

Title

The “Lonely Gamer” Revisited

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Abstract

World of Warcraft (WoW) is a massively multiplayer online game (MMO) supporting rich and complex social interactions among well over 10 million players worldwide. In this study, we explore implications of the pervasive “lonely gamer” stereotype, which portrays online gamers as socially isolated and addicted young people, usually male, with few real-life (RL) social ties. This is the first study to directly address the stereotype quantitatively, focusing on assessing the extent to which *WoW* players interact in the game with other people with whom they share a RL social relationship. Most previous studies of the interaction between online gaming and sociality have focused solely on either in-game or RL social interactions, without seriously taking into account today’s large and growing opportunities for hybrids of both. An online survey (in English and Chinese) collected data from 2865 *WoW* players from multiple world regions: Europe, Hong Kong, Taiwan, and the US. The findings lend no support to the “lonely gamer” stereotype, but suggest instead that playing *World of Warcraft* may serve to *enhance*, rather than diminish, RL social interactions. This paper also

provides benchmark data on *WoW* player characteristics and play patterns in world regions not previously explored, and identifies some intriguing cross-cultural patterns and issues for further research.

1.0 Introduction and Rationale

Massively multiplayer online role-playing games (MMOs) comprise virtual landscapes with rich and varied opportunities for social interaction [1, 2, 3]. MMOs have grown tremendously in size and sophistication in recent years. In *World of Warcraft (WoW)*, one of the most popular and important games, players adventure in a medieval-themed world, slaying monsters, practicing crafts such as herbalism, trading goods at an auction house, and engaging in diverse battles, quests, and contests. Well over 10 million people play *WoW* worldwide [e.g., 4]. It is available in nine languages and is played even in places with poor Internet connectivity, such as Tashkent in Central Asia [5].

A great deal of research on *World of Warcraft* and related games clearly demonstrates that they support complex online social interactions among great numbers of players [e.g., 6, 7, 8, 9, 19, 11, and 13]. Yet the perception persists that they are “anti-social,” attracting lonely people (in particular, young males), and enticing them to spend many hours in social isolation. It is still common “to imagine [players] as pasty, socially challenged loners” [14], or as troubled “addicts” seeking solace away from the real world [e.g., 15]. During the July 2011 shootings in Norway, the lonely gamer stereotype surfaced in an extreme form. A *Reuters* news story on the shooter, Anders Breivik, reported that Breivik’s attorney identified him as a loner who played video games (*World of Warcraft*, as it happened). The report stated: “Breivik’s lawyer, Geir Lippestad, said his client was probably mad, but it was too early to say if the loner and computer game enthusiast would plead insanity at his trial” [15]. In an effort to quell the potentially violent activities of other such “loners,” Coop Norway, one of Norway’s largest retailers, removed 51 video games (including *World of Warcraft*) and weapon-like toys from its shelves [16]. As sociologist Stanley Cohen observed in the 1970s, Western societies are prone to periodic “moral panics” in which elements of popular culture are made visible and demonized [17]. In times of stress, such as the Norway crisis, stereotypes embodying putatively degenerate aspects of pop culture which normally dwell beneath the surface arise and become actionable. The Coop’s retail strategy addressed the urge to restore a social order destabilized by a mass execution—an event linked in the minds of some to video games. Lippestad’s contemplation of a narrative for his client’s defense rather remarkably conjoined “insanity,” “loner,” and “computer game enthusiast.”

As more and more of us spend more and more time in *World of Warcraft* and other MMOs, it becomes increasingly important to seriously examine the connection between gaming and real-life sociality. (We use “real life” (RL) here as gamers do, to indicate a relationship or experience with a significant offline component [3]). Most previous studies of the interaction between online gaming and sociality have focused solely on either online or RL social interactions. All too often, online interaction is simply assumed to be detrimental to RL sociality, in the absence of any serious investigation. Thus, while some researchers have characterized MMOs as virtual “third places,” fostering rich sociability among online acquaintances in an informal setting [10, 13], others maintain that time spent online serves to displace “real” sociality [18, 19; see also 20]. This last argument is sometimes called the “bowling alone” hypothesis [19]. Robert Putnam, an American public policy scholar, argued that in the past, Americans maintained strong social ties through shared activities such as picnics, participation in civic groups, and playing team sports such as in bowling. Now, however, Americans have forsaken the leagues, and “bowl alone” (the eponymous hypothesis), and spend too much time physically apart. In so doing, they are becoming increasingly disconnected from one another, and the consequences for society may be dire.

The lonely gamer stereotype picks up on Putnam’s anxiety with respect to “aloneness.” Within game studies, an alternative hypothesis, that people may use MMOs as vehicles for enacting and enhancing RL social relationships, has been surprisingly overlooked. Most of the previous literature has not seriously taken into account today’s large and growing opportunities for creative hybrids of in-game and RL sociality [see 3, 21, 22 for notable exceptions]. In the study described here, we address this hypothesis by exploring RL relationships among players of *World of Warcraft*. This subtle but profound shift in perspective raises fascinating questions, many of which could simply not arise until now. Do people tend to venture into game spaces on their own, or do real and virtual worlds meet as people play online with friends and family? Does gaming interfere with or enhance existing patterns of RL interaction and socializing? Is in-game socializing similar for men and women? Do sociality patterns vary greatly by region or culture? What other patterns may be found in the interaction between in-game and RL sociality?

We present here results from a large exploratory online survey of *WoW* players, comprising the first set of quantitative findings on MMO play with RL friends, family, and other social connections. Moreover, our findings span geographical regions. While more than half of *World of Warcraft* players live in Asia [23], the data on *WoW* players and play patterns—like that of other MMOs—is overwhelmingly from North America and Europe. Our survey respondents were primarily from the US (with a small sample from Europe), but we also had respondents from Hong Kong and Taiwan. Our results thus also provide benchmark cross-regional data. While no single study could possibly address all the questions raised by this new way of looking at the *World of Warcraft* social landscape, we believe these fundamental, quantitatively-grounded patterns of reported sociality across diverse geographical regions provide a good start. Our primary goals are to shed light on RL social activity taking place in the MMO, and to stimulate further research on this important topic.

2.0 Methods

A survey was created in English, then translated into Chinese using traditional characters. *World of Warcraft* players were recruited through links on online game fora, through popular gaming websites (e.g., wow.com), on social media such as Twitter, and through mailing lists derived from previous web-based studies by the last two authors. The survey was deployed between March and May 2010, and targeted primarily at the US, Hong Kong and Taiwan. For further information on survey construction and implementation, see [24].

Data were obtained from a total of 2865 survey respondents (with 90% or greater survey completion rates) from four regions: The US, Taiwan (TW) Hong Kong (HK), and the EU (from a small but fortuitous set of English-speaking Europeans). Standard data cleaning methods were used on the dataset described in our preliminary report [21]. Table 1 (see below) provides the sample size for each region (in parentheses). Note that large differences in sample counts may reflect a wide variety of factors, including disparities in language, culture and internet access. While every effort was made to minimize sampling biases, they cannot be completely eliminated in surveys of this sort. (This was especially true for the EU sample, since participation was in English and through sites on US servers.) The methods of participant recruitment available to us did not permit meaningful estimates of participation rates or representativeness. These and related considerations dictate the need for caution in interpreting statistical analyses of these data (see section 3.2.1 for further discussion of this issue). Most of the results presented below are frequency counts for RL sociality variables, presented in tables as percentages by region and gender. For this exploratory study, our

primary interests are descriptive, and our conclusions rest primarily on consistent and coherent patterns of data.

3.0 Results

3.1 Player characteristics

We first describe several findings that are related to the lonely gamer stereotype, and provide a context within which to understand how RL sociality might be enacted in *World of Warcraft*. For conciseness, this presentation is fairly brief; see the preliminary report [21] for some further discussion of player characteristics.

3.1.1 Gender Representation. The gender distribution of our participants by region is given in Table 1. Female participation rates overall the same a recent estimate of 24% female players worldwide [24]. This rate was matched exceeded in every region except HK (11%). Female participation was highest in the US (34%), and at a level approaching gender balance more closely than both the “lone male” stereotype and previous estimates would suggest. The low percentage of females in HK (11%) seems anomalous, and may in part be interpretable in terms of the results of another survey question, which suggests more limited home access to the internet in this region. Further research would be required to confirm this.

Gender Distribution of Survey Respondents in Each Regional Sample

REGION	GENDER	
	Female	Male
EU (N=112)	24%	76%
HK (N=246)	11%	89%
TW (N=427)	26%	74%
US (N=2071)	34%	66%
<i>Gender Means</i>	24%	76%

Table 1. Percentage of female and male survey respondents in each regional sample (EU, HK, TW, US).

3.1.2. Age. Table 2 presents the mean age of survey respondents by region and gender. The overall mean is 26.8 yrs, (30.5 for the US). The mean age of females was higher than that for males overall and in each regional sample. This is consistent with previous survey [27] and ethnographic [3] findings suggesting that many female gamers first enter *WoW* through spouses or romantic partners, which may tend to make them somewhat older--as well as more socially connected--than males initially, and perhaps overall. The table also suggests an East/West regional clustering; with EU and US participants substantially older than those from HK and TW.

Mean Age

REGION	GENDER		<i>Regional Means</i>
	Female	Male	
EU	32	27	29.5
HK	23	22	22.5
TW	25	24	24.5
US	32	29	30.5
<i>Gender Means</i>	28.0	25.5	26.8

Table 2. Mean reported age of survey respondents, by region and gender.

3.1.3 Partnership and Parenting. Overall, 42% of participants reported that were currently partnered (that is, in a romantic relationship or marriage); this measure rose to slightly over half of the respondents from the US (53%)--and EU the (52%). These findings are clearly not consistent with the lonely, socially isolated gamer stereotype. Yet we also found that HK and TW respondents overwhelmingly reported being single (89% and 91%, respectively). Along similar lines, while parenthood was not uncommon in the US and EU samples (24% and 17% respectively), it was extremely rare in HK and TW (4% and 2%, respectively). We suspect that these results are attributable in part to the observed gender and East/West age differences described above. However, cultural and related factors may also play an important role, and further research would be needed to clarify this issue. An often (but by no means always) recurring East/West clustering in our data both increases our confidence in the regional samples and suggests intriguing cross-cultural questions for further studies.

3.1.4 Job Status. About half the respondents from the US and EU (53% and 45%, respectively) reported being full-time workers, while about half of those from HK and TW identified themselves as full-time students (51% and 45%, respectively). This pattern is also consistent with regional age differences. Note that these categories are not mutually exclusive; for example, some full-time students reported that they worked part-time. Part-time work was the next most common category in this dataset. Full-time home-makers and retirees were very rare (<5% in each region), and the rate of unemployment hovered around 10% or less across regions. The central message here is that most of these respondents did not seem to be playing *WoW* simply because they had nothing else to do—nor were they doing nothing else simply to play *WoW* addictively. Instead, they were generally gainfully employed or furthering their education, or both.

3.1.5 Player Type and Hours Played per Week. In one survey question, participants were asked to self-identify as “casual,” “moderate” or “hardcore” players. Overall, only 9% of respondents labeled themselves “hardcore.” This datum is encouraging with regard to the representativeness of our samples. It’s even a bit surprising, since our recruitment methods would seem more likely to favor regular, more dedicated players over occasional players. A trend was found suggesting that males and Western players labeled themselves slightly more in the “hardcore” direction than did the

others. The overall mean estimated time spent in *WoW* was 22.8 hours/week. This is quite substantial, but not more than many people regularly devote to hobbies and entertainment (see, e.g., [25, 26]). Note also that such temporal estimates generally tend to be inflated when compared with actual use logs (e.g., [10, 26]). Whether the observed gender and East/West clustering in self-labeling and estimated hours primarily reflect true differences in play patterns or perhaps cultural differences in self-identification and labeling is another topic for further research.

3.2 Sociality

In this section we explore responses to a variety of questions around RL sociality in the virtual world. In viewing these results, note first that the format of the sociality questions differed somewhat from one another; while some questions required a yes/no answer, others (the “play with” questions) asked respondents to simply affirm all that apply—hence, many of these responses—and results—are not mutually exclusive.

In addition, certain statistical issues should be considered here. The primary aim of this study is to provide benchmark measures on the prevalence of RL sociality, presented as mean percentages in the tables below. A limited set of statistical analyses are reported, to explore patterns in the data and provide suggestions for future research. These results are descriptive, not definitive, and should be interpreted with caution. As mentioned above, the representativeness of the regional samples is unclear, and sampling biases may well have differed substantially across regions. In addition, sample size is an important concern. Substantial differences in sample size tend to bias any overall statistic, since the results for a disproportionately large sample (i.e., that for the US) will tend to drive the overall results (including overall mean percentages) in their direction. Results of *Chi-Square* (X^2) tests for significance (of region, gender and age effects) and *Cramer’s V* tests of effect size (varying from 0 to 1, with values above .5 considered fairly high (see, e.g., [27])). Note that the data from the various regional samples (especially those other than the US) were highly variable, which could dramatically reduce estimates of effect size, and they were too sparsely distributed (that is, table cell counts were insufficient) for many higher-order tests.

Overall analyses showed significant gender x region ($X^2(3)=67.29$, *Cramer’s V* =.15, $p<=.000$) and gender x East/West clustering ($X^2(1)=45.07$, *Cramer’s V* =.13, $p<=.000$) interactions. To permit roughly comparable categorical assessments, the “age” variable was divided into approximately equal groups (“younger”=under 20 years; “middle”=20-29 years; “older”=30 and above) based on the overall age distribution. Reliable age x gender ($X^2(2)=68.56$, *Cramer’s V* =.16, $p<=.000$), age by region ($X^2(3)=67.29$, *Cramer’s V* =.15, $p<=.000$) and age x East/West clustering ($X^2(1)=45.07$, *Cramer’s V* =.13, $p<=.000$) interactions were found. Results of separate analyses of the US data alone are not reported, since they closely resemble the overall findings.

3.2.1 Playing Alone Only. Are most people who play *WoW* “lone gamers”? Did our respondents tend to play only with online acquaintances, or did they play *WoW* with other people they know in RL? This question is of central concern for this study. The results are given in Table 3. Overall, the great majority—over three-quarters--of our respondents did *not* report playing alone only (the overall mean was 22%; that for the US was 24%). Female results for playing alone are lower than those for males overall (18% v 26%) and consistently for each region; this gender effect is statistically significant ($X^2(1)= 23.39$, *Cramer’s V* =.09, $p<.000$). The EU (19%) and TW (20%) regional results are very close and somewhat lower than those from HK (24%) and the US (25%), but no reliable effect of region is found. A (non-significant) age-related trend ($X^2(2)=5.3$, *Cramer’s*

$V=0.04$, $p=.072$) suggests that older participants (30%) tended to report playing alone somewhat more often than those of the middle (24%) and younger (25%) age-ranges. Our primary conclusion from these results is that the large majority of our respondents, both male and female and in each region we surveyed, are *not* lone gamers. Instead, most people use WoW play as an extension of their RL sociality. Patterns of RL sociality by WoW players is explored further in the results presented below.

Playing WoW Alone Only

REGION	GENDER		<i>Regional Means</i>
	Female	Male	
EU	15%	22%	19%
HK	23%	27%	25%
TW	16%	24%	20%
US	20%	29%	24%
<i>Gender Means</i>	18%	26%	22%

Table 3. Percentage of respondents who reported only playing WoW alone (i.e., not with anyone they know in real life), by region and gender.

3.2.2 Playing with RL Friends. Given that most gamers do play *WoW* with others they know in RL, with whom do they tend to play? The results in the next several tables explore this question. Table 4 shows the results for respondents who reported playing *WoW* with RL friends. (Note again that the results that follow are not mutually exclusive; for example, one could play with one's spouse as well as one's friends.) Overall, slightly more than half the respondents (53%) reported playing with RL friends; the regional means were close to or above half in every case. Interestingly, the gender effect is reversed for this variable: more males reported playing *WoW* with RL friends overall (47% v 59%) and in each region. This gender effect is statistically reliable ($X^2(1)=9.88$, *Cramer's V*=.06; $p<.002$), and consistent with previous findings [3]. While no main effect of region is found, the interaction between region and gender is significant ($X^2(6)=49.64$, *Cramer's V* =.18, $p<.000$), reflecting a substantially smaller gender difference in the US (4%) sample than the others (mean=15%). Age analyses ($X^2(2)=17.8$, *Cramer's V*=0.08, $p<.000$) show that over half of the respondents in the younger (57%) and middle (55%) age groups reported playing with friends, but somewhat fewer of the older group (44%) did so. These results again demonstrate that robust RL sociality is taking place in this virtual world.

Respondents Playing WoW with RL Friend(s)

REGION	GENDER		Regional Means
	Female	Male	
EU	52%	64%	58%
HK	38%	58%	48%
TW	47%	62%	55%
US	51%	55%	53%
<i>Gender Means</i>	47%	59%	53%

Table 4. Percentage of respondents who reported playing WoW with real-life (RL) friend(s), by region and gender.

3.2.3 Playing with RL Family Members. After RL friends, respondents most often reported playing *WoW* with RL family members. These play patterns are presented by region and gender in Table 5. Overall, about a third (29%) of our respondents reported playing with family members. The results for the EU and US (32% and 35%, respectively) are substantially higher than those for HK and TW (26% and 23%). Region exerts a reliable effect in this data, ($X^2(3)=37.72$, *Cramer's V* =.12, $p=.170$); a significant East/West clustering is also found ($X^2(1)=34.43$, *Cramer's V* =.11, $p<.000$). Females more often reported playing *WoW* with family members overall (37% v 21%) and in each regional sample; this effect is also significant ($X^2(1)= 71.55$, *Cramer's V* =.16; $p<.000$). A reliable increase in family play with age was found ($X^2(2)=100.72$, *Cramer's V* =.19, $p<.000$); the mean percentages for the younger, middle and older groups are 21%, 33% and 47%, respectively. Additional analyses suggest that the family members that our respondents played with most often are spouses and siblings.

Playing WoW with RL Family Member(s)

REGION	GENDER		Regional Means
	Female	Male	
EU	44%	19%	32%
HK	35%	18%	26%
TW	26%	20%	23%
US	43%	28%	35%
<i>Gender Means</i>	37%	21%	29%

Table 5. Percentage of respondents who reported playing WoW with RL family member(s), by region and gender.

3.2.2.3 Play with RL Spouse or Romantic Partner(s). Table 6 presents data on the prevalence of playing *WoW* with one’s RL “significant other” (spouse or romantic partner). Overall, about a third (30%) of all respondents reported playing with a spouse or partner (similar to that for playing with family members). Again, the female percentages are consistently higher than males’ in each region as well as overall (45% v 14%). The gender effect is reliable ($X^2(1)=326.06$, *Cramer’s V*=.34; $p<.000$), consistent with previous findings [3], and the effect size is the highest of all analyses in this study. The EU and US results (30% and 38%, respectively) are substantially higher than those for HK and TW (22% and 28%). Reliable regional ($X^2(3)=91.90$, *Cramer’s V*=.18, $p<.000$) and East/West clustering ($X^2(1)=81.78$, *Cramer’s V*=.17, $p<.000$) effects are also found. Finally, the results for younger respondents (20%) are substantially lower than those for the middle and older age groups (35% in both cases); this age effect is reliable ($X^2(2)=69.09$, *Cramer’s V*=.16, $p<.000$). These results are also consistent with East/West differences in partnering patterns.

**Playing WoW with RL Spouse
Or Romantic Partner(s)**

REGION	GENDER		<i>Regional Means</i>
	Female	Male	
EU	41%	20%	30%
HK	38%	6%	22%
TW	49%	8%	28%
US	53%	23%	38%
Gender Means	45%	14%	30%

Table 6. Percentage of respondents who reported playing *WoW* with RL spouse or romantic partner(s), by region and gender.

3.2.2.4 Playing with RL Co-Workers. Table 7 shows the mean percentages of males and females from each region who reported playing *WoW* with RL co-workers. This was quite rare overall (6%) overall and in each region; results were highest for the US (10%). A reversal in the direction of gender differences obtains for this variable as well; means for males were higher than those for females overall (8% v 5%) and for every region except HK, which showed no difference. The reversed gender effect is statistically reliable ($X^2(1)=5.03$, *Cramer’s V*=.04; $p<.025$). A significant regional effect ($X^2(3)=20.99$, *Cramer’s V*=.09, $p<.000$) and East/West clustering ($X^2(1)=10.20$, *Cramer’s V* =.08, $p<.000$) is also found in these data. A reliable age effect ($X^2(1)=36.97$, *Cramer’s V*=.11, $p<.000$) was also found; consistent with age differences in employment patterns, younger participants (5%) reported playing with co-workers less often than did those in the middle (13%) and older (10%) age groups.

Playing WoW with RL Co-Worker(s)

REGION	GENDER		Regional Means
	Female	Male	
EU	4%	8%	6%
HK	4%	4%	4%
TW	5%	7%	6%
US	8%	12%	10%
<i>Gender Means</i>	5%	8%	6%

Table 7. Percentage of respondents who reported playing WoW with RL co-worker(s), by region and gender.

3.2.3 Making RL Friend(s) in WoW. Finally, an important survey item asked respondents whether they'd met someone in-game who eventually became a RL friend. The results are shown in Table 8. Overall, slightly more than half (56%) of our respondents said they did make RL friends in *WoW* (54% for the US sample). Again, the results for females are substantially higher than for males overall (62% v 51%) and consistently within each region; this gender effect is reliable ($X^2(1)=27.19$, *Cramer's V*=.10; $p<.000$). Significant regional ($X^2(3)=17.21$, *Cramer's V*=.08, $p<.001$), and East/West clustering ($X^2(1)=8.87$, *Cramer's V*=.06, $p<.003$) effects are demonstrated. In addition, in each age group, half or more of our participants reported making RL friends while playing *WoW* (younger=51%, middle=57%, older =50%); this age effect was also reliable ($X^2(1)=43.01$, *Cramer's V* =.06, $p<=.007$). Thus, half or more of our respondents not only interact with RL friends and family in *World of Warcraft*, but also make new RL friendships.

Making RL Friend(s) While Playing WoW

REGION	GENDER		Regional Means
	Female	Male	
EU	59%	45%	52%
HK	58%	50%	54%
TW	70%	60%	65%
US	59%	48%	54%
<i>Gender Means</i>	62%	51%	56%

Table 8. Percentage of respondents who reported making RL friends while playing WoW, by region and gender.

While qualitative evidence for making RL friends in virtual worlds has frequently been reported in previous research [e.g., 9, 10, 13, 14, 21, 24], this study provides the first quantitative estimates. The magnitude of the findings in this table are rather remarkable given the online nature of *WoW*, since whomever one meets could, in principle at least, reside in almost any RL location within a large region. (Great physical distances between *WoW* players must be very common, especially in the larger geographies of Europe and the US. Indeed, a previous study [3] reported guilds composed of people all over North America from Quebec to Mexico.) Further research is clearly needed, but the robustness of this finding intrigues us. That players commonly report making RL friends in-game is a compelling finding, suggesting that *World of Warcraft* may not only support, but perhaps even *promote*, social ties that bridge real and virtual life.

4.0 Discussion

This paper presents the findings of a large online survey exploring RL sociality in *World of Warcraft*. The primary results of this research suggest that substantial and diverse real-life based sociality is taking place in *World of Warcraft*, overall, and by both men and women across regions. Our participants *commonly reported playing with people they know in real life*: friends, family members, spouse/partner(s), and sometimes even co-workers. The patterns are robust and appear to hold not only in the US, but across global regions. These and related findings are clearly inconsistent with the “lonely gamer” stereotype (portraying gamers as isolated misfits, with rhetoric that occasionally spirals down into extravagant moral panic). Moreover, our results lend no support to the “bowling alone” hypothesis [19; see also 20]. Typical patterns of *World of Warcraft* play appear to supplement, and perhaps even *enhance*, real life relationships, not simply subvert or destroy them. The finding that substantial percentages of players across all regions are making new RL friends in the virtual world also suggests that *World of Warcraft* is a successful social platform [3], with players reaching out to people they meet in-game, and incorporating them into their RL social lives. *Contra* Putnam and the moral panic, multiplayer games may be better viewed as platforms for RL(as well as online) social interactions; whether drawing on existing RL relationships or enabling new ones, the effect is to bring people together.

The overall patterns of findings on player characteristics (gender, region, age) are also robust and consistent with expectations. Moreover, as in previous reports [1, 3], relatively few respondents labeled themselves as “hard core” players. This is reassuring with regard to the representativeness of our benchmark results. The East/West age differences, with concomitantly diverging age and gender interactions as well as patterns of partnering, parenting, and occupational status, raises further questions: Why might *WoW* play be more common among younger players in HK and TW? Could this reflect broad differences in culture or in access to technology? Or could some of our sociality findings more strongly reflect age (and gender) differences than regional ones? These questions cannot be answered definitively here; additional research is clearly required.

We note that our US sample appears to “lead” in social diversity in certain key indicators, with the highest percentages of female players, older players, parents, and respondents playing with a spouse or romantic partner. The data suggest that in the US (and perhaps in the EU as well), *World of Warcraft* has reached a substantial female population and regularly engages friends and family, spouses and partners in joint leisure activity.

Finally, we emphasize again the exploratory nature of this study. Several of our findings serve primarily as benchmarks, and cannot in themselves resolve the many intriguing questions they raise around what happens when game culture and local culture meet; much further research is needed for

that. Still, the consistency of patterns across regions with very different cultures suggests that, as we attempt to conduct meaningful research in a global context, it may not always be appropriate to seek only cross-cultural *differences*, but also similarities. At least sometimes, the better question may be not why are we so different, but why are we so similar? In addition, it may be inappropriate to assume *a priori* that “culture” functions as the causal mechanism for any regional differences that are in fact found. To at least some extent, similarities in patterns of play may be attributable to game design factors; that is, to *WoW*’s unique ways of mediating experience, and the specific affordances it offers (see [3, 7]). Outside of language localization and some very small visual adjustments, *World of Warcraft* is identical across regions. The broad questions raised here about culture, mediation, and affordances of virtual worlds cannot be answered in this paper, but our data establish their importance, and suggest critical paths for future research.

5.0 Conclusions

This paper presents exploratory survey findings on the RL social landscape of *World of Warcraft* players across four regional samples: Europe, Hong Kong, Taiwan, and the US. Consistently, the large majority of respondents reported playing with others they know in RL—friends, family members, a spouse or romantic partner, and not just with others they know only online. This pattern of findings is not consistent with the “lonely gamer” stereotype. Moreover, the ‘bowling alone’ hypothesis is not supported by our data. The substantial RL socializing that occurs in games like *World of Warcraft* suggests that this hypothesis’s construction of picnics and bowling leagues as critical sites of socializing is dated, and no longer where much of the social action now is (*which may well be online games!*). Typical patterns of *WoW* play appear to *enhance* real life relationships, not simply replace them. And sizable percentages of players across all regions reported making new RL friends in the virtual world, which can surely be taken as a bottom-line indicator that most gamers may well be neither lonely nor crazy. Instead, these findings support the view of *World of Warcraft* as a successful social platform for men and women across diverse regions of the globe.

6.0 Acknowledgements

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7.0 References

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