

Praxis

Social dimensions of expertise in *World of Warcraft* players

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[0.1] *Abstract*—Expertise development in the massively multiplayer online game *World of Warcraft* (Blizzard Entertainment, 2004) depends greatly on a player's use of social skills to gain access to expert player groups and accrue social and cultural capital. Drawn from ethnographic research, this paper maps out various forms of expert practice and highlights the social aspects of game play that often eclipse the importance of game-mechanics knowledge. At the time of this research, playing *World of Warcraft* and developing expertise in the game happened roughly within a two-stage process: (1) *leveling up*, or advancing one's character or avatar while learning the mechanics of the game, and (2) drawing on social capital gained during the first stage to join a group of up to 40 players to partake in high-end or endgame content.

[0.2] *Keywords*—Digital game; Ethnography; Expertise; Games; Learning; MMOG

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1. Expertise understood through ethnography

[1.1] A recent increasing interest in the use of digital games for education has included a look at designed games or virtual environments for specific content learning (Holland et al. 2003) as well as a look at what players can learn from non-education-specific games (Prensky 2000; Gee 2003). Researchers in the latter field argue that there are certain processes (such as trial and error methods found in inquiry-based activity) to be learned through playing in a rule-based system that may outweigh subject area knowledge acquisition. Yet other researchers look at game players and their literacy practices (Hawisher and Selfe 2007). This increasing interest among educational researchers in digital games is part of a larger scholarly movement that includes humanistic debates on whether games are essentially narratives, allowing for literary analyses, or essentially systems with goals and constraints, begging for process-oriented analyses, and sociological/anthropological examinations of the culture and players around games (note 1). I take a cue from this latter movement to reframe educational inquiry into the learning that happens with digital games by considering the social settings in which learning occurs. When one thinks about learning, it cannot

be disassociated from specific contexts, and in fact, learning is only meaningful if it helps people participate in their activities of choice. One way to examine the learning trajectory is to look at expertise development.

[1.2] Expertise development is not limited to professional or classroom settings and may occur in all the domains of activity in which people participate. In other words, one can be an expert outside traditionally considered domains, and looking at expertise development in these various settings is important for understanding consequential learning across settings. This way of looking at the development of expertise considers it a sociocultural process rather than an individual experience. In other words, individuals participate within a larger social context, and acquiring expertise is, as Collins and Evans (2007:3) note, "a matter of socialization into the practices of an expert group." As Bell and Bricker (forthcoming) further note: "Learning is therefore deeply bound up in an account of expertise development because one must learn what expertise means within the confines of the groups to which he/she belongs, learn what practices and other, possibly tacit, understandings are associated with that expertise, and learn which networks of people and resources are best able to socialize one into these practices and understandings."

[1.3] Other educational researchers have looked at "possibly tacit" forms of expertise using ethnographic methods (Lave 1988; Hutchins 1995; Goodwin 1994). The social and material aspects of expert practices need to be directly observed to get an accurate picture of the interaction that goes into making expertise. This is similar to cultural or social anthropology, which considers *culture* as social relations of meaning-making and not just embodied knowledge in individuals. Boellstorff (2006:31) states:

[1.4] If culture, in Goodenough's (1964) terms, "consists of whatever it is one has to know or believe in order to operate in a manner acceptable to its members," then it is hard to explain why men and women, who both can operate acceptably, are nonetheless unequal. Rich and poor people can both speak language, but framing culture on the model of a language elides issues of inequality that can be found in most cultures worldwide. In game studies to date, the relative absence of feminist, political economic, queer, and other theories of culture is striking, particularly given the importance of profit, consumerism, and capitalism more generally in gaming.

[1.5] The idea that learning and expertise development occur within particular sociocultural settings complicates educational research, since it is therefore important to understand how people within these nontraditional settings display and develop expertise, using their own contextualized notions of what constitutes legitimate practice. On top of this, it is helpful to participate in local expert practices to better understand their meaning and value from real experience.

[1.6] In an effort to do this, I participated with and write about a group of players in the massively multiplayer online game (MMOG) *World of Warcraft* (WoW; Blizzard Entertainment, 2004). I will describe WoW more fully in the next section, but for now it is enough to know that it follows a tradition of role-playing games loosely based on *Dungeons & Dragons* (TSR, 1974; Wizards of the Coast, 2008) set in a Tolkienesque fantasy world where players control heroic characters who gain experience and become more powerful through questing and killing monsters. I was a fellow player before I had any intention of studying the game or its players, and my eventual research participants saw me as a comrade-in-arms rather than as an observer. After playing WoW for a while, I came to realize this was a site where people attach deep meanings to their activities and experiences with the game and other players. It became clear that social relationships and connections have a profound effect on an individual player's experience with the game and the social and cultural world of the game make playing it feel very different than playing a single-player game.

[1.7] For example, access to in-game content is often limited by a player's ability to align him or herself with a larger group of expert players, since at higher levels, monsters and quests are not easy enough to overcome alone. This, in turn, depends on successful networking and possessing a high enough reputation, similar to what Jakobsson and Taylor (2003) saw with successful players of *EverQuest* (Sony Online, 1999), an MMOG that preceded WoW. Access also depends on the possession of social and cultural capital (Malaby 2006). These gateways to expert groups are not clearly revealed in existing literature based on survey data such as the research of Ducheneaut et al. (2006). Through longitudinal census data, they found that players tended to form more groups once they had reached level 55 (at the time, level 60 was the highest a character could be in the game). They write: "Therefore WoW seems like a game where the endgame is social, not the game as a whole. One player summarized this situation nicely by saying that WoW's subscribers tend to be 'alone together:' they play *surrounded by* others instead of *playing with* them" (410).

[1.8] There is no doubt about the usefulness of these large-scale surveys, and in fact they complement other methods very well as a way to triangulate and validate findings. Yet, Ducheneaut et al. did not capture the ways players actually group together and the barriers to entry that prevent some players from finding stable groups when they reach the higher levels. I was able to see and experience these barriers firsthand by reaching these higher levels and facing the real difficulty of joining and forming groups. In fact, I only became privy to the endgame stage of *World of Warcraft* after playing for over a year and attempting to join a group for over half a year.

[1.9] Ducheneaut et al. also don't capture the ways in which players may communicate with others through methods such as in-game chat channels or out-of-game voice chat with third-party software or telephones. In other words, players often find themselves mired in a myriad of different communication and copresence practices even when their characters are neither physically in the same game spaces nor in the same in-game group. These are details that were made clear to me through ethnography.

[1.10] Expertise development in *World of Warcraft* is not limited to an individual player's ability to grasp the underlying mechanics of the game. The social dimension—social and cultural capital, social networking, access to expert player groups—plays a tremendous role in whether a particular player is successful and can engage in the various seemingly equally accessible game activities. Playing *World of Warcraft* occurs in roughly two stages: (1) progression through more forgiving early game content and (2) engaging in technically difficult endgame content. Both stages include social elements to success. Expert game play requires complex online and off-line interactions, which are determined by the game stage. Learning and participating in these expert practices define expertise.

2. A *World of Warcraft* primer

[2.1] As stated earlier, *World of Warcraft* is set in a fantasy world full of exotic locales, aggressive monsters, and glory to be had. Players create a character to play by choosing its class (warrior, priest, etc.), race (human, orc, etc.), and sex (figure 1). Character class and race determine his or her initial attribute values (strength, agility, etc.) and the available abilities or actions (such as "Sinister Strike") he or she can perform (figure 2). As a player journeys through the land with his or her character, completing quests and defeating monsters, the character accrues *experience points*, or XP. After a certain amount of XP, the character advances an experience level and becomes more powerful through a rise in his or her attribute values. Additionally, the corpses of defeated monsters can be searched for valuable items (known as loot) that may help characters outfit themselves and be better prepared for future encounters.



Figure 1. World of Warcraft character creation screen featuring a male orc rogue. Summer 2006. [View larger image.]



Figure 2. World of Warcraft game interface with character panel and agility tool tip. The buttons on the bottom left represent different abilities that can be activated using hot keys (1 through =). Summer 2008. [View larger image.]

[2.2] During my data collection, WoW had a level cap of 60, which means that characters started out at level 1 and could only advance to level 60, at which point no more XP could be gained (note 2). This leveling-up process could be seen as the first stage of the game, where players learned the underlying mechanics of the game while making and strengthening friendships and social relations with other players. Expertise for the players I was with, however, was defined by partaking in certain practices during this stage over and beyond just leveling up. Sometimes players formed teams to tackle the same quests or defeat the same monsters. To do this, they joined a *party*, a group of up to 5 characters, or a *raid*, a group of up to 40 characters. Once reaching level 60, players found that the only way to improve their characters was to join a raid that went to endgame dungeons to kill the monsters within for the loot they dropped. This endgame could be seen as stage two of the game, and players generally needed to draw on the knowledge and social relationships formed in stage one to

succeed. In other words, they needed to use the social networks and social capital to gain access to endgame groups. Once formed, these expert groups also needed to learn how to work collectively and coordinate with each other on team-based activities (Chen 2009).

[2.3] It should be noted that looking at expertise development in these two stages is relatively artificial because most players were involved in many activities and group memberships throughout their game-playing lifetimes. Many players, however, liken WoW to two different games, divided by the level cap, and treating these two parts of the game as two different stages with different player practices that emphasize different skills is useful for separating game rules or mechanics-based expertise from socially and culturally relevant forms of expertise. Players see rules-based or content-based knowledge as what defines expertise in WoW, especially in the first stage, but in actuality, partaking of expert practice defines expertise. Ultimately, if the gamers I played with wanted to succeed in their endgame or stage two endeavors, the importance of social networks and social capital far outweighed game-content knowledge.

3. Setting, group, and data collection

[3.1] *World of Warcraft* had about 6.5 million subscribers in the spring of 2006, the time of my research, and currently has over 11 million subscribers. The subscribers are divided up by region (North America, Asia, etc.) and time zone. Each of these zones has separate computer servers, each running a different instance of the game, so that each server has about 3,000 players. Blizzard Entertainment, the creators, decided to create different types of servers for players to log into, catering to different play styles. The server that some existing friends of mine and I joined was a North American role-play server, where players agreed to use character names that stayed within the fantasy lore of Warcraft. We chose a role-play server because players also agreed to restrict the content of their communication to in-game topics and limit their use of *l33t speak* or abbreviated shorthand commonly associated with texting or instant messaging. In reality, there did seem a tendency for more in-character talk and less *l33t speak*, but out-of-game references and abbreviated forms of communication still occurred, especially in private back channels and during moments where efficient, combat-specific talk (such as "rez pls") needed to happen. Our assumption was that less *l33t speak* made for a more mature player base that valued effective communication skills.

[3.2] In the spirit of joining a role-play server, I created a male orc rogue and thought of a back-story featuring him as a "stabby stabby," cutthroat character who had reluctantly joined the Horde in its battle against the oppressive Alliance. My

friends and I quickly formed one of the server's first *guilds*—an in-game affiliation of characters that let players more easily cooperate with others while playing. In the game, we (that is, the guild) had our own chat channel and interface panel to help us see who else was online, so we could form groups or share newly discovered information. Out of the game, we created our own Web site, with forums where we planned play times and events, discussed strategies, argued about character strengths and weaknesses, made "your mom" jokes, and posted links to *World of Warcraft* machinima and Internet memes.

[3.3] The first few months of my playing time were spent leveling up, completing quests, and learning the rules of the game. Over the course of playing, our guild gained members and reputation and formed alliances with other guilds. It is through one of these alliances that I was able to join a raid group for endgame content, about a year after I first started playing the game. I joined a newly forming 40-person raid group that met up each week to delve into the dungeon known as Molten Core for a period of about 10 months (October 2005 through July 2006). For the 8 months after I had leveled up but had not joined a raid, I participated in smaller five-person group activities in a sort of transition or training period meant to get powerful enough equipment for the larger high-end activities.

[3.4] I collected chat logs during my total *World of Warcraft* experience but have limited my research focus to the spring of 2006 when I was in the midst of Molten Core raiding. During this 3-month period, I also recorded video and audio of particular encounters in Molten Core so that I could analyze the in-game actions and our voice chat during them.

[3.5] Molten Core was a volcanic cave deep below Blackrock Spire, located in a fiery, barren landscape. The sounds of lava flows and rushing hot air provided steady background noise as we delved and fought the monsters inside. These monsters included a horde of generic monsters like rocky Molten Giants and two headed Core Hounds (figure 3) and several big "bosses," unique monsters with carefully scripted combat sequences, providing players greater technical challenge, with names like Majordomo Executus and Ragnaros. Like all *World of Warcraft* monsters, each monster in Molten Core had a set of abilities they used when fighting. For example, Molten Giants have a Stomp ability that damages everyone around them. Part of successfully raiding a dungeon meant learning effective approaches to each encounter. For 7 months, we met twice a week for about 5 hours each session, and then for 3 months we met just once a week as we became more efficient in our monster killing. Each week we would attempt to kill as many monsters as possible before the dungeon reset every Tuesday. That is to say, every week we would start anew, and only after doing this for 7 or 8 months were we able to clear the dungeon completely.



Figure 3. A view of Molten Core, a dungeon found in World of Warcraft, and the monsters within including Molten Giants and Core Hounds. Summer 2006. [[View larger image.](#)]

[3.6] Over the months, the membership of this raid group fluctuated. We had a core of about 20 players from several guilds who had showed up every week since the formation of the group, another pool of 30 or 40 who were regulars for 2 or 3 months, and another 20 or so who showed up either just once or sporadically. On any given night, we would start forming up about an hour before actually going into the dungeon. If we were short 40 players that night, we needed to invite others who were not regulars by having raid members ask their respective guilds if anyone was available to join us. Often a player/character was invited or allowed to join a raid group only if he or she had a character class that was underrepresented in the existing composition of the raid. Skill was not the only factor, however, as it was clear that preference was also often given to players who were friends with or had established relationships with other members in the raid group. In other words, to be invited, players had to possess enough social capital with other members of the raid group. Once invited, it was assumed that newcomers would need a short training period to adjust to the norms and practices of the group.

4. Stage one: Leveling up

[4.1] Expertise depended highly on social interaction, yet many players held onto traditional notions of expertise and saw expertise while leveling up as defined by a player's ability to kill monsters efficiently. This necessitated knowledge of the multitude of actions available to a particular character class and the underlying math behind those actions. In other words, to these players, an expert had to be able to recognize and understand the game mechanics under the narrative. This essentially is what defines expert status in any single-player game: games are inherently systems of rules that need to be understood to win. *World of Warcraft*, however, is a multiplayer game, and therefore it provides a social setting where success is dynamically defined through consensus on expert practice. This was new for many of

us, who had spent most of our gaming lives playing single-player games. In fact, the game presented different players with hugely varying experiences, much of it depending on their ability to navigate the social world and gain access to expert groups, a process initiated in this first stage of play.

[4.2] With WoW, as with most digital games, a player can go about learning the rules in different ways. The focus for new players tends to be on solving quests and leveling up their characters. To do this, it is possible to simply interact directly with the game and use whatever the game provides for solving quests and killing monsters. It is much easier, however, to reference third-party material like online quest guides to learn how the game works. Many players today, for example, reference Web sites such as Wowhead (<http://www.wowhead.com>) and Thottbot (<http://www.thottbot.com>) to read about quests and to plan an efficient process for completing them. Wowhead and Thottbot are both community driven in that the hints and tips for each quest or item listing are written as comments by users of those sites. The use of these sites is considered expert practice. *World of Warcraft's* lead designer confirmed this when he said, "The people that don't go to Thottbot are the casual players" (Edge Staff 2006). That is, supplementing the in-game resources with third-party tools is the norm for expert or hardcore players, and nonexperts, or casual players, tend just to use what is available in the game. I think this is an early example of expertise being socially dependent, as usage of these sites is propagated through word of mouth. Casual players or players who do not communicate much with others could be oblivious to these outside resources.

[4.3] When my guild first began to play, these sites did not yet exist. In fact, our experiences in those early days were very different and filled with a sense of new exploration and discovery. By the time we hit level 40 or so, Thottbot came into existence, and its use became our standard whenever we were unclear about new quests, but only after we attempted to discover for ourselves how to conquer them. In the early days, the other guild founders and I also tended to group together to work on shared quests as a party. Sometimes we would join a party together even though we were in different game regions and working on our own separate quests or killing different sets of monsters. We did this so we could use the party chat channel, making communication easy across great distances, akin to a radio channel or an Internet relay chat (IRC) channel. The ability to work on different quests simultaneously allows players to gain levels at different paces, accommodating varying schedules.

[4.4] Being able to quest alone or in a small party also simplifies monster encounters because it is usually best done by *spamming* certain abilities: while in a small party, each player focuses on whatever role their character class was meant to play. A warrior, for example, is meant to take the brunt of the monster blows (called *tanking*),

while a priest is supposed to heal the other party members, and a rogue is meant to focus on dealing as much damage per second (dps) as possible. An able player knows which abilities are efficient at tanking, healing, or dps during most situations. Learning about these abilities when leveling up for the first time is usually a process of trial and error. Characters can learn new abilities at every even-numbered level, which can then be tested in future encounters to get a sense of their usefulness. Players can then build mental models of the combat mechanics underlying the game. I remember going to an in-game area, the cage found in Gadgetzan, for example, with a warrior friend to test out different abilities, weapons, and shields while dueling each other to help us determine which combination of items and abilities was most effective and to help us understand the underlying math of the game. Our mental models did not need to be perfect, though, as there is a lot of lenience in the monster fights during this first stage of WoW. Successfully killing monsters and leveling up, in other words, depends on a minimum knowledge of game mechanics.

[4.5] When my guild and I were leveling up our second characters, common practice was to use third-party add-ons or extensions to the in-game interface that had not yet existed for our first characters. Most add-ons reveal some of the underlying mechanics of the game. Blizzard Entertainment has always allowed the use of these add-ons—found on clearinghouse Web sites such as Curse.com and WoWace.com—by including a way to edit the user interface through a simple scripting language. For example, many players use an add-on that displays information about the math behind a particular ability when one hovers the mouse over that ability (figure 4). This helps players evaluate and determine the effectiveness of their various abilities and plan accordingly.



Figure 4. World of Warcraft game interface showing the Sinister Strike ability and the underlying math involved as revealed by a third-party add-on. Other add-ons change the user interface (compare with figure 2) such as button position and a top bar keeping track of various pieces of information. Summer 2008. [[View larger image.](#)]

[4.6] Additional add-ons are often used by experienced players to make fights more transparent. Many of these player-created add-ons help lessen the "cognitive load" (Sweller 1988) a player needs to maintain his or her mental model of the fight by visually displaying relevant information that the player can reference quickly, thus allowing the player to concentrate on decision making. A typical fight from this leveling-up stage of *World of Warcraft* might have featured many of these tools (figure 5).



Figure 5. Example of a solo fight in *World of Warcraft*. Individual skill and understanding of the game was all that mattered here. Note the use of third-party add-ons that keep track of things like active abilities (*Slice and Dice*, *Lightning Bolt*) and the current health of both the character and the monster (a *Deadwind Ogre Mage*). Summer 2008. [[View larger image.](#)]

[4.7] Since each player needs to understand the system, even if just in a gross sense rather than exact numbers behind the different actions he or she could perform, this first stage of *World of Warcraft* can be viewed as one of individual cognition. Through the process of leveling up, players get a sense of the effectiveness of all the different abilities for the particular characters they are playing, so by the time they hit level 60, they could loosely be deemed competent players. This does not necessarily make them expert players, however, as it is actually relatively easy to level up. In other words, it is difficult to determine expertise by simply looking at the level of a player's character. Instead, using third-party add-ons and outside Web sites is a good indication of expertise as it is an indication of being able to draw on skills and resources beyond the ones provided by the game, something that was defined by the player community as being expert practice.

[4.8] Leveling up to 60 takes a rough average of 2 or 3 months for people who play about 40 hours a week and are leveling their first character. Meanwhile, players gain reputation and social capital and build on their social networks during this leveling-up process through interacting with other players whom they come across while traveling

the lands. By the time players hit level 60, they have built up a pool of friends they can call on for help or company, as well as a list of players to avoid. Players can designate other players as friends, which then puts their names on a list within the game interface that can be used to quickly see if any of them are online (figure 6). Working together in a party, also known as *grouping*, is the most effective way to determine whether another player is competent and worthy of being placed in the friends list. In this way, players can display expertise through their performance, rather than just giving evidence of the use of add-ons or reaching a high level.



Figure 6. World of Warcraft friends list, part of the social panel built into the game interface. Fall 2008. [[View larger image.](#)]

[4.9] Grouping is also useful to determine how sociable other players are. In other words, no matter how expert a player is, it is possible he or she could be ostracized by certain gaming circles for lacking social skills or, even worse, being outright antisocial. Surprisingly, many players seem to be antisocial, as it is generally agreed that PUGging, or participating in a pickup group, is often an unsatisfactory experience since there is no guarantee that the players in the party would all be sociable or competent. Often, the sociable people are also the competent ones. It is assumed that players who take the time to be conscious of their talk and actions also pay attention to and learn from how others behave.

[4.10] Expert practice in this first stage of playing is the sum of using external Web sites and add-ons as well as learning the mechanics of the game well enough to play

in a team. These are all skills propagated through effective communication and networking. It is difficult to call the gamers who play WoW a single community of practice (Lave and Wenger 1991), since different local groups of players partake in different practices. This makes it difficult to say that all players learn through a process of legitimate peripheral participation (Lave and Wenger 1991) in which players learn the community's norms and practices through observation, trial and error, and apprenticeship. Yet for the gamers I played with, the development of expertise definitely came out of participating and building social capital through normalized communication practices. Learning about the various external resources available to players and about the pros and cons of certain character abilities is facilitated through participation in player communities, both in the game and out of the game. It was therefore extremely beneficial to find and participate in the social elements of the game.

5. Stage two: Raiding

[5.1] If the first stage of *World of Warcraft* depends on individual cognition and expertise, the second stage requires players to transition to a social and collective model of expertise. The social nature of WoW is important in both stages of the game, but endgame activities make it take on a new light and more clearly show how social interactions and social definitions of meaningful play contribute to success. This next stage mostly consists of dungeon-specific settings that require up to 40 players to team up if they are to defeat the monsters inside. It is useful, then, to have an established pool of players to draw from for this new activity.

[5.2] For some of the encounters our raid faced, it was crucially important to have specific character classes in the group composition. For example, it was usually necessary to have a warrior in the party to take the brunt of the blows from the monsters because warriors have high stamina and armor, and it was equally important to have people who could heal the other party members when they took damage. Some encounters were much easier with certain group compositions. This was very important for new bosses, when everything that could be tilted in the raid's favor mattered.

[5.3] Often, however, whom we invited was fully grounded in the various social networks and friends lists of existing raid members. In fact, we sometimes prided ourselves on trying to defeat certain endgame encounters without the optimal group composition. When we were first forming, our raid leader wrote: "As for class balance, I'm not going to tell people who to bring...We're here to have fun, not be forced to do something, after all."

[5.4] Instead, we were more open than some other raiding groups to making sure our friends were being included in our activities. This social obligation we felt was evidence of the importance of social capital and reciprocal friendships, but valuing social skills was not necessarily a given for all players. Some players needed to be primed for socialization. In response to troubles my guild was having with a particular player who was not fitting in, I wrote on my guild's discussion board:

[5.5] So, realize that *World of Warcraft* is NOT a single-player game. The things that make someone a good player in a single-player game do not hold the same value here. In a single-player game, for example, you could concentrate on working the system and maximizing your efficiency in winning the game...In *WoW*, things work a little differently. The first thought most players have is that to be a good player and work well with a party is to know your class...I'd argue that it is only a part of what makes you a good player. This is because a MMOG is a social game. You have to deal with other people who may or may not be as adept as you. They have different personalities, goals, motivations...Sometimes they are having a really great day, sometimes a really bad day. All the players form a social network and community in which certain behaviors are considered normal and others deviant...So, my point is that just because you are good at your class, doesn't mean you are a good player...We value you as a player, not as a class.

[5.6] As stated earlier, however, the friendships we formed were, in part, due to successful displays of competence with the game. On top of this, we also had a wealth of common experiences to reference, and we had developed a shared culture over the months of play. Referencing "Barrens Chat," for example, elicited a collective groan from any person who had gone through the experience of leveling a character in the Barrens region (WoWWiki 2008).

[5.7] Our knowledge of game mechanics and the usage of add-ons from the first stage of *World of Warcraft* was a solid foundation, but raiding focused on highly technical boss encounters that were uniquely scripted with various events or phases in which bosses activated powerful abilities, and the group could only be successful if players learned to adapt and relearn the ways they played the game. The old method of spamming abilities no longer worked, because raid monsters hit back much harder than previous monsters. Only tanks could take the hits and survive, so their role was to maintain the monsters' attention or aggravation (aggro). Meanwhile healer classes needed to continually replenish the tanks' health while other classes dealt as much damage as possible to the monsters without drawing aggro to themselves (note 3).

[5.8] Similar to the "distributed cognition" that Hutchins (1995) writes about on a naval vessel among its crew and their material resources, the raid as a whole succeeded when simultaneous specialized actions were performed by players who may have only been knowledgeable about their individual roles. For Hutchins, the ship can be seen as an entity whose behavior is completed through collective action and distributed responsibilities. This distribution of specialized roles was built into *World of Warcraft* raiding through its use of specialized character classes. Thus, to succeed, raid members have to trust each other and be confident in each others' expertise and their ability to stay coordinated throughout a fight. This trust is such that the raid members identify with the group, treating the raid as a single entity.

[5.9] Successful simultaneous role-playing includes using specialized chat channels that only players of specific roles can see. For example, in my game play, general raid talk was done using the raid channel while all the rogues used a user-created channel called "madrogues" for talk about rogue-specific strategies. I am able to write about these various chat channels since, as part of my data collection, I subscribed to all the different specialized channels, not just the one for my character class.

[5.10] The talk in all of these channels included questions and answers, conjectures on different strategies, off-task joking around, and pleasantries. Most of this talk was done during planning before an encounter, followed by assessment and reflection time after the encounter. For example, when the raid group was first learning how to defeat Ragnaros, the last boss in Molten Core, preplanning took as much as an hour. This time was mostly spent listening to our raid leader and other players (who had read about or done the fight before) summarize the different phases of the encounter, where each type of character class needed to be standing at each phase, Ragnaros's various abilities and actions, and our instructions during those moments. During their summary, some players would ask clarifying questions or make suggestions for other strategies to use given our particular raid composition. In addition to this in-game preplanning time, we were expected to have read online strategy guides such as The Pacifists Guild's guide to Ragnaros, which is a good 14 pages long (note 4).

[5.11] Whether it was before, during, or after an encounter, the talk was full of task-specific lingo. Utterances such as, "Remember, ss target will change at Domo, but until then, your rezzer is to be sused at all times" made complete sense to our group of players. Like any group of people who spend a lot of time together on a shared activity, *World of Warcraft* players develop their own communication shortcuts full of activity-specific references. This is necessary both as a way of communicating efficiently and as a way of affirming and strengthening our cultural production. To be a successful player means participating in a larger shared culture. Players are indoctrinated to WoW's culture during stage one, and their display of cultural

knowledge during stage two becomes more a part of expert practice, though this, of course, is a rough, arbitrary distinction, as cultural capital is continually built on and displayed throughout the full course of playing the game.

[5.12] All this communication may have served to make the task of dungeon delving seem less like work. Unlike in stage one fights while leveling, players assume new responsibilities to other players in stage two fights. Consequently, these encounters have to be planned carefully and are serious business. Group fights while leveling need planning too, but not to the degree found in endgame raids. Physical position matters (figure 7). Often, for example, rogues need to be standing behind a monster's back, while mages and other spell casters need to be spread out around the fight's locus. Many endgame bosses have abilities that affect all characters in front of them or all characters in a tight bunch. This is unlike most nondungeon monsters, where a fight was often between just one character and the monster, and players can't get behind the monster as it would always be facing that one character.



Figure 7. *An overhead map—created outside the game—of Molten Core, a dungeon found in World of Warcraft, showing example positions raid members took while fighting Ragnaros, the large icon in the middle. Each smaller icon represents a player, with the type of icon indicating character class. Created summer 2008, but depicting Molten Core raiding in 2006. [[View larger image.](#)]*

[5.13] Additionally, executing the same abilities used in a basic fight during a raid fight can often result in catastrophic failure. With rogues, for example, it's important to play a careful balancing game using good, steady damage rather than sharp spikes of damage, as is normally the case for preraid monsters. This is because spikes during a raid fight pose enough of a threat to a monster that it would decide to focus its attention on the character that had spiked. Each character class has to adapt to new parameters like these for raid encounters. Failure to do so results in death (figure 8),

making the rest of the raid a more difficult fight. If a critical number of characters die, the fight soon ends in a wipe, where all the characters die because they could not sustain enough damage before the monster(s) killed everyone. When this happened to my group, we would have to respawn or resurrect ourselves and try again, setting us back precious time.



Figure 8. An example of an unsuccessful raid fight with Ragnaros, the final boss in the *World of Warcraft* dungeon Molten Core. Spring 2006. [[View larger image.](#)]

[5.14] Given how varied the fights are in *World of Warcraft*, all successful players exhibit adaptive expertise (Hatano and Inagaki 1986) to some degree in that they are able to adjust to specific monster abilities and choose which personal abilities are most suitable to execute. For raiding, however, the adaptation necessary is in how players think about fights, including a change in player expectations and stance. Some players are able to adapt faster than others.

[5.15] Indeed, the step up in difficulty of boss encounters can sometimes be a shock for new players to raiding, and part of socializing new players includes aligning them to new attitudes. One player wrote on my guild's forums about frustrations over failing at some early raid encounters: "Now I hope no one's getting frustrated. This is how raids go. It's normal: You fight and fight and fight until your gear is broken, repair and do it again. Once you finally get it down you can farm them for loots ([note 5](#)). It can take a while to master these encounters but we're doing good work!"

[5.16] To help do this "good work," my raid group used a common set of third-party add-ons. One add-on, for example, kept track of the threat each character posed to whichever monster was being fought at any given time so that we could be sure not to generate more threat than the main tank. Another add-on kept track of the various abilities boss monsters had available and notified raid members when those abilities were being activated so that we could take appropriate countermeasures. The use of add-ons was part of our common expert practice and exemplifies how we used

material resources to help with our memory and decision-making processes. In other words, our responsibilities and memory were distributed among our raid members and our collective and individual material resources. Installation of these add-ons was required for any new players if they wanted to participate in the raid.

[5.17] Access to expert groups in *WoW* is done mostly by leveraging existing social bonds. Players' subsequent experience with tasks that depend on position and synergy of distributed specialized roles is the core of the endgame expertise development. Part of this development is an induction into a normalized way of communicating—framing work was done by experts to help align teams to new expectations on in-game encounters. Players who do not have or could not gain access to these groups are dependent on PUGs and, I surmise, are less likely to keep a sustained interest in the game. It is through these expert groups that players share knowledge about new add-ons and new strategies to use on raid encounters.

6. Expert practice

[6.1] The social nature of *World of Warcraft* is a given, but a player's experience depends more on these social elements than his or her personal game-content knowledge. Thus, mastering *WoW* is more than simply mastering a particular character class; it also means being able to move in various social circles and communicate effectively. It means being able to use third-party tools and other resources that have been taken up by expert players as common practice.

[6.2] Ethnographic methods helped me immensely in learning what common practice was. In addition to using certain add-ons, a new practice when I joined was the use of outside Web sites to discuss in extreme detail the strategies, abilities, and effectiveness of particular ways of playing specific character classes and how to improve one's performance and value for a raid group. The theory crafting for rogues on Elitist Jerks' Web site (Elitists Jerks 2008), for example, is aimed at helping rogues maximize a steady damage stream specifically for raiding. The high-level talk found on this Web forum, with all of its shortcuts and jargon, is more readily understandable to people with an intimate knowledge of the rogue class. The best way to gain this knowledge is by playing the game as a rogue.

[6.3] Ethnographic methods were also useful in my research since I was studying a relatively new social group. *World of Warcraft* had only been around for a year, and the player community around the game was in its infancy. The early months felt like a new frontier to me and the gamers I played with. Social norms and etiquette had not yet stabilized, and players were still figuring out the underlying mechanics of the game. In the early days, for example, meeting another character in a remote locale in

the game was sometimes awkward. We had not yet established the proper way to greet each other or even if we were supposed to greet each other. This was exacerbated by being on a role-play server where it seemed as if, in keeping with the fantasy of the game, one would definitely at least say hello to someone found in the middle of nowhere. Sometimes it seemed obvious that the other character was working on common quest objectives, but it was unclear whether we should group up to do them together. I tended to befriend those who were receptive to greetings and talk, which might have slowed down their leveling but showed that they were willing to be social.

[6.4] The practices we participated in were constantly changing, affected by new information about the game, new developments or patches to the game (tweaking the rules slightly or addressing balance and fairness issues), and new players constantly joining the player base. By being there as it was happening, I had a window into the change in people's perception of the game and its emergent culture.

[6.5] I remember, for example, when the game first launched, the fishing trade skill was quite profitable, providing players with the option to take a much-needed respite from just killing monsters without feeling like they were wasting their time. Some players discovered that fishing in more lucrative areas was not limited by character level. In other words, level 1 characters could raise their fishing skill high enough to fish for rarer and rarer fish, and more importantly, other items would be caught on the line that they could then sell for huge profits. The developers thought this could be used to break the game's economic system, which emphasized an increasing income stream based loosely on character level. Rather than using fishing to complement other in-game activities, players could bypass or trivialize the main game by fishing. This was made even worse by a rapidly developing real-money trading market for WoW. That is, some players were trading virtual items and gold for real U.S. dollars.

[6.6] Blizzard Entertainment decided to devalue fish and make catching nonfish items much rarer. They also implemented level-bound tiers to the fishing skill, forcing characters to level up if they wanted to continue raising it. What was once a fun pastime, something quickly becoming a cultural meme, turned overnight into a trivial waste of time. At one point, my friends and I had even considered a guild name based on fishing. Today, we're glad we didn't do it.

[6.7] When I finally joined raids, I was blindsided by certain patterns in the communication practices of the group. The Molten Core raid group, for example, included about 20 to 25 percent women, yet chat logs show their contribution to communication was much lower than that. Unfortunately, I do not have a good explanation for why this was happening since I am still working on analyzing the data. I hope to uncover some of the reasons behind unequal participation among all the

players by doing a more thorough re08:17:40 PM Sat, Mar 14 2009 of my logs. What is becoming clear is that the lives of players online are entwined with their off-line lives, which makes my lack of record of players in their off-line settings one of the major limitations of my existing research. I do not know the extent to which players might bring with them issues from their everyday lives into the game, so in future research I'll explore the intersection between online and off-line space, especially with regard to access and social marginalization.

[6.8] What I have done, though, is experience player practice and get an insight into the distributed nature of raiding and expert practice. By playing, I could experience unequal representation and barriers to access firsthand. As I mentioned earlier, it took me about a year of playing before I was able to join an endgame raid group. This was largely due to the game setup, requiring 40 players to band together and play at the same time, sometimes for up to 15 hours a week. Many players could not find groups that matched their schedules. This frustration with the high-end raiding requirements meant that many players decided to stop playing once they got to level 60. These players are not captured in surveys that draw on current players as their pool of participants.

[6.9] The ability to gain access to an expert group, in this case, a learning, ultimately successful raid group, required an expertise in players over and beyond an ability to understand the underlying game mechanics. Instead, players needed to be able to draw on the social and cultural expertise they had developed while participating in the leveling-up stage of the game. A sustained second stage was only available to those who had formed enough friendships and navigated the right social circles to have enough connections with other players who wanted to participate in the same endgame activities. These connections were formed and strengthened by players' ability to demonstrate expert practice of using external resources and an ability to be sociable or, at least, not antisocial. After joining a raid group, players needed to learn and participate in new activities that defined expertise, such as focusing on role-specific actions and using common third-party add-ons for threat management.

[6.10] Understanding the social nature of *World of Warcraft* through ethnographic methods is crucial for mapping out an accurate picture of expertise development within the game. Learning with digital games in this case meant learning *with people* in a game where the game itself served as a setting or backdrop for group work. Gaining access to expert player groups and learning from them, accruing social and cultural capital, and building one's social network affect a player's learning trajectory far more than simply grasping the game's mechanics. Expertise development within WoW, then, is tied inextricably to a player's ability to learn social skills.

7. Notes

1. See, for example, the archives of the Digital Games Researchers Association (DiGRA) conferences (<http://www.digra.org>), gamestudies.org, or *Games and Culture* (<http://gac.sagepub.com>).
2. At the time of this writing, characters can advance to level 70. Likely, by the time of publication, characters will be able to advance to level 80. More evidence of games as a moving target for research and writing...
3. I describe what a fight in Molten Core looked like in Chen (2009).
4. Many strategy guides for the various boss encounters in WoW can be found on the BossKillers collaborative Web site (<http://www.bosskillers.com>). This site did not exist when my group was in Molten Core, but though rarer and harder to find, similar write-ups were online at the time. The Pacifists Guild's guide to Ragnaros (<http://pacifistguild.org/ragnaros>), which no longer exists online but can still be found using the Wayback Machine at the Internet Archive (http://web.archive.org/web/20071213075344rn_1/pacifistguild.org/ragnaros), was the main one most raiding groups referenced for the last boss in Molten Core.
5. The term *farming* is used when certain monsters are killed over and over again for the loot they drop.

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