

The Daedalus Project

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[\(\[HTTP://WWW.NICKYEE.COM/DAEDALUS\]\(http://www.nickyee.com/daedalus\)\)](http://www.nickyee.com/daedalus)

Welcome to The Daedalus Project

So I was just looking at the dates of the previous issues and realized "The Daedalus Project" has been around for a little over a year now. I'd like to thank everyone who's ever participated in the online surveys. You are what keeps this project going. Your participation, feedback and comments are very much appreciated and valuable.

I'm trying to be a little more adventurous in designing the survey experience - so you'll see the dynamic item-script in this survey, and hopefully a user-aware component starting the next survey (the back-end DB will keep track of sections you've previously filled out and let you skip them).

I'm trying to be a little more verbose when reporting the stats, mostly in reporting effect-size estimates so that it's easier to understand the relative importance of contributing factors given that so many factors reach statistical significance with the large sample size. I'm also running multiple regressions using age, gender, motivations and personality traits as the independent variables to sort out the relative contribution of these variables in observed phenomena.

A particularly interesting finding presented in this issue was the multiple regression analysis showing that the personality trait Extraversion (taken from the Big-5 factors) was the best predictor of how players projected their own identities onto their avatars. Introverts are more likely to create characters that were similar to who they were, and in some cases more of "who they really are", whereas extraverts are more likely to create characters that were different from themselves, perhaps trying out new roles and identities.

The Demographics of Motivations

A simplified version of the motivations assessment (rating 7 statements) was tested and produced results that were highly similar to the full assessment (rating 30 statements), though of course it would have been impossible to articulate the condensed scale without having the full scale. The results of the simplified assessment are presented here.

The four highest-rated motivations for playing an MMORPG were Achievement, Immersion, Socialization, and Escapism, in that order. The reported means are only representative of the sample, drawn mostly from EQ-clones (DAOC, SWG, AO, AC etc).

Motivation Ratings* in Descending Order (N = 2980)			
	Mean	Median	Brief Description
Achieve	5.28	5	Getting to the Next Level. Becoming powerful. Achieving goals.
Immerse	5.15	5	Immersed in Fantasy World. Exploring Roles. Part of a Story.
Social	5.11	5	Meaningful conversations. Making good friends. Social/Support Network.
Escape	4.94	5	Escaping from Real World. Venting, or Relieving Stress.
Group	4.74	5	Being part of a Large Group/Guild. Team/Group Achievements.
Analyze	3.61	4	Analyzing Game Mechanics. Making or Analyzing Tables/Charts/Map.
Compete	3.13	3	Competing with Other Players. Dominating/Beating Other Players.

Note. Rating scale was from 1 to 7, with the extremes labeled "Not Important At All" and "Very Important" respectively

Correlations Between Motivations (N = 2980)							
	Achieve	Immerse	Social	Escape	Group	Analyze	Compete
Achieve	---	0.06	NS	0.08	0.16	0.17	0.31
Immerse		---	0.13	0.16	0.07	0.08	NS
Social			---	NS	0.39	NS	NS
Escape				---	NS	0.06	0.07
Group					---	0.15	0.21
Analyze						---	0.20
Compete							---

Note. NS = not significant.

For the most part, the gender and age differences are what would have been expected. The only exception may be that female players might have been expected to rate the Immersion component higher than the male players. The table also shows the relative impact of age and gender on the motivational differences and the two seem to play an equal role among the motivations.

Gender and Age Differences in Motivations and Correlations with Hours Played Per Week (N male = 2496, N female = 420)				
	Gender Differences	<i>r</i> *	Age Correlation Coefficients	Hours Correlation Coefficients
Achieve	Male > Female	0.16	-0.18	0.12
Immerse	Male > Female	0.07	-0.11	---
Social	Female > Male	0.08	-0.15	0.16
Escape	None	---	0.07	0.09
Group	None	---	-0.18	0.19
Analyze	Male > Female	0.17	---	0.07
Compete	Male > Female	0.21	-0.28	0.12

Note. All reported gender differences, and age and hours correlations are significant at the $p < .001$ level. *r* is a measure of the effect size of the gender differences, and thus an approximation of how much the overall difference can be explained by gender alone.

Resource / Manufacture / Combat Classes

Many recent MMORPGs have well-differentiated non-combat professions that are viable in and of themselves. In other words, unlike the EQ system, you don't have to fight to get the resources or money (or rely on your guild) to buy the materials to skill up in crafting. The appeal of the resource and manufacturing classes were explored in comparison with the combat classes. Respondents rated the appeal of the following three broad classes:

If the following 3 types of roles were equally well-implemented and balanced, how much would each appeal to you?

Resource Gathering: Explorer/Geologist/Miner/Hunter/Trapper

Manufacturing: Blacksmith/Alchemist/Armorer/Tailor

Combat: Warrior/Archer/Healer/Sorcerer

Since most MMORPGs tend to be combat-focused, it was expected that the combat rating would be skewed higher. The goal was to explore whether particular slices of age, gender, or motivations would provide a reasonably good understanding of whether certain players were more likely to prefer certain non-combat professions.

Contributing Factors to Preference for Combat and Non-Combat Classes				
(N = 2914)				
	Mean	Gender Differences	r*	Age Correlation Coefficients
Resource	4.41	Female > Male	0.04	0.08
Manufacture	4.42	None	---	---
Combat	6.09	Male > Female	0.07	-0.13

Note. Rating scale was from 1 to 7, with the extremes labeled "Not At All Appealing" and "Very Appealing" respectively. All reported gender differences, and age and hours correlations are significant at the $p < .001$ level. r is a measure of the effect size of the gender differences, and thus an approximation of how much the overall difference can be explained by gender alone.

Correlations of Class Preferences and Motivations (N = 2951)							
	Achieve	Immerse	Social	Escape	Group	Analyze	Compete
Resource	0.07	0.19	0.05	0.04	NS	0.13	-0.10
Manufacture	NS	0.14	0.06	0.05	0.04	0.17	-0.07
Combat	0.26	0.10	0.10	0.07	0.20	NS	0.17

Note. All reported correlations are significant at the $p < .001$ level. NS = not significant. Coefficients above .15 are highlighted.

The results seem to indicate that preference for these three board types of classes do not vary with gender or age very much, but may be better explored in terms of player motivations.

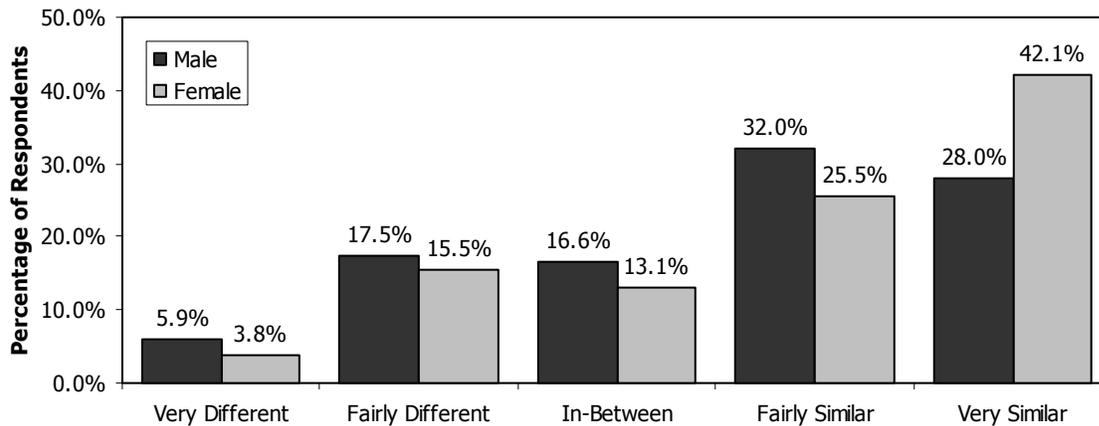
Through The Looking-Glass

This dataset explores several aspects of identity projection through the use of avatars. When players create and play their characters, how many of them choose to act and behave pretty much the same as they do in real life, and how many deliberately try out new personalities? And do players tend to behave and act the same way across their different characters? Are there gender or age differences? And finally, do motivations for playing or personality traits have an influence on how identity is projected through avatars?

Female players are more likely to behave and interact in an MMORPG very similarly to how they behave and interact with others in real life when compared with male players.

Do you behave and interact in an MMORPG very differently or very similarly to how you behave and interact with other people in real life?

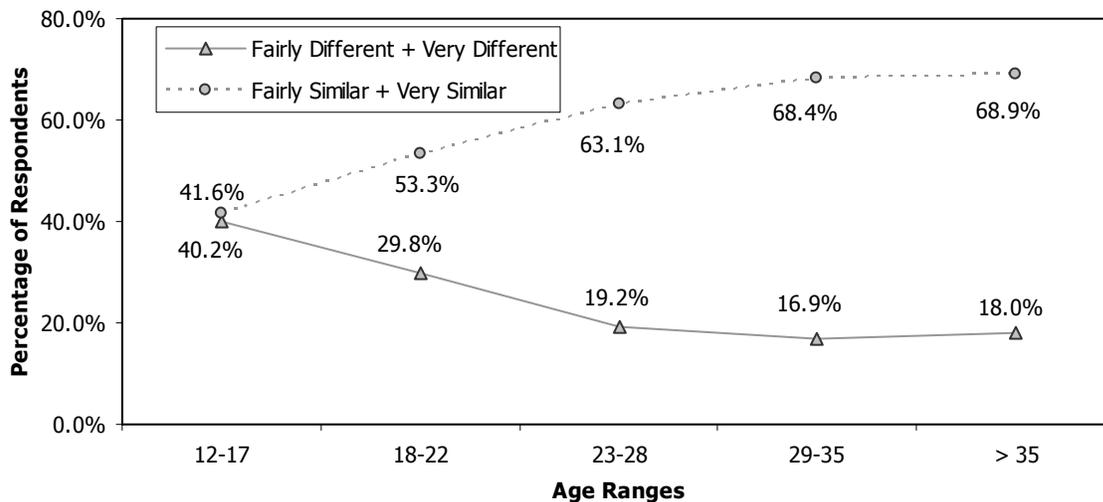
N male = 2495, N female = 420



Age, however, seems to be the more important factor.

Player/Avatar Similarity by Age Cohort

N = 2916



Multiple Regression Results	
Behavioral Similarity	
(N = 2914)	
R ² = .11, Adj. R ² = .11, p < .001	
	Beta
Age	.13
Extraversion	.12
Neuroticism	-.09
Immersion	-.08

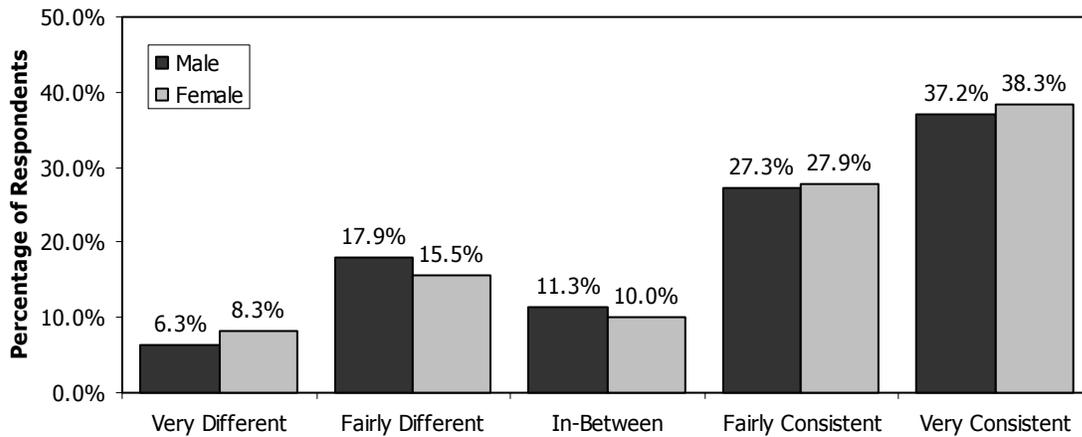
Note. The four highest predictors are listed.

The multiple regression results show that Introverts are more likely to behave similarly while Extraverts tend to behave more differently. Also note that Age and Extraversion do not correlate ($r = -.02$).

Players were also asked how consistently they act and behave when they are playing different characters. Gender and age had no impact on the outcome of the responses.

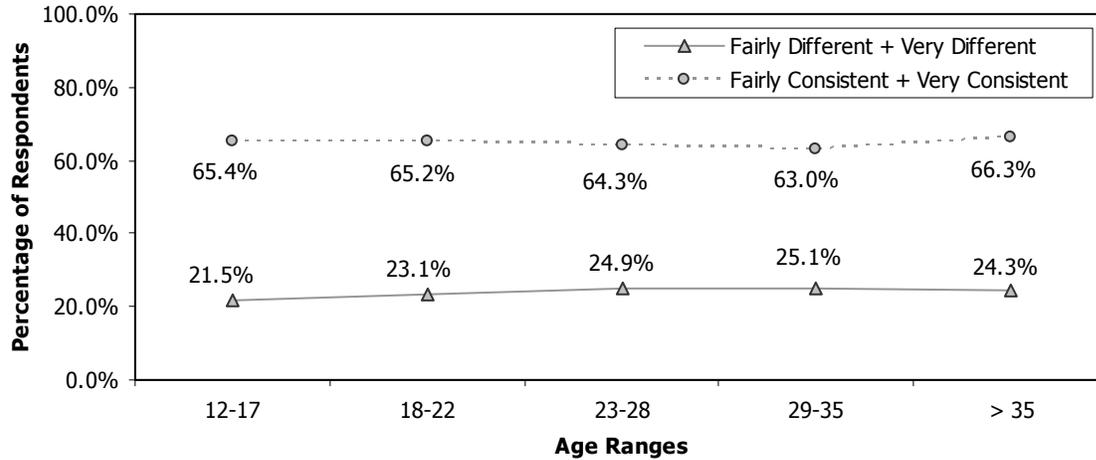
Do you behave fairly consistently across your characters, or do you behave and act very differently when you play different characters?

N male = 2495, N female = 420



Behavioral Consistency across Age Cohorts

N = 2892



The multiple regression results show that it is the desire for immersion and role-playing that most differentiates players who behave consistently across their characters from the players who don't.

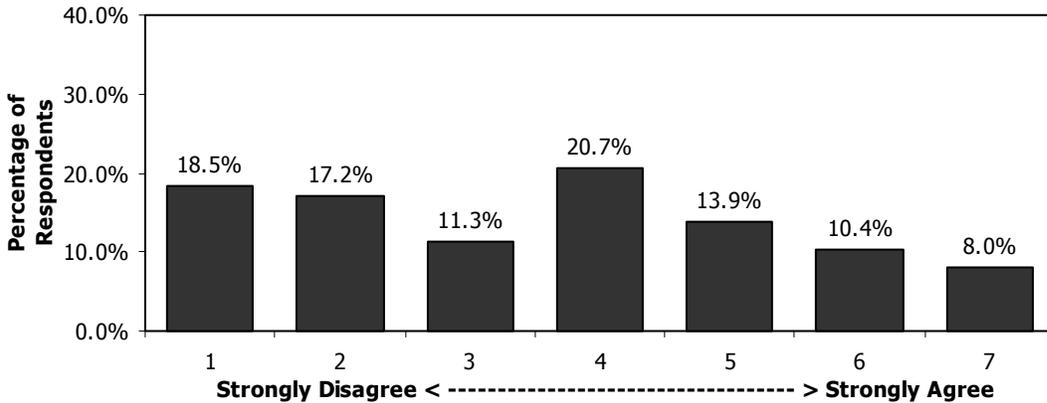
Multiple Regression Results	
Behavioral Consistency	
(N = 2914)	
R ² = .07, Adj. R ² = .06, p < .001	
	Beta
Immersion	-.19
Achieve	.11
Agreeableness	.07
Compete	-.07

Note. The four highest predictors are listed.

Finally, respondents were asked whether they felt that they were more of “who you really are” in the MMORPG than in real life. There were no significant gender differences.

I am more of "who I really am" in the MMORPG than in real life

N = 2916



Multiple Regression Results	
"Who I Really Am"	
(N = 2914)	
R ² = .11, Adj. R ² = .10, p < .001	
	Beta
Age	.13
Extraversion	.12
Neuroticism	-.10
Agreeableness	.08

Note. The four highest predictors are listed.

The multiple regression results echo the results from the questions on behavioral similarity, and show that Introverts are creating characters not only similar to themselves in real life, but that they act and behave in a way that they feel is more true of who they really are.

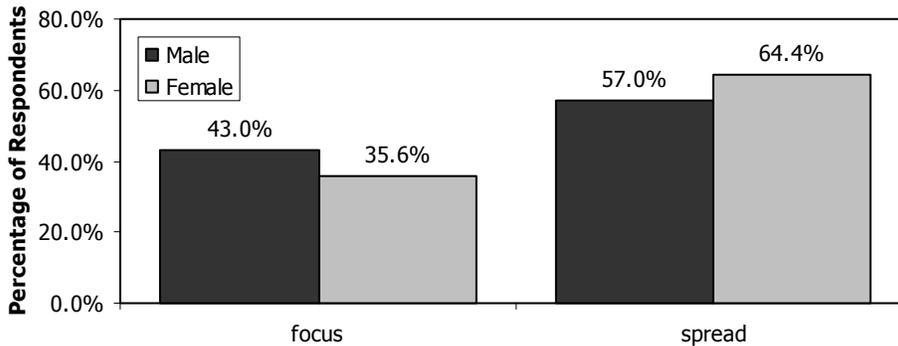
Who wants to be a Jack-of-all-Trades?

In many class-based MMORPGs, class options include pure classes and hybrid classes. Pure classes excel at what they do, but have a more limited ranged of abilities, while hybrid classes have a larger range of abilities, but have limited expertise in them. The data presented here would also apply to skill-based systems because all these systems have a skill cap and players must decide whether to excel in one skill line or spread out, unless the system mechanics make one or the other a better option (like in DAOC).

Both gender and age were found to impact the preference for pure or hybrid classes. Female players tend to prefer hybrid classes. Also, older players prefer hybrid classes.

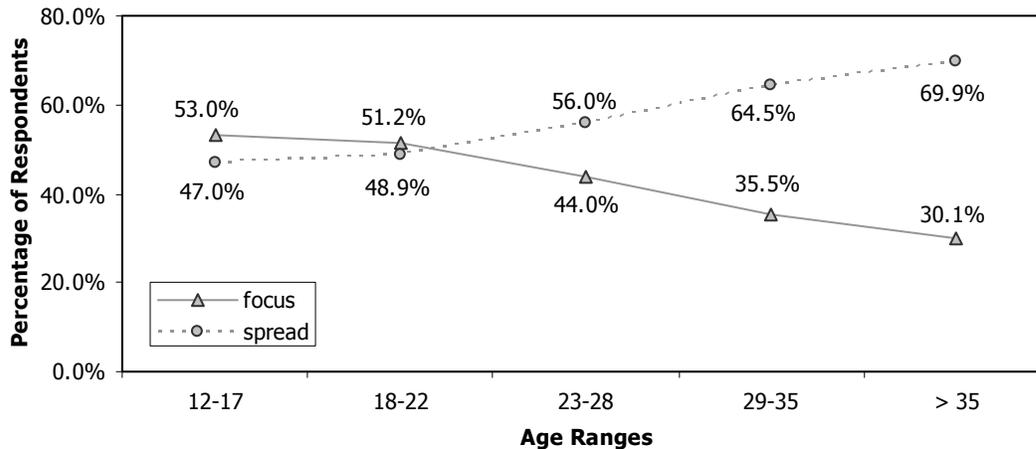
Preference for Pure or Hybrid Classes

N male = 2494, N female = 419



Preference for Pure or Hybrid Classes by Age Cohorts

N = 2170



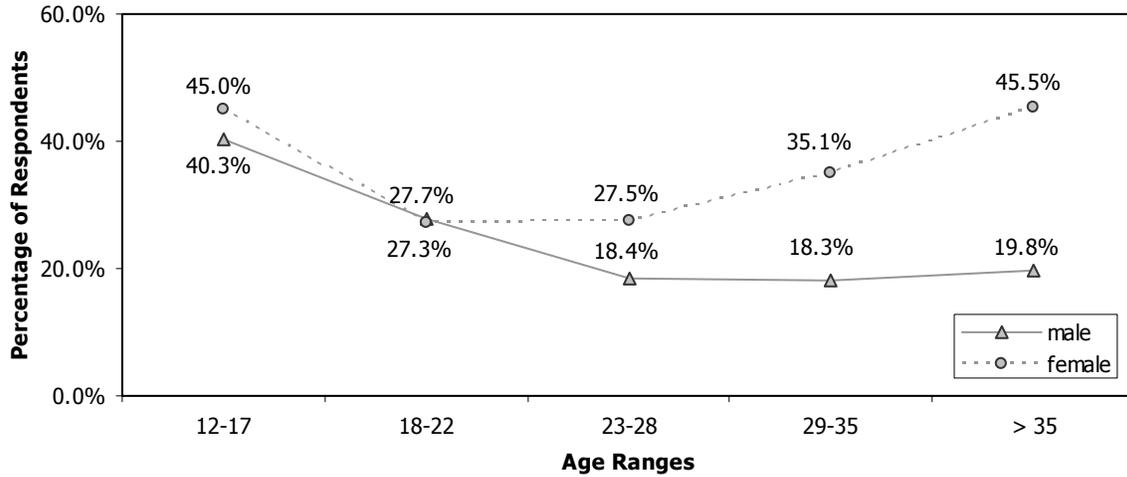
Among the motivation components and personality traits, the motivations “compete” ($t = -10.00$, $p < .001$, $r = .18$) and “achieve” ($t = -7.36$, $p < .001$, $r = .13$) were the best discriminators for players who preferred to focus rather than spread.

Learning Life Lessons

Anecdotal and quantitative data (<http://www.nickyee.com/mosaic/>) seemed to suggest that many players felt they were learning important life lessons from MMORPGs. Several questions were included in a recent survey to explore this aspect in more depth. The following graphs show age and gender differences among respondents who used the top two of the seven agreement rating points, labeled from Strongly Disagree to Strongly Agree. So the 45.5% at the top right of the first graph means that 45.5% of female players over the age of 35 strongly agreed that important life lessons can be learned in MMORPGs.

Important life lessons can be learned in MMORPGs.

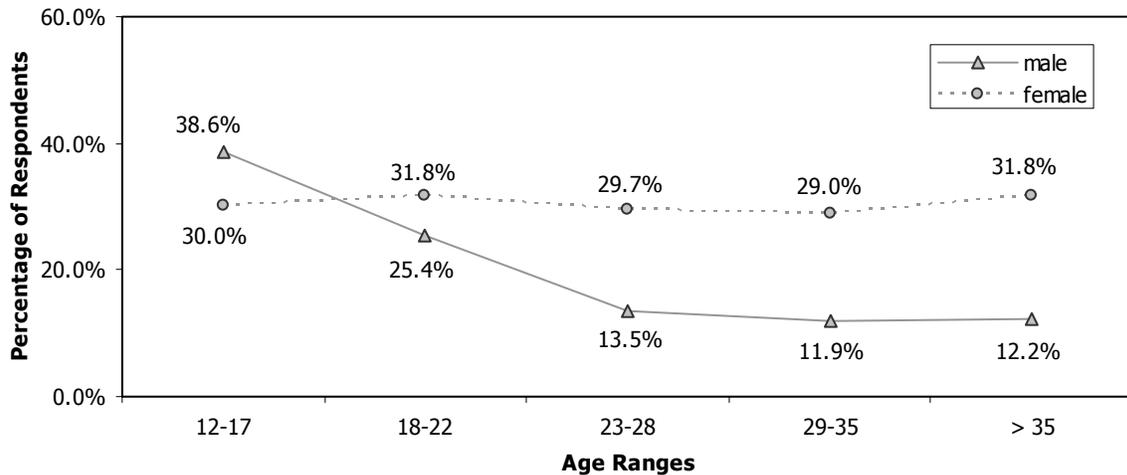
N male = 2497, N female = 420



Note. The data plotted are the percentages of respondents in each gender/age cohort that used the top 2 of the 7 agreement rating points, labeled from "strongly disagree" to "strongly agree". So for example, the 45.5% at the top right of the graph means that 45.5% of the female players over the age of 35 strongly agreed that important life lessons can be learned in MMORPGs.

My MMORPG experiences have helped me grow as a person.

N male = 2497, N female = 420



Note. The data plotted are the percentages of respondents in each gender/age cohort that used the top 2 of the 7 agreement rating points, labeled from "strongly disagree" to "strongly agree". So for example, the 31.8% at the top right of the graph means that 31.8% of the female players over the age of 35 strongly agreed that their MMORPG experiences have helped them grow as a person.

Both the gender and age differences are quite striking in that they are either non-linear or only affect one gender. In the first graph, younger players tend to feel that important life lessons can be learned in MMORPGs, but for female players, this sentiment rebounds with age while it declines among male players. In the second graph, about one-third of female players across all ages feel that their MMORPG experiences have helped them grow as a person whereas among male players, this sentiment declines significantly with age.

Multiple regression analyses were performed on both data sets using the demographics, motivations and personality factors as independent variables.

Multiple Regression Results	
Important Life Lessons	
(N = 2914)	
R ² = .14, Adj. R ² = .13, p < .001	
	Beta
Social	.25
Analyze	.12
Escapism	.12
Gender	.09

Note. The four highest predictors are listed.

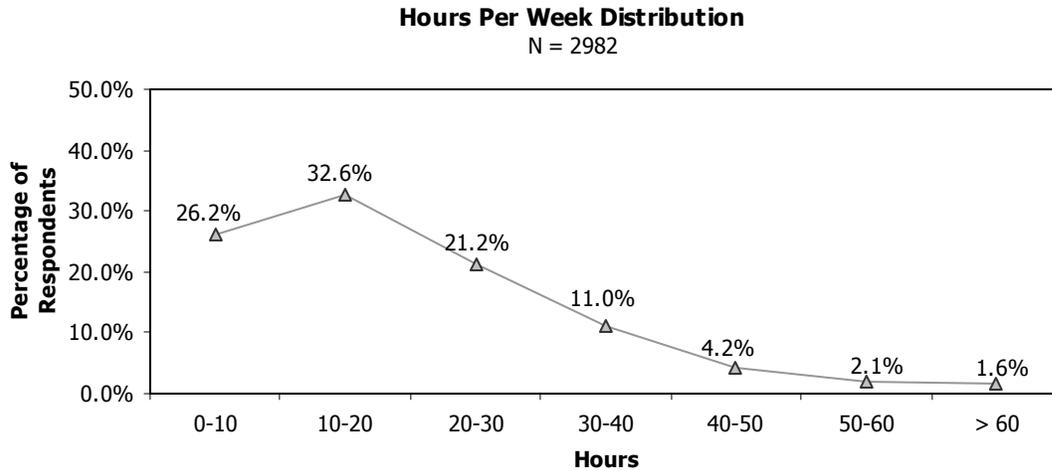
Multiple Regression Results	
Personal Growth	
(N = 2914)	
R ² = .16, Adj. R ² = .16, p < .001	
	Beta
Social	.27
Escape	.13
Gender	.12
Analyze	.10

Note. The four highest predictors are listed.

The multiple regression results showed that the motivation to socialize within the game was the best predictor of whether a player felt they were learning important life lessons or achieved personal growth from the game. To ensure that this result wasn't merely due to the covariance of gender and score on the "social" motivation, the multiple regression was repeated with only the male players. The coefficients for the "social" motivation were almost exactly the same, .26 and .27 respectively. In fact, the coefficients for the "social" motivation were weaker when the multiple regression was done only with female players, .20 and .20 respectively.

Hours of Play per Week

The mean of the number of hours played per week was 21.9, and the median was 20. Interestingly, there were no gender or age differences in hours played per week.



A multiple regression analysis using age, gender, motivations and personality traits revealed that the motivation to socialize and find group affiliation were the best predictors of hours of play per week. Even though the contribution coefficients seem small, for comparison note that between the lowest and highest scoring players on the Social motivation is a difference of about 8.5 hours played per week (from 17.1 to 25.5 hours).

Multiple Regression Results	
Hours Per Week	
(N = 2967)	
R ² = .08, Adj. R ² = .07, p < .001	
	Beta
Social	.13
Group	.11
Achieve	.08
Escape	.06

Note. The four highest predictors are listed.