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WRIT 1133

3 June 2013

Time and Money Expenditure in *World of Warcraft*

Many players of video games have inevitably thought about whether or not they are wasting their time (Manjoo). Often this thought is accompanied by wondering if they're throwing away their money, as well. The players of MMOGs – Massively Multiplayer Online Games – including *World of Warcraft*, or *WoW*, are certainly familiar with this kind of thinking. While these questions are highly subjective and thus can't be definitively answered, they do bring up further interesting questions that can be: just how much time and money do players of *WoW* actually put in? Is it more than other people dedicate to socializing and to other forms of entertainment? What is the value of *WoW*, in terms of dollars per hour of play, and how does it compare to other forms of entertainment in this respect? In this paper, I strive to answer these questions.

1. Method

I primarily collected data from a survey that I posted on one of the *WoW*-focused “subreddits” of the popular discussion website Reddit, specifically the “r/wow” subreddit. I also posted the survey to the “r/gaming” subreddit to get a few more responses from a similar community. The survey began with a note instructing participants that they were granting consent to me to use their responses as part of a research exercise for a writing class. I then included instructions on how the respondent could find his or her billing history for the game.

The survey questions are included in Appendix A. I coded the responses by calculating the mean and standard deviation for each question.

2. Results

I received 24 responses, but had to disregard four unusable responses, giving me a final total of 20. This was fewer than expected, but the survey did ask for a fair amount of time and effort on a respondent's part in order to find his or her billing history and total “/played” time.

2.1 Years Played

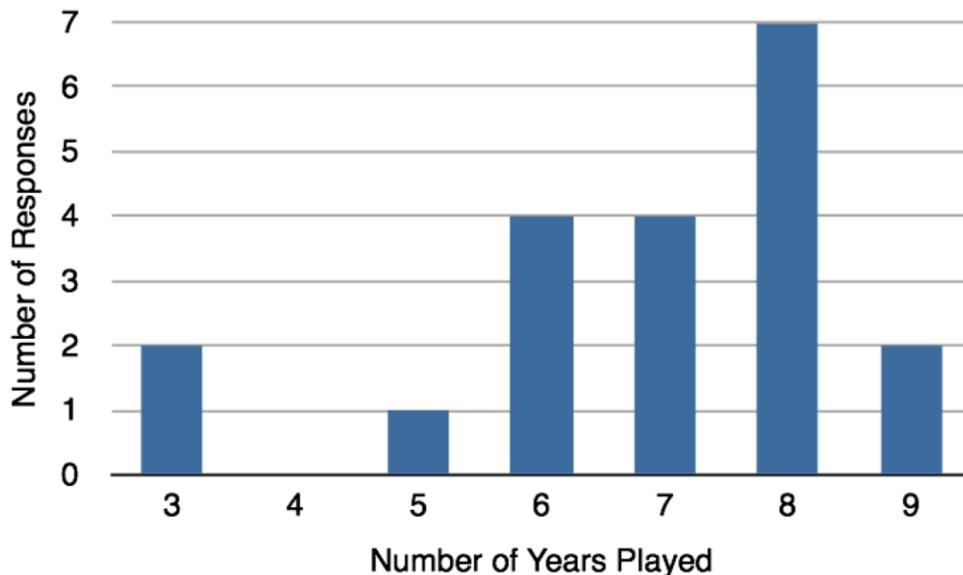


Fig. 1 Distribution of Number of Years Played

The first question asked about the number of years the respondent had been playing. As Fig. 1 shows, the respondents were mainly more experienced players, which makes sense when one considers the demographic that is likely to participate on a website dedicated to the discussion of *WoW*. Note that two respondents stated that they'd been playing *WoW* for nine years. At first glance this doesn't make sense, as *WoW* was released eight-and-a-half years ago, but the game was actually playable in “beta” form since at least February of 2004, around nine months before its release (Wowpedia). The mean number of years played was 6.85 (SD = 1.69).

2.2 Copies Purchased

The next five questions asked the respondent about how many copies of the various releases they had purchased. This may seem like an odd question at first, but in my time playing *WoW* I've found that it isn't all that uncommon for high-level players to have multiple accounts, each requiring separate copies of the game and its expansions. The reason behind this is that *WoW*'s creators have restricted the amount of characters an account can have on a given server, as well as the overall number of characters attached to the account (Blizzard "Maximum Number of Characters"). High-level players, who often have many characters at the level cap on their preferred server, will sometimes create more accounts in order to get around this restriction. It's also possible that some respondents could have purchased copies for their friends and family.

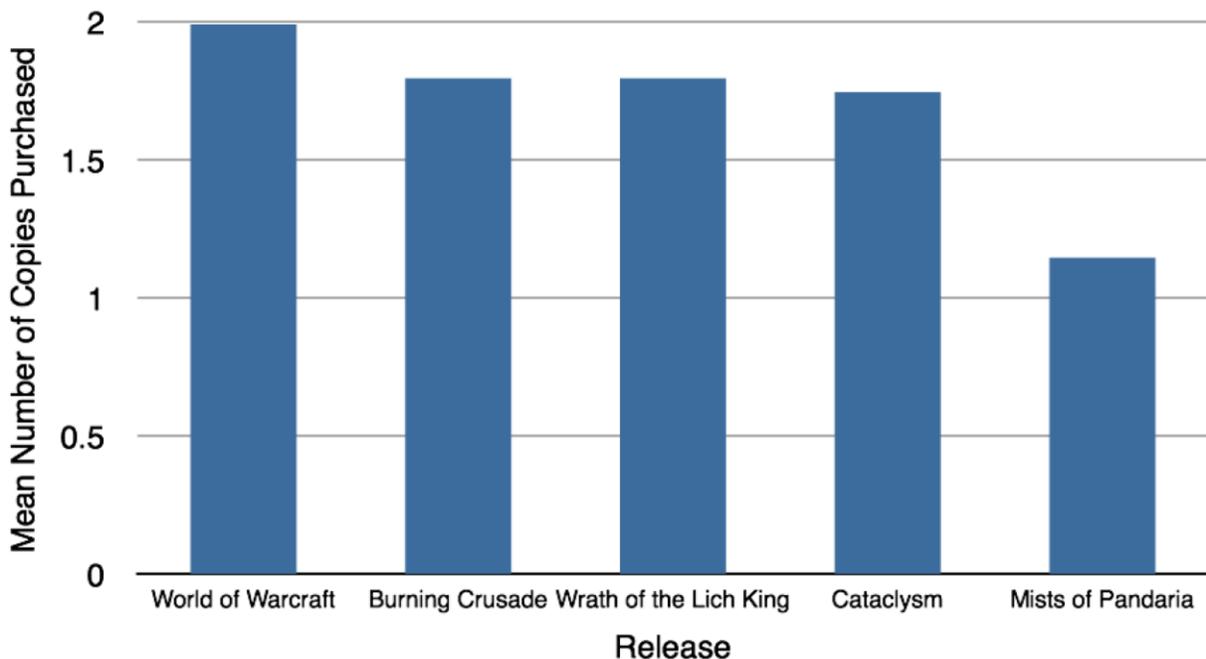


Fig. 2 Number of Copies Owned of Each Release

Given the type of players that I targeted, and the average amount of time respondents stated they had played for, the results are skewed higher than I believe would be found in the

general population of players. Most of the respondents said they had purchased one or two copies of each release, with a few people buying three copies and one outlier buying 11 of each release except for *Mists of Pandaria*, which he or she bought four copies of. The purchasing decisions of this respondent reflect the interesting trend I found in this data that players reported buying fewer copies of the more recent releases. This trend is clearly visible in Fig. 2. In fact, players bought, on average, almost half as many copies of *Mists of Pandaria* ($M = 1.15$ $SD = 0.745$) as they did of the original release ($M = 2$ $SD = 2.248$). This could be due to a variety of reasons, such as players losing interest in the game and not playing as much anymore, or simply the fact that the need to buy another copy of the game often arises out of having a full list of characters at the highest possible level. Since *Mists of Pandaria* was released relatively recently, players may not have been able to raise all of their characters to the level cap yet. The overall average number of games purchased was 8.5, with a very high standard deviation of 9.528, reflective of the high variance in the number of copies purchased.

When originally launched, a boxed copy of *WoW* cost \$50 (GamesIndustry International). Each of the expansions launched at \$40 (HotHardware). When these numbers are used to calculate the total cost of each respondent's copies, the average cost is \$360, with a standard deviation of \$403.25. Again, this high standard deviation is reflective of the high variance in the number of copies purchased.

2.3 Money Spent on Subscription Fees and Time Played

Next, participants were asked to calculate the total amount of money that they had spent on subscription fees for the game. Instructions were provided on how to find this information. The average amount of money spent on subscription fees was \$984.18 ($SD = 458.17$). After this, the survey asked respondents to input their total amount of “/played” time, in hours, across all of

their characters. I referred to this as “/played” time because typing “/played” into the in-game chat will return a total of the amount of time logged on the currently logged-in character. The average number of hours that respondents reported playing was 6457.6 (SD = 4218.07).

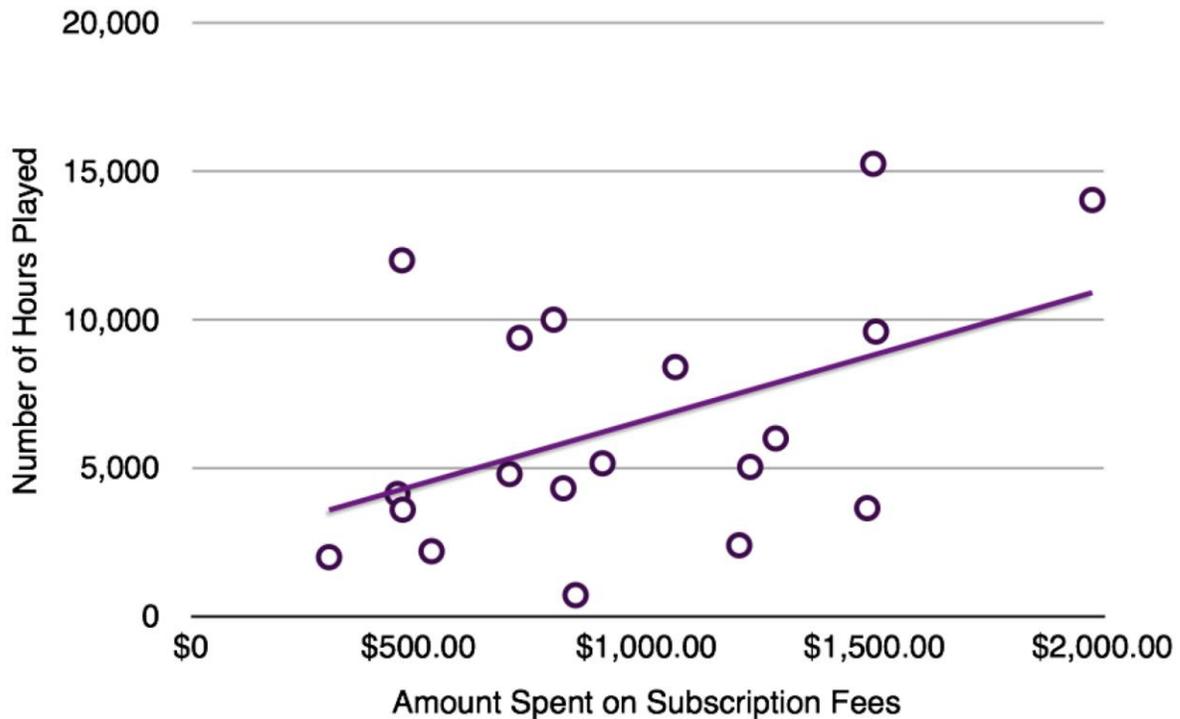


Fig. 3 Hours Played and Subscription Fees

As Fig. 3 shows, there appears to be a positive correlation between the amount of money a respondent spent on subscription fees, and the amount of time that the respondent spent playing the game. Note that there are only 19 data points in Fig. 3; this is because one respondent chose not to input a number for their answer to the question about time played. Instead, he or she simply wrote “too much.”

2.4 Paid Services

The respondents were next asked how many times they had taken advantage of each of the three major non-cosmetic paid services offered for *WoW*: server transfers, faction changes, and name changes.

Table 1

Average Use of Paid Services in *WoW*

Service	Mean	Standard Deviation
Server Transfers	6.25	8.149
Faction Changes	3.15	5.08
Name Changes	0.35	0.813

As shown in Table 1, server transfers were surprisingly common, especially given the fact that this service costs \$25 (Marshall). Faction changes were also pretty common, though less than half as common as server transfers. These changes were are even more expensive at \$30. Name changes were rare, probably due to their more cosmetic nature. Name changes are the least expensive, costing a mere \$10. There are high standard deviations for all of the services because their usage varied widely by respondent. Using the mean number of uses of each service and the price of each, I calculated the average amount of money each respondent spent on each service (Table 2).

Table 2

Average Amount Spent on Paid Services in *WoW*

Service	Mean Amount Spent
Server Transfers	\$156.25
Faction Changes	\$94.50
Name Changes	\$3.50

2.5 Buying Gold and Accounts

The next four questions asked about activities that Blizzard, the creator of *WoW*, definitely does not approve of: the purchasing of gold and accounts. Buying gold and accounts is strictly against the rules in *WoW*, but it still doesn't stop some players from doing it (Blizzard "The Consequences of Buying Gold"). Perhaps due to the illicit nature of these activities, their occurrence turned out to be pretty rare, with only three respondents stating that they had ever purchased gold, and just one respondent reporting that he or she had ever purchased an account. The three that had purchased gold reported the amount of gold they purchased to be 600, 1000, and 10,000. The two with the smaller amounts both stated that they had paid \$50 for the gold, while the purchaser of the 10,000 gold couldn't remember what he or she paid for it.

The respondent that reported buying an account was the same that had once purchased 10,000 gold. He or she stated that it cost them \$500 dollars to buy a shaman character before the first expansion was released.

2.6 Voice Servers

After asking about buying gold and accounts, the survey asked the respondents if they had ever paid for a Ventrilo, TeamSpeak, Mumble, or other voice server, and for how long. Only two people stated that they had ever paid for one, with one respondent having paid \$5 a month for one, and another reporting paying \$120 in total for a server. Curiously, both respondents put "0" when asked how many months they had paid for the server for. This must have either been a mistake on their part, or they didn't directly pay for the server.

2.7 Time Spent on *WoW*-related Forums and Websites

The final question of the survey asked the respondent how many hours he or she spent reading or posting to *WoW*-related forums and websites. The mean number of hours spent was

1.66 (SD = 1.33). This number is likely a good deal higher than it would be if this survey was taken by the general population of *WoW*, as it was posted to a *WoW*-specific forum to begin with.

2.8 Time in *WoW* Compared to Other Entertainment Activities

Americans spend an average (of both weekends and weekdays) of 4.925 hours a day on “socializing, relaxing, and leisure.” (U.S. Bureau of Labor Statistics) This category includes watching TV. I’m using this statistic for comparison, rather than only the television statistic, as *WoW* obviously includes a significant social aspect. By using the number of years played and the total amount of “/played” time for each respondent, I’ve calculated the average number of hours played daily by the respondents. This is not terribly accurate, as players only reported how long they had been playing in years, and a players involvement with the game can wax and wane. Still, this metric gives a good idea of the time invested in *WoW* by the respondents. The average amount of time spent playing *WoW* daily was 2.572 hours (SD = 1.393). This works out to be a little more than half the amount that most Americans spend on leisure time and socializing.

This metric doesn’t give the full picture, however. To get a more accurate portrayal of the amount of time invested in *WoW*, the amount of time spent on *WoW*-related sites every day must be factored in. With this measure included, the average amount spent playing and discussing *WoW* climbed to 4.212 hours a day (SD = 1.888). This number is now quite close to the figure for the average American. It appears that, at least for this particular group of players, *WoW* doesn’t take up an amount of time that dramatically differs from the amount spent by the average American on leisure and socializing.

2.9 The Value of *WoW* Compared to Other Forms of Entertainment

As shown in the BLS statistics referenced earlier, watching television is an extremely popular pastime in the United States. While over-the-air television is available for free to

anybody with an antenna, only 17.85% of homes rely on it (National Association of Broadcasters). Most of the rest of the country pays for cable or satellite television. The costs of these services are not insignificant, as exemplified by the average bill at cable giant Comcast: \$129.75 a month (Arango). Using the average time spent daily watching TV from the BLS data, 2.88 hours, the average American watches 87.6 hours of television a month. This works out to \$1.48 per hour. In comparison, the average amount spent by the respondents per hour of playtime is far lower, at \$0.23 (SD = 0.25). Even when the total cost of *WoW* is factored in, rather than just the subscription fees, the price-per-hour number is still low (M = \$0.636 SD = 0.152).

Going to the movie theater, another popular entertainment activity, costs much more per hour. A typical movie ticket costs \$8.05 and lasts around 110 minutes (Barnes, Sciretta 2). This works out to about \$4.39 per hour of entertainment, more than 19 times as much per hour as *WoW* costs when only the subscription fees are factored in.

3. Discussion

Perhaps surprisingly, my results indicate that *WoW* doesn't take any more time out of a person's life than is normally devoted to leisure activities and socializing. They also show that *WoW* is a better value, in an objective price-per-hour sense, than some other popular forms of entertainment. The answers to my research questions challenge the notion that *WoW* players are wasting their time and money on entertainment at a higher rate than the general population, at least for a certain subset of the player base.

This brings me to one of the areas where future research would be beneficial: I was unable to attract a large number of respondents, and so my results can't really be applied to the *WoW* community at large. A better future survey would be targeted much more broadly, so as to get a larger sample size and more accurate, applicable results. Valuable future research could

also ask questions about what other entertainment activities the respondent enjoys, and how much time and money he or she dedicates to these pursuits.

There is no objective way to determine if time spent playing *WoW* is really valuable; it's a completely subjective decision; no form of entertainment can be definitively called valuable or useless. However, the time and money put into *WoW* can be compared to the time and money put into other activities, and, for this group of respondents, it doesn't seem like *WoW* sucks up any more time or money than the average American spends on watching TV.

Appendix A

1. For how many years have you been playing *WoW*?
2. How many copies of *WoW* have you purchased?
3. How many copies of *Burning Crusade* have you purchased?
4. How many copies of *Wrath of the Lich King* have you purchased?
5. How many copies of *Cataclysm* have you purchased?
6. How many copies of *Mists of Pandaria* have you purchased?
7. How much money have you spent of subscriptions to *WoW*, in dollars? Please refer to the instructions above on how to find this information.
8. What is your total "/played" time, across all of your characters, in hours?
9. How many paid server transfers have you performed?
10. How many paid faction changes have you performed?
11. How many paid name changes have you performed?
12. If you have ever bought gold, how much gold did you buy? If you've never purchased gold, please enter "0".
13. If you have ever bought gold, how much money did you spend for it, in dollars? If you've never bought gold, please enter "0".
14. If you have ever purchased a character, how much it cost you, in dollars? If you've never purchased a character, please enter "0".
15. If you have ever paid for a Ventrilo, TeamSpeak, Mumble, or other voice chat server, how much did you pay for it on a monthly basis, in dollars? If you've never paid for such a service, please enter "0".

16. If you have ever paid for a voice chat server, for how many months did you pay for it? If you've never paid for such a service, please enter "0".
17. On a typical day, how many hours do you spend reading/posting to *WoW*-related forums and websites?

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