Games design and critique –

"Gameplay complexity to players must be justified"

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## Summary

In this assignment the “auto-attack” mechanic and related gameplay systems present in two expansions of Blizzard’s MMORPG World of Warcraft (Blizzard, 2004) - Burning Crusade (Blizzard, 2008) and Legion (Blizzard, 2016)- will be compared. This is part of the “tank” character experience and it will be shown how even this specialised comparison affects both micro and macro-level gameplay design.

At the micro level, players can concentrate on a limited number of gameplay elements at any given time. At a macro level, players must spend time optimizing their character “gear” for end-game activities. The concepts of choice and selective attention will be used to discuss this.

The usage of mixed-method approaches to gameplay and its relevance to the auto-attack mechanic will be examined, and the complexity of the Burning Crusade system will be examined for justification.

In conclusion, the removal of complexity from the auto-attack system has not harmed the gameplay and has indeed improved the game.

## Introduction

Two expansions of World of Warcraft (WoW) will have their “auto-attack” mechanics studied. The first is a prior expansion, released in 2008, Burning Crusade and the second is the current expansion, Legion. In WoW, the high end “player versus environment” (cooperative) gameplay is known as Raiding. In Raids, between ten and twenty five players play together. Typically two of those players will play “Tanks”, these being characters whose gameplay design is to attract and hold AI enemies attention – especially the huge “Boss” enemies - while mitigating the large amounts of damage those enemies cause characters.

The comparison will discuss the three tank-capable specifications present in both expansions – Protection Warriors, Protection Paladins, and Feral Druids. While two other classes may also tank in Legion - Brewmaster Monks and Blood Death Knights - these were introduced after Burning Crusade and cannot directly be compared.

## Gameplay Background

There are both macro and micro gameplay issues to consider when considering auto-attacks. At the micro gameplay level, while boss enemies have many special abilities and moves they typically spend most of their encounters with players in melee combat with a tank. They “auto-attack” the tank character, striking every ~1.5 seconds regardless of other abilities used at the same time. The boss rolls on a percentile table to determine if the result of this attack.

Graphically, these hit tables can be seen as follows for each expansion;



Figure 1; Hit Tables

In Burning Crusade, the table has seven elements. Four of these, Miss, Block, Block and Parry are together considered “avoidance”. The player wants to maximise rolls for avoidance – these all also mitigate damage taken to some extent – while never rolling either the 200% base damage critical hits or the 150% base damage crushing blows.

As auto-attack damage occurs regardless of the boss using other abilities, taking a critical hit or crushing blow at the wrong time can mean that healer characters are unable to restore the Tank’s health fast enough to negate the damage from these other abilities and the Tank character then dies in the game – this then usually quickly leads to a “wipe” where the boss kills the remaining characters in quick succession.

To avoid taking critical hits and crushing blows, the tank character must be equipped with specific tank equipment, which brings in macro-level gameplay. Detailed player guides for Burning Crusade-era tanks are available on sites such as WoW Legacy (n.d.) which explain the details of this from the player’s perspective, and were indeed essentially mandatory reading.

Firstly, to effectively tank, players must first equip gear with the defence statistic which allows the player to negate a certain percentage of critical hits - in fact, negating all 5.6% is the first priority. Secondly, tanks must try and negate crushing blows. Druids may not as they do not have parry or block statistics and instead focus on the extremely high levels of the stamina statistic they can attain to increase their health and to remain alive despite suffering crushing blows. Warrior and Paladin tanks, however, have block, parry and dodge as well as gameplay abilities to boost their block chances. Specifically - after critical strikes have been removed by defence - a total of 102.4% avoidance is required to avoid Crushing Blows. This is called becoming “Uncrushable”; when the avoidance section of the boss auto-attack table expands such that only avoidance results may be rolled and hence crushing blows “pushed off” possible rolls.

Warriors “Shield Block” ability gives +100% to block, which will always thus push crushing blows “off the table”. However, it only worked for two attacks every five seconds and would typically thus – given a 1.5 second auto-attack timer – only affect two-thirds of Boss auto-attacks. Paladins “Holy Shield” ability adds 30% to block – far less, and hence higher gear levels are needed to tank with –and worked for eight attacks every ten seconds. Hence, holy shield hence was always active for all boss auto-attacks and was thus more consistent in its effect. There are other abilities which can increase avoidance, but they are all on far longer timers – from five to thirty minutes – and were typically reserved for dealing with high damage Boss special attacks.

This is a fairly complex system and one in which Warriors are the “primary” tanks – being the only viable tanks in the base version of the game, before Burning Crusade – with other tanks viable for some, but not necessarily all, Boss enemies in the game. Only in rare situations existed in which Paladins or Druids *better* tanks than a Warrior.

In Legion, this is all dramatically simplified. Tanks have a passive ability which negates critical hits and several elements have been removed from normal gameplay – misses, defence, crushing blows and direct gearing for avoidance statistics. Boss’s auto-attack table only have four elements – block, dodge, parry and hit and tanks are not balanced around “pushing out” any results from the hit table. You can take any tank or combination of tanks to any Boss and while in some cases not having a specific tank may make some specific fights somewhat harder this will be nowhere near the magnitude of issues caused by not having a Warrior tank which occurred during the Burning Crusade expansion.

Instead of tanks gearing for defence or direct avoidance in Legion, each piece of gear has two of the four secondary attributes available in the game. Three of these directly contribute to defence – “versatility “directly reduces damage taken, “critical hit” improves avoidance and “mastery” has differing benefits for each Tank specification. In Burning Crusade, different amounts of the available statistics benefit tanks; three of eight for Druids and five of ten for Paladins and Warriors (although not quite the same ten). The availability and relative worth of these also varies wildly.

Avoidance in Legion has strong diminishing returns (Whitetooth, n.d.) – adding more gear with critical hit will thus not add as much avoidance as a simple calculation might indicate. In fact, this was instituted specifically because of issues in Burning Crusade where weaker diminishing returns were applied to dodge and parry, while block had no diminishing returns at all. Warriors and Paladins in high-end gear were able to become “passively uncrushable” when their avoidance rose to 102.5% without needing active abilities. Druids could not do this, and were considered less viable tanks as a result in the more difficult “raid tiers” of Burning Crusade.

In fact because passive uncrushability made Warrior and Druid tanks so much more resistant to auto-attacks, the final and hardest Raid released in Burning Crusade, Sunwell Plateau, had a specific penalty to avoidance. This “Sunwell Radiance” removed 25% avoidance – 5% miss and 20% dodge chance – from players in the raid, leading Tanks to seek more gear with avoidance once more rather than other beneficial statistics. Players did not predictably enjoy this; for instance a Paladin tank, Tengen, made his views clear in his “A Sunwell Radiance by Any Other Name Would Still Nerf as Much” blog article (Tengen, 2009 October 22).

We can also consider complexity in the auto-attack system in other ways, not all of which were negated in Legion. Block, dodge and parry all mitigate different amounts of damage – parry is the most valuable, then dodge and finally block. This is reflected in the amount of the statistics required to gain 1% of these statistics - which in Burning Crusade are all equally valuable in reducing the chance of negating crushing blows. This is also true of defence, which is less “efficient” as a defence statistic than block or dodge but not parry - although diminishing returns in turn adds complexity here.

The 5.6% and 102.4% values used in Burning Crusade tanking themselves are also odd, and do not seem logical. They are a result of WoW considering bosses “three levels above” the player which affects in turn how easy it is for the boss to land critical strikes and for the player to avoid attacks. This is still present in Legion – showing how inertia in design can still complicate systems. The character sheet shown values for block, dodge and parry in Legion are, thus, still inaccurate compared to those used when a boss actually attacks the character.

## Discussion

The lead designer for Blizzard Entertainment for much of this period, “Ghostcrawler” , wrote a postmortem on another WoW Expansion – Cataclysm - in which he discussed choice in WoW and the Blizzard philosophy for reducing the complexity in that system - “You will have fewer choices. But you will have more choices that **\*matter\*.** One of the important philosophies of game design is that interesting choices are fun.” (Street, June 2011a)

This is a concept widely discussed in game design, for example in the article Improving Player Choices (Fulleron, Swain & Hoffman, 2004) and repeatedly in Salen & Zimmerman‘s Rules of Play (2003) which is important one here; simply stated, can the more complex system of Burning Crusade – where you repeatedly use the same abilities (every 6 or 10 seconds) and where auto-attacks are so complex - at both the micro and macro level be justified?

A direct comparison can be made here to the “Threat” system of WoW, which was outright removed between Burning Crusade and Legion. Tank characters, after they gained the attention (“aggro”) of enemies had then to generate enough “threat” to keep the enemies focused on them and not other characters. In a blog titled “Threat Needs to Matter” (Street, 2010) “Ghostcrawler” once more talked about how “Threat “needed to matter. However eight months later in another blog titled “Dev Watercooler -- Thread Level Midnight” (Street, August 2011b) a design descision had been made to remove threat for many of the same reasons.

While the core of the system – that the boss should be focused on the tank characters, in this case – remained large elements of ongoing micro-management and complex gearing decisions were removed. Multiple reasons are given but importantly that tanks were now “busy” with other gameplay elements which are more engaging and Blizzard felt that Threat no longer had anything worthwhile to offer in gameplay terms.

The same comparison can thus be made to the boss auto-attack system between Burning Crusade and Legion. While the base concept of the system – that bosses will attack Tanks in melee combat with them - has remained the same, the complexity of the system on both the macro and micro level has been considerably reduced. An important concept we can use to discuss this is Selective Attention, used in several fields and discussed in Pashler (1999); picking messages from a mixture of simultaneous messages, and the cost of switching your attention between tasks.

Players must pick out what is most important any given time, selecting the actions they must make. A useful analogy for this would be a pool of water, from which the player must “spend” certain amounts to track the state of various gameplay systems which they might need to respond to. It will refill, but not instantly, if distractions are removed. The choices offered to players must, thus, be limited such that they are meaningful enough to be worth spending a player’s attention on.

By their nature, auto-attacks are extremely frequent – generally every 1.5 seconds – and the design of Burning Crusade tanks mean they had to push the same button for an ability every six or ten seconds to mitigate this damage regardless of other game state elements. While this is a drain on their selective attention it is not a meaningful choice or engaging gameplay and gameplay in WoW has altered since Burning Crusade away from “rotations” of fixed button sequences to more reactive priority-based systems to increase choice and engagement (Engadget, 2012).

 In Legion, auto-attacks certainly do exist and they will damage tanks but as the concept of “Crushing Blows” does not exist there and they do not need abilities to specifically counter them. Instead, auto-attacks are simply a part of the actually engaging wider gameplay of managing the health of the Tank – for which they can now spend more of their Selective Attention on, with more meaningful abilities.

At a macro level, there are also far fewer tank-specific elements of gear design in Legion. This not only allows players to begin tanking without the need to gather this specific gear and gives more choices in gearing, it also means they also do not need to learn i.e. the “Crushing Blow” concepts before they can be good tanks. While technically this leads to simpler gameplay, it also allows other gameplay elements such as appropriate movement during Boss fights to be extended to Tanks –non-tanks have always had to deal with this - without risking Tanks making simple mistakes due to missing attention cues and causing a wipe.

The Legion macro gameplay system also has some significant failings, however. One of the four secondary statistics, “haste”, has no direct advantage in terms of tanking auto-attacks but the interacting systems mean that the four secondary statistics available can vary widely in worth for different tank classes – while this is something players can check in external guides, it is hardly ideal in terms of gameplay.

## Analysis

In analysing these gameplay systems, both the functionality and the “feel” of systems has been examined. Certainly tanks must be “balanced” in that they must be able to fill their role in the game –although as discussed in Burning Crusade, only Warriors were universally viable, unlike Legion – but there are also factors of establishing gameplay mechanics for multiple, distinct classes all of which can be played without absorbing too much of player’s selective attention and where meaningful choices are offered to players.

Typically games companies will use mixed methods approaches (Creswell, 2013) to game design often Exploratory sequential mixed methods design or iterative use of convergent parallel mixed methods.

WoW is quite open with its development process in terms of game system design, inviting players to “beta test” its expansions at a relatively early stage of system development – after elements such as the setting and art have been established but before major decisions have been made on class design. We thus know that exploratory sequential methods are used during expansion development; first creating a model they feel is appropriate and fun for each class/specification’s gameplay and then only later doing detailed balancing of the specific numbers needed for gameplay. For instance, for Legion the “Class Blogs” (Blizzard Entertainment, 2015) explain their usage of qualitative design to fill their goals. They then only later balanced the specifications, using quantitative methods.

Players, in fact, have long used quantitative methods to analyse gameplay. During Burning Crusade, the forum Elitist Jerks – which no longer exists – was the centre for this activity. As time has progressed, however, the community has moved on from the methods used there where players used concepts such as “Effective Hit Points” and tested theories in gameplay to quite sophisticated tools which simulate many cycles of World of Warcraft gameplay such as Simcraft (n.d.) and Rawr(n.d.)to determine the gear players should seek and equip.

This study, as it is examining game mechanics directly, has no ethical issues with participants as It involves none. While there are some ethical issues with Player Theorycrafting altering developer behaviour those issues are outside the scope of this assignment.

To return to the title of the piece, player-facing complexity must be justified and the auto-attack design of Burning Crusade does not seem defensible on either a macro or a micro level from any standpoint except in that it evolved from earlier gameplay design choices. It is also notable that while many other MMO games have tried to copy World of Warcraft’s gameplay (Kollar, 2014) in various respects, none have chosen to copy the Crushing Blows mechanic.

## Conclusion

While the design of WoW’s Legion expansion, in respect of auto-attacks, retains many elements from Burning Crusade it also removes and simplifies many others. The complexity of the Burning Crusade system, especially in the function of the hit table in terms of Crushing Blows and the gearing complexity did not add any significant, interesting choices to gameplay.

Moving away from insignificant and repetitive gameplay where players repeated used the same buttons to maximise their numerical changes in the game to more reactive models also benefits players by offering both less, more significant options for both choices and attention. While players can certainly still make errors, these are usually less concerned with mistakes within rigid “rotations” of keys. The complexity of the Burning Crusade cannot thus be justified in terms of player experience.

This is by no means saying that the Legion system is perfect – it does retain elements which can only be seen in terms of being inherited from prior WoW expansions – but there is now a wider viable range of tank classes and it is easier to begin tanking both of which are beneficial to the game and to the experience of its players. In any MMO game, a certain level of complexity is justifiable to create engagement with the game, but in some cases complexity goes far beyond this to offer few meaningful choices or to take too much of a player’s attention. Legion comes far closer to Burning Crusade to avoiding this.

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