kite* it—make it chase after you—into friendly NPCs who will attack it, thereby saving you. One good place is at Southshore, where a murloc just west of the dock can be kited to where Human NPCs are waiting.

An especially impressive example is the attack on Stillpine hold, experienced by both of my Draenei characters, Zodia and Etacarinae. The high chief of the Stillpine

Furbolgs assigns a mission to determine what corruption could have caused the wildkin to occupy this system of caverns. After a series of adventures, the character reports back to the chief, who sends about a dozen of his raiders into the caverns to kill the wildkin. Etacarinae went in with them and participated in the battle that raged. The Furbolgs enter single file, but spread out when they encounter wildkin, and many separate combats ensue. If a Furbolg kills a wildkin, it may rush to the nearest other wildkin, apparently to help its fellows. When Etacarinae helped kill a wildkin, the Furbolgs fighting it quickly attacked another.

Increasingly, WoW has included puppet-show dramas in which NPCs act out complex actions, either entirely or only partially prescripted. Edward Castronova was especially impressed when he saw the NPC Miss Danna, a school mistress, leading her seven students on a tour of Stormwind City in a prerelease version of World of Warcraft.[45] Lunette encountered Miss Danna and her students on her one visit to the city. They walked along as a group, with the children milling around, sometimes skipping (see figure 1.3). One of the boys fretfully asked if they had to walk any farther. Miss

Figure 1.3
Miss Danna, leading her seven students on a tour of Stormwind City.

Danna said, "Here we have the Cathedral of Light, the center of spiritual enlightenment here in Stormwind." Another boy asked whether this was the place the paladins train. She replied, "Yes, that is true. Paladins and priests alike train their skills and research great truths behind the walls of the Cathedral." The first boy complained that his feet hurt. When Lunette entered the cathedral, a functionary standing just inside recognized her class and exclaimed, "Greetings, priest!"

A piece of street theater is enacted occasionally in the bazaar of Silvermoon City, when two rebel ideologues, Priest Ennas and Lyria Skystrider, harangue their fellow Blood Elves like soapboxers in London's Hyde Park. Ennas decries the excessive use of magic that ruins the environment and threatens the very destruction of the Blood Elves if pursued without limit. Skystrider decries the unholy alliances with Orcs and the Undead, trusting previous enemies who could betray them at any moment. Members of their skeptical audience praise the wonders magical technology has provided, but Ennas reminds them of the cost and says, "We have all been blinded." When another member of the audience asks if they are being called traitors, Ennas answers, "The magisters are the traitors! They have sealed our doom." At this point, one of the ruling magisters arrives and casts a spell on the two rebels, transforming them into loyalists who parrot the magisters' party line.

Some innovative computer scientists have been developing technologies to give NPCs more complex and realistic behavior, based on such approaches as machine learning. For example, my colleague Mary Lou Maher and her student Kathryn Merrick have designed NPCs that evolve, adapt, and exhibit curiosity toward new experiences.[46] However, in many contexts human players may find dumb NPCs more manageable, especially in cases when they face a whole swarm of them and their interactions create nearly unmanageable complexity. Fellow human players can provide much of the behavioral richness desired in social interaction, so the need for sophisticated NPCs may primarily be limited to single-player games and educational virtual worlds in which the NPCs teach humans. An exception would be NPCs that play key roles in the legends and mythology of the virtual world.

Thrall, leader of the Orcs, is a perfect example. Members of the Horde can meet him in the throne room at Orgrimmar, where he originates a few quests. He stands up, speaks with dramatic gestures, and gives a few quests, yet one wishes for more. Thrall is a complex and prominent character in the WoW mythos, featuring in two of the novels. In *Cycle of Hatred*, by Keith R. A. DeCandido, Thrall restrains the Orcs from breaking their truce with the Alliance, even after apparent provocations, because he possesses a measure of trust for Lady Jaina Proudmoore, who rules the nearby Human city of Theramore.[47] Thrall is loyal to his own people, the Orcs, but he is able to see things from the perspective of other groups and to imagine a higher level of loyalty, to principles that might unite all intelligent beings.

Christie Golden's novel *Lord of the Clans* is what literary critics call a *bildungsroman*.[48] This German word refers to a novel that chronicles the psychological and moral development of the protagonist, who in this case is Thrall. Orphaned in infancy when his noble parents were assassinated, Thrall is raised by the master of Durnholde Keep, Aedalas Blackmoore, who is the Human administrator of the system of internment camps that held Orc prisoners after the Second War. This was no act of mercy on Blackmoore's part, but his scheme to create a superior gladiator by training Thrall in all the skills of combat. By the very act of naming him Thrall, Blackmoore sought to brand him forever his slave. But during his upbringing, Thrall learned mercy and honor from the sergeant who tutored him, and kindness from Taretha, daughter of the servant ordered to house him. Eventually, after Thrall has become the most formidable warrior in the service of Blackmoore, Taretha helps him escape. In a series of raids, he liberates many of his people and establishes the core of the eventual Horde. When his forces surround Durnholde, and he honorably requests the release of the remaining Orcs, Blackmoore answers him by delivering the severed head of Taretha.

Thrall does display a measure of autonomy in some high-level quests, such as one in the Caverns of Time that depicts his escape from Durnholde Keep. After a team of players releases him from a prison cell, he runs upstairs, dresses in battle armor, then attacks one after another of the Humans barring his way. Just after he has passed through the main gate, he is confronted by a mounted officer. After defeating this enemy, Thrall mounts the man's horse and rides it to nearby Tarren Mill, where he searches both the church and the inn, seeking Taretha (see figure 1.4). Although thoroughly scripted, the action permits much variation, depending on how the battle goes between the rescuers and the captors. The player may never be under the illusion that Thrall is a real person, yet the richness of the story and the complexity of the events provide a credible vision of reality.

Epilogue: A Warrior's Mission

Tarkas, an Orc warrior, is a member of the Horde, like Incognita. Indeed, the Horde was originally an amalgamation of Orc clans who invaded the world in the First War, whereas the Forsaken broke away from the Scourge and joined the Horde only near the end of the Third War. The high point of his life was when he met Thrall, the Horde leader, who sent him on a mission to infiltrate the Burning Blade sect of the Shadow Council, a secret society whose devious plots had provoked the First War. Thrall succeeded in becoming a spy within the Burning Blade, then carried out quests in Ragefire Chasm, both directly on Thrall's order, and as a covert Thrall operative within the sect.[49] To complete his complex missions in this monster-infested underground dungeon, he of necessity participated in three

Figure 1.4
Taretha and Thrall, meeting for the last time, at Tarren Mill.

separate five-person incursions, thus cooperating with a dozen other members of the Horde. After completing every last one of the assigned tasks with honor, he reported back to Thrall, and then disappeared. If Tarkas is under deep cover on a new series of dangerous, secret missions for Thrall, we may or may not ever see him again. Thinking that he would still be in the twenties levels, we are keeping an eye on Fray Island, a special training base for level-30 warriors off the east coast of the Barrens, in case he goes there for a fighting challenge called the Affray. We feel sure he would greet us with the Orc shout of victory: "Lok'tar!"