3-30-2016

Socializing in the Internet Age: A Comparison of Virtual and Traditional Groups in Terms of Self-Definition, Self-Investment, and Personality

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Abstract

As individuals find more of their social identity defined in the virtual sphere, it is important to understand the functions and structures of virtual communities. Yet, a comprehensive comparison between virtual groups and traditional groups has yet to be conducted. This study investigated structural and functional differences and similarities between virtual and traditional communities. Participants (N = 63) in four groups (traditional social/virtual social and traditional professional/virtual professional) were compared on measures of function (as defined by their self-definition and self-investment) and structure (as defined by their personality traits). Three hypotheses were tested: 1. Virtual and traditional groups would not differ significantly in function. 2. Virtual and traditional groups would differ significantly in structure. 3. Professional communities will display higher levels of social identity in both virtual and traditional comparisons. Results are presented and discussed.

Introduction

The concept of social identity is hardly foreign to most people. Individuals are constantly describing themselves in terms of the organizations and groups with which they associate. This is likely because social identity is of great importance to a person's self-concept. It is the part of an individual's identity that forms when a person is aware they are a part of and invested in specific groups (Turner, 1982). Today, groups found partially or wholly online are readily included as part of many people's social identity. Internet facilitated group formation is becoming commonplace in part because the Internet is increasingly used as a platform to explore identity (Boyd, & Ellison, 2008; Valkenburg, Schouten, & Peter, 2005). It seems reasonable to believe that these virtual communities share many features with their traditional counterparts. At the same time, there may be meaningful differences in structure and function between traditional and virtual groups. To date, however, data exploring this direct comparison have been scarce.

Function and Structure of Virtual and Traditional Groups

In terms of function, investigation of the similarity between virtual and traditional groups has only just begun and has yet to satisfactorily reveal the meaningful nature of virtual interactions. Ong, Chang, and Lee (2015) have attempted to measure the well-being (life happiness) of virtual communities. They developed an instrument investigating "website-related happiness," which was constructed around the existing literature on happiness and the various measures used to assess it. Research has found that social support and connection strongly predict improved life happiness (Myers, 2000), and both have been emphasized in the new instrument. This betrays an underlying

assumption that virtual groups function similarly to traditional groups in terms of well-being.

In the virtual context, research has shown that those who have a larger number of friends (i.e. greater connection) on Facebook do also tend to have a higher level of subjective well-being (Chiu et al., 2015; Lönnqvist & Deters, 2016). This finding, however, fails to demonstrate causality. In fact, Lönnqvist and Deters (2016) accounted for extraversion, the connection between subjective well-being and number of friends is rendered insignificant. These findings raise the possibility that the associations individuals make online may differ functionally in some significant way from those in the traditional sphere. Research, however, has yet to explore these possible discrepancies.

This ambiguity extends to the structural nature of virtual groups as well. Research on the personalities of highly connected Internet users has produced conflicting results. For example, Kraut et al. (2002) argues that highly connected Internet users have large social networks and capital offline, a reality normally associated with high extraversion. This "rich-get-richer" hypothesis, which presumes a structural similarity between online and offline groups, is supported by Vergeer and Pelzer (2009), who discovered a positive correlation between offline and online social capital.

In contrast, the "social compensation" hypothesis (Walther, 1996) posits that because traditional communication requires a larger cognitive load than virtual communication, as well as more immediate involvement, virtual communication may be used to compensate for those who struggle with such obstacles in traditional communication. Individuals who find themselves more isolated, such as those with introvert tendencies, may find refuge in virtual communication in the face of limited

traditional social connection. In support of this model, introverted individuals have been shown to have more compulsive Internet use and less traditional social connection (McIntyre, Wiener, & Saliba, 2015).

Further, a third hypothesis has emerged from these contradictory models. The "seek and ye shall find" model was proposed to account for the impact made by individual beliefs about the legitimacy of online socializing on the level of virtual involvement. According this explanation, those with high levels of virtual social capital may not readily exhibit consistent trends in offline social connection. Instead, their connection is that they believe virtual interactions are worthwhile. Tufekci (2010) found that virtual capital was independent of several demographic variables extending beyond traditional social connection, which encapsulates the difficulties of identifying any underlying structure of virtual groups. The issue may be more complex than a simple, one-dimensional approach can tease out.

Due to the different nature of group formation, and the ambiguity of the above findings, it would be reasonable to believe that virtual groups behave differently than groups in the traditional world. However the criteria that define group membership remain consistent online, and research has repeatedly shown that group membership is enough to result in functional consequences, such as memory recall and social pain (Hirst & Coman, 2015; Riva & Andrighetto, 2012). Provided the virtual groups meet the membership criteria and share a traditional counterpart, it seems just as reasonable to believe that the two would function similarly.

Group membership criteria include three primary components. First, individuals in the group must be aware that they are part of the group. Second, individuals in the

group must associate some set of shared values with the group. The group members must also have a sense of how these values differ from those outside the group. Third, there must be a sense of emotional unity associated with the group by those composing it. In addition, some acknowledgment of the group must come from outside the group, usually in the form of a label (e.g. teachers, gamers, vocalists; see Tajfel, 1982). While diverging views on the subject exist—with some studies arguing that group membership awareness is the sufficient sole criterion (Ashforth & Mael, 1989; Platow, Grace, & Smithson, 2011)—this study used the standard three criteria described above in selecting both virtual and traditional groups to investigate.

Finding online groups with traditional counterparts is tricky, in part due to the large variety of groups that exist. One barrier to generalizing findings on virtual communities is the concern over existing group typologies, which attempt to categorize different groups meaningfully (Howard, 2014). This concern becomes more apparent when examining how different groups act online: stigmatized identity groups are likely to be defined by their community-oriented and positive behavior toward one another (Sherman & Greenfield, 2013); support groups can be identified through the prevalence of informational and emotional support shared between members (Coulson et al., 2007); groups centered around games are likely to identify strongly with their online avatars (Trepte & Reinecke, 2010), and the list goes on. Meanwhile, notable dissimilarities are hardly ever investigated even if similarity is determined, and the similarity-based categorization systems often have trouble justifying their criteria (Matzat, 2009).

Because of this, consistently high ratings of shared values, emotional unity, and awareness are bound to be rare and less than informative in virtual groups. It is prudent

for purposes of comparison that we break down virtual and traditional communities into a typology of groups that can apply to both spheres and has merit behind mere classification. One such promising typology divides virtual groups into two subgroups: member-initiated and organization-sponsored (Porter, 2006). This study focused on the comparison of the two kinds of member-initiated groups: social and professional, both of which have traditional counterparts. Social groups are defined by a community that has evolved around a leisure activity or hobby. Professional groups are defined by an expert-based knowledge networks or student based learning communities.

The division between professional and social communities occurs at a functional level in traditional communities. Research regarding investment in one's professional career (Cohen, 1981), contends that learning to become a professional in one's field becomes an incredibly important part of an individual's self-concept. At the same time, other forms of social identity begin to subordinate to this new professional identity. Accounting for the impact of self-categorization on identity, this effect may be attributed to the increased salience of an individual's profession, which comes with integrating oneself into the field (Reynolds, Turner, & Haslam, 2003).

Present Study

The present study was designed to contribute to the ongoing discussion on the functional and structural nature of virtual groups. Specifically, it set out to investigate the functional and structural similarity between traditional and virtual groups. Findings from this study may aid our understanding of how to approach virtual communities in future studies. Should similarities be observed, we may conclude that investigations into the virtual world may be better suited through attempted replication of traditional group

studies in the virtual sphere. Should similarities be absent, we may conclude that our examination of the virtual sphere requires independent investigation and wholly new measures yet to be developed rather than exclusively adapting pre-existing instruments to work online. In both cases, the results ought to contribute meaningfully to our ongoing investigation into the virtual world and should ultimately help reduce the ambiguity surrounding the function and structure of virtual communities.

This study set out to test three main hypotheses: 1) virtual and traditional groups will have similar functionality in terms of self-definition and investment. 2) these communities will differ structurally in terms of personality dimensions. 3) professional groups will show higher levels of self-definition and investment than their respective social groups.

Method

Participants

Participants (N = 63; 20 females) from four different groups (traditional social, traditional professional, virtual social, virtual professional) were surveyed for this study. Traditional group participants were contacted through Otterbein University. Virtual group participants were contacted via forum. Groups were approached if members exhibited levels of awareness (through self-identified labeling) and held a set of shared values (through some document describing the rules or goals of the community)

Materials

Self Definition and Investment Scale: The factors involved in identity formation have been historically difficult to address comprehensively, though steps have been taken to consolidate the literature into a multidimensional approach (Ashmore, Deaux, &

McLaughlin-Volpe, 2004). Leach et al. (2008) developed an in-group (social) identification scale based on definition and investment. While originally developed for traditional groups, it has since been effectively adapted to apply to virtual groups and validated by Howard and Magee (2013). The adapted questionnaire consisted of 14 items which asked participants to rate themselves from 1 (*strongly disagree*) to 7 *(strongly agree*) in relation to their group (see Appendix A). The scale identified several components of identity, including solidarity, centrality, satisfaction, individual self-stereotyping, and in-group homogeneity. The solidarity subscale consisted of 3 items (α = .62), the centrality subscale consisted of 3 items (α = .83), the satisfaction subscale consisted of 4 items (α = .84), the self-stereotyping subscale consisted of 2 items (α = .69) and the homogeneity subscale consisted of 2 items (α = .78). Statements were altered in such a way that they could apply to both online and traditional groups (e.g. "I feel a bond with this online group" became "I feel a bond with this group").

Big Five Inventory. In comparing the structural nature of virtual and traditional groups, this study used "The Big Five Inventory" (BFI) personality test to measure group members' levels of extraversion, agreeableness, openness to experience, conscientiousness, and neuroticism (John & Srivastava, 1999) (see Appendix B). The BFI is a brief and easily administered distillation of Costa and McCrae's (1992) NEO Personality Inventory. Through the BFI, this study was able to compare the personality profiles of members of traditional and virtual communities. The instrument consisted of 44 items which asked participants to rate on a 1 (*strongly disagree*) to 5 (*strongly agree*) scale how much they agreed with statements about themselves (e.g. "I see myself as someone who is talkative"). The extraversion subscale consisted of 8 items (α = .82), the

agreeableness subscale consisted of 9 items (α = .72), the openness subscale consisted of 10 items (α = .58), the conscientiousness subscale consisted of 9 items (α = .81), and the neuroticism subscale consisted of 8 items (α = .83) A short demographic questionnaire consisting of 19 questions was used as well (see Appendix C), including questions concerning participants' group involvement (e.g. "On average, how many hours per week do you participate in activities with this group?").

Design & Procedure

This study used a non-experimental, mean comparison approach to explore the similarities and differences between virtual and traditional groups. Data were collected via survey. The two traditional groups, Otterbein Gamers Guild (social; 4 women, 14 men; M_{age} = 22; range: 19-36) and Kappa Kappa Psi (professional; 6 women, 8 men; M_{age} = 24.6; range: 17-35), were contacted through their respective Presidents, who were asked to distribute the survey. The two virtual groups, Acid Chat/Jiggman's Village (social; 6 women, 15 men; M_{age} = 20.4; range 16-32) and Unity Community (professional; 4 women, 6 men; M_{age} = 28.5; range: 23-36) were solicited via forum posts. Upon opening the survey participants were offered five dollars as remuneration and asked to give consent. It was also explained that they may cease participation at any time while taking the survey. Once consent was given, they were directed to a short demographic questionnaire. After filling out the demographic questions, they were directed to the personality and social identity questionnaires. Upon completion, participants were thanked and asked to enter their e-mail addresses to allow for compensation.

Results

The first stage of the analysis focused on comparing levels of self-investment and self-definition in the virtual social group and its traditional counterparts. It was hypothesized that self-investment and self-definition would not differ significantly between virtual and traditional groups, while the personality traits of participants in the different groups would show few consistent trends in personality across mediums. A series of independent samples *t*-tests were computed to test this prediction. Contrary to my hypothesis, figure 1 shows the traditional group showed significantly higher levels of self-investment ($M = 5.88$, $SD = .76$) and self-definition ($M = 5.89$, $SD = .85$) than those in the virtual group (investment: $M = 4.0$, $SD = .87$; definition: $M = 4.23$, $SD = 1.10$; investment: $t(37) = 7.25$, $p < .001$, Cohen's $d = 2.30$; definition: $t(37) = 5.20$, $p < .001$, Cohen's $d = 1.69$). This statistical significance held true for every scale component of self-definition and investment (see Table 1).

The personality traits of participants in the traditional and virtual groups were then compared. Results were non-significant with the exception of conscientiousness. Those in the traditional group ($M = 3.47$, $SD = .52$) showed significantly higher levels of conscientiousness than those in the virtual group ($M = 3.04$, $SD = .57$; $t(37) = 2.46$, $p = .019$; Cohen's $d = .79$).

In the next stage of the analysis, the professional traditional and virtual groups were compared. In terms of self-investment, the traditional group ($M = 4.78$, $SD = .53$) did not differ significantly from the virtual group ($M = 4.64$, $SD = .72$; $t(22) = .55$, $p = .59$). This trend continued when examining self-definition; the traditional group ($M = 4.79$, $SD = .85$) did not differ significantly from the virtual group ($M = 4.48$, $SD = .72$;

t(22) = .94, *p* = .36). Personality comparisons for these groups also revealed no significant differences, with the exception of neuroticism, where the traditional group (*M* = 3.21, *SD* = .32) scored significantly higher than the virtual group (*M* = 2.61, *SD* = .58; *t*(22) = 2.94, *p* = .012; Cohen's *d* = 1.28).

In the third stage of the analysis, professional and social communities were compared. It was predicted that those in professional communities would have higher levels of self-investment and definition than those in social communities. Contrary to the hypothesis, figure 2 shows the traditional social group (*M* = 5.88, *SD* = .76) ranked significantly higher in self-investment than the traditional professional group (*M* = 4.78, *SD* = .52; *t*(30) = 4.62, *p* < .001; Cohen's *d* = 1.69). This held true for self-definition as well, with the traditional social group (*M* = 5.89, *SD* = .85) scoring significantly higher than the traditional professional group (*M* = 4.79, *SD* = .85; *t*(30) = 3.66, *p* = .001; Cohen's *d* = 1.29).

Results from the comparison of the virtual groups somewhat supported the hypothesis. The virtual professional group (*M* = 4.64, *SD* = .72) scored significantly higher in self-investment than the virtual social group (*M* = 3.97, *SD* = .87; *t*(29) = 2.11, p = .043; Cohen's *d* = .84). A comparison of self-definition scores revealed non-significant differences between the virtual professional group (*M* = 4.48, *SD* = .72) and the virtual social group (*M* = 4.23, *SD* = 1.11; *t*(29) = .65, *p* = .52).

Results were similar when comparing across media. Contrary to the hypothesis (see Figure 3), when comparing self-investment and self-definition, the traditional social group (investment: *M* = 5.88, *SD* = .76; definition: *M* = 5.89, *SD* = .85) scored significantly higher than the virtual professional group (investment: *M* = 4.64, *SD* = .72;

definition: $M = 4.48$, $SD = .72$; investment: $t(26) = 4.21$, $p < .001$, Cohen's $d = 1.68$; definition: $t(26) = 4.46$, $p < .001$, Cohen's $d = 1.79$).

Finally, results from comparing the traditional professional group with the virtual social group somewhat supported the hypothesis. The traditional professional group ($M = 4.78$, $SD = .52$) scored significantly higher in self-investment than the virtual social group ($M = 3.97$, $SD = .87$; $t(33) = 3.12$, $p < .01$; Cohen's $d = 1.13$). A comparison of self-definition scores revealed non-significant differences between the traditional professional group ($M = 4.79$, $SD = .85$) and the virtual social group ($M = 4.23$, $SD = 1.11$; $t(33) = 1.60$, $p = .12$).

In the fourth stage of analysis, the relationship between both age and hours per week of group involvement was investigated. Two bivariate correlations were run to test the relationship age had with both self-definition and self-investment. The variables of age and self-definition were not significantly related ($r(61) = .12$, $p = .93$). The relationship between age and self-investment was similarly insignificant ($r(61) = -.04$, $p = .74$).

Two further bivariate correlations were conducted to test the relationship between hours per week of group involvement and both self-definition and self-investment. The variables of time and self-definition were determined to not be significantly related ($r(59) = -.20$, $p = .13$). The variables of hours per week and self-investment displayed a moderate negative correlation ($r(59) = -.31$, $p = .02$).

Following this, a fifth stage of analysis was conducted comparing the hours per week on average spent by all group comparisons which showed a difference in self-investment. It was determined that the hours per week spent in the social traditional

group (M = 4.56, SD = 4.54) were significantly reduced when compared to the amount spent in the social virtual group (M = 11.13, SD = 8.76; $t(35) = -2.84$, $p < .01$; Cohen's d = -0.94). Similarly, hours per week spent in the social traditional group (M = 4.56, SD = 4.54) were significantly lower than those spent in the social professional group (M = 9.46, SD = 4.43; $t(30) = -3.07$, $p < .01$; Cohen's d = -0.66).

This trend continued when comparing the time per week in the traditional social group (M = 4.56, SD = 4.54) which was significantly smaller than the time per week in the virtual professional group (M = 14.90, SD = 6.86; $t(26) = -4.82$, $p < .001$; Cohen's d = -1.78). Finally, the time per week spent in the traditional professional group (M = 9.46, SD= 4.43) was significantly less than that spent in the virtual social group (M = 11.13, SD = 8.76; $t(31) = -.65$, $p = .02$; Cohen's d = -0.24). The only instance in which a difference in self-investment was discovered between groups with no significant time difference was when comparing the virtual groups to one another.

Discussion

The purpose of this study was to compare virtual and traditional groups on dimensions of function and structure. Group function was measured in terms of self-investment and self-definition. Group structure was measured in terms of personality traits. This study advanced three main hypotheses, based on the existing literature on group comparisons. First, it was predicted that virtual and traditional communities would not differ significantly in terms of function. Second, significant structural differences were expected between the counterpart communities. Third, it was hypothesized that

professional groups would show higher functional levels of investment and definition than social communities.

The first hypothesis was partially supported, but only by the professional group comparison. Traditional and virtual professional groups did not differ significantly on measures of self-investment and definition. Contrary to the hypothesis, however, the traditional social group showed significantly higher levels of self-investment and self-definition than the virtual social group. Looking at the components of the definition and investment scales, traditional social groups exhibited significantly higher levels of solidarity, centrality, satisfaction, in-group homogeneity, and self-stereotyping than the virtual groups. These results suggest that those who participate in virtual social communities are less invested and find less of their social identity involved in their group than their traditional counterparts.

The second hypothesis was largely unsupported, with few statistically significant structural differences when comparing traditional groups and their online counterparts. Those in the traditional social group displayed higher levels of conscientiousness, and those in the traditional professional group displayed higher levels of neuroticism. Levels of extraversion, agreeableness and openness did not differ significantly across mediums. This similarity extended to neuroticism for the social groups and conscientiousness for the professional groups. These results suggest that members in traditional and online groups are on the whole quite similar in their personality structure.

The third hypothesis was supported in only one of the four comparisons made. The virtual professional group did show significantly higher levels of self-investment than its virtual social counterpart. However, this did not extend to self-definition. Results

for two other comparisons (traditional social/traditional professional; traditional social/virtual professional) revealed higher levels of self-investment and definition in the social group compared to the professional group.

It is important to note that these findings primarily exist independently of age and weekly hours of involvement in a group. The only correlation found to be significant was hours of involvement and self-investment, disallowing the possibility of age or hours of involvement being predictor variables for the majority of these results. In the single instance of significant correlation, the findings counterintuitively showed a greater amount of time spent in a group yielded lower levels of self-investment.

This does have some widespread implications in the group comparisons, however. Between social groups, the virtual counterpart averaged both a greater number of hours and lower level of self-investment. Between traditional groups, the professional counterpart averaged a greater number of hours and less investment. The virtual professional group also had more time on average spent involved and lower levels of self-investment than the traditional social group. Finally, the virtual social group also showed higher amounts of time per week spent involved and lower levels of self-investment than the traditional professional group. This brings the conclusion that self-investment differs depending on group membership into question. It simply could be consistently related to hours of investment per week in each group.

These findings suggest that there are functional differences between virtual and traditional social groups. This could explain the functional ambiguity found by Lönnqvist & Deters (2016), which attributed online subjective well-being to extraversion more than social connection. Where social connection has been demonstrated to be a predictor of

well-being traditionally (Myers, 2000), perhaps extraversion is a predictor of online well-being. Further, we cannot presume traits held by traditional communities are present in virtual communities. This makes efforts to create virtual counterparts to extant social measures (Ong, Cheng, & Lee, 2015) all the more meaningful. Notably, this conclusion cannot be extended to professional communities, where few differences were found in terms of function or structure.

These findings also suggest community structure remains relatively consistent between virtual and traditional counterparts. Though the second hypothesis was not supported by these findings, the "seek and ye shall find" model (Tufekei, 2010) is not refuted by these results. It is possible that the structure in each community was dictated by the members' beliefs about the community and not an underlying personality structure. It would, however, seem more likely that if members' belief were the main determinant of structure, then personality groups would vary widely.

These results contradict the assertions made by Cohen (1981) that one's professional group will incite greater feelings of self-definition and investment. Instead, the traditional social group showed the greatest levels of definition and investment overall. The comparison between virtual groups showed a higher level of investment in the professional community, but this did not extend to self-definition. Further investigation revealed the virtual professional community scored lower than the traditional social group on these social identity measures. This can be attributed, however, to the functional difference between virtual and traditional groups; traditional groups will tend to have higher levels of self-definition and self-investment than virtual

groups. As a result, it is not unexpected that a traditional group, social or not, would score higher in self-definition and investment than a virtual group.

It is important to note that the lack of functional similarity between the social groups may be less a reflection of functional difference and more revealing of potential shortcomings of the typology used. There is also a possibility that the proposed "function" of groups in relation to self-definition and self-investment may be spurious. It seems equally possible that the group has no functionality in terms of social definition or investment; as an alternative, those with similar social identities in relation to one another could generate a group which serves no purpose in terms of investment or identity. Further limitations include the sample size. The largest group held only 21 participants (virtual social) and the smallest held 10 (virtual professional). Not only do these small sample sizes make the results difficult to generalize, but they may also fail to properly represent each group. A fourth major limitation arises when considering the limited number of functional measures investigated. Legitimizing the claim that virtual and traditional groups functionally differ would require a near exhaustive comparison of traditional functions; instead, this study focused on just two functions. A final limitation to the study came through attempting to assess if groups met the group membership criteria. Though all approached group members shared awareness of group membership and shared values through either constitution or ruleset, emotional unity was never properly assessed.

Future research could continuing investigating the similarity of other functional dimensions across mediums (e.g. subjective well-being, motivation to maintain relationship, etc.). Alternatively, the functional measures of identity and definition could

be compared with different kinds of groups. This study only investigated two member-initiated organizations. Studying organization-sponsored groups could reveal similarities that were absent in the member-initiated groups. Further research could also be conducted with different types of groups as well, such as stigmatized populations and support groups (see Bargh & McKenna, 2004).

Future structural research could compare other dimensions of personality. The currently suggested models of virtual group membership focus primarily on the scale of extraversion (McIntyre et al., 2015; Vergeer & Pelzer, 2009; Walther, 1996). Indeed, my findings suggest that personality facets may be quite similar between comparable groups beyond the dimension of extraversion. Research may need to expand to study personality traits outside the Big Five model (i.e., locus of control; hardiness) to delineate more fully the differences and similarities between traditional and online groups.

These findings also suggest that professionalism may not be the dominant factor shaping levels of definition and investment, as was previously believed (Cohen, 1981). Further investigation into the structure of professional virtual communities could provide insight into their potentially unique role in identity formation. It has also been demonstrated that professional identity becomes stronger with time (Prosek & Hurt, 2014). Considering the average overall age of the participants, this could explain the unexpected discrepancy concerning professional identity; indeed, the two professional groups had the highest mean ages (KPsi: 24.6; Unity: 28.5) and only displayed results congruent with the third hypothesis across media, shown to function differently. In the future, researchers may want to investigate the relationship between age and identity in virtual communities.

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Tables

Table 1

Comparison of Social Identity Scale Components between Traditional and Virtual Social Groups

	Which social group will you be representing today?	N	Mean	Std. Deviation	t	Sig. (2-tailed)
Solidarity	Gamers Guild	18	5.9074	.89884	4.797	.000
	Acid/JV	21	4.4127	1.02689	4.847	.000
Satisfaction	Gamers Guild	18	6.2778	.93104	6.089	.000
	Acid/JV	21	4.3571	1.02339	6.134	.000
Centrality	Gamers Guild	18	5.3333	1.00326	5.630	.000
	Acid/JV	21	3.0159	1.47752	5.796	.000
Self_Stereotype	Gamers Guild	18	5.7222	1.00326	4.579	.000
	Acid/JV	21	3.9524	1.35004	4.685	.000
Homogeneity	Gamers Guild	18	6.0556	.93760	4.419	.000
	Acid/JV	21	4.5000	1.21450	4.508	.000

Note. These scale components were defined in Leach et al. (2008). Solidarity, satisfaction, and centrality compromise self-investment. Individual self-stereotyping and in-group homogeneity compromise self-definition. Significance occurs at $p \leq .05$

Figures

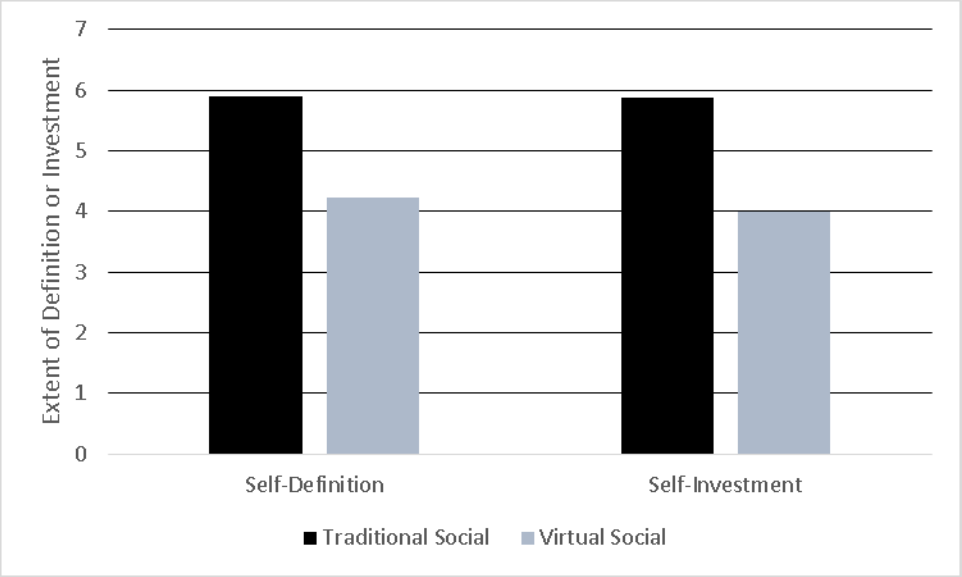

Figure 1. Social identity between social groups. Graphic shows a comparison of self-definition and self-investment between traditional social and virtual social groups.

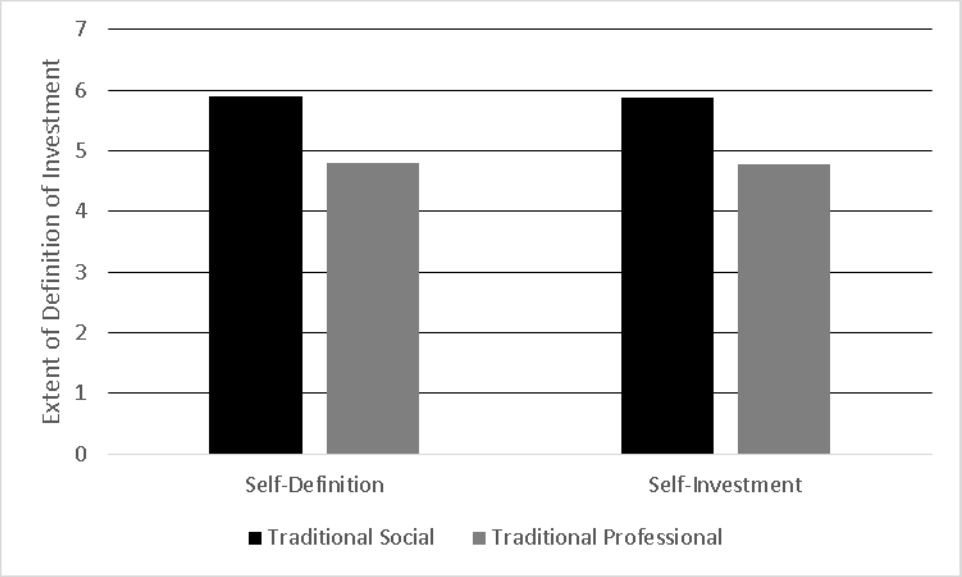

Figure 2. Social identity between traditional groups. Graphic shows a comparison of self-definition and self-investment between traditional professional and traditional social groups.

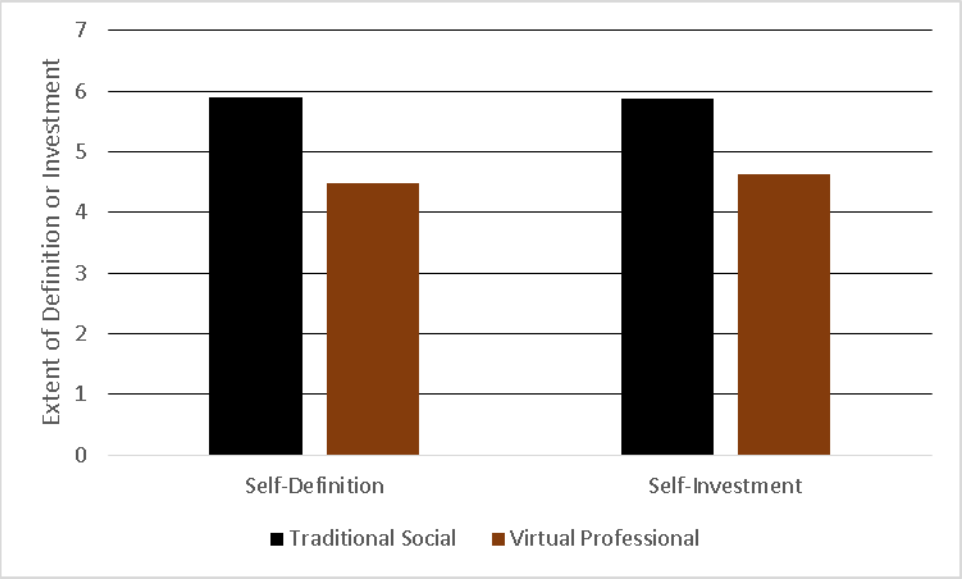

Figure 3. Social identity across media. Graphic shows a comparison of self-definition and self-investment between traditional social and virtual professional groups.

Appendices

Appendix A. Virtual and Traditional Group Identity Scale

The following questions ask you about your group membership. They apply to the group you are representing today. Please indicate how strongly you agree or disagree with each of the following statements on a scale of 1 (*strongly disagree*) to 7 (*strongly agree*)

(Howard & Magee, 2013).

(1) I feel a bond with this group.

(2) I feel solidarity with this group.

(3) I feel committed to this group.

(4) I am glad to be a member of this group.

(5) I think that this group's members have a lot to be proud of.

(6) It is pleasant to be a member of this group.

(7) Being a member of this group gives me a good feeling.

(8) I often think about the fact that I am a member of this group.

(9) The fact that I am a member of this group is an important part of my identity.

(10) Being a member of this group is an important part of how I see myself.

(11) I have a lot in common with the average member of this group.

(12) I am similar to the average member of this group.

(13) This group's members have a lot in common with each other.

(14) This group's members are very similar to each other.

Appendix B: The Big Five Inventory (BFI)

The following are a number of personality characteristics that may or may not apply to you. Please indicate via survey the extent to which you agree or disagree with each statement from 1 (*strongly disagree*) to 5 (*strongly agree*). This process should take about 15 minutes (John & Srivastava, 1999).

I see Myself as Someone Who...

1. Is talkative
2. Tends to find fault with others
3. Does a thorough job
4. Is depressed, blue
5. Is original, comes up with new ideas
6. Is reserved
7. Is helpful and unselfish with others
8. Can be somewhat careless
9. Is relaxed, handles stress well
10. Is curious about many different things
11. Is full of energy
12. Starts quarrels with others
13. Is a reliable worker
14. Can be tense
15. Is ingenious, a deep thinker
16. Generates a lot of enthusiasm
17. Has a forgiving nature
18. Tends to be disorganized
19. Worries a lot
23. Tends to be lazy
24. Is emotionally stable, not easily upset
25. Is inventive
26. Has an assertive personality
27. Can be cold and aloof
28. Perseveres until the task is finished
29. Can be moody
30. Values artistic, aesthetic experiences
31. Is sometimes shy, inhibited
32. Does things efficiently
33. Is considerate and kind to almost everyone
34. Remains calm in tense situations
35. Prefers work that is routine
36. Is outgoing, sociable
37. Is sometimes rude to others
38. Gets nervous easily
39. Makes plans and follows through with them
40. Likes to reflect, play with ideas
41. Has few artistic interests

20. Has an active imagination

21. Tends to be quiet

22. Is generally trusting

42. Likes to cooperate with others

43. Is easily distracted

44. Is sophisticated in art, music

Scoring: BFI scale scoring ("R" denotes reverse-scored items):

Extraversion: 1, 6R, 11, 16, 21R, 26, 31R, 36

Agreeableness: 2R, 7, 12R, 17, 22, 27R, 33, 37R, 42

Conscientiousness: 3, 8R, 13, 18R, 23R, 28, 32, 39, 43R

Neuroticism: 4, 9R, 14, 19, 24R, 29, 34R, 38

Openness: 5, 10, 15, 20, 25, 30, 35R, 40, 41R, 44

Appendix C: Group Demographic Questions

1. Which social group will you be representing?
2. What is your gender?
3. What is your ethnicity?
4. How old are you?
5. Highest level of education completed by your mother if applicable?
6. Highest level of education complete by your father if applicable?
7. Highest level of education you have completed?
8. If you are presently an undergraduate student, please indicate your current year.
9. If you are presently an undergraduate student, please indicate your GPA
10. What is your current living situation?
11. Are you currently employed?
12. What is the marital status of your parents?
13. How did you find and become a part of this group (Open ended)
14. How long have you been a member of this group?
15. On average, how many hours per week do you participate in activities with this group?
16. How long had you been involved in your group's activities as a hobby before joining?
17. Please indicate whether or not you are involved in other groups
18. If yes to 17, please list the other groups (Open ended)
19. Please rate your level of general contentment in the average week