

FROM ONLINE TIES TO OFFLINE TIES

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Introduction

This study traces the boundaries of online-based social networks and their possible extensions and intersections with offline social networks. It seeks to comprehend social ties in online gaming communities, specifically Massive Multiplayer Online Games (MMOGs). Most online gaming community studies have focused on the virtual aspect without seriously considering the intersection between the virtual and the actual lives of the participants.

Definitions

- Massive Multiplayer Online Games (MMOGs - MMOs)
- Actual / Virtual
- Reciprocity
- Multiplexity

Motivation

- The online gaming industry has grown and keeps growing exponentially, with 1,500+ active virtual worlds (MMOSite, 2017) and around 20+ million active users (MMOData, 2013).
- The MMO community is of particular importance when considering that some players go beyond the game-scape when they partake in activities extraneous to the game itself, both online and offline.
- Online gaming usually requires that players seek out help, get organized, and work together on a common goal or objective.
- Interactions occur in real-time, fast-paced scenarios, quite the opposite of other online interactions most of us take part in (e.g., e-mails, and social media).
- Jane McGonigal (2010) suggests that the typical MMO gamer approaches the virtual world with a similar work ethic of a part-time job by dedicating an average of 22 hours a week.
- There are no in-depth studies about the management of online/offline social networks.

Background

- It has been argued that society, at least in the developed world, is deeply embedded in a digital culture (Gere 2008) and that its citizens, at least a big chunk of them, can be considered “digital natives.”
- “[G]aming forms an important part of (at least some) peoples’ everyday lives and identities, and is important and worthy of academic consideration” (Crawford et al. 2011:6).
- Several studies suggest that social dynamics in online gaming are remarkably robust and similar to real-world communities (Jiang, Zhou and Tan 2009, Johnson, Zhao, Xu et al. 2009, Szell and Thurner 2010), others have suggested that the way ad hoc groups form in-game is very similar to way we assemble project teams in real life (Zhu, Huang and Contractor 2013).
- Gamers are loyal to their social networks, both virtual and actual, since they join and migrate from one virtual world to another with their friends (Ducheneaut, Yee, Nickell et al. 2007, MacCallum-Stewart 2011, Taylor 2006).

Background – SNA & MMOs

- Applying social network analysis and data mining to the study of MMOs can be beneficial to multiple parties (Shi & Huang, 2004) .
- MMOs are an effective way of studying collective behavior and sociocultural dynamics on a massive scale (Bainbridge, 2007; Castronova, 2006; Szell & Thurner, 2010).
- Kirman and Lawson (2009) used activity logs of a social game called “Familiars” to define boundaries in play styles.
- Ang and Zaphiris (2010) looked at how roles emerged in a World of Warcraft (WoW) guild by logging and taking field notes of guild members’ interactions and behaviors.
- Szell and Thurner (2010) some players live “a second economic life and are typically engaged in a multitude of social activities within the game.”
- Zhu, et al. (2013) found that in-game groups or “parties” as structural organizations similar to real-life project teams.
- Shen and Chen (2015, p. 213) found support for the notion that these virtual worlds “provide an additional venue of interaction with one’s existing family and friends, resulting in positive outcomes”, and that the communities therein “foster social connections with those outside of one’s existing social circles.”

Research Question

- How meaningful are the social ties gamers develop and manage online?
- How willing are online gamers to foster offline relationships from their online social ties?

Assumptions

- A member that is familiar, has knowledge of, and frequently interacts with other members will be more likely to show interest in crossing the divide between online and offline, and at the same time other members would mention this individual as someone they would be willing to meet face-to-face.
- Incoming ties directed towards members that are readily available and provide support to other members regarding online/offline matters or issues will most likely be the individuals that others identify as a potential offline friend, and would be willing to meet face-to-face

Method

- Recruited an online gaming community.
- Requested complete roster.
- Created an online questionnaire with seven socio-demographic questions and 14 social network questions.
- Six of the social network questions were about their online ties within the group; the other eight were aimed at measuring if those online relationships are considered important and transcend the boundaries of the offline/online divide.
- Used UCINET and the statnet package for R to analyze and visualize data.
- Reciprocity and Multiplexity analyses (Skvoretz and Agneessens 2007)
- Graph-Level Indices

Sample

- ARMA 3 Gaming Community
- 16 active members out of 32
- Males
- 17 or older
- White non-Hispanic (12); Asian (2); Latino/Hispanic (1); Other(1)
- Average hours spent interacting with members online was 28

Network Questions

- 12.1 With which member/s do you spend the most time playing video games?
- 12.2 With which member/s do you interact online more while not playing video games, e.g. chatting and/or talking in Team Speak?
- 12.3 When you need gaming advice (e.g. strategies, new games, how to play, etc.), who do you go to?
- 12.4 Did you recruit or invite any of the current members? Who?

- 16.1 Who recruited or invited you to the group? If more than one person participated in the process, think about the primary recruiter.
- 16.2 Were you friends with any of the members before joining the community? Who?
- 16.3 Which member/s would you be willing to meet in person?
- 16.4 With whom would you be more willing to hang out with on a daily basis in real-life?

- 17.1 Do you consider any of the members as more than an acquaintance (being a good friend)? If yes, who?
- 17.2 Who would you go to for real-life advice or support, if any?
- 17.3 Have you shared personal matters or real-life events with other members? If yes, with whom?
- 17.4 Have you met any of the members in real-life? If yes, who?

- 18.1 Who would you say is the person from the community that you interact with the most in an online environment? Select only one
- 18.2 Who would you say is the person from the community that you interact with the most in an offline environment? Select only one

Results - *General Properties of the Observed Networks*

	Ties	Density	Transitivity	Indegree	Outdegree	Triangles
Q12.1	121	0.504	0.731 ^c	0.316	0.458 ^d	676 ^d
Q12.2	91	0.379	0.634 ^c	0.307	0.520 ^d	329 ^d
Q12.3	37	0.154	0.533 ^c	0.333	0.262	36 ^d
Q12.4	32	0.133	0.964 ^c	0.213	0.853 ^d	27 ^d
Q16.1	13	0.054	0.125 ^a	0.369 ^d	0.084	2
Q16.2	29	0.121	0.857 ^c	0.227	0.227	65 ^d
Q16.3	64	0.267	0.562 ^c	0.284	0.711 ^d	144 ^d
Q16.4	36	0.150	0.452 ^c	0.338 ^d	0.196	49 ^d
Q17.1	43	0.179	0.596 ^c	0.236	0.378 ^d	82 ^d
Q17.2	25	0.104	0.474 ^c	0.244	0.244	21 ^d
Q17.3	23	0.096	0.528 ^c	0.182	0.182	22 ^d
Q17.4	1	0.004	1 ^b	0.067	0.067	0
Q18.1	13	0.054	0	0.156	0.013 ^e	0
Q18.2	8	0.033	0	0.107	0.036 ^e	0

a. 87.1% were less than the observed value; 16% were greater than observed

b. There was only one tie in this matrix

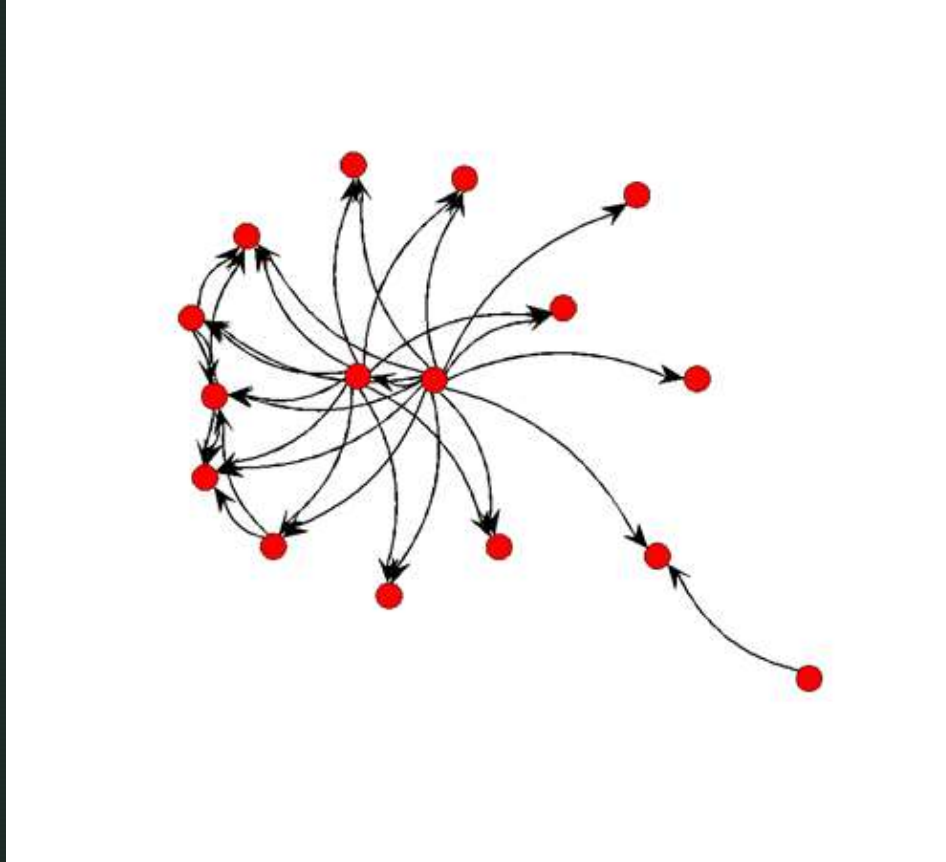
c. Larger than what we would expect by chance

d. Greater than what we would expect by chance

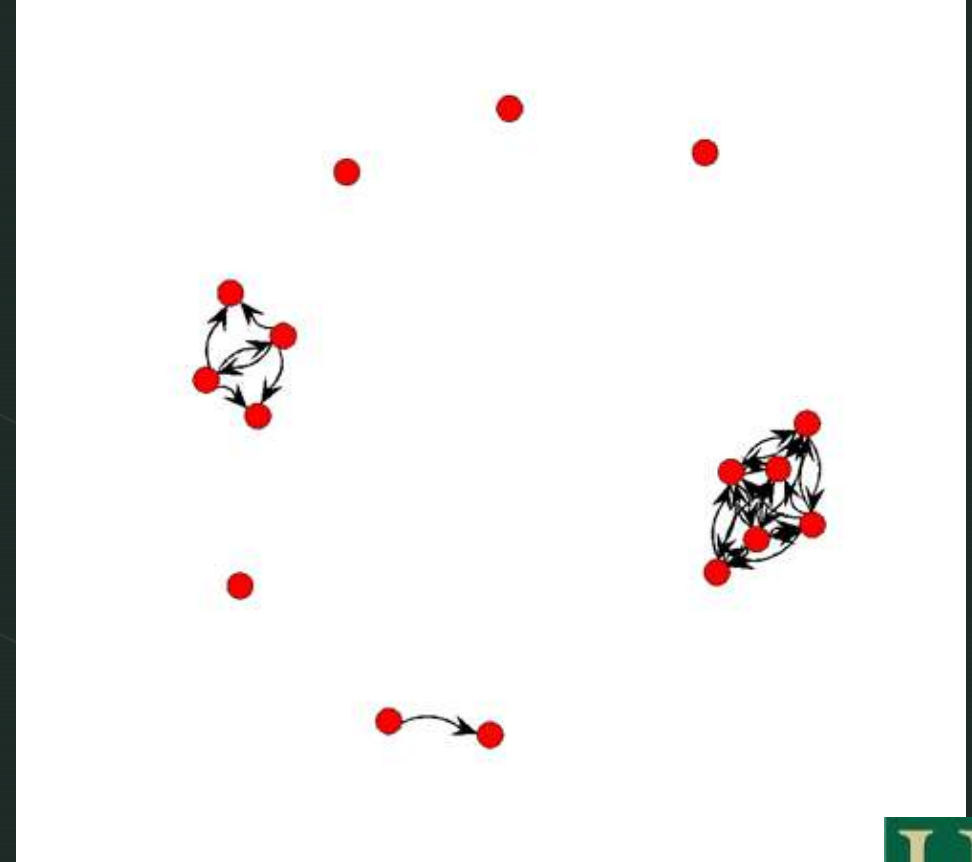
e. Less than what we would expect by chance (18.1 and 18.2 only allowed for one choice per participant)

Results

Q12.4 Did you recruit or invite any of the current members? Who?



Q16.2 Were you friends with any of the members before joining the community? Who?



Results - Reciprocity

Index Scores for Networks with Significant Reciprocity

	Tau	Z-score	P-value
Q16.2	0.597	6.589	0.000
Q16.3	0.257	2.810	0.005
Q16.4	0.479	5.304	0.000
Q17.1	0.481	5.250	0.000
Q17.2	0.259	2.822	0.005
Q17.3	0.498	5.339	0.000
Q18.1	0.469	4.756	0.000
Q18.2	0.226	2.557	0.011

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Results - Multiplexity

	Scores	12.2	16.3	16.4
12.1	Upsilon	0.737	0.614	0.736
	Z-score	5.928	4.982	4.788
	P-value	0.000	0.000	0.000
12.2	Upsilon	-	0.552	0.604
	Z-score		4.839	5.135
	P-value		0.000	0.000

	Scores	16.4
16.3	Upsilon	0.958
	Z-score	9.688
	P-value	0

	Scores	18.2
18.1	Upsilon	0.732
	Z-score	7.748
	P-value	0.000

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Discussion

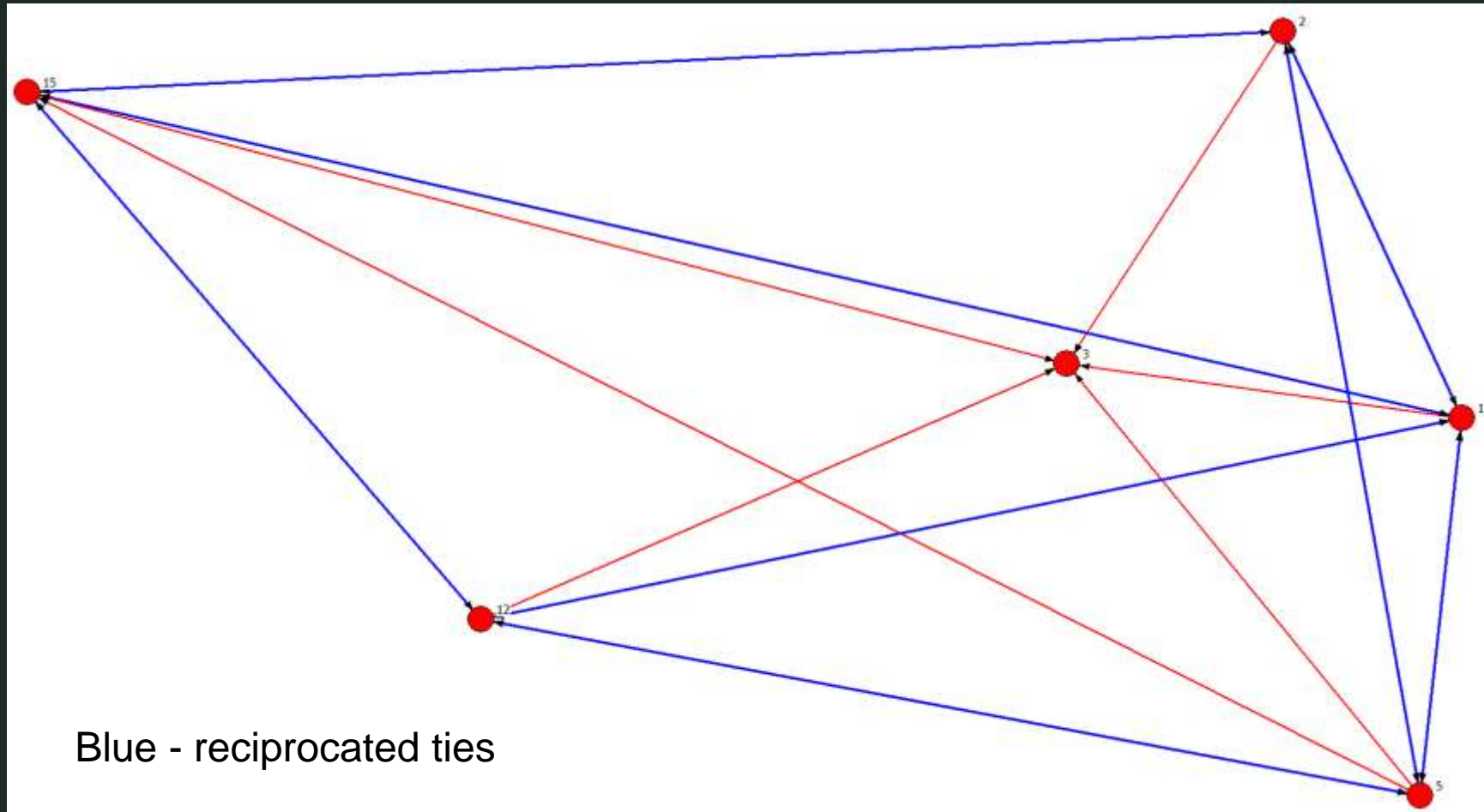
- Results support the main research assumption.
- Not generalizable – Pilot study.
- Research as this can help fill in the gap the in the literature regarding the meaningfulness of online connections in our offline lives.
- My dissertation seeks to expand on this research topic.
- For some people online ties are as significant as their offline ties
 - “In real-life you do not have much choice when it comes to friends or family, but online you get to choose whom you interact with, and that choice is what makes them important.” -Participant

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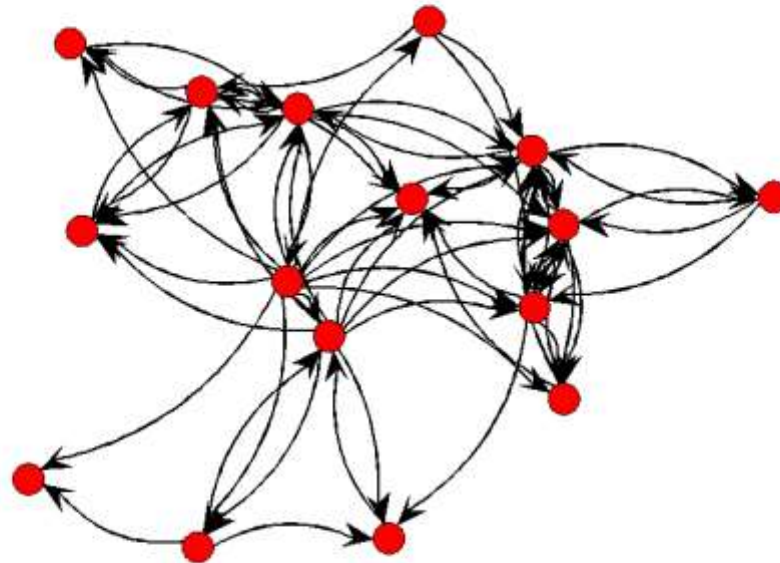
Extra Visualizations

Cluster from Q16.2 Were you friends with any of the members before joining the community? Who?



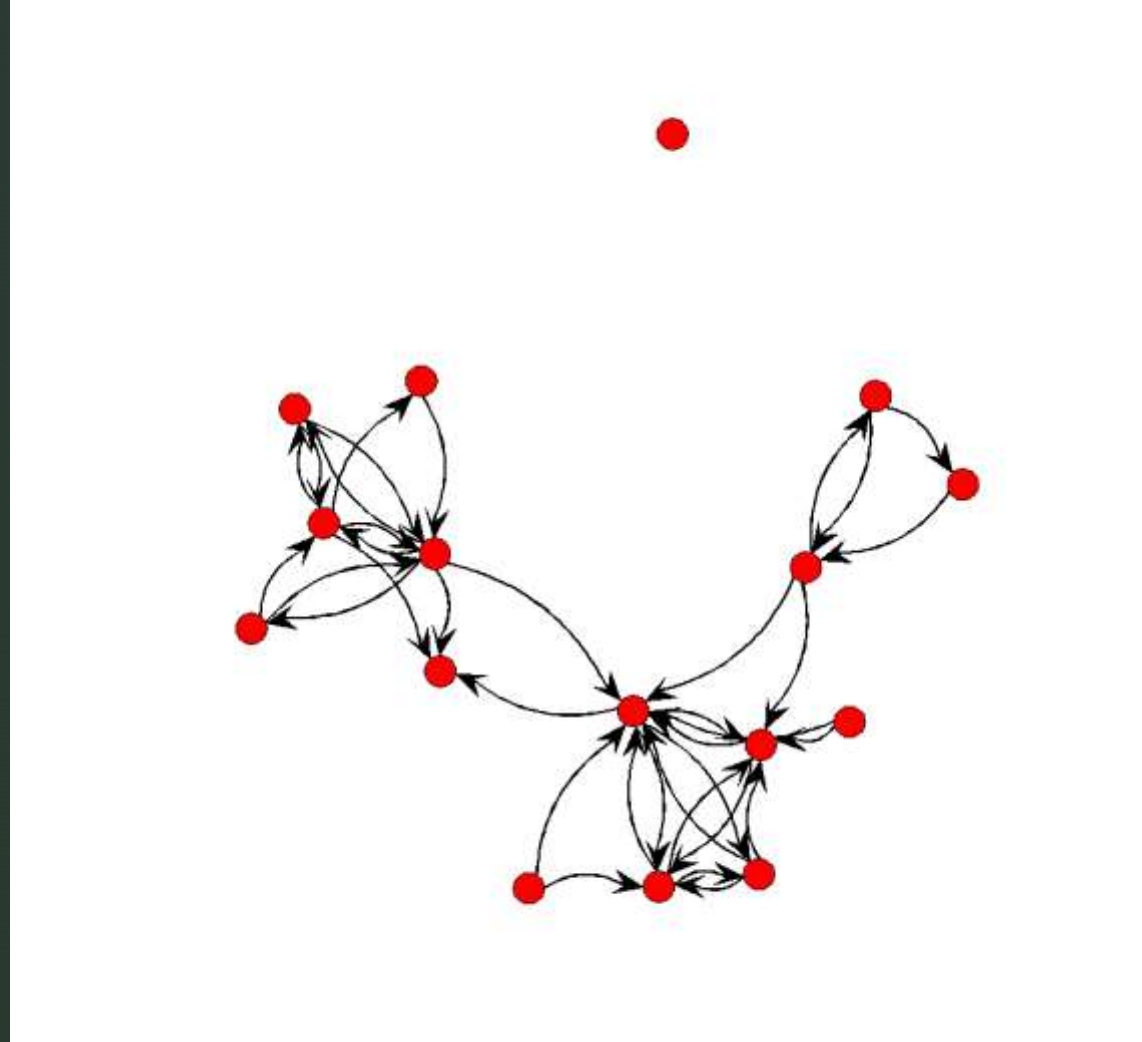
Extra Visualizations

Q16.3 Which member/s would you be willing to meet in person?



Extra Visualizations

Q16.4 With whom would you be more willing to hang out with on a daily basis in real-life?



Extra Visualizations

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