

Social Media versus Gaming Associations with Typical and Recent Dreams

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Abstract

Cirucci (2013a) hypothesized that video game players would display similarities to social media users and that this relationship should be examined. University students who varied in the degree to which they use social media (SMU) and play video games (VGP) were compared in this inquiry on several dream indices and one personality inventory. While there were meaningful differences between the four groups (high VGP/high SMU; high VGP/low SMU; low VGP/high SMU; low VGP/low SMU), most analysis resulted in no differences in dreams. Differences seemed to support the nightmare protection thesis of video game play such that high end gaming, no matter the degree of social media use, suffered less from these negative types of dreams. Additionally, the high VGP/high SMU group had the thinnest psychological boundaries and thus were perhaps most susceptible to media effects. While at the same time this group of high end media users showed the least negative self concepts in their recent dream content. This was reflected in their typical dream reports as well.

Introduction

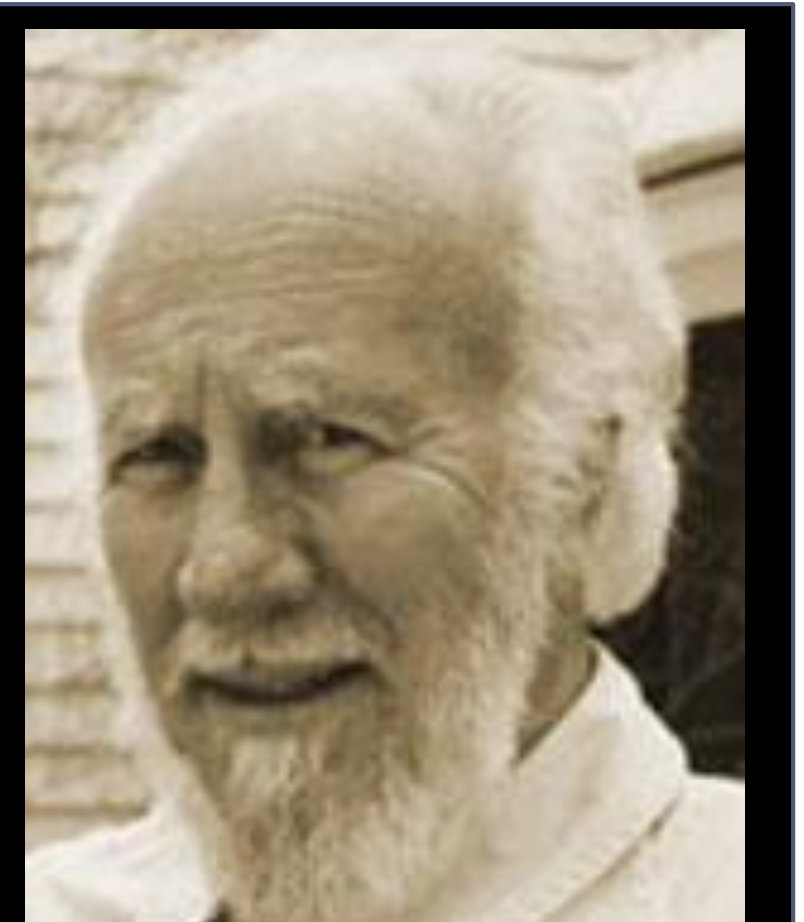
The PEW Internet and American Life Project tracks not only internet use but also its offshoots like texting, tweeting, social media, wireless access, etc. A quick survey of recent findings by the PEW organization shows how widespread electronic media use has become, particularly for social uses (Kohut, et al, 2011). While the various integrations of technology into our lives, from robots to toys, are endless, what is important to keep in mind is that our daily waking realities are changing dramatically via the incorporation of technologically constructed alternative realities into our routines. Sometimes these changes are quite distinct, as immersing oneself in a video game, but sometimes they merge seamlessly with our waking reality, as when texting as one walks between classes. These technological integrations also overlap in a more perceptually profound way, as in the work on the Game Transfer Phenomenon, which examines how video game play experiences are transferred to the real world (Ortiz de Gortari & Griffiths, 2012). Additionally, on the immediate horizon is the increasing use of augmented reality technologies such as Googles glasses, which will show a map overlaid on a segment of the viewer's waking reality visual field (Koetsier, 2013), and cost effective virtual reality technologies such as Oculus Rift headsets for gaming (Orland, 2013).

This new, digitally enhanced way of living permeates modern society and impacts human consciousness in a variety of ways. Understanding such impacts and their ramifications is vitally important. One particular area that merits investigation is dreaming. It has often been pointed out that dreams are a constructed reality. It can also be argued that waking reality is constructed. This constructed reality influences our lives the most, but there are other constructed realities, which can occur during drug use, illness, hypnosis or meditation (Blackmore, 2012), that also impact our lives. However, never before has such a large part of the population been affected so widely by a technologically constructed alternative reality. Our prior research efforts have focused upon video game play and dreams (reviewed in Gackenbach, 2012a;b), but now we turn our attention to non-gaming digital life.

As noted above, video game play has been the focus of our initial inquiries. However, it is clear that other types of digital life are becoming dominant, not only in the mechanics of day to day life, but in also as a force that is shaping the self (i.e. less sense of shyness; Yen et al., 2012), relationships (i.e. finding love online is becoming normal; Hand, Thomas, Buboltz, Deemer, & Buyanjargal, 2013), and more broadly, society (i.e., changing political landscapes; Macafee, & De Simone, 2012). Our research of this phenomenon is particularly relevant since the comparison of video game play (VGP) to social media use (SMU) has precedence in the communication studies literature.

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This poster is dedicated to the memory of Robert Van de Castle, friend and mentor.



Cirucci (2013a) has argued that these groups are basically doing the same thing. Both groups create avatars (though social media avatars are real images while gaming avatars are virtual), both bond via computer code, and both activities can be seen as performances. On the other hand, one might say that competition is a primary element of gaming while cooperation dominates social media use. In response to this line of thought, Cirucci argues that there actually is a type of competition in some social media use, as in getting the most friends, or the most likes. In essence, Cirucci (2013a) suggests that winning in gaming is defeating one's foes, while winning in social media is becoming a celebrity. Furthermore, she suggests that both forms of competition demonstrate the search for acceptance.

In her initial exploratory inquiry into the thesis of strong parallels between VGP and SMU, Cirucci (2013b) found that the self for Gamers is authentic while for SMU's it's idealized. Further, she reported that gamers tend to have friends, and therefore don't feel in need of friends. In contrast, SMUers do feel in need of friends. Finally, she reports that, the more individuals' game, the less they rely on social media for play. In line with Cirucci's (2013b) research, our current inquiry examines VGP and SMU in terms of how such immersion in digital worlds impacts other constructed worlds, i.e. dreams. This allows us to begin to understand the associated deeper elements of such virtual experiences. If, as argued by Cirucci (2013a), these two virtual experiences are similar, then the results of our inquiry into dreams should show few differences. If, however, there are meaningful differences, then we might expect them to fall along social fulfillment versus competition with the emphasis on getting social needs fulfilled in SMU but winning as the focus in VGP.

Method

Participants

Research participants were drawn from a pool at a western Canadian university (74%) for 2% course credit. The remaining 26% of participants came from an online public access site. There were 175 male participants and 507 female participants. Average age was 21, with a range from 13 to 68. Marital status was single as reported by 93% of respondents. Finally, 72% of the respondents were Caucasian.

Materials

Demographics: The first part of the online survey asked about general demographic information including gender, age, marital status, and race/ethnicity.

Video Game History: This part of the questionnaire asked about the research participants' video game play history. Questions included frequency of play, length of a typical play session, the life time number of games played, preferred genre, video game reading and social habits, and questions about their play during the 24 hours prior to filling out the questionnaire (Gackenbach, 2012b).

Electronic Media Use Questionnaire: There were three subsections to this questionnaire: cell phone use, computer and other media use, and social media use. The items were drawn from various PEW research polls, as well as other communication studies surveys on media use. There were six questions on cell phone use, and six on computer and other media usage; many of these questions allow multiple answers. Thirteen questions asked about social media usage, and again, in many of these questions there are opportunities for multiple answers.

Typical Dream Questionnaire (TDQ): This 60-item questionnaire was developed by Nielsen, et al (2003). It investigates the dimensional structure of dreams by asking the respondent to indicate how frequently they have had each type of dream experience.

Dream Collection Questions: The participant's most recent dream were asked for, followed by questions about the type of dream and emotions felt during the dream. Ten questions about dream type were followed by emotional evaluations of the dream along 15 dimensions.

Boundary Questionnaire: This was the 18-item short form of a personality inventory developed by Hartmann (1984). It assesses psychological boundaries, a personality trait concerning the degree of separateness ("thickness") or connection ("thinness") between mental functions. It was administered to a subset of respondents.

Procedure

Students were given access to the online survey through their participation in the mass testing research pool. All personal identifiers had been stripped, thus assuring anonymous participation. After agreeing to an informed consent they moved into the survey questions. A second set of participants were gathered by mounting the survey on several psychology research websites. These were also entirely anonymous. The order of the questions was the same as listed in the materials section. Thus all participants got the questions in the same order. These were arranged from the least personal (demographics) to the most personal, with the telling and self-evaluation of a dream. Participants were told that there was no loss in credit if they decided to not participate or if they dropped out at any time. Once they finished the survey or closed it, thus choosing not to continue, they were presented with a debriefing statement.

Results

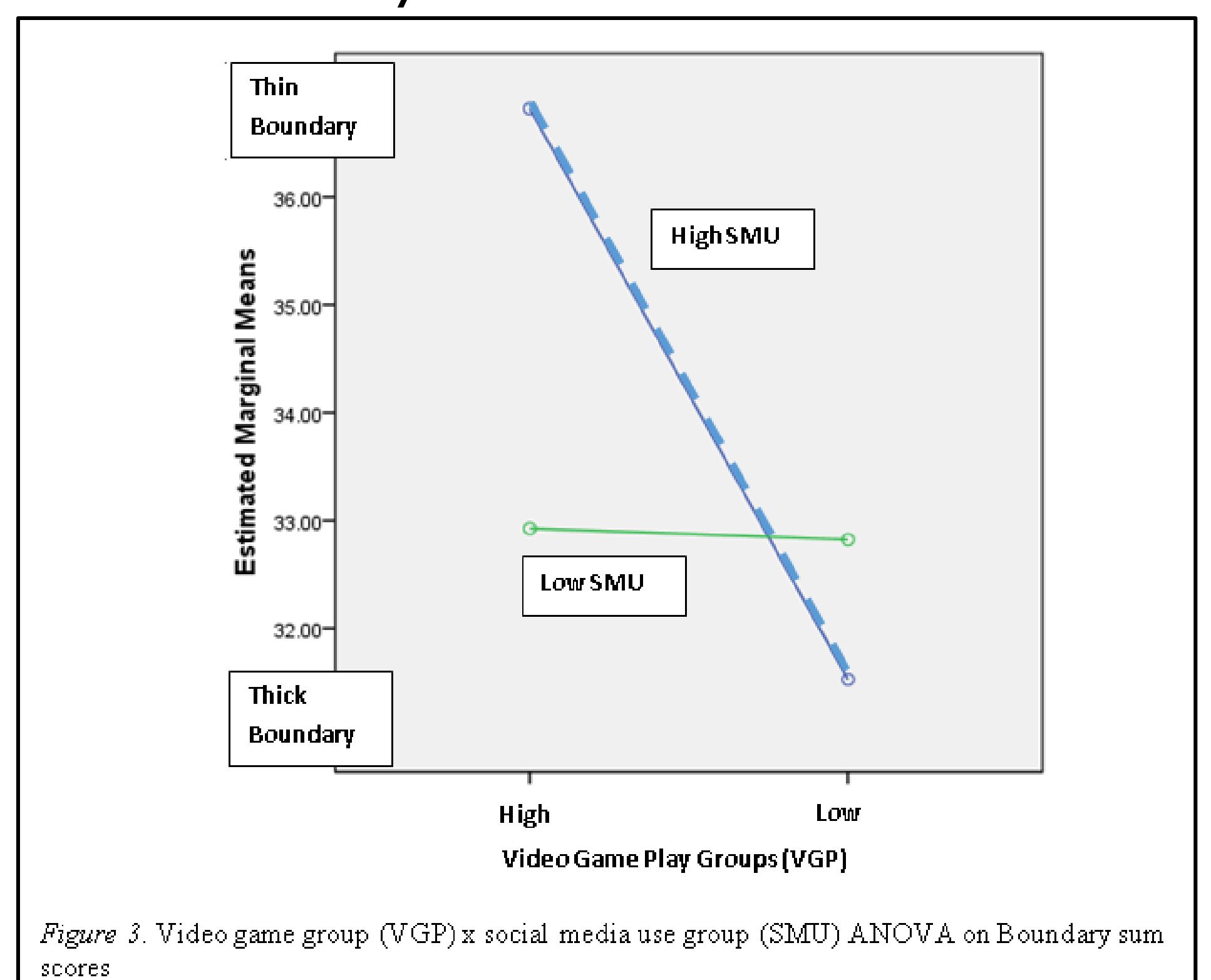
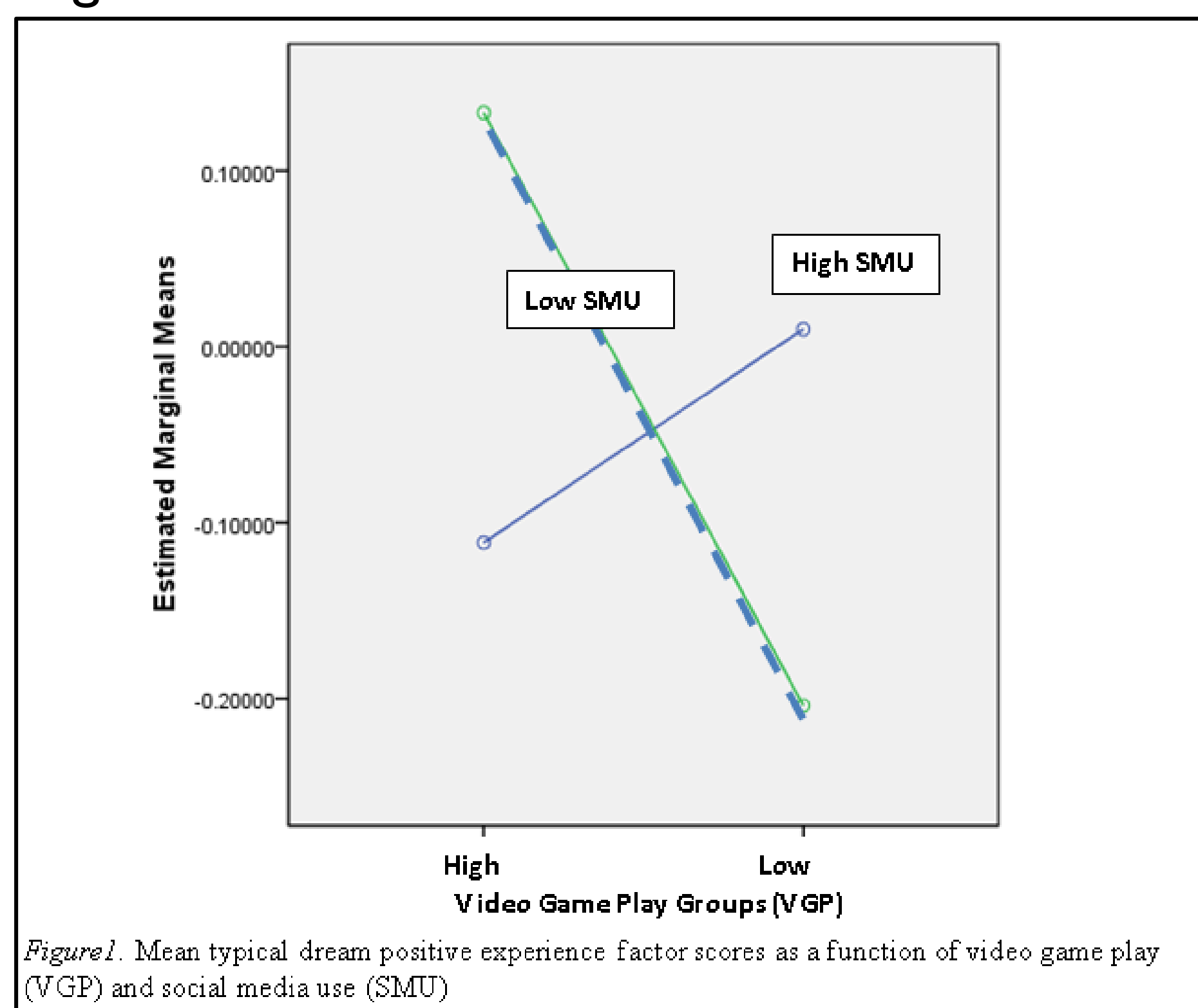
In order to meaningfully organize and reduce the information gathered, various data reduction techniques were undertaken. Many of the questions for social media use, which were taken directly from the PEW surveys, were in a yes/no format. Therefore, where appropriate, they were summed to get indications of preferences suitable for entry into multivariate data analysis. Other variables related to social media were averaged appropriately.

All subjects responses to the video game questions were factor analyzed with four factors emerging in a varimax rotation. The first factor loaded all gaming variables, except for the genre variables. A median split on these factor scores identified the high versus low video game groups. Likewise, a social media use factor analysis was then computed. It included cell phone use, as well as the other social media derived variables. The first factor loaded all the social media variables so that a median split represented high versus low social media use groups.

The final data reduction factor analysis was also done for all research participants on the 56 TDQ items. The resulting 13 factor structure was similar to the ones found by other researchers using this scale (Nielsen et al, 2003; Schredle et al, 2004; Yu, 2008). Social media X Game Group ANOVA's were computed on the TDQ factor score.

| TDQ Factor | Gaming main effect | Social Media main effect | Interaction |
|------------------------------------|--------------------|--------------------------|-------------|
| TDQ factor 2 magic/mythology | High > Low | High = Low | no |
| TDQ factor 3 chase/fear | High = Low | Low > High | no |
| TDQ factor 4 murder | High > Low | Low > High | no |
| TDQ factor 9 dead | High = Low | High > Low | no |
| TDQ factor 10 positive experiences | Figure 1 | Figure 1 | yes |
| TDQ factor 11 epiphany | Low > high | High = Low | no |
| TDQ factor 12 self-transformation | High = Low | High > Low | no |
| TDQ factor 13 evil | High > Low | High = Low | no |

Figure 3 below is the results of VGP X SMU ANOVA on boundary scores.



Recent Dream Self & Judges Evaluations

Recent dreams were self evaluated in terms of type of dream and emotions felt during the dream. Separate factor analysis on each set of questions were computed with the resulting factor scores acting as dependent variables in the gamer x social media use group ANOVA's. Three factors resulted from the self evaluation of dream types; negative dreams, lucid dreams and nonbizarreness. The dream emotion self reports resulted in three factors; mild negative emotions, positive emotions, and severe negative emotions. Both the negative dreams and negative emotions in the dreams interactions were significant. The negative type dreams (i.e., nightmares, bad dreams, observer dreams, and electronic media dreams) interaction showed that high SMU/VGP group had more negative dream types than the high VGP/low SMU with the reverse being the case for the low VGP groups. The highest self reported negative dream types was by the Low SMU/low VGP group.

Four independent judges also evaluated the recent dreams reported by respondents. Three different dream content analysis systems were used: Hall and Van de Castle (HVDC: 1966), Threat Simulation (Revonsuo & Valli, 2000) and Central Image (Hartmann, 1989). The last two coding systems resulted in no group differences for the recent dream. However, the HVDC evidence various differences from the norms. These are portrayed in the Tables below.

| High Video Game Play Groups | Male Norms | Female Norms | High VGP High SMU | <i>p</i> vs. males | <i>p</i> vs. females | High VGP Low SMU | <i>p</i> vs. males | <i>p</i> vs. females |
|--------------------------------|------------|--------------|-------------------|--------------------|----------------------|------------------|--------------------|----------------------|
| Characters | | | | | | | | |
| Dead & Imaginary % | 00% | 01% | 06% | ** .000 | * .003 | 04% | ** .000 | ** .002 |
| Social Interaction % | | | | | | | | |
| Befriender % | 50% | 47% | 00% | ** .000 | ** .000 | 65% | .139 | .074 |
| Aggressor % | 40% | 33% | 29% | .398 | .733 | 16% | ** .001 | * .012 |
| Phy Aggression % | 50% | 34% | 68% | .089 | ** .001 | 76% | ** .000 | ** .000 |
| Settings | | | | | | | | |
| Indoor Setting % | 48% | 61% | 71% | ** .001 | .147 | 72% | ** .000 | ** .006 |
| Familiar Setting % | 62% | 79% | 43% | * .014 | ** .000 | 61% | .958 | ** .000 |
| Self-Concept Percents | | | | | | | | |
| Self-Negativity % | 65% | 66% | 68% | .733 | .835 | 80% | ** .001 | ** .002 |
| Negative Emotions % | 80% | 80% | 78% | .764 | .762 | 89% | * .041 | * .032 |
| Dreams with at Least 1: | | | | | | | | |
| Aggression % | 47% | 44% | 28% | * .019 | * .042 | 36% | * .023 | .081 |
| Friendliness % | 38% | 42% | 18% | ** .006 | ** .001 | 19% | ** .000 | ** .000 |
| Misfortune % | 36% | 33% | 18% | * .012 | * .032 | 14% | ** .000 | ** .000 |
| Good Fortune % | 06% | 06% | 00% | ** .003 | ** .004 | 02% | .058 | .085 |

| Low Video Game Play (VGP) | Females | Lo VGP Hi SMU | <i>p</i> | Lo VGP Lo SMU | <i>p</i> |
|------------------------------------|---------|---------------|----------|---------------|----------|
| Characters | | | | | |
| Dead & Imaginary Percent | 01% | 02% | .111 | 03% | * .021 |
| Social Interaction Percents | | | | | |
| Aggression/Friendliness Percent | 51% | 78% | ** .000 | 74% | ** .000 |
| Physical Aggression Percent | 34% | 70% | ** .000 | 77% | ** .000 |
| Settings | | | | | |
| Indoor Setting Percent | 61% | 73% | ** .005 | 75% | ** .001 |
| Familiar Setting Percent | 79% | 57% | ** .000 | 61% | ** .000 |
| Self-Concept Percents | | | | | |
| Self-Negativity Percent | 66% | 88% | ** .000 | 89% | ** .000 |
| Bodily Misfortunes Percent | 35% | 13% | * .037 | 25% | .401 |
| Dreamer-Involved Success Percent | 42% | 21% | .070 | 06% | ** .001 |
| Dreams with at Least One | | | | | |
| Friendliness | 42% | 15% | ** .000 | 17% | ** .000 |
| Misfortune | 33% | 14% | ** .000 | 12% | ** .000 |
| Good Fortune | 06% | 02% | * .045 | 01% | ** .004 |
| Success | 08% | 04% | .088 | 01% | ** .000 |

Discussion

An analysis of the self-reports of typical dreams showed that high end VGP was related to a positive, empowering interpretation of content that might have otherwise been thought of as nightmarish (i.e., murder). This occurred for high end VGP across SMU levels. The opposite was the case for high end SMU across VGP; a clearly nightmarish tone was evident in the case of high end SMU. This supports the nightmare protection thesis which we have been investigating in prior research. Only in one typical dream analysis did VGP and SMU interact. Specifically, having positive typical dream experiences was rated as highest for the high VGP low SMU group. This is consistent, if one assumes the continuity hypothesis of dream content, with Cirucci's (2013a) claim that the more gamers play video games, the less they need or use social media. The lack of either online activity was least associated with typically having positive dream experiences.

It is important to note that self-reports of what one thinks one typically dreams about, do not always agree with what one reports in any given single dream. The judges evaluations show a pattern not entirely similar to the self reports of typical dreams. In conclusion, some support was found for Cirucci's (2013a) thesis of the similarities between individuals who play video games and those who use social media, but the differences as a function of the combination of these forms of digital media use are also noteworthy. Differences seemed to support the nightmare protection thesis of video game play such that high end gaming, no matter the degree of social media use, suffered less from these negative types of dreams. Additionally, the high VGP/high SMU group had the thinnest psychological boundaries and thus were perhaps most susceptible to media effects. While at the same time this group of high end media users showed the least negative self concepts in their recent dream content. This was reflected in their typical dream reports as well.