How a New Actor Was Temporarily Enrolled Into the Network of Game Playing

Mark Chen, University of Washington, Box 354941, Seattle, WA 98195, markchen@uw.edu

Abstract: This short paper uses actor-network theory to describe how an add-on (a user-created modification) was temporarily used to diagnose problems a group of game players was having with a particular in-game activity. The players were engaged in a high-stakes collaborative activity called *raiding* in the massively multiplayer online game (MMOG) *World of Warcraft* (WoW). They met twice a week for a 10-month period to defeat common game-controlled monsters. The add-on's use complicates the notion that tools are necessarily used in a way they were designed to be used. Instead, "in the wild" practice emerges out of the push-pull relationship of competing parties and objects.

Introduction

This paper uses an actor-network theory (ANT) (Latour, 1987, 2005) lens to document how a new technology was enrolled into the work of an existing player group within *World of Warcraft* (WoW), necessitating a change in how roles and responsibilities were distributed among all the actors in the network. This work is important to education because it helps us understand how distributed networks of coordinated work changes over time as new technologies are introduced, something which other groups in formal and informal settings must take into account when engaged in collaborative practice. Drawing on a tradition of massively multiplayer online game (MMOG) ethnography (Taylor, 2006; Steinkuehler, 2007), I studied and played with the player group for ten months (November 2005-September 2006), collecting chat and video data of our gaming sessions, and used discourse and interaction analyses to understand the data.

The new technology or actor was a third-party modification or "add-on" to the game and was first introduced to the WoW gaming community about four months into the study. It was adopted, first slowly then readily over a two-month period, by the group under study, as its services became increasingly clear. It was instrumental in helping the group become efficient and successful with many in-game, coordinated battles against formidable monsters during an activity known as "raiding." Each raiding session consisted of the group fighting the same monsters over and over until they could successfully kill it and move on to the next monster. While we were in the midst of adopting the add-on for these raids, it played only a temporary role in the group's assessment of a specific encounter, the last monster, Ragnaros, in a fiery cave system known as Molten Core (MC). It helped the group by testing and ruling out a possible diagnosis of the problems with the group's strategy. After eliminating that possible diagnosis, its use was no longer necessary, since its original intended role never needed to be filled in the fight against Ragnaros. This paper details how a historically-based network of online gamers was disrupted by a new technology that coincided with unexpected in-game events. The redistribution and renegotiation of group responsibilities done by the network's dynamic, adaptable actors to overcome those events relied on the new technology in innovative, unintended ways.

Mangles, Networks, Assemblages, and Arrangements

Steinkuehler (2006) described the mangle of play as an emergent complex arena of activity with multiple contentious parties attempting to steer what it means to play in certain directions. This is similar to Pickering's (1993) mangle of scientific practice, which described the dialectic of resistance and accommodation that scientists engage in with the natural world, constantly tweaking their instruments and mental models of how the world works when existing measurements produce puzzling results. Both of these concepts about how gaming or scientific practice works come from a view of these practices as existing in specific settings and circumstances. They recognize that authentic practice "in the wild" includes a multiplicity of parts or parties, acting separately yet collectively, such that collective roles and responsibilities that make the practice what it is are distributed across all of them.

In ANT terms, the activity is composed of multiple objects or actors that act upon other actors and the relationships between actors determines what the network of activity—i.e., practice—looks like. The roles and responsibilities within a network of activity are assumed by both human and nonhuman actors. Flattening the setting allows Taylor (2009) to say, "we do not simply play but are played. We do not simply configure but are configured (Akrich 1995; Woolgar 1991)" (p. 6), emphasizing the fact that actors in a network exist in such a way as to be compelled to act or be acted upon.

Threat Management and KLH Threat Meter (KTM)

Each character in WoW matches an archetypal role based on historical precedent in the fantasy role-playing game and MMOG genres. In representation, characters are warriors, priests, rogues, etc., but for the purposes of

the underlying game mechanics, these various hero classes can be roughly categorized into a function-based tripartite consisting of tank, healer, and DPS. Each of these categories has specific duties and responsibilities to carry in a raid battle. Tanks, with their plentiful Health points and massive armor, have to keep the monsters occupied and focused on them while healers continually cast spells, which deplete their Mana (magic points), to make sure the tanks stay alive. DPS (shorthand for damage per second, a way of valuing damage dealers) can then go about actually killing the monsters.

Each category of roles in the tripartite is therefore necessary to be filled for a raid group to be successful. The problem is that a monster generally attacks whomever it deems the most threatening to its survival. If a DPS player hits a monster particularly hard or a healer heals too effectively, the monster can take notice and decide to hit back. Whoever has the monster's attention is said to have *aggro*, and the monster switches targets when players *steal aggro* from others. Tanks can try to prevent this by activating various abilities meant to maintain aggro, while the DPS and healers try to keep their performance at an even, consistent, predictable level without "spikes" that will make the monster take notice. In other words, many of the encounters in WoW, and indeed most MMOGs, are a balancing game where the three roles of the tripartite work to maximize their efficiency while keeping the tanks the focus of the monsters' attention.

The way in which a monster decides who to attack is completely reactionary to the actions of the raid members. One way to think about how the underlying "brain" of the game calculates monster behavior is to imagine that it creates a table that includes a row for each raid member, and in each row is a number that starts off at zero and increases a certain amount every time that particular raider activates an ability. The amount increased depends on the ability. This number is called the *threat level*. One of the jobs of the raiders, then, is to make sure that the tank(s)'s threat level is higher than everyone else's.

When the raid group I studied first started raiding, each member had to internalize his or her threat level and "play it by ear," so to speak. There was no common resource or explicit knowledge of specific numbers associated with specific abilities. In fact, many of the raiders did not know that threat was based on a constant cumulative number. This is important to note: It was surmised that threat was loosely based off of damage dealt, but it was unclear that it was a cumulative count of all damage over the course of a fight, no matter how long that fight lasted. All that was known was that sometimes certain raid members would do too much damage and gain aggro. Raiders knew from experience that some abilities generated more threat than others and had to weigh the abilities' costs against their benefits. Very often, when a player died, it was because he or she stole aggro from the tank(s). That is, he or she misjudged how much threat was being generated and accidentally raised his or her threat to a higher level than the tank(s)'s threat level. If this happened enough times during an encounter, it usually ended up as a raid wipe (when everyone in the raid died).

About five months into the raid's life, when it was working on defeating Ragnaros, the last boss in Molten Core, the raid was in the process of using a new add-on called "KLH Threat Meter" or "KTM." Created by a player named Kenco, KTM kept track of which abilities a particular player used while fighting a monster, how much threat those abilities generated, and then visually displayed that information to that player. What's more, any instance of KTM could talk to other instances of KTM installed on other people's machines and thereby aggregate all of the threat data for all players who had the add-on installed, displaying relational charts of everyone's threat level to each player. This allowed the offloading of human cognition to a nonhuman resource, effectively eliminating much of the guess work that went into *World of Warcraft* threat mechanics.

Using KTM as a Temporary Actor that Diagnosed Problems

KTM's adoption was a slow process and spanned several weeks across multiple in-game zones and different raiding (sub) groups. It was difficult to understand KTM's usefulness without seeing it in action, and, even then, the demonstration would only be convincing if a critical mass of people were using it. At first, Warren, the main tank, learned about it through the *World of Warcraft* forums and add-on communities, but it was still in beta, so many of the raiders did not feel comfortable installing it, initially. On February 26, 2006, two rogues (including me) had decided to test out KTM's usefulness with a fight in yet another raid zone. Without any tanks or healers having also installed it, however, the threat meter was not of much use. After the add-on was officially released on Curse.com on March 1, 2006, another attempt at getting people to try it happened on March 8, when four members had it installed for the MC run. Still, there were not enough instances of KTM to be useful, but players could start to see how including the add-on to the group's network of activity would be useful for fights it was still struggling with. During the following month, most of the MC raid group would install KTM. By April 2, 2006, much of the group was using KTM. Later, on April 28, it was instrumental in helping the rogues diagnose problems the group was having with the fight with Ragnaros.

The group knew how the fight was supposed to work from reading online strategy guides about it. Reading about the fight did not directly translate into successfully enacting the fight, though. It took embodied knowledge—visceral, physical, rhythmic knowledge—coordinated knowledge developed through gaming. To gain this type of knowledge required practice. It took time to get a sense of the groove—the rhythm of well-coordinated action—the group needed to be in.

Unfortunately, for this particular night of raiding, the rogues had not yet experienced the embodied groove of making the fight routine. We knew what was supposed to happen in the Ragnaros fight, yet, for some reason, we kept dying on each of our attempts to kill Ragnaros for the evening. Ragnaros would, once in a while, focus his attention on one of us and hit that player. This resulted in almost instantaneous death for a rogue.

Naturally, the rogues thought that dying meant we had an aggro problem, leading one of them, Roger, to tell the other rogues how to play:

> this is a steady high dps fight, no bursting, bursting will get you aggro, in my experiance, anything over 1000 gets rags to say hi to ya unless you are feint everytime its up, and a split second after your burst.

It seems like Roger believed, however, that threat was not an additive measure and that gaining aggro was simply a matter of moment-to-moment damage output. If damage output was ever too high in a particular instant in time (e.g., over 1000), aggro would be gained. This goes against the tests done by Kenco that resulted in his relatively accurate threat meter—accurate because it treated threat as a persistent, cumulative number representing the sum of all threat generated with all abilities used during a particular fight.

After the group's second attempt at killing Ragnaros for the evening, Rand said, "I got aggro on that one. Not sure how, was using the same technique as last time." To this, I replied

> so, I have threatmeter on... noticed I wasnt very high up and did a cold blood evis just fine.
> I strongly suggest you get the mod... so you can judge how good you are on aggro

This response was indication that aggro was not gained simply by doing burst damage. It is interesting to note that, at this point, I had already enrolled KTM into my personal actor-network, placing my whole trust into this nonhuman actor for certain responsibilities. I knew that my previous practice of keeping the *feeling* of threat in my head was inexact, and I assumed that this blackbox of a tool could do it better than me. KTM, in turn, gave me permission to push the limits of DPS, and it also let me enroll it as evidence for why threat wasn't the rogues' problem.

During the third attempt for the evening, Roger himself gained aggro and died after the first Knockback event, a move where Ragnaros causes everyone within close proximity to be thrown back, forcing them to run back into fight positions. Roger responded to his death with, "lol. he must dump most agg at Knockback. i think i got to him quicker then the tanks." He assumed that Ragnaros reset his threat table when Knockback occurred, thus getting to Ragnaros before a tank meant it would have been easy for a rogue to generate more threat than a tank since he or she had more time to generate threat.

Eventually, on our fourth attempt, it became clear that the rogues were pulling aggro even though they were nowhere near the threat level as the tanks. This was demonstrated when Roger again died after the first Knockback. When Roger used the general raid channel (instead of just commenting to the private rogue channel) to say, "i hit him once. that made no sense," the raid leader, Maxwell, replied with

> Roger, they [the tanks] may have been out of position for just a second which is enough for anyone else to get aggro who is in melee range.

Elevating his talk to the larger chat channel elicited new information from Maxwell that further helped the rogues to diagnose the aggro problems. Maxwell was correct. Ragnaros attacked whoever had the highest threat within melee range, and the reason why rogues were being killed was because they were running into position and getting within Ragnaros's melee range before any tanks had gotten in range.

By the end of this gaming session, the rogues *almost* realized that Ragnaros hit whoever had the most threat *within range*. This new information from Maxwell added to the information that I presented to the other rogues in the previous fight from the threat meter add-on, such that, by the time we fought Ragnaros again the following month, we had put it all together and delayed our approach to Ragnaros after a Knockback so that a tank got within melee range first.

By using KTM to see that the rogues' threat level was not high enough to theoretically pull aggro, we had to think of other possible reasons why we were being targeted for attack by Ragnaros. Thus, KTM played a role as a temporary actor within this raid encounter. The group only used KTM to diagnose problems, not to actually alert it of threat level dangers throughout the fight. Once we figured out that threat wasn't the problem, we essentially no longer needed KTM for the Ragnaros fight.

In summary, the raid group I played with had reached Ragnaros by the time the new threat meter add-on KTM arrived on the WoW gaming scene. It took the group several weeks, however, to incorporate KTM into its assemblage of play. It completely changed how the task of keeping track of threat was distributed in the

network. Yet the Knockback events in the Ragnaros fight forced the rogues to reconfigure or renegotiate in-the-moment how KTM was enrolled into the network. It added to our body of evidence that threat was not actually the reason rogues were gaining aggro, and, weeks later, we were able to incorporate this new knowledge into a successful strategy.

The idea that we assigned a new role to KTM in-the-moment may seem to complicate actor-network theory's concept of *delegation* where nonhuman actors are meant to take on specific responsibilities by their creators. Instead, we see that this actor-network was dynamic and the translation process—the negotiation and agreement process—necessitated constant reworking and retranslating. Latour (2005) understood actor-networks as ever-changing, though, which is why the work of the actors within the network leave traces of their associations to be followed and examined and why, once described, the network *as described* may no longer exist.

Discussion and Conclusion

Actor-network theory is an attempt to describe how an arrangement of objects in a network are acting on others and are acted upon by others so that the activity does what it does. It tells a story about practice within situated contexts, involving historically-based interrelated actors. At the basic level, this network ANT describes is an assemblage of parts, but it is also dynamic. This dynamism is what makes it a mangle with vying interests and constantly renegotiated relationships and distributions of responsibilities. The reassembling occurs across multiple layers of complexity and multiple timescales.

On the surface level, the whole landscape of *World of Warcraft* play was determined by designed constraints from the game developers, who were, in turn, affected by the historical evolution of MMOG play. Digging deep, individual players assemble and arrange the objects and resources in their specific in-room, on-screen settings. KTM is just one of these objects.

Between the work that occurred on the surface level and the deeper individual player level lays the mangle that Steinkuehler (2006) wrote about: a messy set of practices emerging from the constant clash and negotiation between the designed experience, players' exploration and meaning-making in that experience, and all the ways in which various parties exploit, modify, and change the system. In the larger WoW community, KTM and other player-created add-ons that helped raids manage raiding was becoming so normative that Blizzard Entertainment was forced to incorporate many of their user interface tweaks into future iterations of the base game.

This raid group and its activity across the locations in which it assembled represent one tiny sub-mess—a microcosm of the mangle—and yet this small mess could be broken down further. Each character class was grouped together and those groups independently assigned internal roles and responsibilities, engaged in scientific argumentation about strategies and tactics, and participated in a larger class-based WoW community. Furthermore, as stated earlier, each player had his or her own local configuration to manage. Just as Stevens, Satwitcz, and McCarthy found with their young gamers (2008), these arrangements would sometimes extend beyond the computer screen and into the room.

The enrollment of KTM into the raid's standard practice brings up a number of issues. First, though it was nominally being incorporated to an existing network, it took on a sort of agency itself by imposing new responsibilities to the other actors in the network (e.g., it shifted communication patterns, it drove changes in strategy). Giddings (2007) uses Dennett's (1971) concept of *intentional systems* to describe the key difference between agency ascribed to humans versus nonhumans:

> So this intentionality does not assume that complex systems have beliefs and desires in the way humans do, but that their behaviour can, indeed often must, be understood *as if* they did. Or perhaps, and Dennett hints at this, their "beliefs" and "desires" are not so much metaphorical as analogical.
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> This "unmetaphysical" notion of the intentional system both resonates with Latour's nonhuman delegations and suggests ways in which we might theorise our material *and conceptual* engagement with complex computer-based media, sidestepping a whole range of largely unhelpful speculations on imminent realisation of actual machine consciousness. It suggests that the experience of playing (with) these game/machines be theorised as one of engagement with artificial intelligence without slipping into naive anthropomorphism or frenzied futurology (p. 122).

KTM, on a micro level, required players to give it attention and then adjust behavior based on what it displayed. It did not care, of course, whether players actually changed their behavior, and neither did it enforce its use. Yet, by being a transparent tool, showing everyone's threat level to all players, it did not need to enforce its use. The raid members did that on their own. This is both good and bad. Its benefit was clear: some of the players appreciated being reminded by others to be cautious about their threat level. Yet this came with a price.

While KTM served as a threat meter add-on to warn us of impending aggro change, it also served as a surveillance tool that we could use to make sure each of us was playing efficiently to help the common task. What used to be monitored individually had become distributed to the collective, making it as open as Thomas More's houses in *Utopia* and as transparent as Bentham's Panopticon. Furthermore, on a more macro-historical level, KTM helped narrow the legitimate experience of playing *World of Warcraft* by reinforcing the threat paradigm and the tank-healer-DPS tripartite found in MMOG encounters. Playing WoW has consistently become more and more a game of numbers, efficiency, and number-crunching, buying into the notion that the end goal of playing is to win loot and progress.

The second issue brought to light in analyzing KTM's adoption is the issue of communication levels. The rogues were internally attempting to make sense of Ragnaros's aggro changes, but it was only after Roger voiced his dissonance in the general raid chat channel that the rogues began to understand what was happening. This occurred when Maxwell replied to Roger, letting him know that the melee DPS needed to wait for tanks to be in position before getting in range. Indeed, it seemed like Maxwell, a non-rogue, already knew about Ragnaros's melee targeting preferences. If it is necessary for group members to make available to others their misconceptions before the group can become aligned or translated to a common understanding, how do individual players become compelled to speak up? The raid assumed character class-specific expertise in all its members. Displaying evidence of a lack of understanding could have been seen as a risky move. What's more, this assumes the rogues could identify and be metacognitive about their lack of understanding and need to elevate their talk from their private rogue channel to the larger raid channel. Yet the onus of opening up appropriate communication channels so the raid could repair itself seemed to be taken up by happenstance through flabbergast and flailing. What do we make of this? In future endeavors or other group work, some way to insure recognition of micro dissonance that needs to be elevated to the whole group would be necessary.

Still, the raid's eventual adoption of a new actor into the network is an example of how local practice is emergent and dynamic and heavily dependent on available technomaterial resources, which are assembled and configured in and around the activity. This example helps us redefine expertise development not as just changes in practice, but also, as changes in how the assemblage is configured, which necessitates the successful negotiation among actors in a network about distributed roles and responsibilities and a shared understanding about the local task at hand. What's more, the shared understanding and the actual roles and responsibilities that need to be distributed also changes over time. The enrollment and translation process reconfigures all involved. The reconfigured network is then stable and successful—that is, until a new disruption occurs.

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Acknowledgments

This work is funded by the National Science Foundation through the Science of Learning Center program under grant SBE-0354453.