Gamers' confidants: Massively Multiplayer Online Game participation and core networks in China

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ABSTRACT

Through a survey of more than 18,000 participants in a Chinese Massively Multiplayer Online Game (MMOG), this study examines how the size and diversity of Chinese gamers' core networks vary by individuals' sociodemographic, socioeconomic and game-related characteristics. It represents the first study focusing exclusively on the gamer population and one of the most recent examining personal networks in contemporary China, home to over 560 million Internet users. We found that Chinese gamers have notably larger and more diverse core networks than those of major studies. Coplaying patterns and attachment to the game community contributed significantly to network size and diversity.

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1. Introduction

Capturing individuals' immediate interpersonal environment, the core discussion network (hereafter core network) has been an important sociological concept, with significant implications for shaping individuals' opinions (Katz and Lazarsfeld, 1955), providing instrumental and emotional support in everyday life (Ruan, 1998; Wellman and Wortley, 1990; Zhang, 2005), health and well-being (Song and Chang, 2012), labor market performance and entrepreneurship (Chen and Tan, 2009; Zou and Ao, 2011). Given its importance in various domains of social life, scholars in America, China, and beyond have studied the size and diversity of core networks since the 1980s and how they are affected by factors ranging from individual sociodemographic characteristics such as class, gender, and race to macro-structural forces like national culture, sociopolitical change, and technological advancement (Bearman and Parigi, 2004; Burt, 1984; Marsden, 1987; Marsden and Campbell, 1984; McPherson et al., 2006; Ruan, 1993; Ruan et al., 1997; Zou and Ao, 2011).

Recently, research on the core network has drawn great scholarly and media attention. McPherson et al. (2006) identified a sharp decline in core network size in America from 1985 to 2004 and

speculated that Internet use might have contributed to the decline, an alarming trend that has found support in subsequent studies (Brashears, 2011; Chen, 2013; Hampton et al., 2011; Paik and Sanchagrin, 2013). It rekindled early concerns about the decline of social capital in America (Putnam, 2000) and the hypothesis that Internet use may displace face-to-face interaction (Nie, 2001). However, a number of studies since the mid-1990s demonstrated a positive or neutral relationship between Internet use and personal networks (Katz and Rice, 2002; Robinson and Martin, 2010; Shklovski et al., 2006; Vergeer and Pelzer, 2009). Specifically, two recent studies linked various aspects of Internet use to the increased size and diversity of core networks in the U.S. (Chen, 2013; Hampton et al., 2011).

The current study, examining implications of online gaming on Chinese core networks, is theoretically grounded in three interconnected strands. First, the core network literature in sociology has been centered on social stratification and mobility theories, examining how the core network is shaped by social inequalities such as class, gender, and race and how it, in turn, affects health, educational, and status attainment by structuring individuals' access to and mobilization of information and resources. Second, the core network is a foundational component of social network studies, revealing the structure and composition of the very core of individuals' social world. Third and as importantly, the core network is central to a growing communication literature on the implications of digital media and communication technologies, which, however, has been focused on general Internet use or social media use.

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More specifically, the current study offers a unique opportunity to reconcile some of the conflicting results mentioned earlier. Most existing studies have focused on general Internet use primarily as a monolithic source of effects, but few distinguished specific technology uses and activities and examined their respective implications (Shen and Williams, 2011). Further, even when specific online communication activities are considered, the contextual factors of such communication, particularly one's interaction partners such as strangers, friends, family members, are rarely taken into account. Finally, most published studies on Internet and personal networks have drawn on samples in the U.S. or Canada exclusively (see exceptions in Boase and Ikeda, 2012; Hampton and Ling, 2013), while few interrogated the assumed universality of these findings and explored variations stemming from national and cultural contexts.

This study attempts to address these gaps in the Chinese context, focusing specifically on participants of Massively Multiplayer Online Games (MMOGs). MMOGs symbolize a comprehensive "world" where networked participants are able to lead virtual lives in growing and developing their characters, crafting weapons, slaying dragons, decorating virtual houses, and more importantly, engaging in short- and long-term social groups. Although MMOGs are an increasingly popular genre of Internet communities of much social, cultural and economic significance, there is a dearth of empirical studies of the social implications of MMOG participation, especially on players' core networks. This study represents the first to our knowledge on gamers' core networks in any national context.

This current study also provides an updated perspective in the Chinese context. Although research on the Chinese core networks had a history as long as that on the American core networks, there are few recent studies after the early 2000s (Bian, personal communication; Ruan, personal communication, but see an exception in Zou and Ao, 2011). Currently, China has the most Internet users and online gamers in the world. As of the end of 2012, there were 564 million Chinese using the Internet, accounting for 42% of the Chinese population (CNNIC, 2013). Among the Chinese Internet users, a staggering 60% play online games.

Drawing from a large-scale online survey of players of Chevaliers' Romance 3 (CR3), one of the most popular MMOGs in China, the current study examined how the size and diversity of Chinese gamers' core networks vary by (1) individuals' sociodemographic and socioeconomic characteristics and (2) specific game playing patterns and attachment to the gaming community. Results showed that CR3 gamers have notably large and diverse core networks that dwarf those of other major studies in the US, China and beyond. In addition to sociodemographic and socioeconomic factors, co-playing patterns and attachment to the game community contributed significantly to Chinese gamers' core network size and diversity.

2. Literature review

2.1. Core networks: size and diversity

The core discussion networks measured by the egocentric name generator have been one of the major approaches to capturing individuals' small, dense, kin-centered, and relatively homogeneous interpersonal environment (for history and review see Bearman et al., 2004; Brashears, 2011; Burt, 1984; Marin and Hampton, 2007; Marsden, 1987; Marsden and Campbell, 1984). The most widely used name generator – the important matter name generator – first appeared in the General Social Survey (GSS) 1985 and was replicated in GSS 1987, 2004, and 2010 in America. Ruan and colleagues used a slightly revised GSS name generator in two representative sample surveys in Tianjin, China, in 1986 and 1993, respectively

(Ruan, 1993; Ruan et al., 1997). In a typical GSS name generator, respondents were asked to name up to 5 network contacts (alters): *From time to time, most people discuss important matters with other people. Looking back over the last six months – who are the people with whom you discussed matters important to you?*

Decades of research have shown that the size and composition of core networks are shaped by individual socioeconomic and demographic characteristics and macro-structural factors such as national culture, sociopolitical changes, and technological advancement (Bearman and Parigi, 2004; Burt, 1984; Marsden, 1987; Marsden and Campbell, 1984; McPherson et al., 2006; Ruan, 1993; Ruan et al., 1997). In both America and China, higher socioeconomic status (SES) is related to larger, more diverse, and more resourceful core networks (McPherson et al., 2006; Ruan, 1993; Zou and Ao, 2011). Core network size and diversity also vary by demographics, although the specific relationships may change over time. For instance, early studies showed that core network size and diversity increased over the lifespan but start to decline around middle age (Marsden, 1987), while more recent studies demonstrate a monotonic decline of network size as people age (McPherson et al., 2006; Zou and Ao, 2011). Early studies also showed that men's core networks were larger, more diverse, less kin centered, and richer in resources than women's (Marsden, 1987; McPherson et al., 2001; Ruan, 1993; Ruan et al., 1997). Yet, more recent research shows that the gender gap in the core networks has been narrowed or reversed (McPherson et al., 2006). For instance, Chinese women have larger core network size than men, in terms of both kin and non-kin ties (Zou and Ao, 2011). Married people also tended to have larger, more diverse networks than singles (Marsden, 1987; McPherson et al., 2006).

Because people coming from the same families are expected to have similar attitudes and behaviors, the proportion of non-kin ties in core networks has been used as one important indicator of network diversity (Hampton and Ling, 2013; Marsden, 1987). While kin ties make up the majority of the ties in Americans' core networks (Marsden, 1987, p. 126), about 80 percent of Americans in 1985 and 57 percent of Americans in 2004 had at least one non-kin confidant (McPherson et al., 2006). Several factors were found to contribute to core network diversity. The better educated tend to have more non-kin ties (Marsden, 1987; McPherson et al., 2006), so do single Americans (Chen, 2013; Hampton and Ling, 2013). American women also tend to have more non-kin ties than men (Hampton and Ling, 2013). In China, women and married people have more kin ties in their core networks (Ruan et al., 1997; Zou and Ao, 2011). Studies have also shown that Communist party members had more co-worker ties than non-members (Ruan et al., 1997).

2.2. Internet, MMOGs and core networks

In a widely publicized study, McPherson et al. (2006) found that American discussion networks had become "smaller, more tightly interconnected, more focused on the very strong bonds of the nuclear family" from 1985 to 2004, with demographic and methodological factors controlled (p. 371). While the decline was across relational types, non-kin ties that link people to their communities and neighborhoods experienced the largest loss. McPherson et al. (2006) speculate that the Internet might play a role in the decline of core discussion network size and a growth of superficial relations at the expense of strong ties. Despite early findings that linked Internet use with decreased sociability (Kraut et al., 1998; Nie, 2001), considerable empirical evidence has demonstrated that the relationship between Internet use, sociability, and personal networks tend to be positive or neutral (Chen, 2013; Howard and Jones, 2004; Katz et al., 2004; Shklovski et al., 2006). The intensity of both general Internet use and online