Knowing, not doing: Modalities of Gameplay Expertise in World of Warcraft Addons

Abstract
In this paper we consider the impacts of game addons on conventional notions of game-based expertise in World of Warcraft, through the analysis of 37 travelogues - a data collection tool designed for use in MMOG research. We adopt a multi-faceted definition of gaming expertise as described by Taylor, Jenson, De Castell and Humphrey [33] and apply their categorization of expertise modalities to the addons named by our study participants. We find that the most commonly understood expressions of expertise in games (time investment and skill) are less represented in the addons reported by our participants.

Keywords
Massively Multiplayer Online Games, Virtual worlds, research methods, expertise, knowledge production, technological tools, human computer interaction

ACM Classification Keywords
K.8.0. [Personal computing]: General – Games.

Victoria McArthur
York University
4700 Keele Street
Toronto, ON, Canada, M3J1P3
vickymc@yorku.ca

Nicholas Taylor
York University
4700 Keele Street
Toronto, ON, Canada, M3J1P3
nickttaylor@gmail.com

Tamara Peyton
York University
4700 Keele Street
Toronto, ON, Canada, M3J1P3
tpeyton@yorku.ca

Suzanne de Castell
Simon Fraser University
8888 University Dr
Burnaby, BC, Canada, V5A 1S6
decaste@sfu.ca

Jennifer Jenson
York University
4700 Keele Street
Toronto, ON, Canada, M3J1P3
jjenson@edu.yorku.ca

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Introduction

*World of Warcraft (WoW)* is one of the most successful Massively Multiplayer Online Games (MMOGs) of all time. The size and scope of possible interactions and intents within WoW situates it as "something between a game and a world" [1]. In this paper, following Ducheneaut’s assertion that "narrowing our scope [to specific online games] is a necessary first step in analyzing concretely and critically what can be accomplished in digital spaces" [8], we consider the impacts of WoW addon software on WoW gaming expertise and achievement.

The dataset upon which we draw for this paper comes from a mixed methods, multiple locales approach to understanding expertise and leadership in MMOGs and virtual worlds. Sites for the study include lab-based settings in Canadian cities and observations of public gaming sites (LAN events, Internet cafés, and informal gamer gatherings) in the UK and Canada, surveys, interviews, participant self-reporting and researcher direct observation. To date, we have over 600 individual multimodal datasets of people playing games and answering survey questions. The study’s primary intent is to see whether and how it is possible to understand participants’ real world characteristics (such as gender, age and capacity for leadership) from their in-game interactions. Both in its scope and in its methods, this is a study that examines the "on the ground," complex relationships between virtual worlds, and the localized practices of players in different environments and contexts of play.

As its central mandate, the study takes Actor Network Theory’s injunction to "follow the actors" [19], whether they be non-human or human. This enables us to consider addons, authored and used by players to improve and/or enhance the *World of Warcraft* gaming experience, as a social actor which influences the ways in which gameworld participation is experienced and gameworld expertise is realized.

Using a framework for understanding different expressions of MMOG-based expertise – a multifaceted "expertise construct" - developed in an earlier work [33], we apply their expertise modalities to our study of addons. Through this construct, we contest the dominant idea of expertise as narrowly limited to skilled performance and time investment.

Approach

The data for this paper draws most heavily on the survey and visual data provided in participants’ "travelogues" a voluntary data collection tool developed for the study [21]. The travelogue collects visual and textual data from expert level players across multiple MMOGs and virtual worlds. Participants connect to an online form that presents them with a series of nine or ten questions to which they are able to provide both textual and visual responses. The travelogue is intended as a way of getting multimodal data, through both visual and textual means. It allows participants to report on their behaviours and practices across the entire ensemble of the MMOGs they play, providing a glimpse into their ‘domestic’ play, and giving them control over both the method and the content of what they choose to represent to researchers.
In the following sections we discuss the history of addons, including popular narratives that have been constructed about them within and around the current player base. We then describe our conceptual framework and the travelogue in greater detail. Next, we report on our data from 37 World of Warcraft players who filled out travelogues (a sub-group within the 69 travelogues), specifically, their textual and visual responses regarding addon use.

**What are addons?**

In 2004, WoW's developer, Blizzard, decided to allow the integration of user-created software into its WoW game client. Known as 'addons', these bits of software modify and augment the game's technical affordances. WoW addons typically serve one of two functions: they either replace the default UI with a different theme, appearance or layout, in a practice known as 'skinning' [7], or they add functionality to the client, through added popup menus, informational displays, game sounds and mini-map icons. While in some academic work [e.g., 18], addons are conflated with 'mods' (full game modifications), there are fundamental differences between addons and mods. Addons only change aspects of the user's client software [9], whereas mods alter the core game mechanics and game goals [20, 30]. Mods also add in new content or core game functions in multi-player first-person shooter games such as Half-Life (user-community created Counter-Strike) and Quake (user-community created Team Fortress).

Addons are created using a proprietary API and a scripting language called ‘Lua’ [9], both owned and managed by Blizzard. Lua is essentially a scripting language that enables the embedding of client-side functions into a player’s WoW client. The open-source standard XML is used for the graphical interface of each piece of addon software [9].

As a kind of fan-created artifact, addons are a visible and active aspect of committed WoW play for many players. They are a tangible indicator of both the addon producer and the addon user relationship to the gameworld and its practices, providing a "tactical, critical relationship to the game cultures they inhabit" [7]. Given the richness of this culture and environment, WoW provides fertile ground in which to study the interplay of affordances between corporate owners, hobbyist users, technical interfaces and social norms.

WoW is one of the only MMOGs to allow for the integration of add-ons into its core client technology. With over 4700 addons available, across 27 categories of functionality, the addon scene in WoW is sizable and dynamic. Based on download lists available at Curse.com, the main source of WoW addons, some of the most popular addons globally include: QuestHelper, which adds quest objectives to the minimap; Auctioneer, which tracks the trading activity and financial performance of auction house commodities; and DeadlyBossMods, which provides customizable popup alert boxes and sounds related to specific monsters’ real-time activities at higher levels of the game.

**Games, Addons, and Expertise**

For this paper, we reviewed the game studies literature that considers gaming practice, group dynamics and definitions of expertise. Themes in this literature include: the impacts of the avatar and the game interface on gaming practice [12, 14, 23, 35], the nature of immersive learning in games and the
generalizability of ludic learning to everyday life [1, 10, 31, 32], and individual and group dynamics in high performing players [5, 6, 12, 17, 25].

In the literature that discussed addon use both directly and tangentially [6, 12, 18, 29, 33], the dominant understanding of addon use is of a play practice that is positively correlated to top tier, high functioning players participating primarily in guild groups, and who play almost exclusively in order to pursue the successful completion of end-game group content (known commonly as raid groups). A key theme in this latter set of literature is the idea that addons "fix" problems in the WoW UI. Chen’s work treats addons mainly as diagnostic tools, and as agents which overcome UI issues that would otherwise make certain game instances unwinnable [6]. Similarly Golub states that many game challenges – raids in particular - are impossible to complete without the aid of addons [12]. This viewpoint is echoed within the CHI community. For example, Bardzell et al. suggest that without addon use, "some game content (e.g., end-game raids) are all but impossible" [3].

In much of this literature, addons are regarded as supplementary technologies that 'fix' the game, but questions of how they inflect, expand or enhance player agency are left largely unexplored. Specific addons are rarely mentioned and the overall impression is of canny hard-core players maximizing the efficiency and efficacy of their play through addons. This incomplete view of addons and their role in gameplay, and how they relate to concepts of expertise is what we wish to address in this section.

Most of the works cited above address expertise in some way, but few provide an explicit, theoretically-grounded framework for understanding the relationship between specific addons and different styles of expert play. Drawing from work first published by Taylor, de Castell, Jenson & Humphrey [33], we take up the "expertise construct" proposed therein and use it to experiment with the development of a framework for categorizing and conceptualizing addons based on the kinds of expertise they extend to players – or, in ANT terms, the kinds of work they carry on behalf of players. To do so, we apply the idea of an "assemblage of play" [34] as inspired by Actor-Network Theory, to the discussions and self-reports of addons from participants.

**Expertise framework**

Working with the expertise framework proposed by our project group [33], we look at how addons relate to, and can be categorized using, the four modalities of expertise outlined in their construct: investment, skill, discourse and game knowledge.

**Investment** is not just actual quantification of time spent in-game, but also to the amount of ‘mindshare’ or invested commitment players have in the game, regardless of their actualized in-game practice.

**Skill** is the operational competency and proficiency of players across a set of game assemblages. In the context of addons we apply the skill modality to addons that directly impact the efficiency of play.

**Discourse** evidenced not just through a mastery of the social language [2] of gaming, but also through a contingent and contextual awareness of discourses that
circulate among players and between players and the interface.

**Game knowledge** refers to both the ludic knowledge (of game mechanics such as avatar class and race affordances, skills and builds, game enemies and quests, and so on) and narrative knowledge (of the plot, lore, and mythos of the game and its characters, as expressed both in the game and through other texts).

Applying our understanding of these four modalities of expertise to the study’s data subset, we sketch out a way to conceive of addons as non-human actors in the assemblages formed by players in the gameworld of WoW, in ways that re-cast ‘expertise’ along post-human, ANT-informed directions. We build from Giddings and Kennedy’s argument that gaming virtuosity, typically viewed in humanistic terms as expressive of expert players’ superior embodied abilities, ought to be viewed instead as a “cyberknetic circuit” between player, game, and context, where the game ‘reconfigures’ its players [11]. To extend this insight to our analysis of addons, we borrow from Latour’s notion of "plug-ins" [19], which he describes as "circulating entities" that extend to human actors specific and contingent forms of competence. In writing, "you realize that to obtain ‘complete’ human actors, you have to compose them out of so many successive layers, each of which is empirically distinct from the next," Latour moves away from a humanistic model of the individual subject as a discrete, autonomous agent whose capabilities and competencies reside 'within' her/him. Instead, competence (as well as subjectivity and personality) are seen as arising through context-specific associations with non-human tools – "plug-ins" that supplement thought, communication, and action. Applying this concept to MMOG play, we can show that, and how, MMOG expertise resides not in players’ embodied skills, but precisely in the capacity of players to assemble a network of non-human actors that extend and enrich their capacity to carry out different game-based directives. Seen in this view, addons do not "fix" the game [6, 12], nor do they detract from players’ embodied expertise; rather, they supplement and extend the cyberknetic apparatus of play.

**Method & Data points**

In this section of our paper, we present the commonalities and differences we found between the affordances of addons reported through the travelogues and through participant observation, and their apparent impacts on game play expertise modalities.

Using both the textual and visual data in the travelogue, we counted all instances of explicitly named or shown (via screenshots) addons. Next, looking at the textual and visual information separately, we analyzed textual responses to see whether or not participants described the benefits of specific addons. Lastly, mobilizing the framework proposed by Taylor et al. [33], we analyzed each addon and, based on its functionality, aligned it with one or more expertise modalities. We used this framework in our analysis as a way to understand and explain the relationship between addons and players, by reframing the impacts of addons to ludic expertise.

**Participants**

Participants were recruited at LAN parties, public gaming conventions, and on university campuses in
Canada, as well as public gaming events in the UK. We invited participants to fill out a travelogue documenting their play in any MMOG of their choice. Presently, 69 travelogues have been completed and 37 were completed by World of Warcraft players (23 male, 14 female). The age range was 19 to 60 years (mean 28, SD 8.18).

In addition to the travelogue data for this subset, we also have additional data from survey, interviews, and in most cases, one or more videotaped game play sessions with researcher direct observation.

It is important to note that while participants in the project represent all levels of expertise, including novice players, 27 of the participants who completed a travelogue self-identified as "advanced" or "expert" players. The remaining participants self-identified as intermediate (2), novice (3), newb (1), and 4 chose not to rank their expertise. Participant self-assessments were confirmed through qualitative observations of their play either in lab-based or public settings.

While we acknowledge that our recruitment locations affect the 'ecological validity' of the results, the fact that travelogue participants also self-identified as expert players means that the results should be taken as representative of this group.

**Results and Analysis**

88 unique addons were named by participants in the travelogue. As shown in figure 2, participants utilized the multimodal quality of the travelogue to both show and tell us about these addons in different ways. For example, some listed the addons textually by name, while others provided screen shots of their list of active addons in the WoW addon interface. Some participants described the benefits each of the addons provided, others stopped at naming them. In general, there seemed to be no reticence on the part of players to name, show or discuss their addon selections.

While the most cited addons (Table 1) were raid-related (Recount, Omen and Deadly Boss Mods being most-often mentioned), the screen snaps submitted via participants’ travelogues often belied this explicit reporting. Images of participants’ addon folders showed that each player used an average of 10-15 types of addons. Many participants’ addon folders showed addons such as: AtlasLoot, which automates the collecting of items dropped by vanquished monsters; Alzoholic, which allows a player to see gear and inventory across their various characters; SexyMap, which adds additional tracking, sizing and locator functionality to the UI’s minimap.

Table 1 lists the 16 unique addons that were named by 3 or more travelogue participants. Mobilizing the expertise framework from Taylor et al. [33], we researched the functionality of each addon and linked it to one or more expertise modalities. We looked at what the addon brought forth to the assemblage of play (i.e.,
<table>
<thead>
<tr>
<th>Addon</th>
<th>Number</th>
<th>Modality 1: Investment</th>
<th>Modality 2: Skill</th>
<th>Modality 3: Discourse</th>
<th>Modality 4: Knowledge</th>
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<td></td>
<td>Primary</td>
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<td>AtlasLoot</td>
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<td>Bartender</td>
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<td>Secondary</td>
<td></td>
<td></td>
<td>Primary</td>
</tr>
<tr>
<td>PowerAuras</td>
<td>3</td>
<td>Secondary</td>
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<tr>
<td>Recount</td>
<td>17</td>
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<td>Titan Panel</td>
<td>3</td>
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<tr>
<td>XPerl</td>
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</table>

what action possibilities it opened up as its primary function or action) and then what sort of secondary impact hat addon had as a social actor upon the play assemblage. Within the set of 16 "popular" addons (within our participant group), we found that each addon was linked with two modalities: one primary and one secondary. The distinction is illustrated in the following two examples.

The addon "Gatherer" tracks and visualizes historical data related to assets obtained via the gathering professions (e.g. mining or herbing). The historical data Gatherer displays is based on the player's own gathering data (or data that was shared by guildmates via the addon). As a tool that enables more well-informed decisions regarding the often time-intensive gathering activities, we see Gatherer as strongly linked to investment. In its visualization of where and when the player obtained particular kinds of resources, Gatherer is secondarily related to (ludic) knowledge.

Conversely, Deadly Boss Mods (DBM) is one of the most popular high-end raiding addons in our dataset. DBM provides players with audio and visual alerts timed
to specific NPC monster damage abilities, such as flame breath (for the dragon Onyxia), poison waves (for Heigan in the Naxxramas instance) or frost damage (for the Lich King in the Icecrown Citadel instance). DBM also notifies players when specific phases of a fight are about to begin. DBM’s alerts allow players the time to recognize and react appropriately to each danger. Given this, DBM is linked here primarily with knowledge: it makes information that is otherwise invisible visible. It is linked secondly with discourse; in order to meaningfully communicate with other players in a raid, the addons packages the specialized colloquial language of gaming and insert it into the assemblage of play in a way that is intended to goad players into specific actions.

**Discussion and Conclusions**

With the categorization of addons using a multifaceted framework, we have proposed a theoretically-grounded and empirically-driven model for conceptualizing and ordering the ways that addons extend different manifestations and expressions of game-based ability. We plan to mobilize this framework along two directions: the first, as a means of analyzing moments in our audio-visual data in lab-based settings in which expert players attempt to play without the addons they normally used (and showed us, via the travelogue) in their at-home play. Without the "plug-ins" that they are accustomed to, these players are literally dis-abled.

Secondly, we hope to further populate this framework as we progress in our data collection for this study, in order to develop a qualitatively-driven, quantitative overview of which players use which addons, for which purposes.

Within the HCI community, we need to recast the ways in which addon use in MMOG play is understood, especially in relation to "expertise." What is clear from our travelogue data, surveys, interviews, and observations is that people are making use of addons as an affordance of the game - something that the publisher, Blizzard, has openly facilitated. By carefully examining the role addons play as actors, researchers can gain a richer understanding of what it means to use specific addons. Presently, a search for "addon" or "mod" in the SIG CHI proceedings returns a very small number of papers that only mention these assemblages in passing [e.g., 3]. The difference between outsourcing agency and making invisible information visible is quite significant, yet these differences are often wrapped up into the "does or doesn't use" model of expertise and normative MMOG play.

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