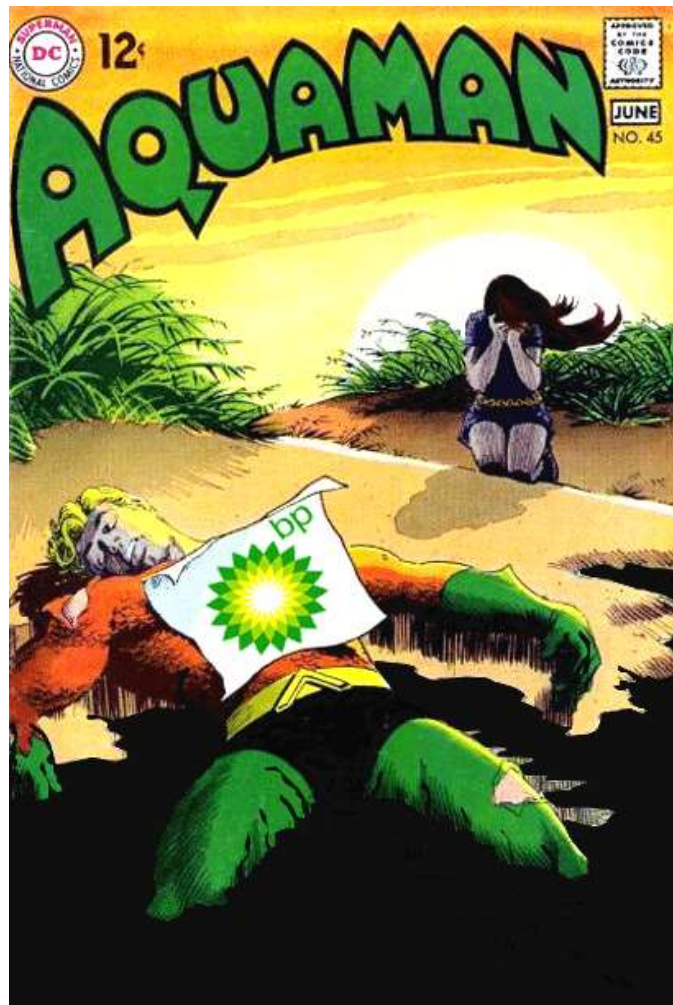


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see the game as a system and take a playful stance of trying, failing, revising, and retrying various tactics and strategies in order to become expert players and win.



*Figure 1.* Fake issue of *Aquaman* featuring the titular character's body lying on a beach dead. A sheet of paper featuring the BP logo lays face-up on his chest, and the shore is covered in black oil. A distraught woman, holding her head in her hands, kneels in the background. This serves to illustrate a remixed product, combining imagery from different cultural sources and news events to create new meaning. Original image by Nick Cardy "photoshopped" by Rob Kelly for his blog *The Aquaman Shrine* (<http://www.aquamanshrine.com/2010/05/sg.html>).



Figure 2. A screenshot of a raid battle in *World of Warcraft* showing various screen overlays through the use of third-party add-ons that some players used in order to understand and “read” the happenings in the 3D environment.



Figure 3. The same screenshot of a battle in *World of Warcraft*, this time modified with an external software program to label each screen overlay. Even with the labels, people without more detailed knowledge of WoW gaming have a hard time understanding what these third-party add-ons are showing..

## Description of Dissertation Chapters

Chapter 1, based on “The Social Dimensions of Expertise in *World of Warcraft* Players” (Chen, 2009b), represents an exploration of everyday expertise and how its development can be attributed to successfully accruing social and cultural capital. It also describes in more detail the benefits of ethnographic methods by painting a general overview of (a) leveling up and (b) raiding in WoW. This sets the stage for a strong series of points:





Figure 4. World of Warcraft character creation screenshot showing a male orc rogue.

During the time of data collection for this project, WoW had a level cap of 60, which means that characters started out at level one and could only advance to level 60, at which point no more XP could be gained. (The level cap at the time of this writing is now 80.) Eventually, most players discovered that to continue to advance efficiently, they needed to team up with other players who were working on completing the same quests and defeating the same monsters.



Figure 5. *World of Warcraft* user interface showing the character panel (inset) with a mouse-over tooltip detailing the Agility attribute and the ability buttons on the bottom-right with a tooltip detailing the Sinister Strike ability.

To team up, the player-character joined a *party*, a group of up to five characters. Once reaching the level cap, the only way to improve one's character was to join a raid group—composed of several parties, making a larger group of up to 40 players—that could go to high-end dungeons to kill the monsters within for the loot they dropped. For some of the encounters a group will face, it is important to compose the party or raid with favorable proportions of the different character classes. For example, it is often useful to have a warrior



*Figure 6. World of Warcraft screenshot from Molten Core, a fiery cave system full of monsters such as Lava Elementals, Core Hounds, Lava Surgeurs, and Molten Giants.*

Over the months, the membership of this raid group fluctuated. We had a core of about 20 players from several guilds who had shown up every week since the formation of the group, another pool of 30 or 40 who were regulars for two or three 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 a few 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. I did not analyze any chat data from non-regulars to the group, but I did look at online message postings from all players, as it was a public forum.





Figure 7. Player-created map taken from web strategy guides of Molten Core for the game *World of Warcraft*. Each dot represents a different monster. Clusters of dots represent monsters that would have to be fought in groups. Larger dots show the location of boss monsters.

The raid group met twice a week for roughly 7 months and then just once a week for 3 months as they became more efficient in their monster killing. Each session lasted about 5

was by randomly awarding raid members with loot, giving veteran raiders weighted chances of winning, and emphasizing the group's values of friendship over loot (Chen, 2009a).



*Figure 8.* Ragnaros, the final boss in the Molten Core cave system in *World of Warcraft*. Three rogues in the foreground, listening to the raid group discuss fight strategies, passed the time by cracking jokes.

I collected raid data in the form of text chat logs during the whole 10 month period (about 600 hours of chat). It should be noted, however, that I did not get human subjects

19:30:00.953 : [2. madrogues] Rebecca: good... poison up... assist wei	- 'good' refers to the fact that no Rogues said they have not done this fight. Even so, Rebecca clarifies our role—use poisons on our weapons and focus-fire on Wei's target.
19:30:02.484 : [5. madtankin] William: where is wallace tonight?	-madtankin channel for the Warriors. wallace is a character who usually comes to our raids.
19:30:07.703 : [Raid] Maxwell: Henry peels to Marcie	-role assignment
19:30:10.468 : [3. healsting] Drusella: *runs around like crazy people*	-Druids are getting a little silly now...
19:30:12.656 : [3. healsting] Sven: We could... DPS shaman, Holy Nova priests?	-more suggestions on turning certain healers into damage dealers instead
19:30:15.312 : [5. madtankin] Wallace: I didn't make it in time. Rawr!	-Wallace is still subscribed to the madtankin channel even though he is not part of the raid. These custom chat channels exist independently from any other channels in the game.
19:30:17.453 : To Lori: May I have a healthstone pretty please?	-Healthstones made by different Warlocks sometimes have different amounts of healing they can do (depending on how a player has 'spec'd' the character) which means they can be stored in one's inventory at the same time. In this case, I know Larry and Lori create different types of healthstones, so I've requested one from each.
19:30:17.687 : [Raid] Maxwell: Horace peels to Mary	-role assignment
19:30:19.640 : [4. soulburn] Lori: Les-for this fight you will be ssing Derek.	-what to do with that one soulstone that Lester has available

Figure 9. Example chat log with annotations that I later added to help make sense of the data.

When it seems appropriate, I write in the first person and refer to the raid group as *my* group. I may say that *we* accomplished certain goals rather than *they* accomplished the goals. I do this as a way to emphasize my role as a participant—as an actor in the network. Additionally, I may give a personal account of my change in thinking during our raiding activities.

I cannot possibly—no one can possibly—know what is going on in the mind of another person. Therefore, there is no way I can ever fully understand someone else and what





Figure 10. *World of Warcraft*'s in-game auction house.

While I was checking the Auction House, I asked Meep if he could wait 15 minutes, but I ended up making him wait for about an hour due to travel time (it took a good 10-12 minutes to fly from Orgrimmar to Gadgetzan<sup>16</sup> and then another 5 minutes to run over to the quest location) and going afk (*away from keys* or *away from keyboard*, indicating that I was not at the computer) for 30 minutes to take care of some offscreen, “in real life (IRL),” errands. After finally getting to the deserts of Tanaris and marveling at how oppressive the visuals and art design for the arid heat could be during my run, I met up with Meep. When I

<sup>16</sup> Key cities had game-controlled non-player characters called Flight Masters who offered player-characters a sort of airline service on the backs of wyverns that flew from city to city. This was much faster and less laborious than manual navigation by the player on foot or using mounted transport.





*Figure 11. 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 have changed the user interface such as button position and a top bar keeping track of various pieces of information.*

Additional add-ons were often used by experienced players to make fights more transparent. Many of these player-created add-ons helped lessen the cognitive load (Sweller, 1988) a player needed to maintain his or her mental model of the fight by visually displaying relevant information that the player could reference quickly, thus allowing the player to concentrate on decision making. In other words, becoming a better player meant continually

reassembling or rearranging the player's personal network of responsible objects—continually enrolling new resources into the network. A typical fight from this leveling-up stage of *World of Warcraft* might have featured many of these resources (see Figure 12).



Figure 12. 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).

list. In this way, players could display expertise through their performance, rather than just relying on their character level.



Figure 13. *World of Warcraft* friends list, part of the social panel built into the game.

In his ethnography of Linden Labs, Malaby (2009) describes the concept of *contingency* and how contingent acts—that is, actions that have a chance of failure—hold more value, generate more cultural capital, than less contingent acts. Displaying expertise through performance is essentially showing that one belongs to a particular cultural group by performing contingent acts. This was a sure way for WoW players to position themselves as experts. Character level was another form of cultural capital—institutionalized credentials





*Figure 14.* An overhead map—created outside the game—of Ragnaros's chamber in 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.

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 assumed new responsibilities to other players in stage two fights. Consequently, these encounters had to be





Figure 15. An example of an unsuccessful raid fight with Ragnaros, the final boss in the *World of Warcraft* dungeon Molten Core.

Given how varied the fights are in *World of Warcraft*, all successful players exhibited adaptive expertise (Hatano & Inagaki, 1986)—the ability to generate new procedures to solve novel problems—to some degree in that they were able to adjust to specific monster abilities and choose which personal abilities were most suitable to execute. For raiding, however, the adaptation necessary was in how players thought about fights, including a change in player expectations and stance. Some players were able to adapt faster than others.

Furthermore, monsters in WoW also have special abilities that they can activate against the players, and part of what we had to learn was the kinds of abilities to expect from each type of monster.



*Figure 16.* The first pair of Molten Giants, a raid encounter in Molten Core, the fiery cave system found in the game *World of Warcraft*.

To aid us in this coordination, each role in the raid had a specialized chat channel. For example, the healers had a channel in which they managed the assignment of healing and buff duties:

18:21:48.843: [3. healsting] Paula: how about Pod 1, 2, . . . Paula 3, 4, 5 . . .

and Peter 6, 7, 8? For DS buff

important to the group because we had established a norm of valuing players for their social skills rather than just game-content knowledge.

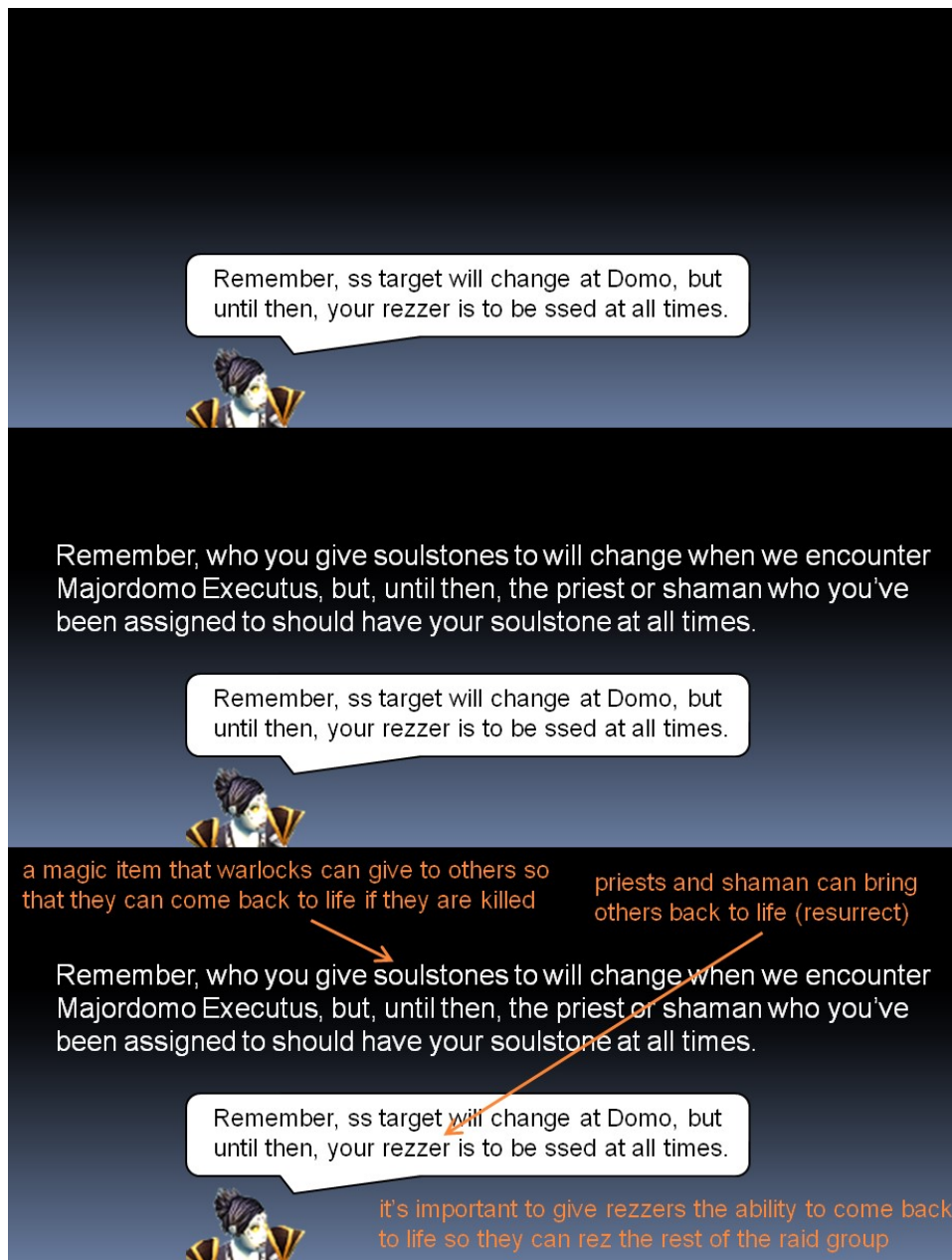


Figure 17. Unpacking text chat found in the game *World of Warcraft*.



*Figure 18.* Majordomo Executus and his eight guards, the second-to-last boss fight in Molten Core from the game *World of Warcraft*.

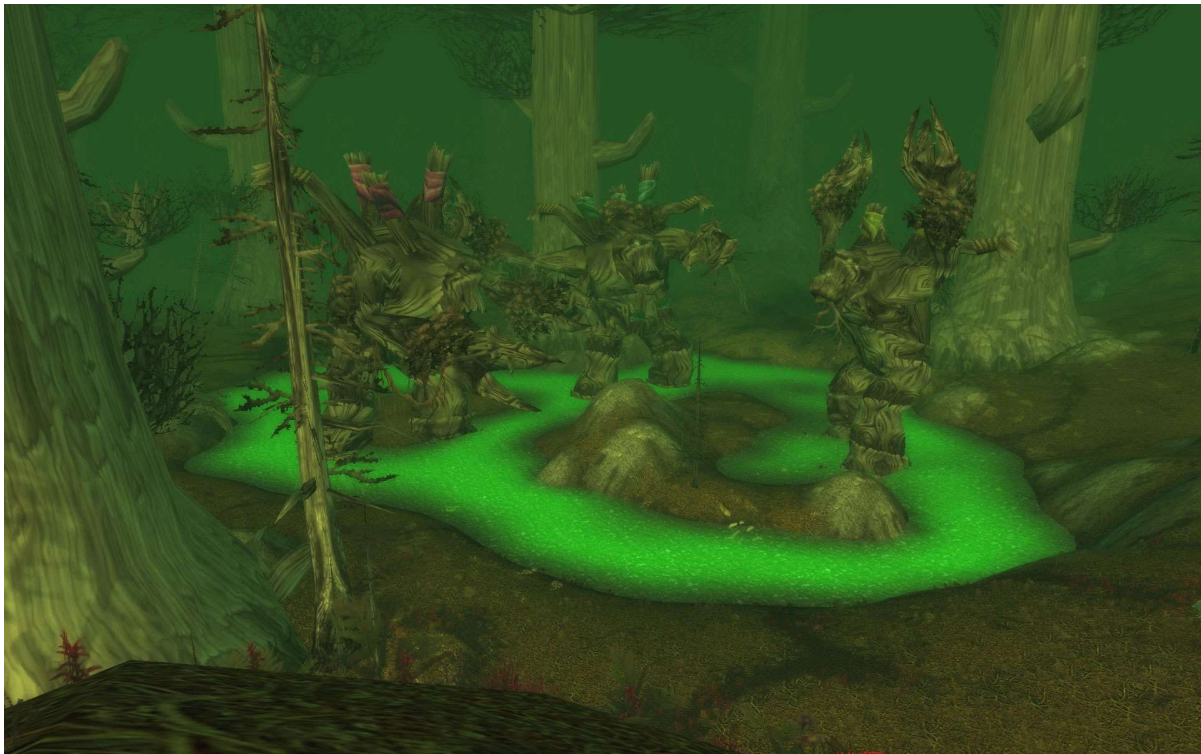
### **An Atypical Night in Molten Core**

In contrast to our good night that Friday, the following week on April 19, 2006, we had an atypical night in MC. It was atypical in that a series of events unfolded that caused us many wipes and generally gave us poor morale, which almost culminated in a *meltdown*, where enough raid members fervently opposed each other on an issue that irreparable damage occurred to their friendships, effectively disbanding the raid. I believe it started with having enough people in the raid feeling stressed about other things happening in their offscreen lives. For example, about 30 minutes before the raid session started, a member of my guild made it known that she was depressed and contemplating committing suicide. As an officer and friend, I was compelled to attend to her as best I could without knowing who she was offscreen. This meant I was engaged in a private conversation with her in-game, forcing me to miss some of the other chat that was happening.

We also decided that night to try using two different warriors as our MTs for the first time, and it was clear that the warriors who were not used to tanking were not sure where to



and continued killing Treants. After 3 minutes or so, I sent him a whisper<sup>43</sup> asking if I was right, but he never replied.

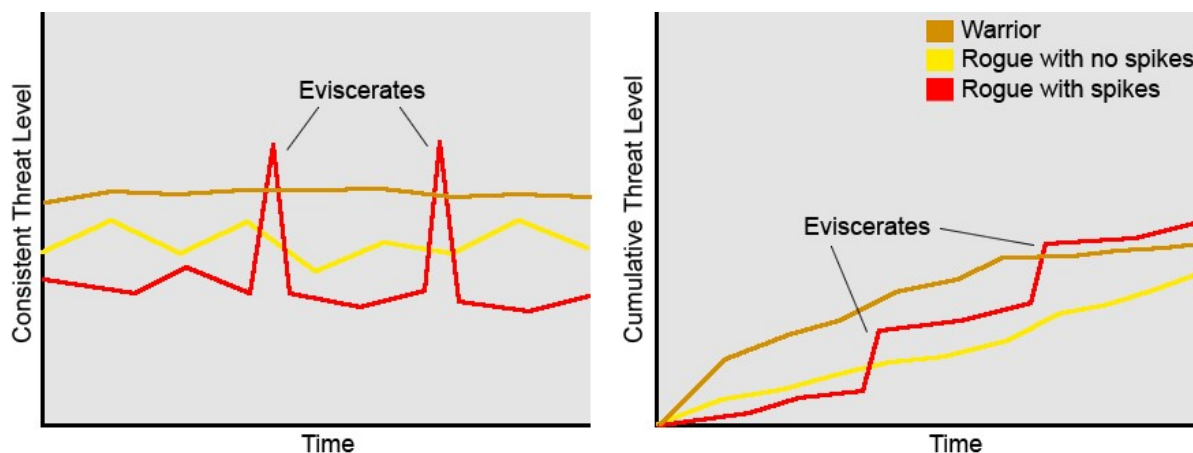


*Figure 19. The Felwood region in World of Warcraft.*

At the time I felt slightly jilted. Here was someone to whom I was being courteous, even considerate, but I felt he clearly did not want to talk to me; so much so, in fact, that he did not even want to acknowledge my help. The more I think about this, though, the more I am willing to believe he just did not have time to talk to me or he just did not understand the situation's social norms. It was possible he was having an off day. It was even possible he

---

<sup>43</sup> a personal message sent directly to a player who could be anywhere in the game world



*Figure 20.* Two hypothetical charts showing different concepts about how threat worked in *World of Warcraft* created to illustrate this chapter’s analysis. The chart on the left displays threat as a consistent level such that performing certain high-damaging abilities like a rogue’s Eviscerate would cause a spike in the graph that would cause monsters to aggro since those spikes surpassed a warrior tank’s threat level. The chart on the right displays threat as a cumulative value over the duration of a battle. Note that in this second view, the first “spike” is not enough to gain aggro.

Every character had a default attack that didn’t require any input from the player. The level of damage from this default or *white damage* (so called because it was displayed in white in the in-game combat logs) attack from rogues was determined by the speed of how often a rogue swung his or her weapons, which was determined by the speed factor or attribute of each weapon, multiplied by how much damage the particular weapons could do with each hit. The resulting number was known as the weapons’ damage per second or DPS, a term that, as mentioned earlier, had been co-opted as the name of the role rogues and other damage dealing classes assumed. So, the baseline in the graph in Figure 20 was actually a combination of the white damage plus the consistent damage from SS (a form of *yellow damage*, the color of damage coming from activated abilities in the combat logs).

All this lead up to our fight with the last boss in Molten Core, Ragnaros (see Figure 21). When we first encountered him, it was generally agreed upon by the rogues in the raid that we should stick with using SnD to maintain a consistent, predictable level of threat. As we were learning the fight, however, something completely new changed raiding in *World of Warcraft* forever.



*Figure 21.* Ragnaros, the last boss monster in Molten Core in the game *World of Warcraft*. The raid's skeletal remains littering the floor around him are good indicators of his size.

also changed who communicated with whom and about what, most notably allowing raid leaders to caution specific raiders about their threat generation. This effectively substituted knowledge-based trust in others with a technological advancement where trust or faith in other players' ability to manage their threat didn't matter. Yet, at the same time, KTM let us be much more efficient in our monster killing. We could ride the moguls much more effectively, thereby taking down monsters faster than we had been before, which also lowered the learning curve associated with new encounters.



*Figure 22.* A section of my user interface during a raid battle, showing various add-ons in use. KLH Threat Meter (KTM) can be seen on the left side, displaying the top ten current threat levels of various members of the raid group. Warren and Wendy, colored in brown, are the main tanks for the group. Roger, in yellow, is a rogue. Thoguht, my character, is in red only because the color red was used to display the player's personal threat. If this screenshot was taken on someone else's computer, Thoguht's threat level would appear in yellow like Roger's.

KTM is an interesting example of Latour's recognition that objects within an activity system may have multi-layered complex histories. The emergent network or arrangement of

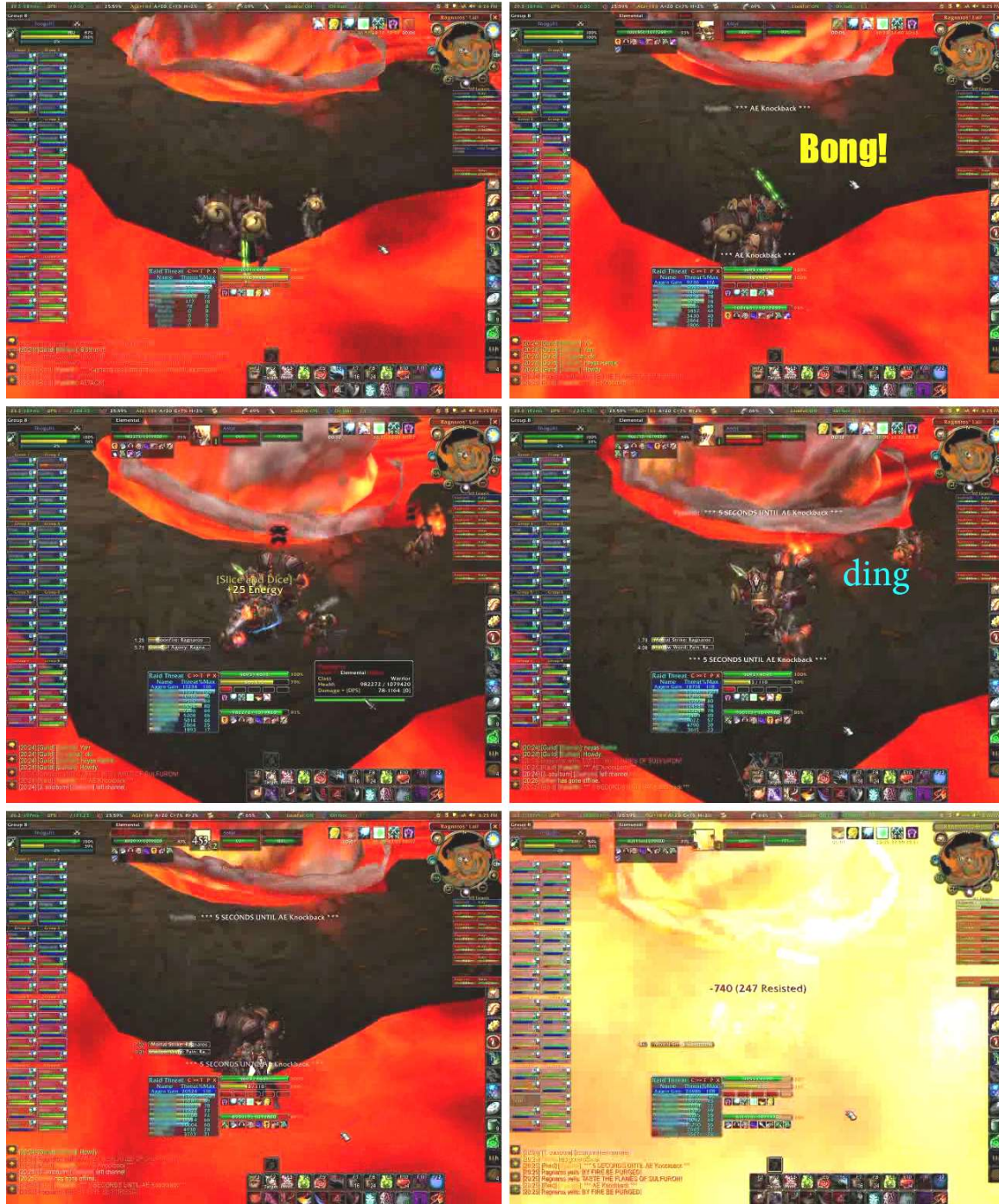


Presented next is a description of the Ragnaros encounter and how the raid group used KTM to diagnose a problem the raid was having with the fight on April 28, 2006.



*Figure 23.* Overhead map of Ragnaros's chamber in Molten Core, a fiery cave system in *World of Warcraft*, detailing the positions of players during the fight with Ragnaros. M1, M2, and M3 are melee positions. MT is where the main tanks stand. CP1 and CP2 are the collapse points for the players during Phase 2 of the Ragnaros fight.

The fight with Ragnaros had two phases to it. In the first phase, he emerged from a pool of lava in the center of the cavern chamber and engaged in melee combat against those close to him while throwing fireballs at raiders who were at range. In phase two, he hid under the lava surface and sent eight of his Sons of Flame to battle us instead. This process was repeated until either he died or killed all of the raiders. Here's a more detailed summary of



*Figure 24.* The diageitic and non-diageitic elements of the Ragnaros fight for a melee DPSer. The melee stand in position and move forward when they hear the “Bong!” sound provided by a third-party add-on, attacking until they hear a “ding,” when they move back until the next “Bong!”

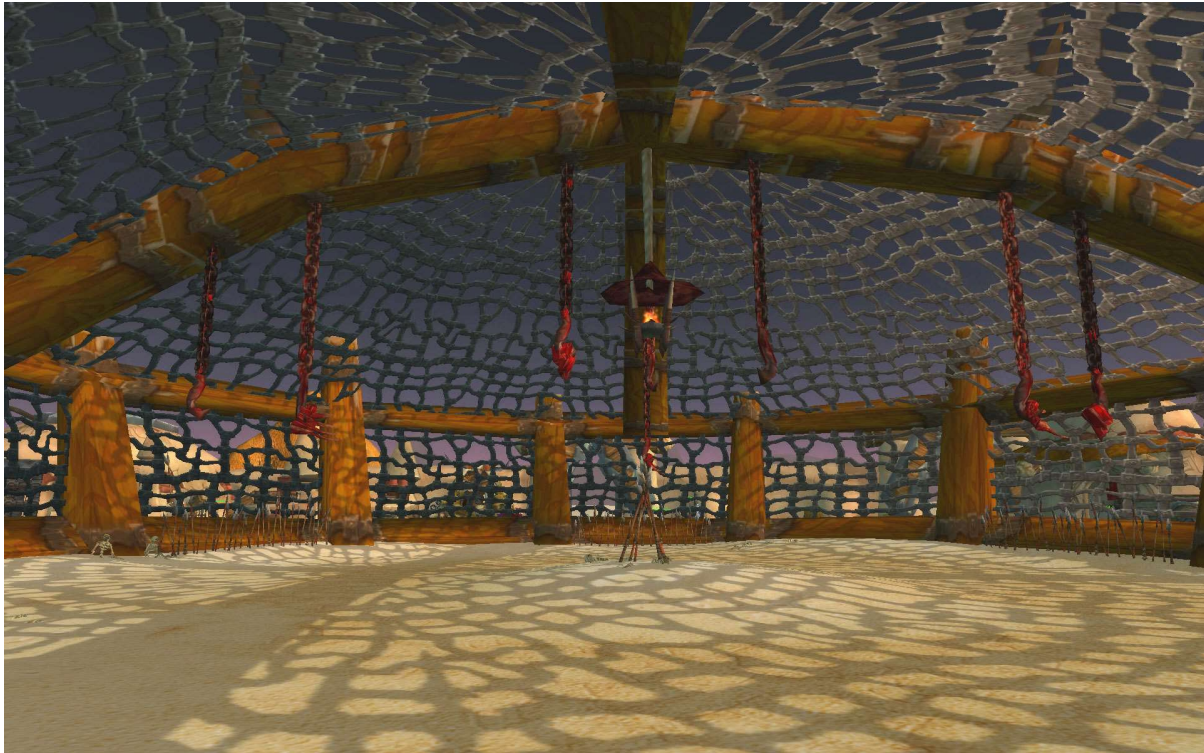


Figure 25. The caged arena in Gadgetzan in *World of Warcraft*, where my guildmates and I would go to test out equipment and “theorycraft.”

[18:4][4337][Thoguht] says: Like my daggers?

[18:4][4345][Walt] says: Oh my yes.

[18:4][4352][Party] [Thoguht]: [Dirk]

[18:4][4368][Walt] says: Now... I’m going to go into Defensive Stance.

[18:5][4372][Party] [Thoguht]: I get more attacks with them but do the same amount of dps as unarmed.

[18:5][4382][Walt] says: I want you to hit me as hard as you can.

[18:5][4400][Walt] says: Aah! I found block.





Figure 26. A trophy screenshot of one of the raid group's first Ragnaros kills in *World of Warcraft*, May 19, 2006.