

THE BIG FIVE PERSONALITY CHARACTERISTICS OF  
WORLD OF WARCRAFT PLAYERS

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This study is a comparative analysis of the personality characteristics of a sample of World of Warcraft players ( $n = 147$ ) and a large normative sample ( $n = 20,993$ ). The 120-item International Personality Item Pool, based on the five factor model, is used. Independent  $t$ -tests were conducted and statistical significance was found for some factors; however, the effect sizes were small, indicating a limited practical difference between the two groups.

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## TABLE OF CONTENTS

	Page
LIST OF TABLES.....	iv
INTRODUCTION.....	1
The Problem and Its Purpose	
LITERATURE REVIEW.....	3
Online Gaming	
Five Factor Model	
The International Personality Item Pool (IPIP)	
Research Question	
METHOD.....	13
Sample	
Procedure	
RESULTS.....	16
Descriptive Statistics	
Reliability Analysis	
DISCUSSION.....	22
Limitations of the Study	
Implications for Future Research	
APPENDIX: SUPPLEMENTAL MATERIALS .....	26
REFERENCES.....	46

## LIST OF TABLES

	Page
1. Item Numbers for the 120-item IPIP and their Corresponding Scales .....	15
2. Descriptive Statistics for the Online Gamer and Normative Samples .....	16
3. Pearson Correlations for Online Player and Normative Samples .....	17
4. Coefficient Alphas for the Online Player and Normative Groups on Each FFM Subscale.....	18
5. Levene's Test for Equality of Variances .....	19
6. Independent Samples <i>t</i> -Test for Equality of Variances and Cohen's <i>d</i> Effect Sizes .....	20

## INTRODUCTION

It is easy to see that video games are everywhere. As the Nintendo® generation grows up, many are bringing their video game habits with them – the effect has been likened to that of rock and roll on baby boomers (Maney, 2004). According to a study released by Pew Internet and American Life Project in December 2008, 53% of American adults and 97% of teenagers play video games (McCoy, 2009). In fact, video games are finding new markets and increasing in popularity despite a downturn in more traditional entertainment industries like music, movies, and television. In a speech at the 2009 Consumer Electronics Show, the president and CEO of Activision Publishing, Mike Griffith, expressed his belief that video gaming is in a position to eclipse other forms of entertainment in the next 10 years (McCoy, 2009). For all their popularity, however, games and, more specifically, gamers as a group are not well understood in academia. As Bryce and Rutter (2003) stated, “The size and popularity of the games industry stands out in contrast to the relative lack of understanding of computer gaming as a serious leisure activity” (p.1).

Of course, this is not to say that researchers have ignored games – quite to the contrary. An abundance of research has been conducted regarding games and violence (Bartholow, Sestir, & Davis, 2005; Olson, Kutner, & Warner, 2008; Sherry, 2001). Social science research into video games is almost synonymous with violence and aggression. Bryce and Rutter (2003) found that:

While there is a developing body of computer gaming literature, there is still a tendency to place games and gaming within the discourses associated with the media effects debate. Within these discourses, games are predominantly understood as technological stimuli that produce measurable, and largely negative, effects in the people exposed to them (p. 1).

Some of the problems with the current literature include the use of very small sample sizes and variable methodology across studies (Sherry, 2001). Additionally, researchers tend to examine a game's effect on various research participants (who may or may not play the game in question or any games at all). In spite of some popular perceptions, virtually no empirical data are available on gamers as a group. Without this information, it is difficult to put studies on the effects of games into context.

### The Problem and Its Purpose

In short, a cohesive picture of "gamers" as a group, or possible relevant subgroups, has not yet emerged. Clearly, much research has been done on games and their impact (if any) on players (Bartholow, Sestir & Davis, 2005; Bryce & Rutter, 2003; Bushman & Anderson, 2002; Myers, 2005; Olson, Kutner, & Warner, 2008; Sherry, 2001). There is no doubt that this type of research on gaming should continue, however, it may be useful to approach the problem from a different angle. Instead of studying how games impact people, it might be useful to study the people who play games.

In an attempt to provide a starting point for future research, the purpose of the present study is to examine the personality characteristics of online game players and compare this information with a large normative sample. This comparison will help establish a baseline for the future study of personality and other characteristics of gamers. I first provide context regarding the popularity of online gaming, followed by a review of the five factor model of personality and its measurement. Then, the method and results of the comparative study are provided.

## LITERATURE REVIEW

### Online Gaming

Video games are being propelled to the forefront of social experiences through online gaming. As Mike Griffith, president and CEO of Activision Publishing, explained:

Gaming is no longer a solitary pursuit, as it was with 'Pac-Man', 'Pong', and most of the early games. Technology has allowed it to become a social experience, the advanced dimensions of which would probably astonish you. Online community play is becoming the norm in gaming of all sorts (McCoy, 2009).

Of particular interest is World of Warcraft, a very popular game which combines the fun and excitement of video games with the fun and excitement of social interactions online.

#### *World of Warcraft*

##### *History*

World of Warcraft, often abbreviated as WoW, is an immensely popular massively multiplayer online role-playing game (MMORPG). Originally released by Blizzard Entertainment on November 23, 2004, it currently holds the Guinness World Record for most popular MMORPG (Guinness World Records Limited, n. d.). Since its initial release, the game has had two expansions. The first, The Burning Crusade, was released on January 16, 2007 (Wikipedia, n. d.). It sold almost 2.4 million copies within the first 24 hours on the market, making it the fastest-selling PC game in history at that time. The Burning Crusade went on to sell 3.5 million copies within its first month (Blizzard Entertainment, n. d.). The game's second expansion, Wrath of the Lich King, released in November 2008, shattered previous sales records, selling 2.8 million copies in the first 24 hours of release (Blizzard, 2008a). Wrath of the Lich King sold over 4 million copies in the first month (Blizzard, n. d.). By the end of 2008, WoW boasted



more than 11.5 million monthly subscribers worldwide (Blizzard, 2008b), and is currently available in eight languages (Blizzard, n. d.).

### *What is WoW?*

As a massively multiplayer online game, a large number of players interact with each other in a virtual world. World of Warcraft takes place in the fantasy realm of Azeroth. This virtual world is persistent, that is, time passes and things change in the virtual world even when the player is away from the game. As a role-playing game, players create fictional characters which they use to interact with the game world. Players can advance in the game by earning experience and levels for their character. Experience can be earned through in-game activities like killing monsters or creating items.

Like all MMORPGs, social interaction is a key element of successful game play in World of Warcraft. Players network in-game to form groups of various sizes to accomplish game goals. Small teams, called “parties,” may be simple and include as few as two players, whereas larger groups called “guilds” can be complex and include hundreds of players.

World of Warcraft is unique in its enduring popularity. With so many players logging on repeatedly over long periods of time, highly structured, complex, completely virtual organizations have developed and been allowed to flourish. This rich social landscape presents a wealth of opportunity to researchers in behavioral science or sociological fields. In particular, and more to the focus of the current study, the personality characteristics of WoW players may be of interest in providing some

baseline information about this group of individuals. Knowledge of WoW player personality variables could inform future behavioral science research in many areas, including social networks, analysis, online relationship development, and even the validity of many stereotypes about gamers in general.

The current study will use the five factor model of personality to explore these characteristics in a WoW sample.

### Five Factor Model

The five factor model (FFM) is a way of organizing thoughts and research about personality using lexical analysis. By statistical analysis of words commonly used to describe personality, researchers have arrived at five major dimensions, or factors, of personality. The five factor model is purely descriptive, and is currently considered to be the most comprehensive data-driven theory of personality.

### *History*

The complete history of personality research is beyond the scope of this paper, but the problem of finding a scientific approach to the study of personality was an established headache for the psychological community at the beginning of the 20<sup>th</sup> century. L.L. Thurstone laid the groundwork for the five factor model in his presidential address to the American Psychological Association in 1933. His comments, published the following year in *Psychological Review*, reflected the breakthrough nature of the five factor idea:

It is of considerable psychological interest to know that the whole list of sixty adjectives can be accounted for by postulating only five independent common

factors. It was of course to be expected that all of the sixty adjectives would not be independent, but we did not foresee that the list could be accounted for by as few as five factors. This fact leads us to surmise that the scientific description of personality may not be quite so hopelessly complex as it is sometimes thought to be. (Thurstone, 1934, p. 13-14)

Throughout the next few decades, researchers performed similar studies, gradually paring down huge descriptive lists to isolate a core of personality factors (Allport & Odbert, 1936). In the early 1960s, Tupes and Christal (1961) and Norman (1963) brought the research full-circle by arriving back at a five-factor model.

However, changing attitudes over the next two decades shifted focus away from personality research (Goldberg et al., 2006). After being ignored for 20 years, the five factor model had been largely forgotten. Then in 1981, Lewis Goldberg reexamined the five factor approach (Goldberg, 1981), and in doing so, ushered in a new era of personality research.

Perhaps the most significant contribution of the five factor model is the establishment of a common taxonomy for the field of personality research. Additionally, rather than being based on an esoteric theory, the five factor model is based on natural, everyday language. This makes it accessible and adaptable.

### *The Factors*

Rather than being a set of criteria that people either have or don't have, all of the factors are viewed on a continuum. That is, each person will have a score for every factor and those scores demonstrate the degree to which that person exhibits the traits associated with each factor. Digman (1990) produced an excellent review of the five factor model, including a section on the interpretations of the dimensions. McCrae and

John (1992) also offer a well-informed and very readable explanation of the five factor model, with a description of the factors. What follows is a generalized description of the five factors. Examples of items for each factor are taken directly from the 120-item IPIP questionnaire used in this study.

### *Neuroticism*

Neuroticism, sometimes called Emotional Instability, is the enduring tendency to experience negative emotional states. Individuals who score high on Neuroticism tend to respond poorly to environmental stress, and are emotionally reactive. They are more likely to feel threatened by ordinary situations and tend to become overwhelmed, hopeless, or frustrated by minor setbacks. High Neuroticism is associated with negative emotions like anxiety, anger, guilt, and depression.

Conversely, individuals who score low in Neuroticism are less emotionally reactive and calmer. They tend to be emotionally stable and are less likely to feel tense or rattled. However, freedom from negative emotions doesn't mean that low scorers on Neuroticism necessarily experience a lot of positive emotions. Frequency of positive emotions is a trait of Extraversion, a separate factor.

Some examples of Neuroticism items are:

- Worry about things
- Get irritated easily
- Feel that my life lacks direction
- Am afraid to draw attention to myself
- Go on binges

- Become overwhelmed by events

### *Extraversion*

Extraversion is characterized by positive emotions, energy, and engagement in the world. Individuals who score high in Extraversion seek out stimulation and the social opportunities. They tend to be enthusiastic, assertive, and action-oriented.

Conversely, individuals who score low in Extraversion (sometimes called introversion) tend to need less social stimulation and more time alone. They are deliberate, quiet, and low-key.

Some examples of Extraversion items are:

- Warm up quickly to others
- Talk to a lot of different people at parties
- Like to take charge
- Do a lot in my spare time
- Love excitement
- Have a lot of fun

### *Openness*

Openness, or Openness to Experience, is a general appreciation for art, beauty, imagination, adventure, unusual ideas, and variety of experience. Individuals who score high on Openness tend to be sensitive to beauty, imaginative, and intellectually curious. They tend to be more in touch with their feelings and are more likely to hold unconventional beliefs.

By contrast, individuals who score low on Openness tend to have more conventional, traditional interests. They are conservative and prefer familiarity to novelty. They take a more pragmatic approach to life and may regard the arts and sciences as frivolous.

Some examples of Openness items are:

- Have a vivid imagination
- Like music
- Try to understand myself
- Prefer variety to routine
- Like to solve complex problems
- Believe that there is no absolute right or wrong

### *Agreeableness*

Agreeableness is a tendency towards compassion and cooperation. Individuals who score high on Agreeableness value social harmony and have an optimistic view of human nature. They tend to be generous, helpful, friendly, and willing to compromise their interests to get along with others.

By contrast, individuals who score low on Agreeableness are unconcerned with others' well being and prioritize their interests over those of others. They may have a cynical outlook and tend to be skeptical of others' motives.

Some examples of Agreeableness items are:

- Trust others
- Would never cheat on my taxes

- Make people feel welcome
- Can't stand confrontations
- Dislike talking about myself
- Feel sympathy for those who are worse off than myself

### *Conscientiousness*

Conscientiousness is a tendency towards self-discipline, devotion to duty, and drive. Individuals who score high on Conscientiousness prefer planning to spontaneity. They are persistent, ambitious, and frequently successful, and may be perceived as intelligent and reliable. They may also be perceived as relentlessly perfectionist or workaholics.

Individuals who score low on Conscientiousness tend to be less organized and less driven to get things done. They tend to procrastinate and may take a more improvisational approach to life.

Some examples of Conscientiousness items are:

- Complete tasks successfully
- Like to tidy up
- Keep my promises
- Turn plans into actions
- Get to work at once
- Choose my words with care

Because of the wide popularity of the five factor model, assessment instruments for its measurement abound. Perhaps the most commonly used instruments are the

NEO PI-R, a proprietary 300-item instrument published by Costa & McCrae in 1992, the shorter, 60-item NEO-FFI, revised by McCrae & Costa in 2004, and the International Personality Item Pool.

### The International Personality Item Pool (IPIP)

The International Personality Item Pool, or IPIP, is a public domain personality measure based on the five factor model. It was developed by a scientific collaboration headed by Lewis R. Goldberg of the Oregon Research Institute. Goldberg and his colleagues have provided a very informative summary of the history of the IPIP and its development (Goldberg et al., 2006). Briefly, the IPIP was introduced in 1996 and has been continuously evolving since.

Essentially, the IPIP was born of a desire to accelerate the advancement of personality research. To this end, the items, scales, and scoring keys for the IPIP are available at no cost online at <http://ipip.ori.org/ipip/>. Since its inception, the IPIP has grown to well over 2000 items, with more added annually. These items are grouped into scales which measure constructs such as Empathy, Locus of Control, and Self-Monitoring. At present there are approximately 300 scales measuring roughly 175 constructs.

In personality research, it is important that the participants and researchers are in agreement regarding the meaning of items on the questionnaire. Single trait adjectives are thought to be too abstract and, without context, highly open to individual interpretation (Goldberg et al., 2006; Hendriks, 1997). Conversely, detailed, highly specific items may make a questionnaire too lengthy and arduous. The IPIP items are



comprised of short verbal phrases. These phrases are seen as a good compromise to the conflicting goals of context and brevity (Goldberg et al., 2006).

Because of the open, collaborative nature of the IPIP, the length and content of any IPIP questionnaire is not fixed; the possible combinations are quite numerous. A 300-item version, which more closely resembles the 300-item NEO PI-R, is available but takes roughly 40 minutes to complete. This study employed a shorter 120-item version, as most people can complete the 120-item IPIP in 10 to 15 minutes.

Overall, the IPIP in its various forms demonstrates both internal consistency and concurrent validity for its scores (Donnellan, Oswald, Baird, & Lucas, 2006; Goldberg, 1999; Gow, Whiteman, Pattie & Dearie, 2005). Its value and validity as an online personality inventory has also been evaluated favorably (Johnson, 2005). As such, it is well suited for this study.

### Research Question

This study attempts to answer the question “How do the five factor model personality characteristics of World of Warcraft players compare to a normative sample?” The study will examine the null hypothesis that there are no statistically significant differences between the personality characteristics of MMORPG players and the characteristics of a comparison sample from the general population on each of the five domains in the five factor model.

## METHOD

### Sample

Participants for the online player group were 147 World of Warcraft (WoW) players between the ages of 18 and 53. The mean age for participants was 29 ( $SD = 6.8$ ). Almost 80% of participants were male, with 31 females in the sample. They were recruited through word-of-mouth (or more specifically, email) and postings on various popular internet message boards that cater to WoW players. Participants were provided with a link to the online IPIP survey.

The comparison group (normative sample) data was derived from previous research conducted with the IPIP as provided by Johnson (2005). Permission to use these data was requested and the data were provided. The comparison group contained 20,993 participants between the ages of 10 and 99. The mean age for participants in the comparison group was 26 ( $SD = 10.8$ ). In the comparison group, 37% of participants were male.

### Procedure

#### *WoW Sample*

Once the WoW sample participants linked to the page, they were first presented with a Web-based informed consent form, which they could choose to print for their records. Agreeing to the form took the participants to the Perl-executed survey. Data collection took place online over the course of 3 months, between August 28, 2007 and November 28, 2007. Participants were also asked to complete a short online demographic questionnaire (age, gender, country) prior to the personality survey. As

previously discussed, this study used a 120-item form of the IPIP, which employed a 5 point Likert-scale where 5 = *strongly agree*, 4 = *somewhat agree*, 3 = *neither agree nor disagree*, 2 = *somewhat disagree*, and 1 = *strongly disagree*. After participants submitted their responses, the Perl script generated a web-based narrative report summarizing their results. This narrative report was viewable only to the participant, and they could print the report if they wished. The Perl script also appended the participants' responses to a secure, comma delimited data file, along with the computer's IP address and a timestamp. The data was then stored in a controlled location on a UNT server in the Department of Educational Psychology. The server was not publicly accessible, and was located in a secured environment on the UNT Denton campus, with limited physical and remote access. Once the data collection was complete, a server administrator securely transmitted the data file to me. The data file was then deleted from the server. At this point, the data file was imported into SPSS for analysis.

### *Comparison Sample*

Data for the comparison sample were collected from individuals who anonymously completed an online version of the 300-item IPIP. Participants were not actively recruited, but discovered the website on their own or through word-of-mouth, similar to the WoW sample. Data collection for the normative sample took place between August 6, 1999 and March 18, 2000.

### *Scale Creation*

At the start of analysis, data from the normative sample were converted to the

120-item format by creating a new data file which contained only the data from the 300-item IPIP which corresponded to the 120-item version. Missing values in the data were replaced with means for each variable in both the WoW and control groups. Reverse-scored items were re-coded prior to creating the five factor scores as the sums of the items. A summary of item numbers and their corresponding scales can be found in Table 1.

Table 1

*Item Numbers for the 120-item IPIP and their Corresponding Scales*

<u>Scale</u>	<u>Item Numbers</u>
Neuroticism	1, 6, 11, 26, 31, 36, 41, 56, 61, 71, 16, 86, 91, 46, 21, 66, 76, 51*, 116*, 81*, 96*, 111*, 101*, 106*
Extraversion	2, 7, 12, 17, 22, 27, 37, 42, 47, 52, 57, 32, 77, 72, 82, 87, 67*, 102*, 107*, 112, 117, 62*, 97*, 92*
Openness	3, 8, 13, 18, 28, 33, 43, 23, 58, 63, 38, 93, 48*, 88*, 78*, 68*, 53*, 98*, 73*, 83*, 113*, 118*, 103*, 108*
Agreeableness	4, 29, 34, 59, 64, 14, 9*, 44, 24*, 89*, 39*, 19*, 54*, 94*, 74*, 49*, 84*, 79*, 119*, 69*, 109*, 114*, 99*, 104*
Conscientiousness	5, 35, 10, 15, 20, 25, 65, 45, 30*, 50, 55, 60*, 95, 40*, 75*, 70*, 105*, 85*, 90*, 100*, 80*, 115*, 120*, 110*

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\* indicates item is reverse-scored.

## RESULTS

### Descriptive Statistics

Descriptive statistics were calculated for each factor for both groups. These descriptive statistics demonstrate that the two groups seem quite similar in terms of means and SDs across factors. These data are displayed in Table 2.

Table 2

*Descriptive Statistics for the Online Gamer (n = 147) and Normative (n = 20,993) Samples*

Subscale	n	M	SD	Skewness		Kurtosis	
				Statistic	SE	Statistic	SE
<b>Neuroticism</b>							
Online	147	66.16	15.76	-.02	.20	-.18	.40
Normative	20,993	70.58	16.10	.11	.02	-.39	.03
<b>Extraversion</b>							
Online	147	75.13	15.16	.17	.20	-.66	.40
Normative	20,993	80.42	14.82	-.29	.02	-.23	.03
<b>Openness</b>							
Online	147	87.06	11.25	-.41	.20	.01	.40
Normative	20,993	87.12	12.31	-.27	.02	-.16	.03
<b>Agreeableness</b>							
Online	147	87.23	12.07	-.37	.20	-.32	.40
Normative	20,993	88.02	12.86	-.61	.02	.55	.03
<b>Conscientiousness</b>							
Online	147	81.90	13.23	.32	.20	-.13	.40
Normative	20,993	84.55	14.42	-.21	.02	-.25	.03

Table 3

*Pearson Correlations for Online Player (n = 147) and Normative (n = 20,993)*

Samples

Subscale	N	E	O	A	C
Neuroticism	1.000	-.471**	-.072**	-.140**	-.406**
Extraversion	-.517**	1.000	.227**	.065**	.178**
Openness	-.022	.178*	1.000	.208**	-.082**
Agreeableness	-.226**	.239**	.267**	1.000	.283**
Conscientiousness	-.482**	.328**	-.089	.255**	1.000

*Note.* Online player data are below the diagonal; normative sample data are above. N = Neuroticism; E = Extraversion; O = Openness; A = Agreeableness; C = Conscientiousness.

\*. Correlation is statistically significant at the 0.05 level (two-tailed). \*\*. Correlation is statistically significant at the 0.01 level (two-tailed).

Table 3 reports Pearson correlations. The most striking feature here is that correlations between factors (regardless of strength) tend also to move together between the two groups. For example, the moderately negative correlation ( $r = -.471$ ) found between Neuroticism and Extraversion in the control group was also found to exist in the online player group ( $r = -.517$ ). Additionally, all correlations between factors maintained their direction (positive or negative) for both groups. This result implies that the five factors relate to each other in a reasonably predictable and consistent way for both groups.

### Reliability Analysis

Because the reliability of scores from an instrument can vary across different

administrations (cf. Vacha-Haase, Henson, & Caruso, 2002), internal consistency estimates were computed with coefficient alpha for the present data. Table 4 presents the alpha estimates for both groups on each five factor model subscale. The estimates are all of sufficient magnitude for research purposes (Henson, 2001) and quite consistent across the two groups. For example, Openness to Experience demonstrated the lowest reliability for its scores in both groups.

Table 4

*Coefficient Alphas for the Online Player (n = 147) and Normative (n = 20,993)*

*Samples on each FFM Subscale*

Subscale	Online Player Group	Normative Group
Neuroticism	.91	.90
Extraversion	.91	.89
Openness	.80	.83
Agreeableness	.86	.86
Conscientiousness	.90	.90

#### *Group Differences*

As a precursor to group mean tests, the homogeneity of variance assumption was tested with Levene's test for each factor. These results are given in Table 5. None of the scales demonstrated statistically significant differences between variances, thereby meeting the assumption. Equal variances were assumed for the following *t* tests.

Table 5

*Levene's Test for Equality of Variances*

<i>Subscale</i>	<i>F</i>	<i>p</i>
Neuroticism	0.03	0.86
Extraversion	0.78	0.38
Openness	3.07	0.08
Agreeableness	0.25	0.62
Conscientiousness	2.90	0.09

An independent samples *t*-test for each factor was conducted to compare subscale means. A Cohen's *d* effect size was calculated using the formula (Cohen, 1988; see also, Henson, 2006):

$$d = \frac{\bar{X}_{\text{WoW}} - \bar{X}_{\text{Control}}}{\text{Spooled}}$$

Where *s* is:

$$s = \sqrt{\frac{\sum (X_{\text{WoW}} - \bar{X}_{\text{WoW}})^2 + \sum (X_{\text{Control}} - \bar{X}_{\text{Control}})^2}{n_{\text{WoW}} + n_{\text{Control}} - 2}}$$

Table 6 presents the *t*-test results and corresponding effect sizes.



Table 6

Independent Samples t-test for Equality of Means and Cohen's d Effect Sizes

Subscale	<i>t</i>	<i>df</i>	<i>p</i>	Mean Diff.	SE Diff.	95% confidence interval of the difference		<i>d</i>
						Lower	Upper	
N	-3.32	21138	.001	-4.42	1.33	-7.03	-1.81	-0.28
E	-4.31	21138	<.001	-5.29	1.23	-7.69	-2.88	-0.36
O	-0.05	21138	.958	-0.05	1.02	-2.05	1.94	< -0.01
A	-0.75	21138	.455	-0.80	1.06	-2.88	1.29	-0.06
C	-2.23	21138	.026	-2.66	1.19	-5.00	-0.32	-0.18

*Note.* N = Neuroticism; E = Extraversion; O = Openness; A = Agreeableness; C = Conscientiousness; SE = Standard Error.

Based on the independent samples *t*-test results, it can be seen that the differences between the two groups on Neuroticism, Extraversion, and Conscientiousness were statistically significant, thus rejecting the null hypothesis. However, it has been eloquently argued that there is a difference between statistical significance and practical significance (Henson, 2006; Kirk, 1996). In these cases, the mean differences were small (see Table 6). Using Cohen's (1988) benchmarks for *d* from his work on statistical power analysis, which classify *d* = .20 as a "small effect", *d* = .50 as a "medium effect", and *d* = .80 as a "large effect", we see that while the groups exhibited a statistically significant difference on some scales, the practical difference between the groups is quite small. That is, the small effect sizes indicate considerable group overlap and therefore less distinction between group means (Henson, 2006).

Nevertheless, the online player group exhibited a consistent pattern of scoring slightly lower on each factor.

## DISCUSSION

This study used the 120-item International Personality Item Pool (IPIP) to examine personality differences between World of Warcraft (WoW) players and a normative sample. While research on games has been prolific, no modern research has been conducted on the personality characteristics of gamers. This research will likely become increasingly important as games like WoW continue to grow in popularity. In what follows, I discuss the results of the research, as well as limitations of the study and implications for future research.

Although statistically significant results were obtained for three *t*-tests, the sheer size of the control group ( $n = 20,993$ ) yielded considerable power to detect small effects. When effect size was taken into account, as previously discussed, the practical differences between the WoW player group and the normative sample were almost negligible. It would seem that there is very little difference in personality characteristics between these two groups given the current data.

However, as previously mentioned, one observed difference was a pattern of lower means among the WoW group. The causes and implications of this difference are not known, but the possibility that gender bias between the samples, which is discussed in Limitations of the Study, may be influencing these results must be considered. Another possible influence on this outcome is a lack of representation within the current sample.

Of course, more research, perhaps with a much larger sample of WoW players, should be conducted before any solid conclusions can be drawn, but the lack of difference in personality characteristics between the two groups is intriguing. In the

future, research on gamers may be able to assume normative values for the Big Five personality characteristics. At the very least, this data suggest that the pervasive, negative stereotypes about online gamers deserve a second look.

### Limitations of the Study

The potential for bias is always present in studies which use self report data. However, despite its many flaws, the use of self-report data is standard practice in personality research, and some researchers who study self-report data feel it is not only valuable but vital in gaining a well-rounded perspective and a unique window into human personality (Oishi & Roth, 2009).

The advantages of using a web-based format for a study like this are obvious. Particularly with MMORPGers as a sample, the internet was the natural and likely only vehicle for this research. Speed, accuracy, convenience, anonymity, and the ability of participants to easily recruit others are all strong arguments for the use of online assessments in personality research. It is not without its pitfalls, however. Johnson (2005) discussed the some of the problems unique to web-based personality inventories. It would seem that chief among these concerns are careless or inattentive responding and experimental responding - changing some of one's answers to get a different result. Johnson conceded that "...the rates of certain kinds of inappropriate responding may invalidate a slightly higher percentage of unregulated, Web-based personality measures than paper and pencil measures". However, he concluded that "The much larger and potentially more diverse samples that can be gathered via the

World Wide Web more than make up for the slightly higher incidence of invalid protocols” (Johnson, 2005, p. 126).

Another interesting facet to consider about this study is the gender distribution between the two samples. The WoW player sample was largely male (almost 80%), which may or may not accurately reflect gender distribution among WoW players as a population. However, the control group of 20,993 participants representing a “normative” sample was certainly not normal in terms of gender distribution at 63% female. It is not known if gender bias had any influence on the results, but it is certainly something to take into consideration in future research.

#### Implications for Future Research

Moving forward, a more robust understanding of personality in groups like WoW players will be useful as these games become even more mainstream. With 11.5 million monthly subscribers worldwide, WoW players themselves represent a significant group that regularly convene on the internet. Handled correctly, this could make acquiring a very large sample easy with little effort. Additionally, greater insight into how networking and social organization occurs in games like WoW could inform everything from distance education to geriatric care, by improving the immediacy and “realness” of online social experiences. In other words, if normative values for personality can be assumed for online gaming groups like WoW players, conclusions from future research with these populations could possibly be generalized to other groups.

If conclusions from gaming research can indeed be generalized to some extent, another fascinating possibility for conducting research with online gaming groups like

WoW players is the ability to overcome some ethical constraints on research which are neither necessary nor relevant in a virtual environment. Currently, computer models are used to simulate things like epidemics and natural disasters, but these models can never truly predict the uniqueness of human response. Naturally, recreating these conditions in the real world for the purpose of studying them is unethical or impossible; but, in a socially robust virtual environment like WoW, these events can be directly orchestrated and manipulated by the researcher with no threat to human life. For example, some researchers have already proposed using WoW as a model for human behavior during disease outbreaks (Lofgren & Fefferman, 2007).

The internet is not going away, and neither are online games. From BlackBerrys® to Facebook, we are increasingly utilizing online communication in our personal and professional relationships. As our world becomes more wired, researchers in the behavioral sciences need to continue to investigate online interactions to maintain a balanced and accurate perspective.

APPENDIX  
SUPPLEMENTAL MATERIALS

## Permissions Email

from: John A. Johnson  
to: Jessica Martin  
cc: Lew Goldberg  
date: Tue, May 9, 2006 at 2:11 PM  
subject: RE: IPIP questions...  
mailed-by: psu.edu

Jessica, I'm tickled that you are studying WOW gamers for your thesis. I would like to know what you uncover with your research.

To create norms from a large data set, you can download from the Internet an SPSS file containing item responses to the sample described in my paper,

Johnson, J. A. (2005). [Ascertaining the validity of web-based personality inventories](#). *Journal of Research in Personality*, 39, 103-129.

The file contains data from the final sample, after all duplicate and possibly invalid protocols were removed. The final N is 20,993. It is downloadable from:  
<http://www.personal.psu.edu/~j5j/IPIP20993.sav>

The item responses listed under variable labels i1-i300 are coded with the reverse scored items already transformed (1=5) (2=4) (4=2) (5=1). If you want the raw, untransformed data, these exist under labels tmp1-tmp300.

From this data set you can compute norms for males and females by any range of ages you wish to define.

You also might find useful an Excel file containing the scoring keys for the IPIP-NEO at:  
<http://www.personal.psu.edu/~j5j/IPIP20993iteminfo.xls>

Finally, if you want to use the HTML and CGI files that I use to administer the IPIP on line, you can find them at  
<http://www.personal.psu.edu/~j5j/ipipcgis.zip>

Please feel free to modify these files in any way that suits you. If you are not familiar with the Perl programming language used in the CGI files, you'll have to find some help locally or get yourself a copy of Chris Fraley's outstanding, easy-to-understand book, [How to Conduct Behavioral Research over the Internet : A Beginner's Guide to HTML and CGI/ Perl](#).

Hope things go well for you; let me know if you have any questions.

Best wishes,  
John A. Johnson



## Consent Form

### Informed Consent

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Principal Investigator: Jessica L. Martin, a graduate student in the University of North Texas (UNT) Department of Technology and Cognition

This research project has been approved by the UNT Institutional Review Board (IRB).(940) 565-3940. Contact the UNT IRB with any questions about your rights as a research subject.

Please read the following carefully before continuing.

---

Hi! Thanks for helping me out. I am a UNT graduate student studying the personality characteristics of World of Warcraft gamers for my Master's thesis. To participate in my study, I'd like you to take a short personality survey.

Participation is entirely voluntary. You can withdraw your consent at any time by simply exiting the website, and have the results of the participation returned to you, removed from the experimental records, or destroyed. You will have a opportunity to decline to take the survey if you choose. Here are some things to keep in mind while completing the survey:

- You must be at least 18 to participate.
- The inventory does NOT reveal hidden, secret information about you, NOR does it assess serious psychological disorders.
- The report is designed to be objective, not pleasing or flattering.
- Measurement error, misunderstandings, carelessness, and mischievous responding can invalidate the report. Please be honest.
- If knowledgeable acquaintances disagree with the test results, then the results are wrong.
- Your report is visible only to you. As a researcher, I do not have access to your narrative report.
- As a research participant, you have certain rights. There are no foreseeable risks involved in this study.

About 10-15 minutes of your time is all that is needed for you to complete the survey.

You may print this consent form directly from your browser and keep it for your records.

The results of this participation will be confidential and will not be released in any individually identifiable form unless required by law.

If you have any questions or concerns, you may contact me at (redacted), or Dr. Robin Henson, my faculty advisor, at (redacted).

Thank you for your time and effort to make this study successful!

Jessica L. Martin  
University of North Texas  
March 1, 2007

I Agree

## IPIP Online Personality Survey

### *Instructions for Completing the IPIP Short Form*

The following pages contain phrases describing people's behaviors. Please use the rating scale next to each phrase to describe how accurately each statement describes you. Describe yourself as you generally are now. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex as you are, and roughly your same age. So that you can describe yourself in an honest manner, your responses will be kept in absolute confidence. Please read each statement carefully, and then click the circle that corresponds to the accuracy of the statement.

Answer every item. Failing to answer items will return an invalid narrative report. If you make a mistake or change your mind, simply click the circle you wish to choose. After you have answered the first 60 items, press the send button at the bottom of this page. This will take you to a page with the next 60 questions. After you complete all 120 questions, pressing the send button will return an interpretive report to you.

All responses to this inventory from all respondents are completely confidential and will **not** be associated with you as an individual. Responses are, however, automatically entered into a database. To ensure confidentiality of your responses to the inventory, **DO NOT** enter your real name in the box below. Please create a nickname or made-up name. If you do not enter a nickname with at least one letter or numeral in it, a random nickname will be generated for you.

Your Nickname

[This inventory will not be scored unless valid values for sex, age, and country are entered.](#)

Do you currently play World of Warcraft? **Yes**  **No**

Sex: **Male**  **Female**

Age:

When selecting your country, please indicate the country to which you feel you belong the most, whether by virtue of citizenship, length of residence, or acculturation.

Country:

1.	Worry about things.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
2.	Make friends easily.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
3.	Have a vivid imagination.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
4.	Trust others.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
5.	Complete tasks successfully.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
6.	Get angry easily.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
7.	Love large parties.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
8.	Believe in the importance of art.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>

				<input type="checkbox"/>		
9.	Use others for my own ends.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
10.	Like to tidy up.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
11.	Often feel blue.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
12.	Take charge.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
13.	Experience my emotions intensely.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
14.	Love to help others.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
15.	Keep my promises.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
16.	Find it difficult to approach others.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>

17.	Am always busy.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
18.	Prefer variety to routine.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
19.	Love a good fight.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
20.	Work hard.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
21.	Go on binges.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
22.	Love excitement.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
23.	Love to read challenging material.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
24.	Believe that I am better than others.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
25.	Am always prepared.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>

				Inaccurate <input type="checkbox"/>		
26.	Panic easily.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
27.	Radiate joy.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
28.	Tend to vote for liberal political candidates.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
29.	Sympathize with the homeless.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
30.	Jump into things without thinking.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
31.	Fear for the worst.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
32.	Feel comfortable around people.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
33.	Enjoy wild flights of fantasy.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>

34.	Believe that others have good intentions.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
35.	Excel in what I do.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
36.	Get irritated easily.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
37.	Talk to a lot of different people at parties.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
38.	See beauty in things that others might not notice.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
39.	Cheat to get ahead.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
40.	Often forget to put things back in their proper place.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
41.	Dislike myself.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
42.	Try to lead others.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>



				Inaccurate <input type="checkbox"/>		
43.	Feel others' emotions.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
44.	Am concerned about others.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
45.	Tell the truth.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
46.	Am afraid to draw attention to myself.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
47.	Am always on the go.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
48.	Prefer to stick with things that I know.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
49.	Yell at people.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
50.	Do more than what's expected of me.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>

51.	Rarely overindulge.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
52.	Seek adventure.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
53.	Avoid philosophical discussions.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
54.	Think highly of myself.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
55.	Carry out my plans.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
56.	Become overwhelmed by events.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
57.	Have a lot of fun.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
58.	Believe that there is no absolute right or wrong.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
59.	Feel sympathy for those who are worse off than myself.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>

				Inaccurate <input type="checkbox"/>		
60.	Make rash decisions.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate Nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>

Next Page

IPIP Short Form Items 61-120

61.	Am afraid of many things.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
62.	Avoid contacts with others.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
63.	Love to daydream.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
64.	Trust what people say.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
65.	Handle tasks smoothly.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
66.	Lose my temper.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>

				<input type="checkbox"/>		
67.	Prefer to be alone.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
68.	Do not like poetry.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
69.	Take advantage of others.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
70.	Leave a mess in my room.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
71.	Am often down in the dumps.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
72.	Take control of things.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
73.	Rarely notice my emotional reactions.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
74.	Am indifferent to the feelings of others.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>

75.	Break rules.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
76.	Only feel comfortable with friends.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
77.	Do a lot in my spare time.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
78.	Dislike changes.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
79.	Insult people.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
80.	Do just enough work to get by.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
81.	Easily resist temptations.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
82.	Enjoy being reckless.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
83.	Have difficulty understanding abstract ideas.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>

				Inaccurate <input type="checkbox"/>		
84.	Have a high opinion of myself.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
85.	Waste my time.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
86.	Feel that I'm unable to deal with things.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
87.	Love life.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
88.	Tend to vote for conservative political candidates.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
89.	Am not interested in other people's problems.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
90.	Rush into things.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
91.	Get stressed out easily.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>

92.	Keep others at a distance.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
93.	Like to get lost in thought.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
94.	Distrust people.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
95.	Know how to get things done.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
96.	Am not easily annoyed.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
97.	Avoid crowds.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
98.	Do not enjoy going to art museums.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
99.	Obstruct others' plans.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
100.	Leave my belongings around.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>

				Inaccurate <input type="checkbox"/>		
101.	Feel comfortable with myself.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
102.	Wait for others to lead the way.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
103.	Don't understand people who get emotional.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
104.	Take no time for others.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
105.	Break my promises.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
106.	Am not bothered by difficult social situations.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
107.	Like to take it easy.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
108.	Am attached to conventional ways.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>



109.	Get back at others.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
110.	Put little time and effort into my work.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
111.	Am able to control my cravings.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
112.	Act wild and crazy.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
113.	Am not interested in theoretical discussions.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
114.	Boast about my virtues.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
115.	Have difficulty starting tasks.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
116.	Remain calm under pressure.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
117.	Look at the bright side of life.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>

				Inaccurate <input type="checkbox"/>		
118.	Believe that we should be tough on crime.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
119.	Try not to think about the needy.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>
120.	Act without thinking.	Very Inaccurate <input type="checkbox"/>	Moderately Inaccurate <input type="checkbox"/>	Neither Accurate nor Inaccurate <input type="checkbox"/>	Moderately Accurate <input type="checkbox"/>	Very Accurate <input type="checkbox"/>

**PLEASE NOTE:** Your results should appear on your screen within moments after clicking the Send button. If nothing happens, something has gone wrong. Clicking the button again and again will not help.

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