“I Swear to God, I Only Want People Here Who Are Losers!” Cultural Dissonance and the (Problematic) Allure of Azeroth

We use ethnographically informed survey and interview data to explore therapeutic and problematic play in the online World of Warcraft (WoW). We focus on how game-play in WoW is driven by shared and socially transmitted models of success that we conceptualize as cultural ideals. Our research reveals associations between having higher online compared to offline success, on the one hand, and gamers’ reports about how their play both adds to and subtracts from their mental wellness, on the other. Fusing William Dressler’s notion of “cultural consonance” (an individual’s relative consistency with his or her culture) with Leon Festinger’s “cognitive dissonance” (the tendency of individuals to suffer distress when they cannot eliminate incompatibilities in conflicting beliefs and attitudes), we develop the notion of “cultural dissonance,” which in this context refers to how conflicts between online and offline lives, and also subsequent attempts to minimize the conflicts through psychological negotiations, impact gamers’ mental health.

Introduction

The Cultural Patterning of Therapeutic and Problematic Online Play

Anthropological and interdisciplinary research suggests that play in online virtual worlds such as Azeroth, the virtual lands of the videogame World of Warcraft (WoW), the focus of the present study, is not only fun and engrossing but also potentially enhances participants’ emotional and social lives (Nardi 2010; Schiano et al. 2011; Snodgrass et al. 2011a, 2011b, 2011c, 2012; Steinkuehler and Williams...
By contrast, researchers also speak of WoW and other “massively multiuser online role-playing games” (MMORPGs, or MMOs for short) as addictive and escapist and thus psychologically harmful (Caplan et al. 2009; Castronova 2005; Mitchell 2000; Snodgrass et al. 2011a, 2011b, 2011c, 2012, 2013; Yee 2007; Yellowlees and Marks 2007; Young 1998a, 1998b; Young and Rogers 1998).

The present study takes inspiration from gamers’ own discourse about WoW play, exemplified in our title quote, and addresses how culture shapes individuals’ experience of online play as positive or negative. That exhortation comes from a WoW player chastising his virtual peers after leading them in a failed group effort in one of WoW’s highly challenging “end-game” scenarios referred to as “raids.” He screamed at his (virtual) teammates and theoretical subordinates, informing them that he welcomed only committed players ready to prioritize the raid team’s endeavors over their offline commitments: “I swear to God, I only want people here who are losers! I don’t want people who have jobs or school!” Though laughing off such incidents, our respondents also felt uncomfortable with mainstream culture’s “gamers are losers” frame, even though they sometimes echoed the view that individuals turn to games like WoW because their real lives are unsatisfying.

To succeed in WoW’s most challenging environments, such as raids, demands enormous investments of time, both to accomplish the in-game tasks themselves and also to reach the level and hone the skills that even allow one to attempt the tasks. Successfully completing WoW’s most complex undertakings also requires collaboration with in-game others, such as members of one’s guild (an in-game association of players). Spending large amounts of time completing often highly rewarding endeavors with other players leads some WoW gamers to develop meaningful relations with these in-game others, coming to value them greatly, even as much as their offline social connections. Still, mainstream society, we were told by players, is reluctant to acknowledge the value of these in-game accomplishments and social relationships. Depicted as finding in WoW the success and social connection that they lack in real life, players are portrayed by many as over-valuing their play (or, in other cases, devaluing the offline world), with each new in-game success only further eroding the quality of their actual and most important offline lives, pushing them deeper into the game and thus also into greater distress. Though stereotyped here, this frame nevertheless signifies real tensions players felt between virtual and actual lives. It also illuminates certain gamers’ attempts to manage the goals and demands of sometimes incompatible systems of belief and practice, and thus to protect and bolster their various selves.

The prominence of the “gamers as losers” frame in both mainstream culture and our interviews with gamers led us to explore relationships between experiences of online and offline success, on the one hand, and WoW’s pleasures and perils, on the other. We argue that socially shared and transmitted cognitive frames for on- and offline success structure whether WoW play is experienced as therapeutic or problematic. We consider the “WoW play as compensation” idea—i.e., that the game psychologically compensates players for the success they feel eludes them in offline life. But we examine specifically the possibility that differential online and offline success, rather than simply one’s absolute level of offline (or online) success, might explain the game’s therapeutic/addictive dynamics: Are players who
find more success in **WoW** than in offline life pushed more deeply into game-play? Does such differential success, even among players with successful offline lives, lead to increased valuing of the game to justify to self the hours spent in virtual reality and thus potentially masking the distress such heavy patterns of play might cause?

We address these questions from a perspective familiar to medical anthropologists, using William Dressler's (e.g., Dressler and Bindon 2000) notion of “cultural consonance” (an individual’s consistency with his or her culture), but add to it Leon Festinger’s (2003 [1957]) “cognitive dissonance” (psychic tension associated with conflicting beliefs and attitudes). We develop a concept of “cultural dissonance” to highlight how gamers’ subjective well-being is affected by conflicts between socially valued online and offline lives, and subsequent attempts to equilibrate through psychological negotiations and revaluations. Though developed and employed in an online gaming context, our theories and methods for cultural dissonance are potentially useful for understanding health processes in other subcultural communities, whose members simultaneously inhabit multiple and even conflicting cultural realities, a point to which we return in our conclusion.

**Setting: The Persistent and Immersive World of Warcraft**

**WoW** now has approximately 8.3 million monthly subscribers, making it one of the largest subscription-based MMOs and virtual communities in the West, with significant player populations in East Asia as well. Central to this online reality is its quality of **persistence**: Thousands of users interact in a world that persists independently of any particular player. Individuals log out of the environment, but other players continue to compete and interact, advancing and changing the contours of the game-space. **WoW**’s massively multiple play spaces are also immersive. Software with powerful 3D graphics create spaces that feel virtually real. Players’ avatars (visual representations of the character-self) respond to commands and enhance this sensation, as do the mentally and emotionally absorbing quests and plot-lines. **WoW**’s persistent and immersive environments magnify the potential for gamers to sometimes play more than they might otherwise wish. Players find it harder to resist the temptation to lose to themselves too frequently, completing engaging tasks in a beautiful virtual world environment, which is available almost always on demand (24 hours a day, seven days a week, with only minor breaks for system upgrades).

There is no single way to play **WoW**, nor any single goal. **WoW** offers gamers a range of tasks. Some are **quests**, with goals given by computer-controlled, non-player characters. In completing these, players advance in **levels**. Each level acquired, like won **gear** in the form of swords, armor, and jewelry, bestows additional power and ability on a character, allowing it to complete more difficult game challenges, which, in turn, allows them to advance even further. After completing the game’s highest level (currently 90) players compete in challenging end-game content such as multiplayer instances like **dungeons** or **raids**, requiring cooperation between players with groups balanced between different character classes. Typically, the most fearsome monsters are faced and most valuable treasures are won in these contexts,
though Player-vs-Player arena and battleground competitions offer comparable challenges.

“Problematic” MMO Play and WoW Therapeutics

Some researchers liken distressful online play to addictions like alcohol and gambling (Mitchell 2000; Young 1998a, 1998b; Young and Rogers 1998). Although not yet recognized in the American Psychiatric Association’s (APA) Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; APA 2000), DSM-5 revisions include “Internet addiction” in an appendix (APA 2013), treated analogously to problem gambling (Young 1998a, 1998b; Young and Rogers 1998).

Other scholars prefer “problematic Internet usage” (PIU) to Internet addiction (Yellowlees and Marks 2007). PIU entails symptoms resembling classic addiction, such as the compulsion to play, the cognitive preoccupation with online activity, and maladaptive use of the Internet to regulate affect (Caplan et al. 2009; Yee 2007). But this term does not attribute biochemically addictive properties to Internet use, as such assumptions have yet to be demonstrated (Seay and Kraut 2007; Widyanto and Griffiths 2006). We side with the PIU tradition and focus on negative personal and interpersonal consequences of Internet use, such as damage to school, work, and relationships, and experiences of anxiety and emotional distress that users themselves identify as distressing (Seay and Kraut 2007:830).

Of particular interest here is that achievement-based motivations among MMO gamers is linked to both positive and negative WoW experiences, given players’ need to grind through layers and layers of in-game content to experience rare moments of exhilarating success (Charlton and Danforth 2007; Snodgrass et al. 2011a, 2012; Yee 2006, 2007).

Cultural Dissonance

Recent studies show that online worlds like WoW form communities whose members’ activities are culturally patterned (Corneliussen and Rettberg 2008; Golub 2010; Nardi 2010). Rather than focusing on culture as a whole, we are especially influenced by cognitive anthropological studies of how cultural frames, models, or schemas structure individuals’ reasoning and practice (D’Andrade 1995; Holland and Quinn 1987; Strauss and Quinn 1997). In the current context, cultural models of success (real and virtual)—which may form what Shore (1996) calls a “foundational schema,” given the manner it informs diverse achievement and other domains—channel our gamers’ behavior and experience in patterned ways.

Dressler’s (Dressler and Bindon 2000) work on the emotional and physical consequences of cultural consonance—defined as “the degree to which individuals approximate widely shared cultural models in their own beliefs and behaviors” (Dressler et al. 2007:195)—is particularly helpful here, with its emphasis on the consequences of failing to share or achieve cultural values. For example, in research with communities in Brazil, Dressler and his associates found that individuals who were not congruent with their cultures’ normative models of success and the good life had higher rates of depression and elevated blood pressure. To explain this association, they propose that less consonant individuals experience either unspoken
or explicit social sanctions, leading to higher rates of stress and associated medical conditions.

Like Dressler, we presume that individuals’ well-being and health are partially determined by their relation to shared and socially transmitted models or frames that we conceptualize as cultural ideals. However, we consider also the experience of individuals in relation to multiple cultural models, in this case, to models of virtual- and actual-world success. We argue that how gamers embody culturally defined models for good online and real lives can lead alternately to feelings of accomplishment or distress, which, in turn, affects players’ emotional health. Further, we link Dressler’s notion of cultural consonance to Festinger’s (2003 [1957]) cognitive dissonance, which posits that holding two or more conflicting cognitions leads to disequilibrium, discomfort, and anxiety, motivating individuals to reduce dissonance by altering cognitions to create a more coherent belief system. Fusing Dressler’s and Festinger’s analytical categories, we develop the idea of cultural dissonance to describe the psychological conflicts gamers experience when they strive to embody competing real- and virtual-life success models and ideals.

Following Festinger, we anticipate that players experiencing higher levels of game-model than offline-model success may increasingly value their WoW play to justify and validate the amount of time spent in Azeroth and thereby reduce dissonance. As we will show, this leads them both to feeling that the game greatly contributes to their life happiness and satisfaction and, in other contexts, to compulsive, excessive, and stressful patterns of play. We emphasize that players here negotiate between two socially transmitted and shared cultural models, rather than between their purely personal ideals or commitments. Thus, we rework Festinger’s idea, bringing it together with Dressler’s, to speak of cultural rather than merely cognitive dissonance.¹

Methods

Research Model

We explore relationships between players’ achievement of culturally defined success and how they experience online gaming. Specifically, we hypothesize:

**H1:** The dissonance (difference) between gamers’ levels of online and offline success will be associated with self-reports that WoW is a source of both positives and negatives in players’ lives. Here, we hypothesize that experiencing more success and status in the world of Azeroth as compared to offline reality can both provide these players with a boost of positive feelings and also push them further and even too far into the WoW universe. Thus, even players with relatively high levels of offline success can be vulnerable to WoW overplay if they judge their in-game success as better than their offline achievements.

**H2:** Dissonance between online and offline success will be related to how much players value WoW as compared to offline reality, which in turn is related to mental health outcomes. Thus, the relative value of WoW versus offline reality mediates between dissonance and mental health. Experiencing more in-game than offline success will lead players, as Festinger might predict, to “rationalize” WoW
as particularly important when it potentially interferes with or even eclipses in importance offline commitments. This will further commit these successful players to the game, making it more likely that they will be pushed further into patterns of excessive play, with potentially adverse consequences for their subjective well-being.

**Sampling and Procedures**

We began with an ethnographic phase, conducting participant–observation in *World of Warcraft* (WoW), followed by semi-structured interviews and small sample surveys using free-lists and rating tasks (Weller and Romney 1988) to refine, for example, cultural models related to real-life and in-game success. We used cultural consensus analysis (Romney et al. 1986) to assess the content of in-game and real-life cultural models of success, in work described elsewhere (Snodgrass et al. 2013). Our research culminated in a formal web questionnaire, with a similar survey ongoing (http://tinyurl.com/WoWwellness). We used the survey results to quantitatively verify our qualitative insights into potential links between gamers’ levels of online and offline success and their positive and negative WoW experiences. Of note, though also posting our survey on WoW blogs and gamer sites, our interview and survey sample was largely drawn from persons associated with our own play networks—both online guilds of which we were members and also from local gaming communities and centers with which we were associated—followed by network referrals from these initial respondents. This sampling method had the strength of linking our survey tightly to our ethnography and interviews. And the typically personal bond with respondents helped ensure openness in interviews and a willingness (even enthusiasm) to complete our somewhat time-consuming online survey (approximately 160 items). Given this, our results best represent the particular North American players who shaped our understanding of the game during 2008–2009.

**Measures**

As part of the web survey, we developed four psychocultural scales to measure players’ level of involvement within the game (see Appendix A for complete scales). One, the “WoW Consonance Scale,” measured consonance with WoW, that is, the degree to which individual players view themselves as fulfilling the cultural model of a successful WoW player. Scale scores were sums of players’ self-ratings of the extent to which they agreed that each of the WoW Success model items characterized them personally. In parallel, a “Real Life Consonance Scale” was constructed from summing players’ rating of themselves relative to each of the Real Life Success model items. A third scale measured players’ valuing of WoW vs. Real Life and was similarly formed from their scores on a series of rating items asking them to compare the two realities. A fourth scale measured the extent of players’ reported experiences of problematic WoW play and was adapted from Young’s commonly used Internet Addiction Test (IAT) (Young 1998a, 1998b, 2009; Young and Rogers 1998). Items in this scale describe experiences of compulsive play that negatively affect other dimensions of gamers’ lives, such as jobs and relationships. Finally, we constructed a Cultural Dissonance variable as the difference (online–offline)
Cultural Dissonance and the Allure of Azeroth

Table 1. Descriptive Statistics (N = 257)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>WoW increases my happiness</td>
<td>10.1</td>
<td>12.4</td>
<td>32.7</td>
<td>35.8</td>
<td>9.0</td>
</tr>
<tr>
<td>WoW increases stress</td>
<td>19.1</td>
<td>32.3</td>
<td>19.5</td>
<td>19.5</td>
<td>9.7</td>
</tr>
<tr>
<td>Feel addicted to WoW</td>
<td>15.6</td>
<td>18.4</td>
<td>19.9</td>
<td>27.3</td>
<td>18.8</td>
</tr>
<tr>
<td>WoW helps relax/decrease stress</td>
<td>2.7</td>
<td>11.7</td>
<td>21.9</td>
<td>46.0</td>
<td>17.6</td>
</tr>
<tr>
<td>WoW experiences increase well-being</td>
<td>8.6</td>
<td>14.0</td>
<td>25.3</td>
<td>37.7</td>
<td>14.4</td>
</tr>
</tbody>
</table>

Female 20.1%
Is student 45.7%
Unemployed 26.7%
In marital/romantic relationship 57.2%

| WoW Consonance, Mean (SD)                                                | 59.8 (7.4)        |
| Real Life Consonance, Mean (SD)                                          | 67.1 (10.5)       |
| Dissonance, Mean (SD)                                                    | 0.0 (1.2)         |
| Problematic WoW Use, Mean (SD)                                           | 46.9(16.1)        |
| WoW vs. Real Life, Mean (SD)                                             | 47.9 (13.0)       |

between an individual’s score on the WoW Consonance Scale versus the Real Life Consonance Scale, with each one standardized first to make them commensurable.

Several subjective experience outcomes related to WoW play were measured with single item Likert ratings, which asked players to rate how much they believed WoW play added to their “happiness” and “life satisfaction,” alleviated or increased the “stress” in their lives, and made them feel “addicted” to the game. Basic demographic data (e.g., gender, education, employment, relationship status), degree of WoW usage and accomplishment within the game, motivation and styles of gameplay, social interactions in the game, and numerous other topics were also included in our survey.

Survey Results

Descriptive statistics for predictor and outcome variables included in our analyses appear in Table 1.2 The first substantive analysis is in Table 2, which shows ordinal regression results, with the difference between WoW and Real Life consonance (success)—or what we call “cultural dissonance”—being used to predict each of the five subjectively rated outcomes of WoW play. Results in that table show a positive
Table 2. Ordinal Logistic Regression of Ratings **WoW-related** Subjective Outcomes in Relation to Cultural Dissonance and Control Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Increases Happiness</th>
<th>Increases Level of Stress</th>
<th>Helps Relax/Combat Stress</th>
<th>Adds to Well Being</th>
<th>Feel Addicted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissonance (WoW vs. Real Life)</td>
<td>1.79***</td>
<td>1.42***</td>
<td>1.38***</td>
<td>1.61***</td>
<td>1.80***</td>
</tr>
<tr>
<td></td>
<td>(1.46–2.21)</td>
<td>(1.16–1.73)</td>
<td>(1.12–1.70)</td>
<td>(1.31–1.98)</td>
<td>(1.47–2.21)</td>
</tr>
<tr>
<td>Student status (1 = yes)</td>
<td>1.45</td>
<td>1.13</td>
<td>0.92</td>
<td>1.09</td>
<td>0.95</td>
</tr>
<tr>
<td></td>
<td>(0.88–2.38)</td>
<td>(0.70–1.85)</td>
<td>(0.56–1.50)</td>
<td>(0.67–1.77)</td>
<td>(0.58–1.56)</td>
</tr>
<tr>
<td>Employment (1 = unemployed)</td>
<td>0.77</td>
<td>1.38</td>
<td>1.08</td>
<td>1.33</td>
<td>1.87***</td>
</tr>
<tr>
<td></td>
<td>(0.42–1.41)</td>
<td>(0.77–2.48)</td>
<td>(0.59–1.96)</td>
<td>(0.74–2.40)</td>
<td>(1.00–3.47)</td>
</tr>
<tr>
<td>In relationship (1 = yes)</td>
<td>1.09</td>
<td>0.79</td>
<td>1.36</td>
<td>0.83</td>
<td>0.81</td>
</tr>
<tr>
<td></td>
<td>(0.67–1.78)</td>
<td>(0.48–1.29)</td>
<td>(0.82–2.23)</td>
<td>(0.51–1.36)</td>
<td>(0.50–1.32)</td>
</tr>
<tr>
<td>Gender (1 = female)</td>
<td>2.38***</td>
<td>1.52</td>
<td>2.13***</td>
<td>2.12**</td>
<td>1.42</td>
</tr>
<tr>
<td></td>
<td>(1.33–4.27)</td>
<td>(0.87–2.68)</td>
<td>(1.20–3.79)</td>
<td>(1.20–3.77)</td>
<td>(0.80–2.53)</td>
</tr>
<tr>
<td>Observations</td>
<td>258</td>
<td>258</td>
<td>257</td>
<td>257</td>
<td>257</td>
</tr>
<tr>
<td>Lacy R2o^2</td>
<td>0.083</td>
<td>0.046</td>
<td>0.035</td>
<td>0.075</td>
<td>0.11</td>
</tr>
</tbody>
</table>

* ***p < 0.01, **p < 0.05, *p < 0.1

1 Confidence intervals are on the odds ratio scale, while standard errors are for raw-coefficients.

2 Lacy (2006)
relationship between Dissonance and each of the subjective outcomes with odds ratios ranging from about 1.4 to 1.8. Note that this finding held for both pleasant (e.g., “increases happiness”) as well as unpleasant (e.g., “feel addicted”) outcomes of WoW play.³

In a similar analysis (Table 3, left column), we examined dissonance as a predictor of the Problematic WoW Use scale. Dissonance was positively and substantially related to Problematic WoW Use scale, with a slope of about 5.1, even after adjusting for the various demographic variables. The right column of Table 3 shows an analysis with addition of the Value WoW vs. Real Life scale as a predictor. The slope coefficient for the dissonance scale declines substantially (5.1 to about 3.2) from what it was in the previous model, a result consistent with a mediated relationship in which dissonance increases valuing of the online game world, which then leads to increased experiences of adverse effects of game play on players’ lives. The mediated (indirect) effect was formally estimated to be 37%, suggesting that over a third of the total (direct and indirect) effect of dissonance on Problematic Use was mediated by valuing of the WoW world.⁴

A final set of results in Table 4 concerns Valuing WoW vs. Real-life as a mediator variable between cultural dissonance and each of the ordinal mental health outcome variables. For “increases happiness,” the results show that the odds ratio for dissonance has dropped substantially from Table 2, a finding consistent with

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Table 3. Regression of Problematic WoW Use on Cultural Dissonance, Control Variables, and Valuing WoW vs. Real Life Scale

<table>
<thead>
<tr>
<th></th>
<th>$b$ (se)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value WoW vs. Real Life</td>
<td>0.34***</td>
</tr>
<tr>
<td></td>
<td>(0.080)</td>
</tr>
<tr>
<td>Dissonance</td>
<td>5.06***</td>
</tr>
<tr>
<td></td>
<td>(0.76)</td>
</tr>
<tr>
<td></td>
<td>3.18***</td>
</tr>
<tr>
<td></td>
<td>(0.86)</td>
</tr>
<tr>
<td>Student status (1 = yes)</td>
<td>−0.70</td>
</tr>
<tr>
<td></td>
<td>(1.97)</td>
</tr>
<tr>
<td>Employment (1 = unemployed)</td>
<td>5.77**</td>
</tr>
<tr>
<td></td>
<td>(2.31)</td>
</tr>
<tr>
<td>In relationship (1 = yes)</td>
<td>−3.91**</td>
</tr>
<tr>
<td></td>
<td>(1.96)</td>
</tr>
<tr>
<td>Gender (1 = female)</td>
<td>3.22</td>
</tr>
<tr>
<td></td>
<td>(2.28)</td>
</tr>
<tr>
<td>Constant</td>
<td>47.1***</td>
</tr>
<tr>
<td></td>
<td>(1.78)</td>
</tr>
<tr>
<td></td>
<td>31.0***</td>
</tr>
<tr>
<td></td>
<td>(4.12)</td>
</tr>
<tr>
<td>Indirect Effect [%] of Dissonance Through “Value WoW vs. Real Life”</td>
<td>1.89 [37%]***</td>
</tr>
<tr>
<td></td>
<td>(0.48)</td>
</tr>
<tr>
<td>Observations</td>
<td>257</td>
</tr>
<tr>
<td></td>
<td>257</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.23</td>
</tr>
<tr>
<td></td>
<td>0.29</td>
</tr>
</tbody>
</table>

***p < 0.01, **p < 0.05, *p < 0.1.
<table>
<thead>
<tr>
<th>Variables</th>
<th>Increases Happiness</th>
<th>Increases Level of Stress</th>
<th>Helps Relax/Combat Stress</th>
<th>Adds to Well Being</th>
<th>Feel Addicted</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Value WoW vs. Real Life</strong></td>
<td>1.09*** (1.07–1.12)</td>
<td>1.04*** (1.01–1.06)</td>
<td>1.07*** (1.04–1.09)</td>
<td>1.11*** (1.09–1.14)</td>
<td>1.03***</td>
</tr>
<tr>
<td><strong>Dissonance (WoW vs. Real Life)</strong></td>
<td>1.20 (0.95–1.52)</td>
<td>1.17 (0.93–1.48)</td>
<td>0.98 (0.76–1.25)</td>
<td>0.96 (0.75–1.22)</td>
<td>1.58***</td>
</tr>
<tr>
<td><strong>Student status (1 = yes)</strong></td>
<td>1.37 (0.83–2.28)</td>
<td>1.06 (0.65–1.73)</td>
<td>0.80 (0.48–1.33)</td>
<td>1.01 (0.61–1.67)</td>
<td>0.95</td>
</tr>
<tr>
<td><strong>Employment (1 = unemployed)</strong></td>
<td>0.62 (0.33–1.15)</td>
<td>1.36 (0.75–2.44)</td>
<td>1.02 (0.55–1.88)</td>
<td>1.18 (0.64–2.16)</td>
<td>1.78*</td>
</tr>
<tr>
<td><strong>In relationship (1 = yes)</strong></td>
<td>1.40 (0.84–2.31)</td>
<td>0.86 (0.52–1.40)</td>
<td>1.59* (0.95–2.64)</td>
<td>1.12 (0.67–1.85)</td>
<td>0.86</td>
</tr>
<tr>
<td><strong>Gender (Female = 1)</strong></td>
<td>1.55 (0.85–2.85)</td>
<td>1.15 (0.64–2.06)</td>
<td>1.51 (0.83–2.76)</td>
<td>1.40 (0.77–2.54)</td>
<td>1.29</td>
</tr>
<tr>
<td><strong>Indirect effect [%] of dissonance through “Value WoW vs. Real Life”</strong></td>
<td>0.48 [72%]*** (0.32, 0.65)</td>
<td>0.20 [56%]*** (0.071, 0.33)</td>
<td>0.37 [107%]*** (0.22, 0.51)</td>
<td>0.59 [108%]*** (0.40, 0.78)</td>
<td>0.14 [24%]** (0.021, 0.26)</td>
</tr>
<tr>
<td><strong>Observations</strong></td>
<td>257</td>
<td>257</td>
<td>256</td>
<td>256</td>
<td>256</td>
</tr>
<tr>
<td><strong>Lacy R2o</strong></td>
<td>0.20</td>
<td>0.07</td>
<td>0.10</td>
<td>0.24</td>
<td>0.12</td>
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***p < 0.01, **p < 0.05, *p < 0.1

1Confidence intervals rather than standard errors are reported here and for other logistic regression models, since the standard error of the odds ratio is not a  2Lacy (2006).

2Indirect effect coefficients in logistic regression models are measured on the log-odds rather than odds scale and are not directly comparable to odds ratios in Table 2.
a mediated effect. The indirect (mediated) effect of dissonance was estimated as almost three-quarters the size of its total effect, suggesting that dissonance increases valuing of WoW relative to Real Life, which, in turn, leads to stronger reports of WoW as increasing happiness. The result for the first adverse outcome, “increases stress,” is similar, with a positive mediated effect accounting for about half of the estimated total positive relation of dissonance and increased stress. For “decreases stress,” the result is dramatic and unusual.

Notice that in Table 2, dissonance had a positive relationship to decreased stress, but in Table 4 that relationship is slightly negative and is completely counterbalanced by a positive indirect effect. This fits an interpretation with all the relationship of dissonances to reducing stress occurring via the pathway of leading to greater valuing of WoW than real life, leading to less stress. For the outcome “adds to well-being,” the statistical result is similar, with an estimated indirect effect slightly over 100%, with the relation of dissonance to well-being happening completely through the means of increased valuing of WoW relative to the real world. Finally, for the subjective report of “feeling addicted,” the mediated effect of dissonance is smaller though still substantial, with about one-fourth of the total effect of dissonance estimated as indirect. For all the subjective outcomes, whether adverse or not, the results support the hypothesis that dissonance has much of its effect through an indirect mechanism.

Discussion in Relation to Ethnographic Findings

Our web survey results reported in Tables 2–4 confirm that a difference between in-game and offline success—and not just the absolute level of in-game or offline success—is strongly associated with both enjoyable and also problematic play, thus validating our first hypothesis. For dissonant individuals, finding higher relative in-game success might be compensatory, pushing them toward play that at first feels good (i.e., relieves stress, adds to happiness, etc.), but eventually becomes distressful and compulsive, as such players compromise their offline existences in favor of online ones. The fact that unemployed individuals, like those not in relationships, are more likely to report Problematic WoW Use and feel addicted (Table 2 and 3) further supports the idea that excessive play compensates for offline shortcomings. Interestingly, women in our sample reported more positive subjective outcomes from their WoW play (Table 2). This, too, could reflect compensatory play, if this results from women enjoying the relative freedom of constructed identity in an online world as compared to the greater gender-based constraints of offline life.5

Further, survey results in Tables 3 and 4 allow us to posit a plausible mechanism for how this difference between in-game and real-life consonance translates into positive and negative WoW play experience outcomes. In support of Hypothesis 2, valuing WoW as compared to offline reality functions as a mediating variable, a pathway by which differential online and offline consonance leads to positive or negative mental health outcomes. The experience of dissonance might lead players to increase the relative psychic value they placed on WoW compared to offline “real” life, which would, in turn, lead to various positive and negative outcomes, so that dissonance, besides whatever direct relationship it might have to the various outcomes, might also have an indirect or mediated impact. Consistent with what we
suggest in relation to Hypothesis 1, this could show how players first find positive
compensation in an online world where they experience greater success, but in
which initial good feelings can lead gamers to shift their valuing of WoW relative
to offline reality so that they eventually find themselves, in their own estimation,
compulsively over-playing.

Our ethnographic interviews aid in interpreting the survey results. The dominant
cultural frame, echoed by many informants, suggests that gamers have less-than-
successful real lives and those failures lead them to seek fulfillment in WoW, but
ultimately they encounter distress. For example, exploring more deeply the rela-
tionship between relative online and offline success and positive and negative WoW
experience (Hypothesis 1), interviewees referenced the South Park episode, “Make
Love, Not Warcraft” and the web series, The Guild, which portray gamers’ social
ineptness as a cause and result of their problematic game play.6 Gamer interviewees
generally were entertained by media portrayals, which, though a parody of their
lifestyle, nevertheless were seen to smartly capture the mainstream public’s per-
ceptions of WoW videogamers. And the idea that WoW compensates for real-life
failings filters into gamers’ own observations and personal experiences with WoW.
No matter what the quality of their offline life, if a player was willing to put in the
hours, they advanced and started to feel, in the somewhat ironic words of another
respondent, very special:

My guild member is really good at the game. While he’s a solid citizen, I
don’t think he feels exceptional in any way in real life–he doesn’t feel like he
was achieving anything. Whereas in game he feels so special. He was the guy
with the fury [a warrior ability], the guy . . . the main tank [warrior who
defensively absorbs the attacks of opponents]. He was so good, he gets
preferential treatment . . . he feels very, very special in game, in a way he
doesn’t feel out of the game. But this is only what I surmise from having
talked to the guy for more hours than I can remember.

In this individual’s view, WoW gives his unexceptional “solid citizen” friend
unimaginable levels of achievement and success. Consider as another example the
first-hand testimonial of Richard, another WoW player:

Richard: Most of my coworkers are in sales, and yes it is about money.
There’s also a societal pressure on me that I’ve personally chosen to ignore
as has my wife to get married and to have kids. They see successful people as
people raising a family, and being able to provide for your kids. So I would
say people around me see that as very important.

Interviewer: And that’s not important to you?

Richard: All the things you see out there that are so important to so many
people are things that I threw out of my life a long time ago, because I
decided this is not what I want to be happy, this is not what I need to do to
feel like I have achieved and succeeded. Even though I go to work and
there’s the guy with the nice ‘vette [Corvette], and he’s ripped, and he’s got
the hot chick hanging on his arm, and he’s making $800,000 a year, and everybody loves him, you know what, I don’t really care, and you know, if I were in his shoes I would probably just be uncomfortable to be that center of attention and to be that person that people are looking up to [oh! sighs]. I would be uncomfortable.

Interviewer: When you’re speaking about yourself, in a way you’re speaking about gamers, right?

Richard: Yeah, gamers in general, yeah. And it’s funny, I just realized the dichotomy of this speech I’m giving you now. I just said in real life to be that guy that everybody looks up to and admires, and is, I would be uncomfortable. Yet when I’m hiding between that toon. . . .

Interviewer: Are you that guy?

Richard: I’m an officer [in the guild], I am that guy! [laughs] So when I’m hiding behind a toon I’m okay with that, but when I’m outside of the game, I find that distasteful.

Richard criticizes people who flaunt their real-life success, and he rejects certain elements of dominant offline models of success and achievement. Yet, as an officer in his guild, he is a role model and leader to other members. He admits pride in his accomplishments and gear, which confer prestige among his peers in WoW. Richard’s views are common: We observed many WoW players expressing dissatisfaction with aspects of real-world models of success while pursuing oddly reminiscent paths in the game, amassing gear and seeking satisfying social relations.

In a moment of recognition, Richard perceives himself to be pursuing, if in disguised form, the very real-life models of success he purports to reject.

Players like Richard acknowledge searching in WoW for the success that eludes them in the real world. As in popular portrayals, they rise through their characters to relative levels of recognition far beyond that achieved by their real-world persona. This theme of psychological compensation is prominent in other work, where we have described a strong negative relation between real-life cultural consonance and problematic WoW play (Snodgrass et al. 2011a, 2013).

Still, real-life failure per se does not push players more deeply into WoW. The first interviewee above describes his friend, somewhat ironically, as a “solid citizen.” Not a loser, just not exceptional. Likewise, Richard is a real-world success by conventional American standards, with a relatively prestigious well-paid job (above $70,000 per year), a loving wife and fulfilling marriage, and a rich network of offline (and online) friends. He doesn’t, however, meet all the standards of the mainstream U.S. model of success: Though he is well paid and happily married, he has no children and is less well paid and less socially successful than many others. His failings are partial and relative, not total: One can always be better. Yet, in WoW, he is unquestionably successful, leading a guild as it advances quickly through endgame content. His very success in the game—and perceiving his online
success eclipsing his offline achievements—pushes him to value WoW to the point that he confessed overplaying WoW to potentially addictive levels.

The raid leader quoted in our title thus exaggerated the truth. Yes, “losers” may thrive in WoW, if only because they need virtual world success and will pour much energy into WoW achievement. Nevertheless, WoW draws in even relatively successful individuals, who are in no sense isolated losers. When in-game success outshines real-world achievement, even conventionally successful individuals like Richard experience both joy and distress as they strive for even more virtual life success. Our concept and measure of cultural dissonance highlights exactly this phenomenon, extending our analysis beyond the so-called offline loser parodied in popular culture.  

A theoretically informed analysis of interviews also clarifies survey findings related to Hypothesis 2. As stated earlier, Festinger (2003 [1957]) posited that holding two or more conflicting cognitions leads to disequilibrium and anxiety, motivating individuals to reduce dissonance by altering cognitions to create a more coherent belief system.

In the present context, we would suggest that many players feel themselves pulled between competing value commitments to online and offline worlds, with some coming to feel like they inhabit two lives simultaneously, an infeasible and thus distressing situation (Snodgrass et al. 2011b). The drive to succeed in two interpenetrating but separate worlds leads potentially to emotional dissonance and conflict, with a concomitant desire to minimize such feelings of disequilibrium by modifying existing beliefs and commitments. The strongest case is when one judges online success to be higher than that in the actual world. In this case, players can find themselves even more strongly enmeshed and invested in online activities and commitments, to the detriment of offline ones, as when Richard prefers playing WoW to fishing with his offline friends, a practice that jeopardizes offline friendships and troubles him (see Snodgrass et al. 2011b).

However, coming to value online over offline commitments can reduce the dissonance Richard and others like him feel, justifying to themselves an online existence that others in their lives might consider excessive and restoring emotional equilibrium. After all, any reasonable person would want to stay in a place where they are more esteemed and that is judged to be fairer, more supportive, honorable, and colorful than the offline world. In justifying to themselves the time they spend in Azeroth, gamers like Richard would prefer to pursue WoW success. They would thus ensure that they continue to enjoy the positive feedback from online achievements, which leads them to feelings that WoW adds positively to their lives by, for example, enhancing their happiness and life satisfaction and relieving stress. But in the long run, a change toward valuing WoW over the offline world would protect players from the idea that their time spent in Azeroth is a waste. This encourages ever higher levels of commitment to WoW, leaving such players more vulnerable to “problematically” stressful and distressful patterns of play and the attendant neglect of and damage to offline life.

Our qualitative interviews further support this interpretation of our survey data, with some interviewees consciously acknowledging the way cognitive evaluation brought on by online success pushes them to over-play WoW. Consider the following exchange with 30-year-old Doug:
Interviewer: Would you say *WoW* has more of a positive or a negative influence on your personal life? [i.e., What was your primary motivation for playing?]

Doug: Well, the ultimate feeling always comes at the ultimate price, and that is, I feel that is a negative impact.

Interviewer: Why do you think that?

Doug: Because it [*WoW*] took away from—everything else became not important. You know, you start rationalizing silly things, you just cut back, cut back, cut back, and pretty soon you just stop leaving your room, or your house, and you think it’s been a day or two and in reality it’s been a week. Then it’s a month or after that, most likely fragment some of your friends off or it could impact your work. I know it impacted my work because there’d be many where I’d just be like “Last minute, last minute, last minute, fuck! Gotta go!” Or I would play it for so long I’d have like an hour of sleep and then you’re a space case like I am today.

Interviewer: What was your primary goal [in playing *WoW*]? [i.e., What was your primary motivation for playing?]

Doug: Primary goal was: Is it entertaining? The primary goal was achieved rather quickly. [laughs] It was very entertaining. And then it was just like, “Ah, I gotta get to level 10, ah I gotta to level 20, ah I gotta get to level 30,” but by that time it was all just “level, level, level, level, level.” I was kinda bypassing a lot of anything. . . . I was just sticking to one region and just power-leveling. That was my main goal: power-leveling, power, power, power, sleep! Stay focused, stay focused, stay focused. And then I got to 70 and I did the battlegrounds and that was real important you know, “gear, gear, gear, gear, gear.” You hit 70 it was just all about gear.

First, Doug tells us that the “ultimate feeling”—what he in another context calls a “maximum adrenaline rush” brought on by in-game success, where he’s “screaming” with excitement—leads to the compulsive play problems of which he speaks. He further explains that players like himself arrive at this point through a process of “rationalization,” which shares features with our dissonance concept: *WoW* success leads players to devalue offline life related to friends and work (they “became not important” and thus get “cut back”), while the game becomes increasingly important, even central to life (“you just stop leaving your room”). Indeed, in this case, cognitive reassessment is accompanied by perceptual distortion: In-game success and exhilaration warps the experience of time, making it difficult for players like Doug to both honestly assess their online hours and regulate their gaming. Paralleling our survey data, in-game success leads to problematically compulsive play, mediated by a pathway of cognitive reevaluation of the importance of offline as compared to online reality.

The second passage shows more about this process of cognitive reevaluation—and indeed distortion—brought about by ongoing *WoW* success: As a self-professed
“power-leveler,” Doug only cares about in-game advance, his life narrowing to a focused quest for online power and gear, with offline life completely diminished in importance. Doug does not specifically draw attention to the difference between his online and offline statuses as being the source of his problems. Still, it is interesting to note that he is an unemployed college dropout, describing himself as “a full-time video-game player. ... I don’t work.” Online, by contrast, he has reached the maximum level cap (70 at the time of this interview) and is contemplating, and indeed being encouraged by his in-game friends because of what they perceive as his skill and commitment, elevating his game further by joining a “hardcore” raiding guild. In our framework, such a difference between online and offline achievement can help propel Doug toward the compulsive patterns of play, of which he himself is aware.

In our interpretation, dissonance emerges from a conflict between two culturally informed frames, one online and the other offline, about how to judge success. Our research situation thus pushed us beyond the notion of a single shared cultural model—and thus of straightforward cultural consonance—to instead speak of multiple culturally salient models, remarkably parallel, situated in potentially competing virtual- and actual-world moral universes and social networks. In the current context, the dynamics are such that whether WoW play is experienced as restorative adventure or, by contrast, as addictive and thus disruptive to offline lives depends critically on the extent to which individuals, first, embody several cultural norms and, second, manage to successfully reconcile the conflicting frameworks of value and commitment established by these norms. Combining Dressler’s notion of cultural consonance with Festinger’s (1957) cognitive dissonance, we refer to the stresses, strains, and psychological processes associated with embodying and negotiating potentially competing or conflicting social norms as cultural dissonance—with dissonance referring both to the conflicts between cultural norms and to the emotional experience of such conflict and disequilibrium.

We suggest that cultural norms discussed by Dressler can be thought of as a particular case of the cognitions alluded to by Festinger. Dressler tells us that individuals can be consonant or dissonant with a particular cultural norm or model. Combining Dressler’s framework with that of Festinger, we point to a double process of consonance and dissonance. First, individuals can successfully embody, and thus be consonant or dissonant, with not one but several separate cultural norms. Consonance or dissonance with each of the norms results in positive or negative psychosocial feedback, respectively. Second, cultural norms or models can themselves be more or less consonant or dissonant with each other. Dissonance between conflicting norms would lead to feelings of stress and anxiety as well as, potentially, to the attempt to eliminate or minimize such contradictions, as we have shown, by shifting the way one values WoW compared to the offline world.8

Finally, Dressler speaks of cultural consonance as the manner individuals approximate in their belief- and behavior-shared norms. Still, we suggest that cultural consonance is also a self-conscious representation, from the point of view of the individual interview or survey respondent, of how successfully that individual approximates a shared cultural model. That is, cultural consonance is also a self-concept: Prompted by a researcher–observer, individuals step outside themselves and assess, report, and even claim a particular status in relation to a shared norm. This is interesting
in light of certain recent work on cognitive dissonance, which emphasizes how dissonant cognitions lead particularly to psychological discomfort and the desire for congruency when they threaten one’s coherent sense of self (Aronson 1999). Here, cultural consonance, reconceptualized in part as a self-concept, joins fluidly with Aronson’s ideas, pointing to how cultural dissonance might apply, especially when individuals strive to maintain coherence in an overarching self-concept informed by competing cultural norms.9

Conclusion

By recognizing both the therapeutic and harmful features of online gaming, we have tried to provide a more balanced portrait of WoW play and to clarify paths toward problematic usage. We appreciate how recent ethnographers of virtual worlds—such as Boellstorff (2008) in his study of Second Life—have studied them entirely from within the persistent virtual world in question as cultures in their own right and not mere expressions of the actual world. Still, to address patterns of wellness and distress in WoW gamers’ lives, we have followed others and tried to understand how gamers’ WoW experiences intersect with offline ones (Nardi 2010; Schiano et al. 2011; Snodgrass et al. 2011a, 2011b, 2011c, 2012, 2013; Taylor 2006). Our research shows that problematic play emerges when gamers feel themselves better positioned in an online social world compared to an offline one and come to believe—either rightly, through a realistic assessment of less-than-desirable offline opportunities, or wrongly, through misplaced rationalization—that online life offers more fulfilling possibilities. That is, our research suggests that an individual’s social position relative to online compared to offline group norms—rather than the game per se, which should not be pathologized—is better understood as a more ultimate source of online gaming distress.10

Psychological anthropologists have long noted that cultures consist of multiple and even conflicting shared and socially transmitted models arranged in hierarchies involving overarching “foundational schemas” and more context-delimited and domain-specific ones (D’Andrade 1995; Shore 1996). Recent research in the cultural consensus tradition has begun to incorporate ideas about cultural complexity and conflict into sophisticated analyses, many with health applications of interest to medical anthropologists (Brown et al. 2008; Chavez et al. 2001; Hruschka et al. 2008; Medin et al. 2006; Mueller and Veinott 2008; Ross 2006; Snodgrass et al. 2011a, 2013). The cultural consonance framework—a highly influential formal and structured medical anthropological approach for understanding the cultural patterning of health, which provides the focus for this article—has begun to deal with cultural complexity, for example, the way that a few underlying latent constructs inform consonance in numerous domains like lifestyle, social support, family life, national identity, and food (Dressler et al. 2007). However, this framework has yet to fully contend with the ways that individuals feel pulled to approximate belief and behavior in the same domain situated in competing and even conflicting normative worlds, as is the case when the WoW gamers feel torn between their online and offline goals, commitments, and social relations.

In this study, we have operationalized the notion of cultural dissonance—as the subtraction of two separate consonances and as the subsequent psychological
negotiations employed to relieve conflicts of commitment to alternate cultural worlds—to point to the manner that cultural complexity and conflict impacts mental health and well-being in an online gaming context. We imagine researchers will discover further ways that the cultural dissonance concept can be used to explain health processes, both through alternate quantitative procedures to measure individual commitment to conflicting cultural models and by documenting ethnographically the multiple particular ways that individuals strive to alleviate such conflicts.

In this vein, and to conclude, we also think our procedure and perspective possess wider applicability beyond the online realities discussed here. For example, cultural dissonance could be used to explain health processes in contexts of cultural conflict such as might be experienced by ethnic and racial minorities, immigrants, and otherwise socially marginalized individuals. In these situations, too, individuals might feel compelled to embody in their belief and behavior potentially competing and even incompatible cultural norms defining success and the good life. Such compulsion might impact these individuals’ health and well-being through processes related to those examined in this article, as, for example, when impoverished minority drug users’ valuing of the camaraderie and excitement of the street, and devaluing of more mainstream society where they lack accomplishment and respect, pushes them to even greater levels of involvement with drug culture (e.g., Bourgois 2002, 2003).

Indeed, contemporary experience almost everywhere in the world and among most all social classes increasingly either unfolds online or is influenced by the Internet and other new media technologies. This ensures that the issues discussed here now even more directly impact what were once more purely and fully conflicts between various real-life domains of experience, suggesting further intersecting social and health complexities to be unraveled by future medical anthropological research utilizing a cultural dissonance framework such as ours.

Notes

1. Others like Choi et al. (2008) have used the term cultural dissonance to refer to cultural value conflicts among immigrants and other groups. These uses differ from ours in that they do not emerge methodologically and substantively from Dressler’s cultural consonance concept.

2. All scales showed internal consistency, with high Cronbach’s $\alpha$ values for the WoW Consonance scale (.86), Real Life Consonance scale (.91), Valuing WoW vs. Real Life scale (.90), and problematic WoW play (.94).

3. Considered as an outcome, dissonance was somewhat related to demographic background factors, though not strikingly so. In a regression analysis not shown here, we found that unemployed persons were somewhat higher in dissonance, and students and persons in romantic relationships were somewhat lower. Gender and age had no substantial relation to dissonance.

4. A mediated or indirect effect is said to occur if some variable conceived to be first in time and/or causal order affects some second variable, which, in turn, affects some outcome variable. By contrast, a direct effect occurs if the first variable affects the outcome variable by itself without that effect occurring through some intermediary variable. For example, level of stress might directly contribute to depression, but also do so indirectly, insofar as stress leads to decreased social contact, which then leads to depression. We estimated the extent of mediation of the relation of cultural dissonance to various outcomes using a relatively new
method, implemented in a publicly available Stata add-on program called -khb-. Among other convenient features, this method permits mediation analyses for categorical as well as continuous variable outcomes. See Karlson and Holm (2011) and Karlson et al. (2012) for documentation.

5. Yee’s (2006) findings suggest that it is the relationships that women build in WoW that make the game particularly important to them.

6. This South Park episode—number 147 of this animated series—first aired October 4, 2006. The Guild – Episode 1: “Wake-Up Call” can be found on YouTube.

7. Caplan et al. (2009) shows loneliness and introversion to positively predict PIU. However, other scholarship reminds us of gamers’ intense online social lives, which importantly intersect with potentially rich offline social relationships (Nardi 2010; Schiano et al. 2011; Steinkuehler and Williams 2006).

8. Alternate cultural dissonance paths are possible, which we plan to explore in future research. For example, gamers do not generally seriously endorse the dominant cultural “gamers are losers” frame.

9. Alternately, dissonance might be resolved through behavior rather than conscious cognition and belief. That is, confronted with offline failure, WoW players may redouble their online play efforts, avoiding having to confront offline realities and relieving the felt experience of dissonance and anxiety. Indeed, simply paying a monthly subscription fee may lead players to over-value WoW and play more excessively to avoid the feeling that they are wasting their time and money. For further modifications of classic formulations of cognitive dissonance along a more “action-based” approach, see Harmon-Jones et al. (2009). For approaches to addiction and behaviors like machine gambling emphasizing the role of activities and sensory-rich involvements rather than cognition and belief, see Lende (2012) and Schull (2012). Likewise, see Nardi 2010 for an “activity theory” approach to WoW (excessive) play.

10. Nardi (2010:123–136), herself points out that online communities can provide support, which discourages rather than promotes problematic play. Schiano et al. (2011) illuminate how online and offline social networks overlap, as do we in other writing (Snodgrass et al. 2011b), complicating the identification of a clear source, online or offline, of gaming distress.

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