The Daedalus Project

FAQ on the Good and Bad (transcript of interview)

I was recently interviewed over email over some issues centered on game-play and game addiction. I decided to include them here as they answer some of the questions I am most frequently asked about.

What evidence suggests video games and online role playing games are addictive?

60% of MMORPG players surveyed have played the game for 10 hours continuously or more.
44% of MMORPG players surveyed would consider themselves to be addicted to the game they are playing.
13% of MMORPG players surveyed have tried to quit the game but failed.

About 5% of MMORPG players surveyed strongly agree that playing the game:
    - makes them feel guilty
    - has caused them financial or relationship problems in real-life
    - they become irritable and angry if they can't play the game.
    - has caused their social life to suffer.
    - arguments have arisen at home because of their game-play

Are there positive factors to playing these games?

Yes there are, and I wish people focused on these more often:

Learning Leadership Skills:
http://www.nickyee.com/daedalus/archives/000338.php

Learning Relationship / Communication Skills:
http://www.nickyee.com/daedalus/archives/000339.php

Helping Teenagers Deal with Identity / Gender Issues:
http://www.nickyee.com/mosaic/adolescence.html

Helping Individuals Gain Confidence and Self-Esteem:
http://www.nickyee.com/mosaic/growth.html

How Playing Helps Romantic Couples who Play Together:
http://www.nickyee.com/mosaic/partner.html

How Playing Helps Parents and Children who Play Together:
http://www.nickyee.com/eqt/parent.html

Using MMORPGs as Therapeutic Spaces:
http://www.nickyee.com/daedalus/archives/000516.php

Educational Uses of MMORPGs:
http://www.nickyee.com/daedalus/archives/000515.php

What are the primary negative factors?

MMORPGs are designed to encourage time investment and are more addictive than other less complex games. For a more detailed analysis, read through:
 http://www.nickyee.com/eqt/skinner.html

If they are addictive, why is that so?

One theory of addiction is that people become dependent on a substance/action because it ultimately empowers them as it destroys them. For example, individuals who feel they have no control over their lives might binge eat or shop because in those moments, they can at least feel they are in control. One reason why MMORPGs might be so addictive is because they help individuals deal with a host of very common issues they might be dealing in real-life. For example:

- People with low self-esteem can become a knight or a princess and feel they can achieve something in this virtual world.
- People with poor self-image can become as beautiful and agile as they want.
- People who feel they have no control over anything in life can exert control in a virtual environment where they have super-human abilities.
- People who feel unneeded or under-valued can make a difference.
- People who have trouble sustaining relationships in real life find it easier to do so in the simplified world of MMORPGs.
- People who are stressed and burdened with problems in real life can use MMORPGs as an escape.

What are indicators of possible addiction?

A combination of:

- Anxiety, frustration and anger when unable to play.
- Feelings of guilt when playing.
- Continuing to play even when you're not having fun.
- Peers or family have suggested that game-play has become a problem.
- A deterioration in social life.
- Emergence of financial or relationship problems.

How much time is reasonable for a youth to spend playing video games?

MMORPG players play on average about 22 hours per week. This, on the other hand, is less than the average number of hours that a typical American watches TV per week which is 27 hours. The important thing is to make sure you can set clear time schedules ("I'm only going to play for 2 hours") and to be able to log off when that time is up. I think around 22 hours is a reasonable amount per week. Of course, if a teenager is out of school, then it is ok to play more since they have more time as long as they can moderate their game-play and aren't playing the whole day away.

Individually, how can a possible video game addiction be resolved?

Different players play the game for different reasons, and this is actually a fairly complicated issue. Some players are driven by the achievement cycle, while others get tied up with their online social network. Others play to escape real life, and yet others play to become the heroes they can't be in real life. On an individual basis, the key to resolving addiction is to identify what is motivating the individual to play and address that issue specifically. Of course, this should be done with the help of a counselor who is familiar with online games or non-substance addictions.

**How would you recommend solving the problem on a nationwide basis?**

I'm not sure if there's an actual problem per se. Driving automobiles causes far more deaths on a statistical perspective than playing video games. An addiction is not something a substance/game causes as much as it is vulnerability in the individual that has gone out of control. As such, destroying all games won't suddenly cure all people of their self-image and confidence issues. And in fact, there's a lot of good that is coming out of these games as well. To me, the problem isn't the games. The problem is people who blame the game instead of really helping the person when he/she becomes addicted.

**What can others do to help eliminate this problem?**

As with all other indulgences in life, moderation is the key. I would rather see all these people campaigning against video games to campaign against alcohol because alcohol, by far, causes more deaths and problems in our society than video games …

Occupational Status, Marital Status, and Children

Overall, 50% of MMORPG players are working, 22% are full-time students, 12% are working and/or going to school part-time, 10% are unemployed, 3% are home-makers, while 1% are retired. The gender differences are presented below.

Occupational Status

N male = 2394, N female = 440
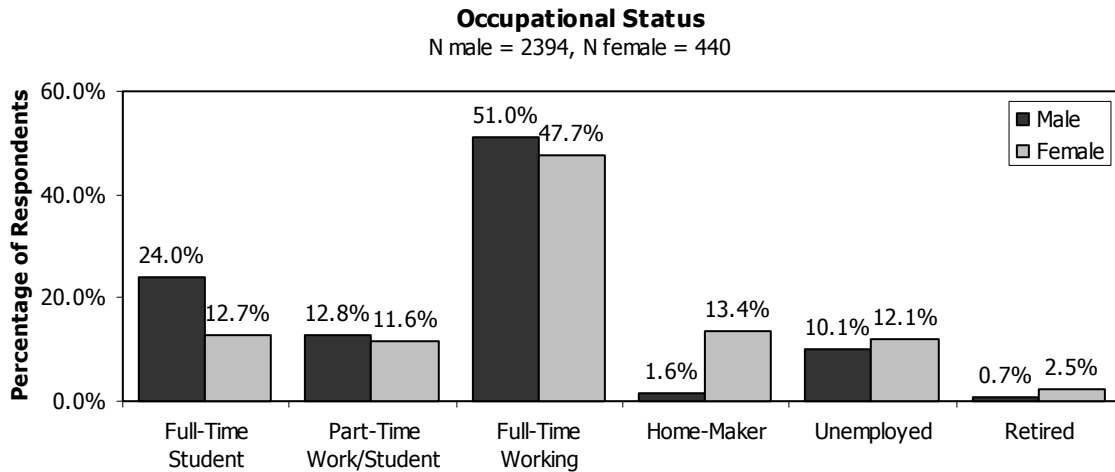
While about 36% of MMORPG players are married, there are significant gender differences.

Marital Status

N male = 2384, N female = 442
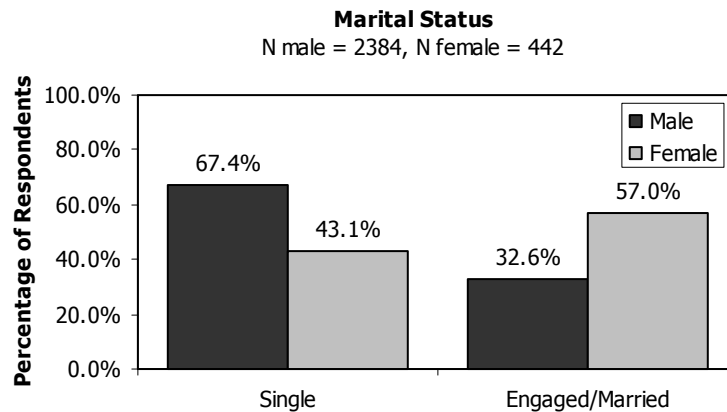
Even though part of the gender difference in marital status can be attributed to older female players in general (http://www.nickyee.com/daedalus/archives/000194.php), it is also the case the female players (and women in the US in general) get married at an earlier age than men do.
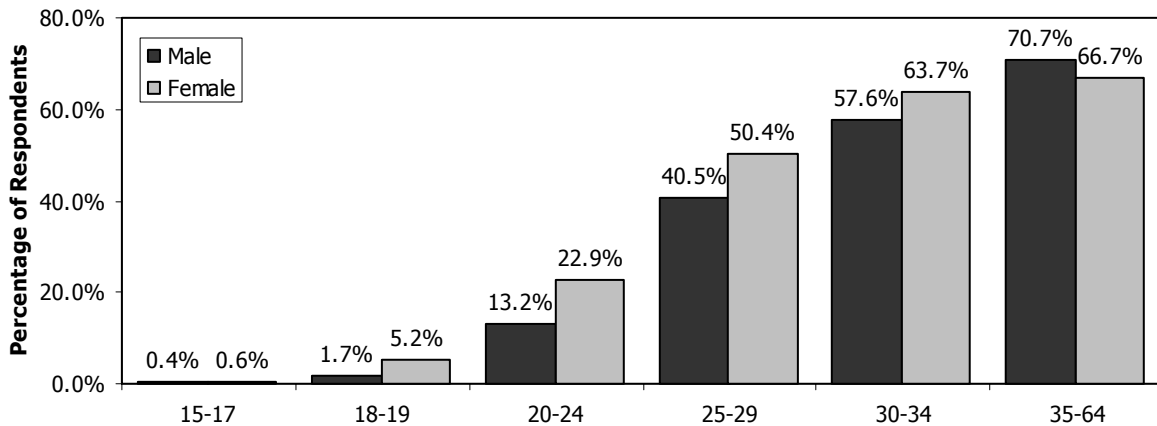
Marital Status (by gender)

N male = 2363, N female = 435
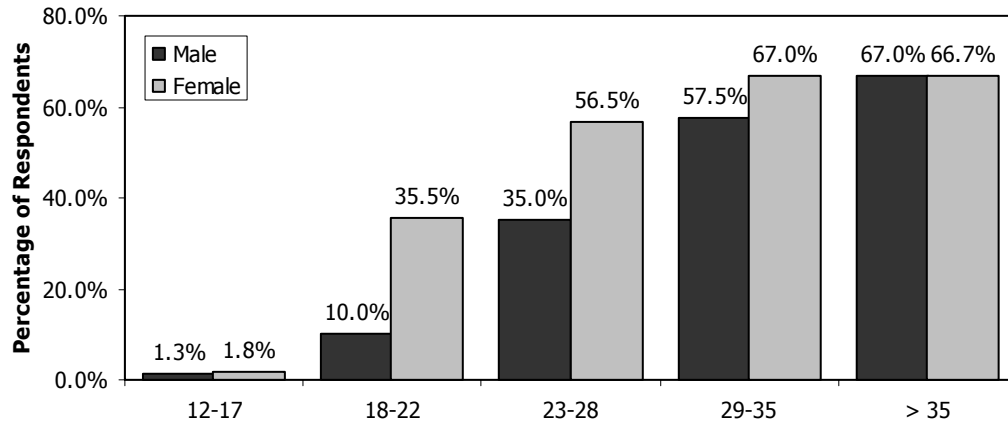
US Census Data 03/2002: Marital Status (by gender)

N male = 106819, N female = 114639

Because the younger female age cohorts had the smallest sample sizes, it could be that the higher number of married females under 29 is skewed high; however, the chances of all 3 female age cohorts under 29 skewed high due to chance alone is fairly low. Female players are more likely to have started playing MMORPGs because of their spouses and thus this may be causing the number of younger married female players to be disproportionately higher.
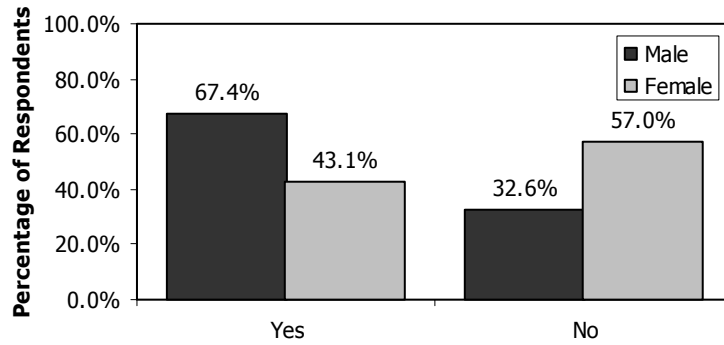
Did Someone Introduce You to the Game?

N male = 1778, N female = 420
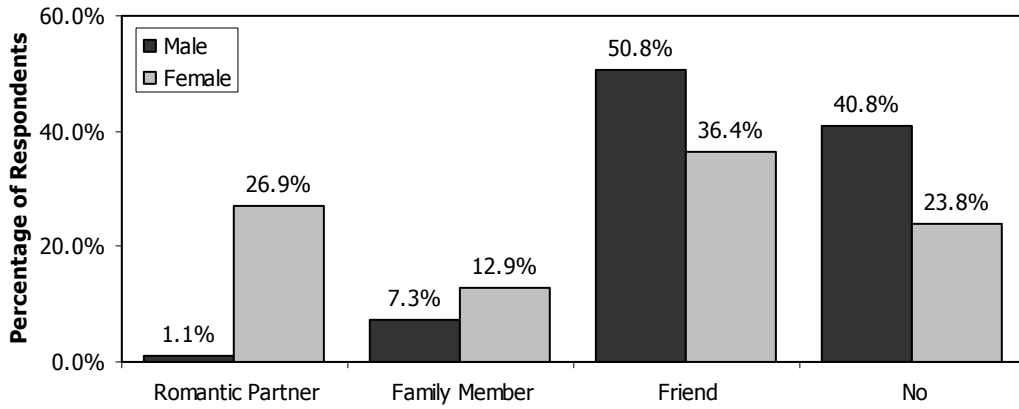
Below are the percentages of male and female players who have children.

Children?

N male = 2384, N female = 442

The Demographics of Gender-Bending

Previous findings had shown that male players were significantly more likely to play characters of the opposite gender (http://www.nickyee.com/eqt/genderbend.html), but the age differences among male and female players was never explored in detail. It was surprising to find that older male players are the most likely players to gender-bend.

Number of Characters of The Opposite-Gender (by Gender)
N male = 2200, N female = 410
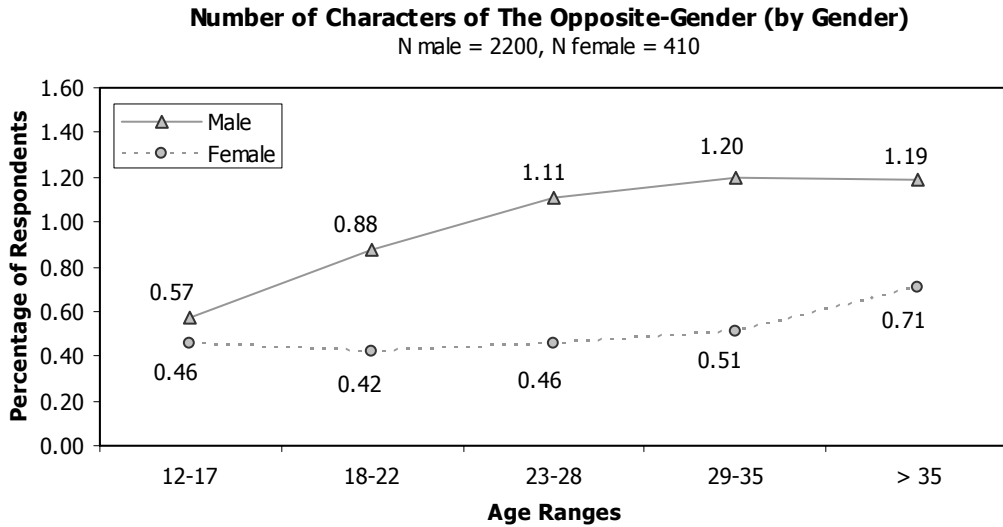
However, there was a possible confound in that older male players were also found to have more characters in general. This was not the case with female players.

Number of Characters (by Gender)
N male = 2122, N female = 354
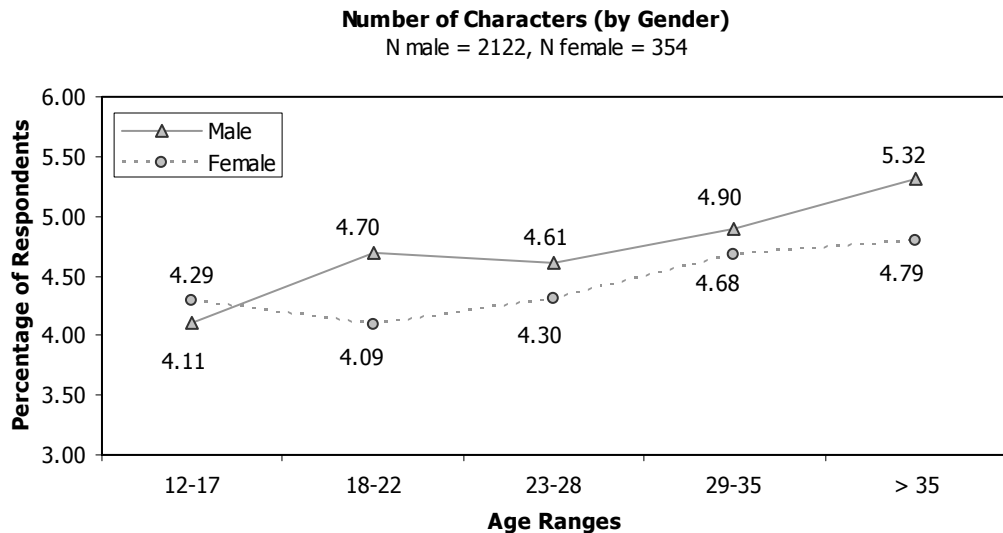
And so instead of relying solely on the absolute number of characters of the opposite gender, another analysis was performed that used the proportion of characters of the opposite gender in terms of total characters. And this showed that older male players were indeed much more likely to have characters of the opposite gender.

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Ratio = Number of Opposite Gender Char / Total Chars (by Gender)
N male = 2023, N female = 388
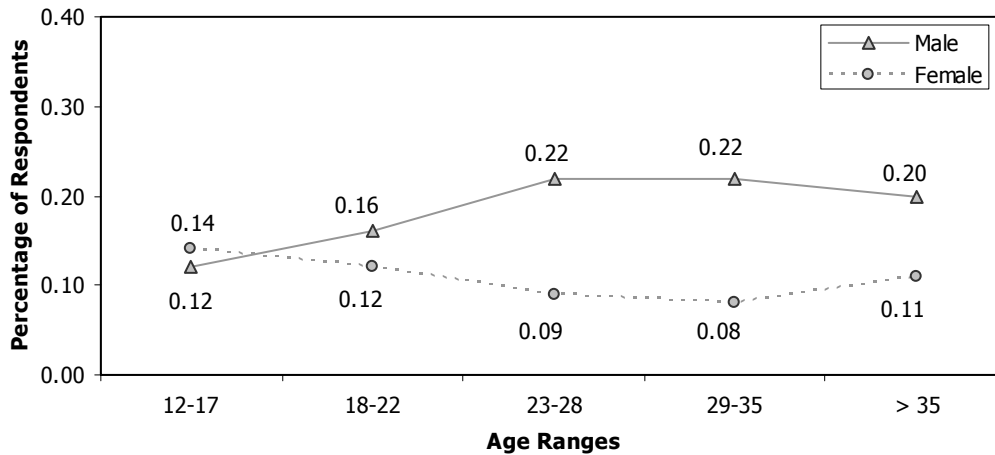
Theories for male gender-bending I have explored in the past have included:

- Social gender boundaries more stringent in real-life for men, and in an anonymous space, men are more likely to explore gender roles.
- Female avatars receive more "freebies" and are treated "better" than male avatars.
- Male gender-bending is another form of dominating the female body.
- In PvP games, female avatars are perceived to be weaker and this might give the player a psychological edge against unsuspecting chauvinistic players.

None of these theories, however, explain why older men would be most likely to gender-bend. Any ideas?

The Demographics of Guild Membership

While most players are in guild, one unexpected finding was that female players are significantly more likely to be guild leaders ($p = .03$).

Guild Membership Status
N male = 2384, N female = 439
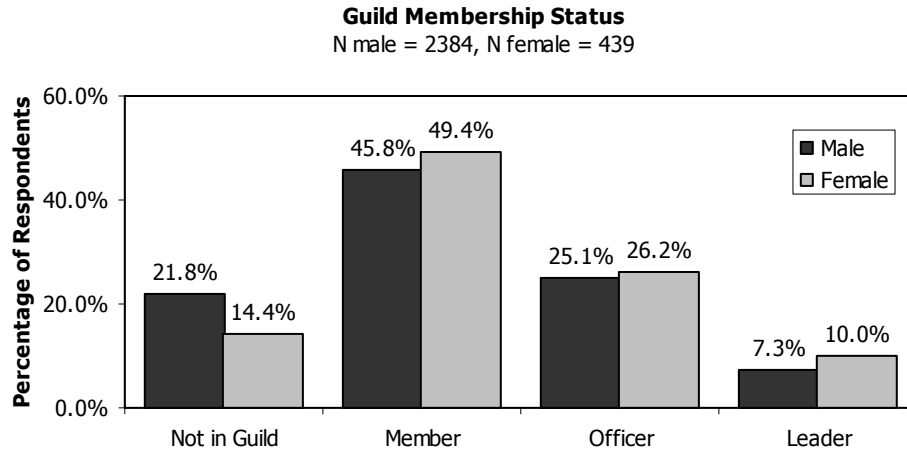
It was also found that older players are more likely to be guild leaders.

| I am a Guild Leader	
N = 2814	
12-17	4.2%
18-22	7.4%
23-28	8.4%
29-35	9.2%
> 35	9.5%

See "The Demographics of Groups" to see how the demographics flip in normal group leadership.

The Demographics of Groups and Group Leadership

Reasons for grouping and the demographics of grouping were explored. Female players are more likely to group for social reasons while male players are more likely to group for better XP.

Do you tend to Solo or Group?
N male = 2383, N female = 438
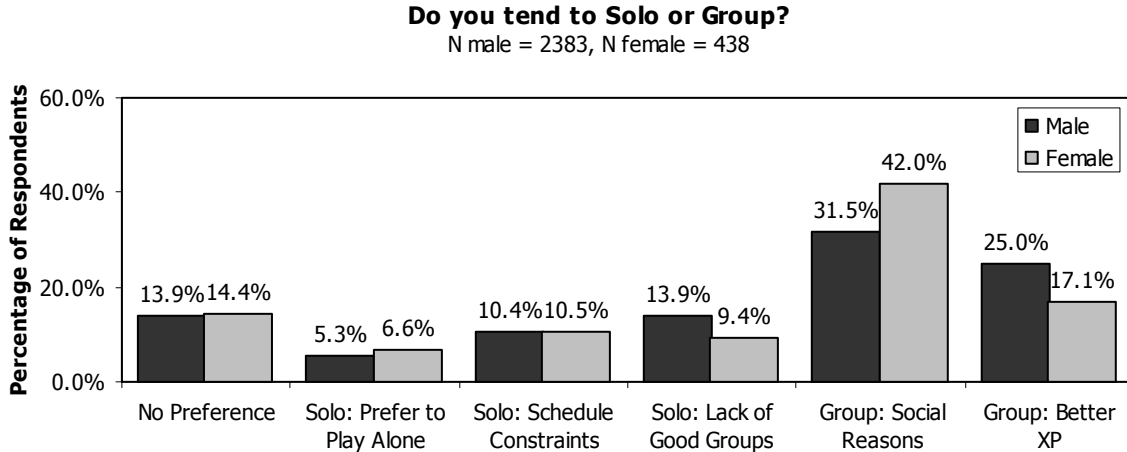
Age differences were quite pronounced. Older players were far less likely to group for better XP and were more likely to prefer to solo either because of schedule constraints or because they preferred to play alone. Older players were not more likely to group for social reasons. It can be inferred from this that groups are typically composed of disproportionately younger players.

Age Differences in Grouping/Soloing
N = 2812
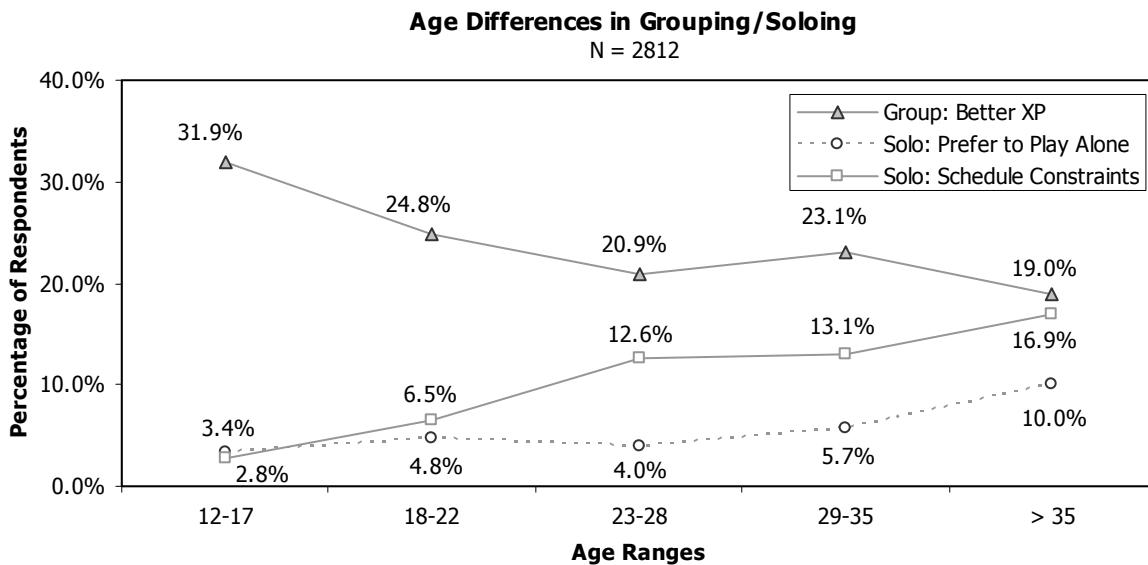
It was found that older players were less likely to want to be the leader of groups.

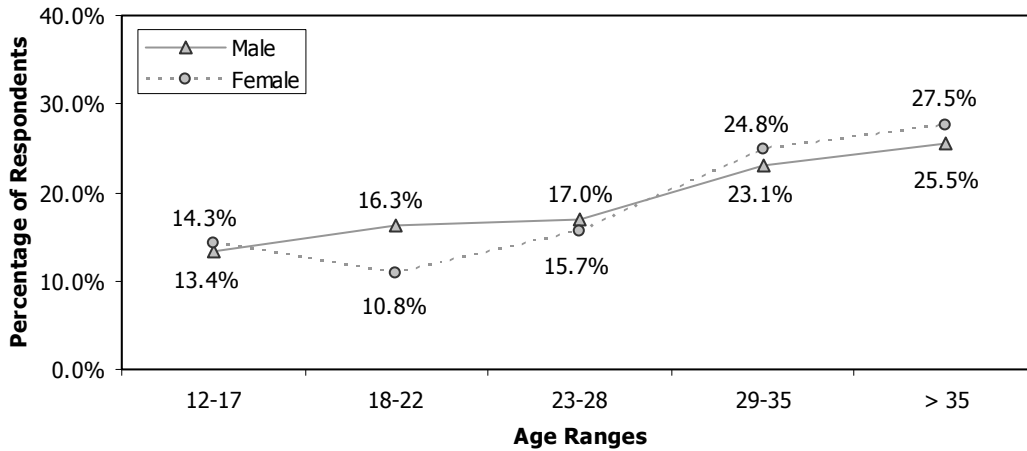**When in a group, I usually want to be in a leadership role**

N male = 2366, N female = 435
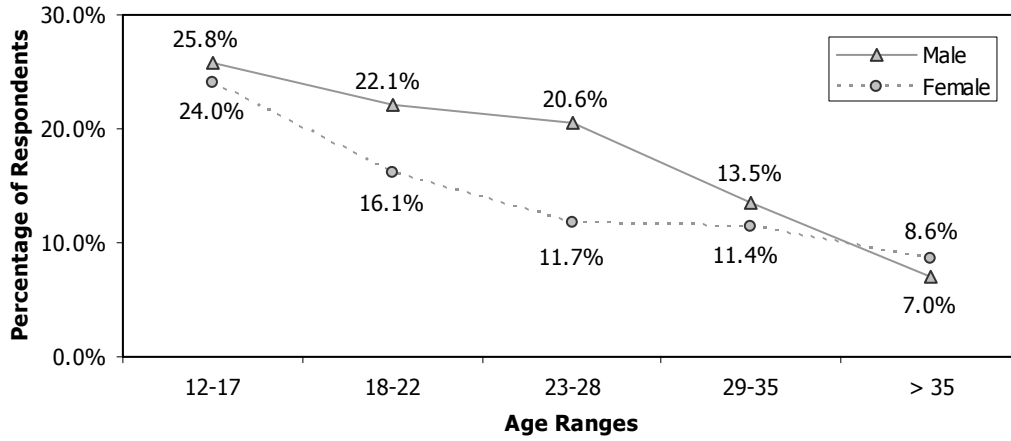
It was also found that older players are less likely to be leaders of groups, and that they are the leaders in groups less often over time. The difference is clearer among male players than female players.
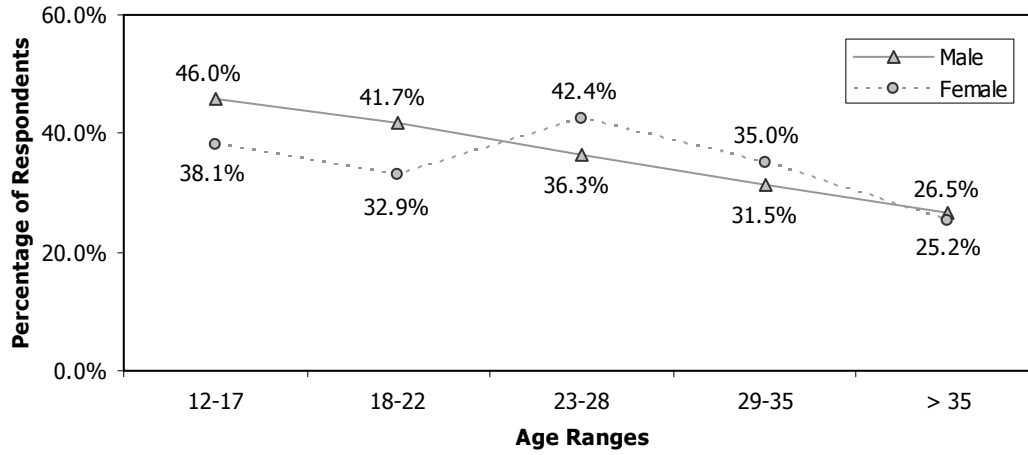
I am almost never the leader in groups

N male = 3036. N female = 477

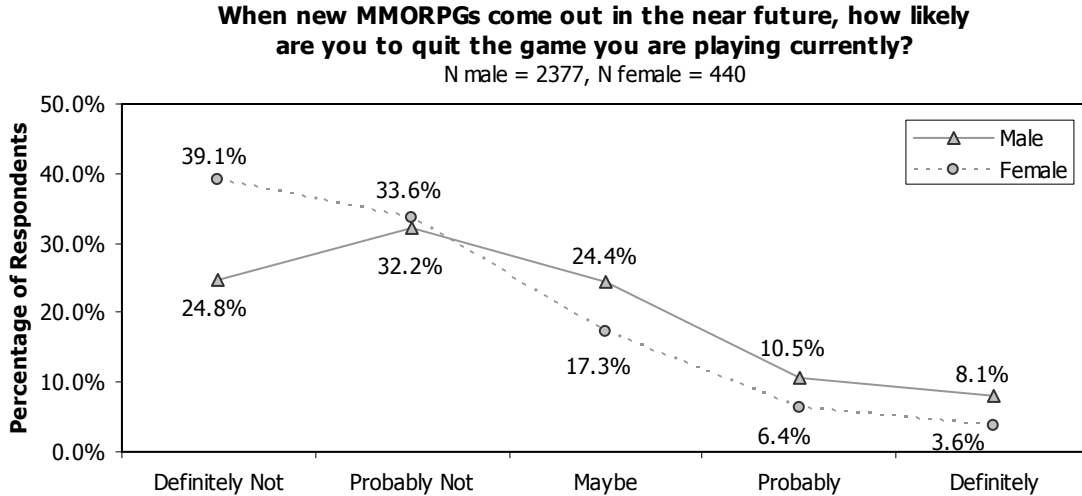**Over time, I am the leader of groups more often**

N male = 3031, N female = 474

In other words, group leaders are usually young players because older players are less likely to be in groups and they also don't want to be a group leader.

The Demographics of Quitting

When asked whether they would quit their current game when a new game came out, female players indicated they were less likely to switch to a new game completely.

When new MMORPGs come out in the near future, how likely are you to quit the game you are playing currently?
N male = 2377, N female = 440

It was also found that older players were less likely to quit their current game for a new game.

Will You Quit (by Gender)
N male = 2377, N female = 440
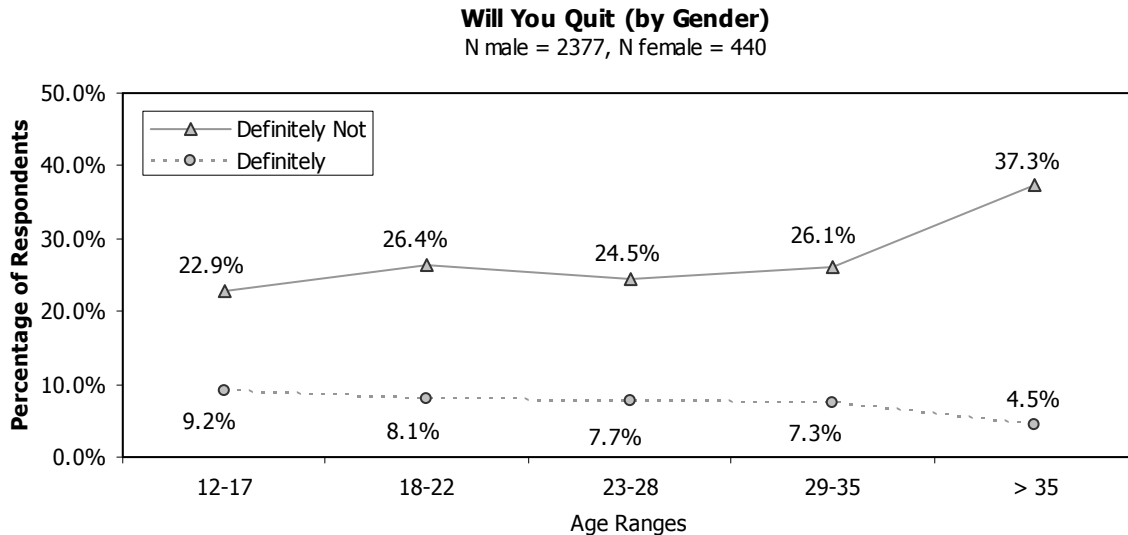
The demographics and social changes that a server goes through over its life-cycle would be interesting to explore further.

Revised Player Motivation Factors

This is a brief statistical overview of the revised player motivation factors. It is being included for completeness and for reference, and is not meant to be completely accessible to a lay audience.

The following data builds on findings from the Facets presentation (http://www.nickyee.com/facets/home.html). The main problem was the awkwardness of the Leadership factor which seemed both too vague and imprecise.

A new factor referred to as Group Affiliation was tested as a potential replacement for the Leadership factor. The 5 statements used were:

- **I like to be part of a group or team effort.**
- **I enjoy being part of a guild.**
- **I tend to be very loyal to the guilds I am in.**
- **I have a great respect for group and guild leaders.**
- **I prefer team victories over individual achievements in the game.**

The results were very good. Group Affiliation was independent of the other factors. The Factor Analysis results are shown here:

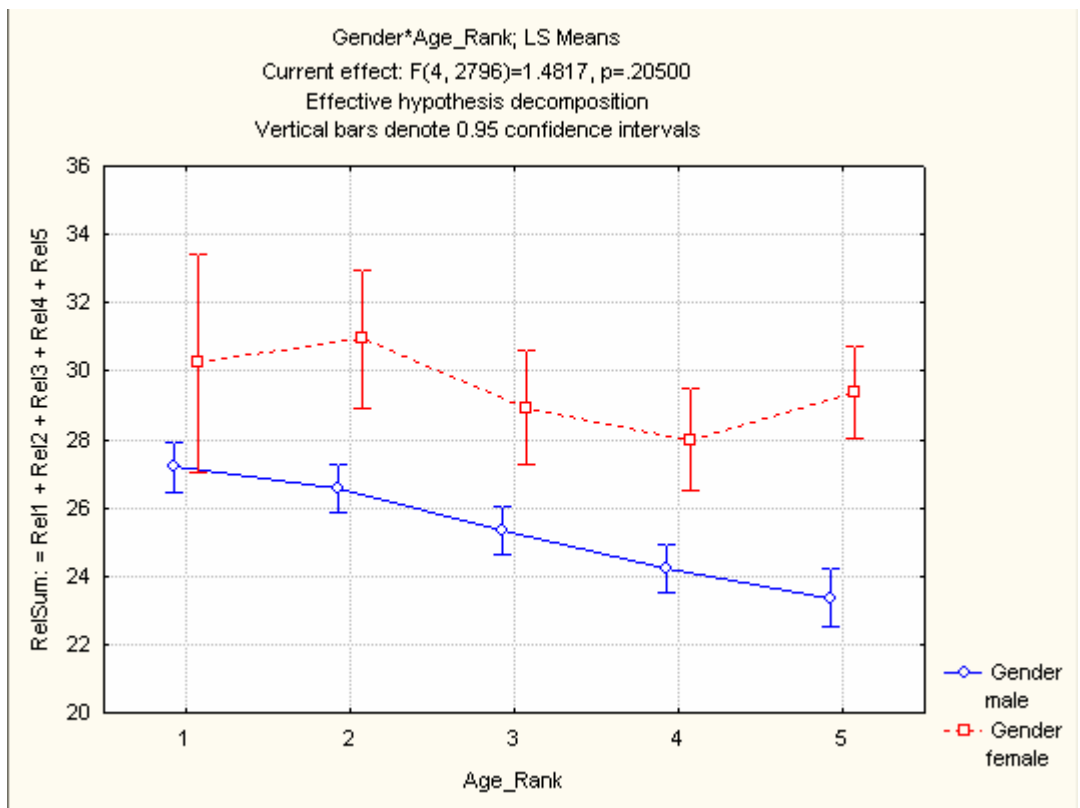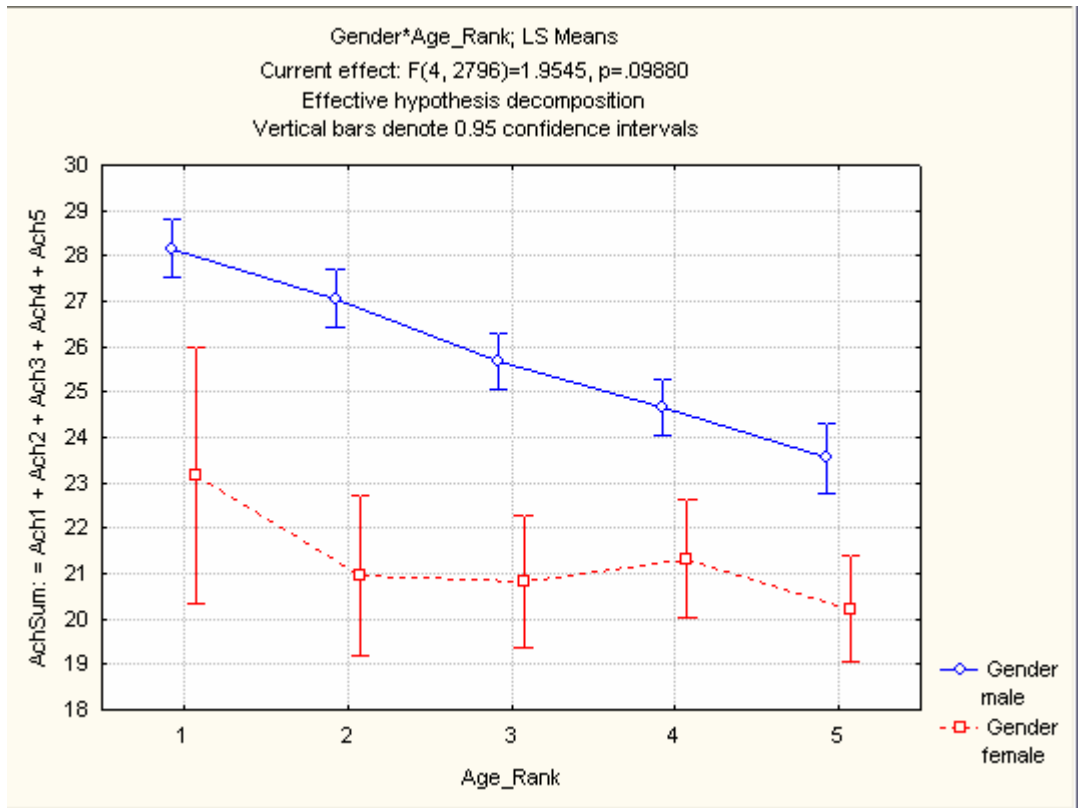| Variable	Factor Loadings (Quartimax normalized) (mmg10_stat.sta) Extraction: Principal components (Marked loadings are > .600000)				
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
ACH1	0.068881	0.766157	-0.017499	0.090753	-0.003262
ACH2	0.059690	0.620088	0.194118	0.249598	-0.015298
ACH3	0.028039	0.783299	-0.013262	0.117344	-0.032603
ACH4	0.071143	0.741466	0.079222	0.053358	0.054693
ACH5	-0.012563	0.761864	-0.119729	0.192220	-0.036592
AFF1	0.761991	0.064276	0.067895	0.071129	0.115484
AFF2	0.748973	0.100572	0.054444	0.026726	0.259527
AFF3	0.640035	0.106362	0.077406	-0.192379	0.218080
AFF4	0.576082	0.124500	0.162932	-0.239623	0.253116
AFF5	0.747612	-0.098188	0.059564	0.040755	0.104328
GRE1	-0.014283	0.052769	-0.036529	0.801306	0.021736
GRE2	0.033385	0.328852	0.063001	0.701887	0.024559
GRE3	-0.058845	0.160240	0.062874	0.801587	-0.017885
GRE4	-0.092887	0.011377	0.009607	0.711041	-0.048187
GRE5	0.002128	0.262708	0.102672	0.643854	0.032444
IMM1	0.050957	0.151622	0.691041	-0.018389	0.074439
IMM2	0.074263	-0.051070	0.712669	0.132684	0.097406
IMM3	0.192340	0.049105	0.694723	0.026995	0.116663
IMM4	-0.025899	0.095415	0.705119	0.024480	0.080294
IMM5	0.059875	-0.174997	0.720983	0.006482	0.111563
REL1	0.280398	-0.012656	0.119932	-0.009215	0.704002
REL2	0.102578	0.048114	0.316931	-0.009978	0.536120
REL3	0.316255	0.015955	0.151716	-0.004403	0.728301
REL4	0.103380	-0.012813	0.018549	0.042294	0.831228
REL5	0.157890	-0.066727	0.089905	-0.023546	0.829554
Expl.Var	2.743897	3.046805	2.753683	2.945229	2.953708
Prp.Totl	0.109756	0.121872	0.110147	0.117809	0.118148

The clustering diagram is shown here:

Tree Diagram for Variables
Single Linkage
Euclidean distances
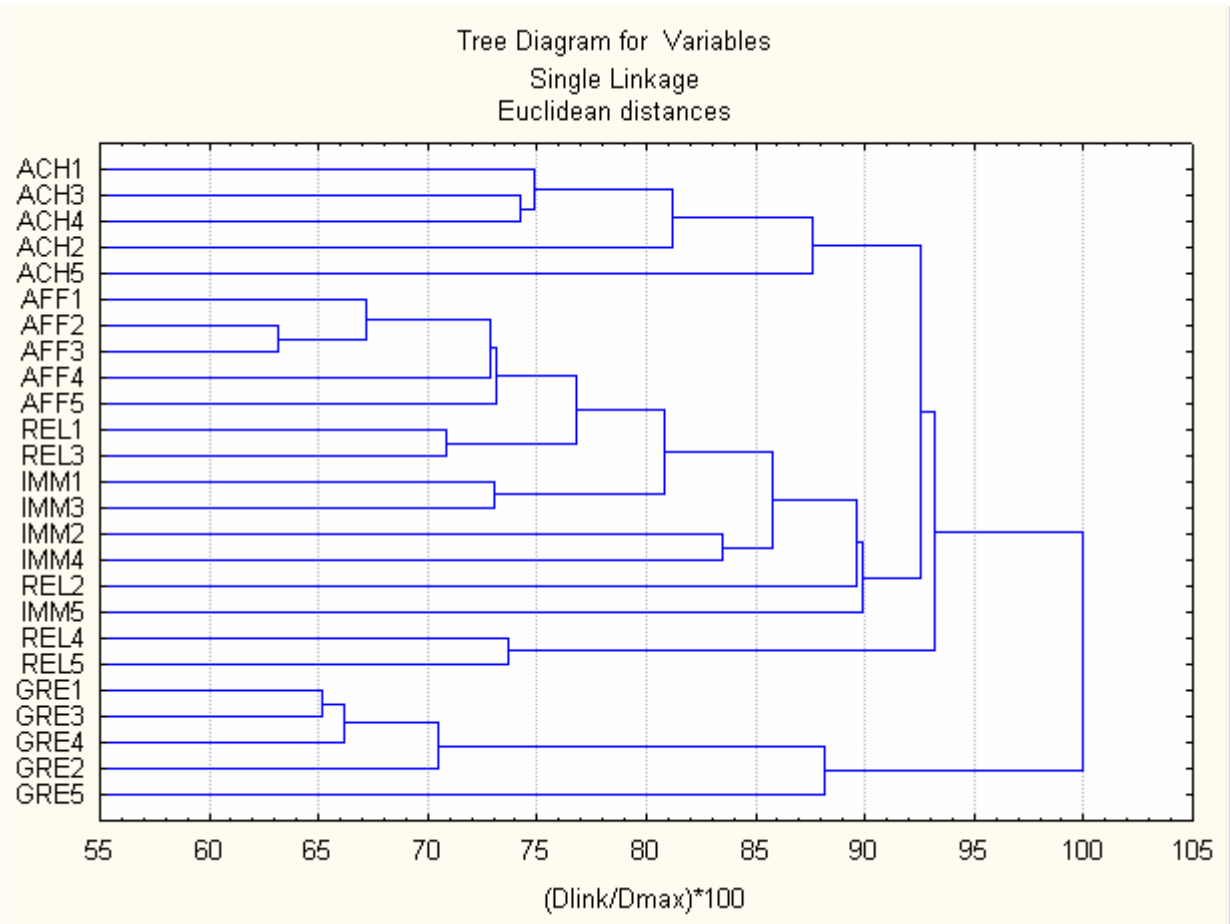
The age and gender plots (with error bars) for each factor is shown below:

Gender*Age_Rank; LS Means
Current effect: F(4, 2796)=1.9545, p=.09880
Effective hypothesis decomposition
Vertical bars denote 0.95 confidence intervals

Gender*Age_Rank; LS Means
Current effect: F(4, 2796)=1.4817, p=.20500
Effective hypothesis decomposition
Vertical bars denote 0.95 confidence intervals

Gender*Age_Rank; LS Means
Current effect: $F(4, 2796)=1.1091$, $p=.35037$
Effective hypothesis decomposition
Vertical bars denote 0.95 confidence intervals
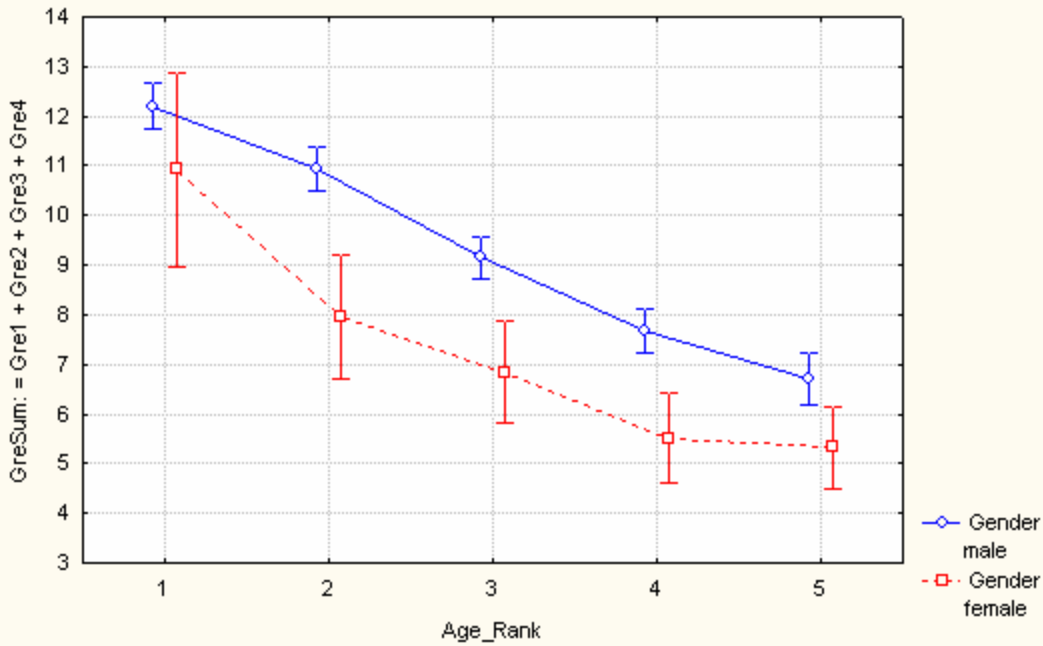
Gender*Age_Rank; LS Means
Current effect: $F(4, 2796)=.76979$, $p=.54476$
Effective hypothesis decomposition
Vertical bars denote 0.95 confidence intervals

Gender*Age_Rank; LS Means
Current effect: $F_{(4, 2796)}=1.0236$, $p=.39359$
Effective hypothesis decomposition
Vertical bars denote 0.95 confidence intervals