

## **Understanding Digital Generations: Social Media Habitus, Memetic Engagements, and Digital Social Inequalities in China**

QINGQING HU

Northwest University, China

PAULINE HOPE CHEONG

Arizona State University, USA

Although age is commonly identified as a key explanatory variable in Internet adoption and use, digital divide studies have not fully explicated why generational differences are associated with disparities in social media use. This study explores how age can function in constituting a distinctive habitus in China. A comparative analysis on Chinese born in the 1970s and 1990s—cohorts identified in prior literature as having distinct sociotechnical educational experiences in China—was conducted on 429 Chinese Internet users. Results indicated significant differences among the 1970s-born and 1990s-born cohorts in their online experiences, exposure, and education, which, in turn, were associated with differences in their social media habituses, capital-enhancing activities, and memetic engagements. Findings here act as an empirical reference to illustrate connections between age differences, digital capital, and habitus, as well as contribute to deepened understandings of how culture influences global digital inequalities.

*Keywords: digital social inequality, digital generation, social media use, social media habitus, Bourdieusian approach*

In an updated 14th-century Chinese morality text of the renowned “24 filial exemplars” traditionally held as paragons of Chinese virtue, the National Committee on Aging in China has publicized aphoristic recommendations for all children to enhance the social participation of their elders, including teaching their parents to use the Internet (Gao, 2012). While this state-sponsored text is striking in its juxtaposition of Internet versus non-Internet users marked by age, it is not uncommon to find age being reiterated in public and political discourse that reproduces facile generation gaps in technology adoption. Age is typically used to distinguish generations—people groups who share a community of values and experiences (Inglehart & Baker, 2000; Mannheim, 2013). In parallel, age has historically been applied as a sharp marker to differentiate cohorts in terms of new media connections (e.g., Rice & Pearce, 2015; van Deursen & van Dijk, 2014). Yet prior studies in technology application and the digital divide have not provided sufficient

---

Qingqing Hu: palsimonhu@gmail.com

Pauline Hope Cheong: pauline.cheong@asu.edu

Date submitted: 2021-02-02

Copyright © 2021 (Qingqing Hu and Pauline Hope Cheong). Licensed under the Creative Commons Attribution Non-commercial No Derivatives (by-nc-nd). Available at <http://ijoc.org>.

contextual knowledge to illuminate the complexity of age differences in contemporary dimensions of Internet use (Rice & Pearce, 2015), particularly social media networks.

In this article, we draw upon and extend a Bourdieusian approach to technological engagement (Ignatow & Robinson, 2017) by examining how age can function in constituting a distinctive habitus, with differentiated social media appropriation and outcomes among younger and older mainland Chinese users. Rather than simply treating age as a demographic variable to be controlled in statistical analyses, we view digital generations as a lens through which the complexity of relations between social development and technological advancement can be understood. Hence, in this study, the first goal is to extend digital divide studies by exploring not only the differences in Internet use across generation groups but also the linkage between their habitus and sociotechnical backgrounds.

Furthermore, to deepen the understanding of the disparities in the online participatory culture, this study will discuss and investigate the connections between digital content consumption and sharing, and the store of "digital capital" (Calderon Gomez, 2020, p. 2537) applied by younger and older Internet users. Prior research has highlighted how Internet use influences opportunities in the real world (e.g., capital-enhancing activities; DiMaggio, Hargittai, Celeste, & Shafer, 2004). But what has been understudied is the extent to which the participatory nature of the Internet as an "online field" with its own value system (Levina & Arriaga, 2014, p. 477) can affect user contribution and privilege. Thus, as a second goal, this study will examine younger and older users' memetic engagements in a bid to provide more nuanced contextual understanding to the notion of digital generations.

Specifically, this study will focus on unpacking similarities and differences in WeChat use between two Chinese generations that have been identified as having significantly different sociotechnical experiences and educational backgrounds (Dai, 2002; Egri & Ralston, 2004), namely "the '70s-borns" (i.e., people who were born in the 1970s) and "the '90s-borns" (i.e., people who were born in the 1990s). Findings from this study will shed light on enhancing social media use for the young and middle-aged Chinese as well as contribute to deepened understandings of how culture influences global digital inequalities. In the next section, we will begin by reviewing relevant studies to formulate our five research questions before introducing the methods used in this study and reporting the results. The article concludes with a discussion on the key findings and future directions.

## **Literature Review**

### ***Digital Divide and the Age Difference***

Since the 1990s, digital divide studies have contributed to increasing knowledge about the interconnected disparities among Internet users and their social influence (DiMaggio et al., 2004; Mossberger, Tolbert, & Stansbury, 2003; Norris, 2001). Despite various foci on disparities, scholars have generally agreed that users differ in terms of Internet use, and those differences are associated with distinct demographics and sociotechnical environments, such as socioeconomic status (SES), education, age, occupation, perception of the Internet, technological cluster, and residence (Mossberger, Tolbert, & Hamilton, 2012; Rice & Pearce, 2015; van Deursen & van Dijk, 2014). Though some factors are more

easily explained and controlled (e.g., a higher education is typically associated with better digital literacy), age as a factor is less critically explored in detail for its role in the formation and maintenance of the digital divide.

Although age is commonly identified as a significant predictor in Internet adoption and use (e.g., Rice & Pearce, 2015; van Deursen & van Dijk, 2014), digital divide studies have not fully explained why age differences are associated with disparities in social media use. Indeed, the cohort effect or age difference can be complex. For example, when discussing Internet use by college students and their parents, are differences predicted by age or age-related factors (e.g., health, occupation, and availability)? Are elderly populations reluctant to adopt the Internet or coerced into doing so, despite less relevant online content? Thus, simply designating age as the explanatory factor would be reductive and would even lead to ageism and bias in technological development and diffusion.

In this study, therefore, we propose that age should not be treated as one single factor. Rather, it is a marker of a specific context in which Internet users' scheme of thinking and acting (i.e., habitus; Bourdieu, 1986) is formed and practiced. One way to trace multiple dimensions of contextual influence is to examine characteristics of generation cohort. A generation refers to a group of people differentiated from others in terms of their age, while sharing a community of experiences and feelings within the group (Mannheim, 2013). Generation members share a set of values, beliefs, expectations, and behaviors that are greatly influenced by their experiences of youth and remain relatively stable through a lifetime (Inglehart & Baker, 2000). As Mannheim (2013) indicated, characteristics of a generation cohort are determined by a particular social context in a particular period of time. The cohort effect—or age difference, in this sense—should be extended beyond the conceptualization of different physiological life stages to distinct characteristics that are associated with unique contexts in terms of space and time. Hence, we argue that the age differences in Internet use do not merely exist but are embedded in unique contexts, and thus should be understood within specificities of those contexts.

### ***Bourdieuian Approach to Digital Social Inequality***

While prior digital divide studies have identified multiple factors in social inequality, limitations of a functionalist approach related to Internet use exist. As Halford and Savage (2010) argued, there are two interconnected shortcomings of digital divide studies: First, they view the Internet as being neutrally beneficial and assume rational or normal use for everyone; second, the Internet and inequality are placed in a simple input-out model that regards them as independent entities, neglecting the complex ways in how they shape each other. In response, Halford and Savage (2010) suggested several approaches, including a Bourdieusian approach, to jointly explore the dynamic processes of social differentiation and classification connecting with Internet use. Rather than separating the Internet from social processes, the Bourdieusian approach is based on a combination of realism and social constructionism that views Internet use as occurring in social spaces made up of interrelated fields constraining and shaping each other, with distinctive user habitus and capital (Halford & Savage, 2010; Ignatow & Robinson, 2017).

The conceptualizations of field and habitus have contributed to better understandings of the interrelations and complexities between Internet use and digital social inequality. Field refers to a network

of interrelations among social positions, in which the configuration of positions and their interrelations are characterized by specific rules; habitus is the internalization of field, a set of preferences, or dispositions that structures individuals' perception of and action in the world (Bourdieu, 1984, 1986; Bourdieu & Wacquant, 1992; Ignatow & Robinson, 2017). Habitus is an embodied social world, a collection of collective and individual trajectories, and a complex interplay between the past and present (Reay, 2004). Although habitus is "probably Bourdieu's most contested concept" (Reay, 2004, p. 432), it offers new perspectives to approach the connection between digital social inequality and social group differences. For example, Kvasny (2005) and Robinson (2009) observed how people from distinct sociodemographic backgrounds formed different perceptions of and usage patterns for information technologies that, as they indicated, would lead to more digital social inequalities.

Applying the conceptualization of habitus to social media use, a social media habitus could be understood in at least three ways. First, a social media habitus is a "structure of perception, conception, and action" (Bourdieu, 2002, p. 27) that drives social media practices. In the current study's context, a social media habitus refers to one's patterns of thinking and acting, which shape social media practices, such as why she or he uses social media (i.e., perceived attributes), how she or he perceives social media as being popular among peers (i.e., perceived popularity), and what her or his preference is for social media functions (i.e., perceived importance of functions). Second, a social media habitus is an embodiment of the interactions between users and the sociotechnical context, which consists of forms of competence, skill, and multitrack dispositions (Crossley, 2001; Reay, 2004). Third, a social media habitus is a collection of agents' experiences that is structured and restructured through their continual contact with the sociotechnical surroundings (DiMaggio, 1979; Reay, 2004). In the current study, therefore, we view a social media habitus as a structuring structure of social media-related perception, competence, and experience, which is acquired and constituted through social interactions and drives social media practices. As a structuring structure, a social media habitus is not only a consequence of one's past experiences in the social media field but also a scheme that actively shapes practices to reproduce and reinforce the field. Specifically, we focus on examining how generation cohorts' perception of social media (i.e., perception), Internet skill (i.e., competence), and social media information contact (i.e., experience) jointly constitute distinct social media habituses, and on how these differences are associated with disparities in their social media use.

Bourdieu's conceptualization of capital also has a significant influence on digital social inequality studies. According to Bourdieu (1986), capital refers to assets that are scarce and socially valued. Capital is accumulatable, fungible, and can be converted to advantages in one field or the other (Halford & Savage, 2010). Three forms of capital have been widely discussed by Bourdieu (1986) and others (e.g., Julien, 2015), including economic capital (e.g., money and property), social capital (e.g., social relationship), and cultural capital (e.g., education resources). Recent literature has also discussed digital capital as a new form of capital that has emerged in the information society. Digital capital is a subform of cultural capital and is associated with the use of digital technologies and contemporary cyber culture (Calderon Gomez, 2020). There are two types of digital capital: embodied digital capital (EDC; e.g., digital literacy and experience) and objectified digital capital (ODC; e.g., digital device and infrastructure). Both are accumulatable and transferable to other forms of capital (Calderon Gomez, 2020; Ragnedda, 2018).

The ways through which various forms of capital are accumulated and transferred along with Internet use is the key to understanding inequalities between digital generations. The Internet is a combination of two mutually influenced fields: It is a virtual representation or digital extension of the offline social field as well as an online field itself (Julien, 2015; Levina & Arriaga, 2014). On the one hand, the Internet serves as a platform on which rules of the offline social field take place, and online practices are, to some extent, digital duplicates of the offline ones that affect individuals' life chances (e.g., taking online courses may also help an individual get a degree in the real world). For the influence of online activities on offline social field, DiMaggio et al. (2004) argued that some types of activities are more capital-enhancing than online entertainment because they bring more economic, social, and cultural resources in the long term. As Hargittai and Hinnant (2008) suggested, capital-enhancing activities include those enhancing one's life chances in the real world, such as online career development, political participation, and information seeking on health and finance services.

On the other hand, the Internet is an online field with its own hierarchy and position-taking rules (Bourdieu & Wacquant, 1992; Julien, 2015; Levina & Arriaga, 2014). The Internet consists of information that is an independent source of productivity and power (Castells, 1996) and, therefore, an agent's status in the online social space is characterized by his or her capacity to produce, generate, and deliver information content (Levina & Arriaga, 2014). Once entering the online field, agents abide by this position-taking rule and struggle to make their information content more visible and influential than others. Digital capital plays a significant role in this mechanism. EDC (e.g., digital literacy) is a production by the online field and structures online social relations through accumulation and transferring (Calderon Gomez, 2020; Ragnedda, 2018). ODC (e.g., digital device) is a materialization of resource and power that enables and boosts online practices (Calderon Gomez, 2020). As Ragnedda (2018) suggested, a high degree of digital capital is necessary for satisfactory online experiences.

One type of online practice that is closely related to digital capital is memetic engagement. Internet memes are cultural information that passes from person to person, reproduced by imitation, and is diffused through competition and selection (Shifman, 2013). An example of Internet memes is the video of "Leave Britney Alone" that spawned through imitation and remix (Shifman, 2013). Memetic engagements include meme-related practices such as gaining knowledge about memes, spreading memes, and creating memes (Shifman, 2014; Spitzberg, 2014). Memetic engagements contribute to an agent's digital capital and online social position in multiple ways. First, knowledge about memes is a part of EDC that is produced and characterized by the Internet; thus, memetic engagements help accumulate and (re)produce digital capital (Calderon Gomez, 2020). Second, because of the popularity of memes among Internet users, an agent's meme spreading and creating practices would increase his or her online visibility and consequently enhance his or her online social status (Cheong & Chen, 2015; Levina & Arriaga, 2014; Meikle, 2016). Third, meme is a key part of the Internet's participatory culture; therefore, memetic engagements indicate an agent's distinction and grant inclusion into the online social networks (Julien, 2015; Shifman, 2014).

### ***Chinese '70s-born and '90s-born Cohorts and Social Media***

In this study, we focus on Chinese young and middle-aged generation cohorts—to be specific, Chinese born in the 1970s (i.e., '70s-borns) and the 1990s (i.e., '90s-borns). These two cohorts constitute a significant crucible to potentially understand how different digital generations function for multiple reasons that are explicated below. Chinese '70s-born and '90s-born cohorts form a sizable number of Internet users. According to China Internet Network Information Center (CNNIC, 2019), China has about 210 million '90s-born and 148 million '70s-born Internet users, who, together, constitute 42% of China's Internet population. Moreover, there are notable differences in economic, cultural, and sociotechnical contexts between Chinese '70s-born and '90s-born cohorts that implicate their values. China's Open-Door policy and economic reform, both initiated in the late 1970s, have greatly boosted the economy, with implications on its value system. From 1979 to 2019, China's economy increased with an approximate annual rate of 10% for 40 years (Orsmond, 2019). Ahuvia (2002) argued that economic development and subjective well-being (SWB) has helped to create more individualistic cultures among youths. In the same vein, Egri and Ralston's (2004) research indicated that the younger Chinese generation is more open to change, more focused on self-enhancement, and less conservative than the older generation. In this way, age differences may translate to different perceptions of new communication platforms.

Members of the '70s-born and '90s-born cohorts may also function in different sociotechnical fields in terms of information education. Since 1993, China began to build its information superhighway through the launch of the "Golden Bridge Project," which resulted in the rapid development of Internet infrastructure (CNNIC, 2009). Besides heavy infrastructure investment, the Chinese government also recognized the importance of teaching people how to access and operate the Internet, and therefore conducted a nationwide information skill education reform (CNNIC, 2009). In 2000, CPC explicated that schools of all levels should introduce education on computer and Internet skills and, consequently, information education has become compulsory in most higher education institutions, and has helped train Chinese students into technically capable Internet users (Dai, 2002). When the information education (2000-) started, most '70s-born cohorts had graduated from school. Therefore, unlike the '90s-born cohorts, many '70s-borns did not receive information education in school, either because of the lack of Internet infrastructure, or because they were not required to take the course.

Subsequently, as discussed above, it is plausible to conceive of how the '70s-born and '90s-born cohorts differ not just in terms of their age, but more specifically in terms of how their lifetimes help constitute distinct habituses related to their social media practices. According to CNNIC (2017), approximately 60% of Chinese Internet users spend more than two hours on social media every day, and 92.6% use WeChat. WeChat is a Chinese multiplatform and multifunctional social media that integrates various features, such as instant messaging, socialization, and mobile payment (Montag, Becker, & Gan, 2018). It used to be interpreted as a Chinese version of WhatsApp but now goes far beyond the counterpart's features and steadily expands its functions by incorporating new programs and third-party plug-ins (Montag et al., 2018). For the first and second research questions, we aim to understand how '70s-born and '90s-born cohorts differ in terms of their WeChat activities and social media habituses that structured these practices.

*RQ1: What is the association between age and social media habitus for Chinese '70s-born and '90s-born digital generation cohorts?*

*RQ2: What is the association between age and social media use in terms of WeChat activities for Chinese '70s-born and '90s-born digital generation cohorts?*

While studies have shown that social media adoption and use is associated with demographic differences (e.g., age; Blank, 2017), their implications about digital generations' social media activities and their embedded sociotechnical context is understudied in China. The Bourdieusian approach provides new insights in exploring digital social inequalities about '70s-born and '90s-born cohorts' use of WeChat. Internet uses are outcomes of interrelated fields constraining and shaping each other, which links to distinctive user habitus (Halford & Savage, 2010; Ignatow & Robinson, 2017). For the third research question, we aim to explore how age differences in social media activities could be explained by digital generation cohorts' social media habitus.

*RQ3: How does social media habitus help explain age difference in WeChat use between Chinese '70s-born and '90s-born digital generation cohorts?*

In the current study, we also aim to examine interactions between various forms of capital in different fields, represented by social media. On the one hand, social media are virtual representations of the offline social field, and capital-enhancing activities help increase individuals' offline life chances (Hargittai & Hinnant, 2008). On the other hand, social media serves as an online field, and memetic engagements contribute to agents' digital capital and online social positions (Calderon Gomez, 2020; Levina & Arriaga, 2014; Reay, 2004; Shifman, 2014). As such, we raise our fourth and fifth research questions to examine how age interacts with economic (i.e., family income) and cultural (i.e., information education) capital on WeChat activities about online and offline life chances.

*RQ4: How does age interact with cultural and economic capital to influence digital generation cohorts' capital-enhancing WeChat activities?*

*RQ5: How does age interact with cultural and economic capital to influence digital generation cohorts' memetic engagements?*

## **Method**

### ***Research Designs***

This study draws upon and extends a dissertation research project. The original questionnaire was first developed in English since major items were adopted from literature in the same language. Because Chinese participants may not have adequate proficiency in understanding and responding to questions in English, the questionnaire was translated into Chinese. To develop and test the adequacy of the research instrument, the researcher piloted the questionnaire among the target population (van Teijlingen & Hundley, 2002). The researcher first sent the questionnaire to three WeChat users who have

more than 2,000 followers for their feedback and review. Based on their comments, minor revisions were made primarily on the apprehensibility of the questions. In addition, a pilot study was conducted before the main survey, where 20 '70s-born and '90s-born cohort members were invited to complete the survey and report their experiences on the clarity of the instructions and questions, as well as their ease of their survey participation on desktops and cell phones. Based on the feedback, the original questionnaire was altered slightly to improve the flow and adequacy of the research instrument.

The survey was conducted through SurveyMonkey.com. The researcher asked two instructors working in a large public university in Midwestern China to send recruitment advertisements to students enrolled in their classes, students' parents, and their friends who were born either in the 1990s or the 1970s. Participants then joined online discussion groups by scanning a QR code or by entering the group serial number provided in the advertisement. Participants' identities were verified by instructors and other group members. After the verification was complete, the researcher sent the link to all group members and made the survey available. Participation was voluntary and anonymous. IRB approval was obtained before conducting the survey.

### **Sample**

Participants of the study were 429 (male = 195, female = 232, 2 = unspecified) Chinese '70s-born and the '90s-born cohorts. Among them, 208 (male = 106, female = 100, 2 = unspecified) were '70s-born and 221 (male = 89, female = 132) were '90s-born. The '70s-born cohorts ranged in age from 40 to 49 ( $M = 45.94$ ,  $SD = 2.43$ ). The '90s-born cohorts ranged in age from 20 to 24 ( $M = 22.29$ ,  $SD = 1.13$ ). The most frequently reported ages were 48 for the '70s-born cohort and 22 for the '90s-born cohort.

Participants came from diversified backgrounds. More than half of the participants (231, 53.8%) held or were pursuing bachelor's degrees. Two hundred and seven (48.3%) were identified as full-time students. More than half (252, 58.7%) of the participants lived in urban areas. Participants' annual family incomes ranged from less than ¥1,000 to more than ¥1,000,000, with ¥50,001~¥100,000 the most reported (114; 26.6%; see Table 1). According to China Bureau of Statistics (2018), Chinese average annual disposable income per capita was ¥28,228 ( $\approx$ \$4,300). Considering the normal size of Chinese families (two to three members), our sample is representative in terms of income.



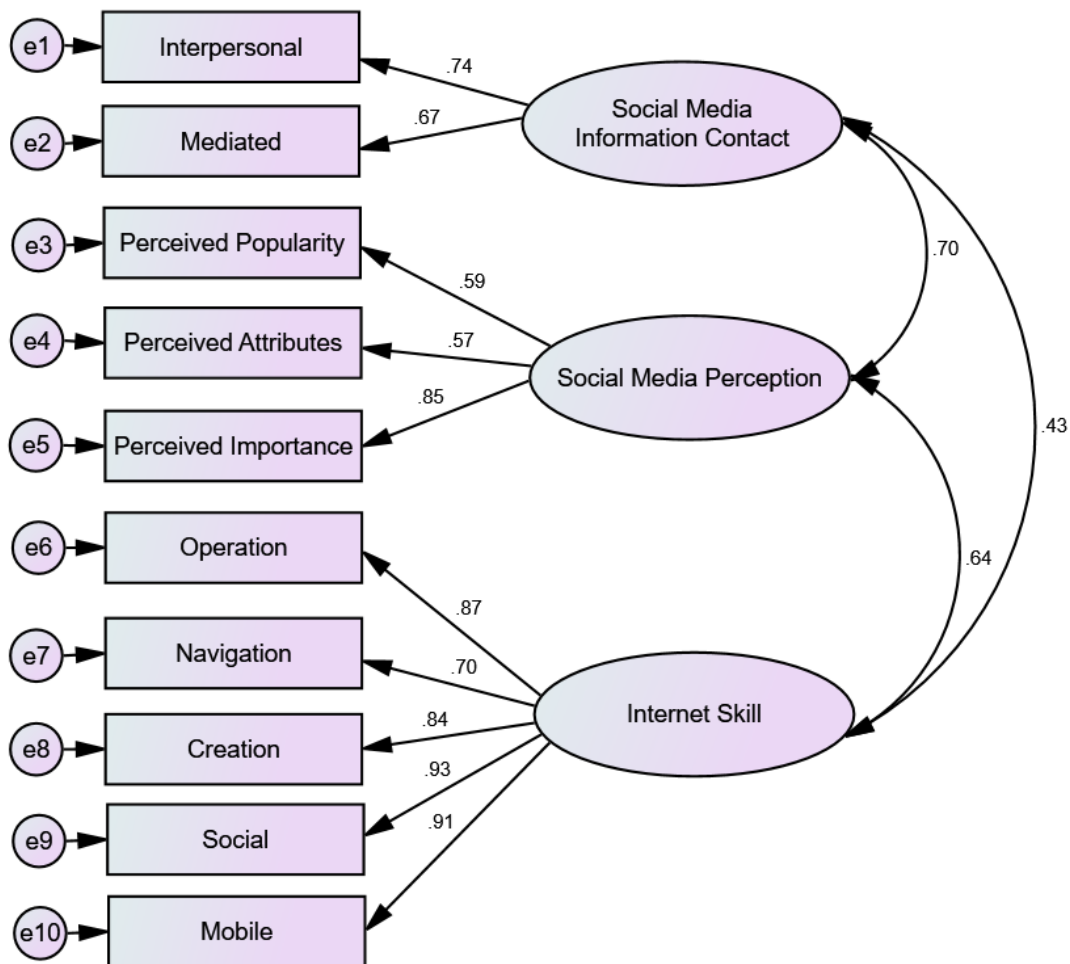
**Table 1. Sample Descriptive Statistics.**

	'70s-born		'90s-born		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
<b>Gender</b>						
Male	106	51	89	40.3	195	45.5
Female	100	48	132	59.7	232	54.1
Unspecified	2	1			2	.4
<b>Education Background</b>						
Primary School or below	34	16.3			34	7.9
Junior High School	76	36.5	4	1.8	80	18.6
Senior High School	44	21.2	9	4.1	53	12.3
Bachelor's	49	23.6	182	82.4	231	53.8
Master's or above	5	2.4	26	11.8	31	7.2
<b>Family Income</b>						
≤ ¥1,000	2	1	13	5.9	15	3.5
¥1,001–¥10,000	48	23.1	23	10.4	71	15.6
¥10,001–¥50,000	50	24	60	27.1	110	25.6
¥50,001–¥100,000	55	26.4	59	26.7	114	26.6
¥100,001–¥200,000	42	20.2	51	23.1	93	21.7
¥200,001–¥1,000,000	8	3.8	13	5.9	21	4.9
> ¥1,000,000	3	1.4	2	.9	5	1.1
<b>Area of Living</b>						
Urban	102	49	150	67.9	252	58.7
Suburban	45	21.6	30	13.6	75	17.5
Rural	60	28.8	41	18.5	101	23.6
Unspecified	1	.5			1	.2
<b>Occupation</b>						
Student			207	93.7	207	48.3
Job-Holders	187	90	12	5.3	199	46.4
Unemployed	21	10	2	1	23	5.3

### **Measurements**

The questionnaire included questions on social media habitus, WeChat activities, memetic engagements, and demographics. Three aspects of social media habitus were examined: perception of WeChat, Internet skill, and WeChat information contact. Perception of WeChat was measured by 12 items on perceived attributes of WeChat (5-item about compatibility, relative advantage, trialability, observability, and complexity; e.g., "WeChat is better than other social media in China"), perceived importance of WeChat functions (5-item about major WeChat functions; e.g., "The 'moment' function is important to me"), and perceived popularity of WeChat (2-item; e.g., "A lot of my friends and relatives are using WeChat"). Participants rated each item on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). Items were adapted from literature (Jung, 2008; Vishwanath & Goldhaber, 2003; Zhu &

He, 2002) with good reliabilities (perceived attributes = .73; perceived importance = .83; perceived popularity = .77). Ten items were employed to measure five dimensions of Internet skills (i.e., operational, navigation, creation, social, and mobile skills). Items were adapted from van Deursen, Helsper, and Eynon's (2016) Internet Skill Scale (ISS). Analysis indicated good reliabilities for ISS (.96) and the five dimensions (operational = .88; navigation = .76; creation = .80; social = .89; mobile = .96). Two items were employed to measure the frequencies of participants' WeChat information contact through interpersonal and mediated channels (e.g., "I heard media mention WeChat"; 1 = never, 5 = several times a day). Before exploring the research questions, construct validity was examined using confirmatory factor analysis (CFA). Results showed significant intercorrelations between the latent and observed variables, and the social media habitus model is acceptable,  $\chi^2 = 123.00$ ,  $p < .001$ , CFI = .96, TLI = .95, NFI = .95, RMSEA = .08 (see Figure 1).



**Figure 1. Social media habitus model.**

WeChat activities included 19 items adapted from literature (e.g., Blank & Reisdorf, 2012; Zillien & Hargittai, 2009). Participants reported how frequent they participated in each WeChat activity on a 7-point Likert scale (1 = never, 7 = more than three times a day). A principal component factor analysis identified four dimensions of the activities (65.19% explained variance). Online community participation included six items on communications and interactions with online community members, including both acquaintances and strangers. Relationship maintenance included three items on social networking with friends and relatives. Self-expression included three items on posting essay, selfie, and expressing feelings and thoughts. Extra activities included online banking/mobile payment and third-party plug-ins that were not typical or core functions of social media (see Table 2). Because of the results, we constructed four new items representing WeChat activities (online community participation = .88, relationship maintenance = .83, self-expression = .80, extra activities = .73).

**Table 2. Factor Analysis Results.**

	1	2	3	4
Offering help or support to others	.73			
Asking for help or support from others	.72			
Grabbing red pockets	.60			
Watching school- and work-related discussions	.62			
Joining school- and work-related group discussions	.60			
Making voice/video call	.69			
Following friends' updates		.78		
Liking/commenting on friends' updates		.78		
Communicating with friends and relatives		.63		
Posting selfies			.80	
Posting original essays			.69	
Expressing feelings and thoughts			.58	
Using third-party plug-ins				.73
Online banking/mobile payments				.60

*Note.* 1 = online community participation, 2 = relationship maintenance, 3 = self-expression, 4 = extra activities.

Capital-enhancing activities included six items selected from WeChat activities that enhance life chances, such as career advancement and financial well-being (Hargittai & Hinnant, 2008). Items were: promotion, online banking/mobile payments, watching school- and work-related group discussions, joining school- and work-related group discussions, asking for help or support from others, and gaining information that benefits personal development. Analysis indicated good reliability ( $\alpha = .82$ ) of the six items.

Memetic engagements included nine items on meme knowledge, meme spreading, and meme creation. Meme knowledge was measured by five items ( $\alpha = .96$ ). Each asked participants to rate how well they knew a specific popular meme (1 = never heard about it; 5 = know well and can use well). These memes were selected from China National Language Resources Monitoring and Research Center's (2017) report on Chinese popular online memes. Four items were employed to measure frequencies (1 =

never, 5= every day) of activities about meme spreading (3-item,  $\alpha = .87$ ; e.g., "using memes in WeChat post/communication") and meme creating (1-item; i.e., "making your own memes"). Items were adopted from and inspired by Shifman's (2013) and Spitzberg's (2014) research on meme diffusion.

Seven questions were included to ask about participants demographics, including year of birth, gender, urbaneness, education level, occupation, information education history, and annual family income. One question was employed to measure information education history (i.e., "I took/am taking a computer- and Internet-related course in school"; 1 = yes, 2 = no). Among the participants, 20.19% (42) '70s-born and 80.54% (178) '90s-born cohorts reported "yes." Participants were recoded into low- and upper-mid-income families using ¥50,001~¥100,000 as the threshold (China Bureau of Statistics, 2018).

### **Data Analysis**

Data were analyzed using IBM SPSS Statistics v.25. Multiple statistical procedures were employed to explore the research questions. Independent sample t-test was performed to investigate our first research question. The independent variable was generation (1 = the '70s-born cohorts; 2 = the '90s-born cohorts), and dependent variables were three dimensions of social media habitus. We employed multivariate analysis of variance (MANOVA) and multivariate analysis of covariance (MANCOVA) to explore the second and third research questions, with generation as IV and WeChat activities as DVs in MANOVA, and three dimensions of social media habitus added as covariates in MANCOVA. For research questions four and five, we used a 2X2X2 factorial design and a three-way MANOVA. The independent variables were generation, information education, and family income, and the dependent variables were capital-enhancing activities and memetic engagements, respectively.

### **Results**

For RQ1, which asks about the association between age and social media habitus, we found significant differences in habitus about social media use between '70s-born and '90s-born cohorts. Compared with the younger generation, '70s-born cohorts had an overall lower perception of WeChat,  $t(427) = -3.91, p < .001$ , less WeChat information contact,  $t(427) = -3.59, p < .001$ , and lower Internet skills,  $t(427) = -15.08, p < .001$  (see Table 3). There were some exceptions, though: a detailed look at the results revealed that the mid-aged generation cohort was more agreed with the statement that WeChat is more advantageous than other social media,  $t(427) = 5.08, p < .001$ , acknowledged the importance of WeChat's voice and video call function,  $t(427) = -1.95, p = .05$ , and gained WeChat information through interpersonal channels as frequently as '90s-born cohort did,  $t(427) = -.98, p = .33$ .

**Table 3. Generational Differences in Perceptions of WeChat, Internet Skills, and WeChat Information Contact.**

	'70s-born	'90s-born	<i>df</i>	<i>t</i>
Perception of WeChat	3.89	4.12	427	-3.91***
Perceived attributes	3.35	3.25	427	1.62
Perceived importance	4.33	4.82	427	-5.94***
Perceived popularity	3.99	4.30	427	-3.73***
Internet Skill	3.01	4.26	427	-15.08***
Operational	3.13	4.18	427	-13.52***
Navigation	3.03	3.97	427	-10.53***
Creation	2.50	3.94	427	-14.53***
Social	3.20	4.54	427	-13.60***
Mobile	3.24	4.59	427	-12.67***
WeChat Information Contact	3.02	3.25	427	-3.59***
Interpersonal	3.11	3.21	427	-.98
Mediated	2.93	3.44	427	-5.22***

Note. Scale: 1 = strongly disagree/never, 5 = strongly agree/several times a day.  
\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

For RQ2, which looks at the association between age and social media use, a significant multivariate level effect of generation on WeChat activities was observed, Wilk's  $\Lambda = .80$ ,  $F(4, 424) = 26.56$ ,  $p < .001$ , partial  $\eta^2 = .21$ . RQ3 examines the extent to which social media habitus could help explain age differences in WeChat use between two generation cohorts. We added three dimensions of social media habitus as covariates and constructed a MANCOVA. Results indicated that generation was still a significant factor, Wilk's  $\Lambda = .93$ ,  $F(4, 421) = 7.66$ ,  $p < .001$ , partial  $\eta^2 = .07$ . Compared to the uncontrolled model, there was a decrease of effect size of generation from 21% to 7%. Significant multivariate effects of WeChat perception (Wilk's  $\Lambda = .73$ ,  $F(4, 421) = 38.07$ ,  $p < .001$ , partial  $\eta^2 = .27$ ), Internet Skill (Wilk's  $\Lambda = .93$ ,  $F(4, 421) = 7.67$ ,  $p < .001$ , partial  $\eta^2 = .07$ ), and WeChat information contact (Wilk's  $\Lambda = .92$ ,  $F(4, 421) = 9.57$ ,  $p < .001$ , partial  $\eta^2 = .08$ ) were observed, and together, social media habitus explained 42% of the variances in WeChat activities. In the controlled model, generation significantly influenced WeChat activities about relationship maintenance,  $F(1, 424) = 4.92$ ,  $p < .05$ , self-expression,  $F(1, 424) = 6.00$ ,  $p < .05$ , and extra activities,  $F(1, 424) = 10.93$ ,  $p < .01$ , but not online community participation,  $F(1, 424) = .77$ ,  $p = .38$  (see Table 4).

**Table 4. Univariate Effects of Generation on WeChat Activities in Controlled Model.**

	'70s-born	'90s-born	<i>df</i> <sub>1</sub>	<i>df</i> <sub>2</sub>	<i>F</i>	Partial $\eta^2$
Online community participation	3.65	4.08	1	424	.77	.002
Relationship maintenance	4.31	5.40	1	424	4.92*	.011
Self-expression	2.42	3.11	1	424	6.00*	.014
Extra activities	2.53	3.40	1	424	10.93**	.025

Note. Control variables: WeChat perception, Internet skill, WeChat information contact.  
Scale: 1 = never, 7 = more than 3 times a day. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

For RQ4, which asks about how age, economic, and cultural capital influence capital-enhancing activities, we observed significant main effects of information education ( $F(1, 421) = 16.03, p < .001$ , partial  $\eta^2 = .04$ ) and family income ( $F(1, 421) = 10.30, p < .01$ , partial  $\eta^2 = .02$ ), and a significant interaction effect of generation and information education ( $F(1, 421) = 3.77, p < .05$ , partial  $\eta^2 = .01$ ) on capital-enhancing activities. Generation cohorts with more economic and cultural capital participated in more capital-enhancing activities. Results from post hoc tests revealed that the '70s-born cohorts who did not receive information education participated in less capital-enhancing activities compared to other three groups (see Table 5).

For RQ5, which explores the effects of age, economic, and cultural capital on memetic engagements, we observed significant multivariate effects of generation (Wilk's  $\Lambda = .58, F(3, 419) = 102.86, p < .001$ , partial  $\eta^2 = .424$ ), information education (Wilk's  $\Lambda = .92, F(3, 419) = 12.24, p < .001$ , partial  $\eta^2 = .081$ ), and generation\* information education (Wilk's  $\Lambda = .96, F(3, 419) = 5.49, p < .01$ , partial  $\eta^2 = .038$ ) on memetic engagements (see Table 6). Those who participated in more memetic engagements tended to be younger and had received more information education. Generation cohorts with higher family income had more knowledge about memes,  $F(1, 421) = 7.14, p < .01$ , partial  $\eta^2 = .017$ , and participated in more meme spreading activities,  $F(1, 421) = 5.25, p < .05$ , partial  $\eta^2 = .012$  (see Table 6). Results from post hoc tests on the significant interaction effect indicated that the '70s-born cohorts who did not receive information education in school had less knowledge about popular memes than other three groups.

**Table 5. Generation, Information Education (IE), and Family Income on Capital-Enhancing Activities.**

	$df_1$	$df_2$	$F$	Partial $\eta^2$
Generation	1	421	1.73	.004
Information education (IE)	1	421	16.03***	.037
Income	1	421	10.30**	.024
Generation*IE	1	421	3.77*	.009
Generation*income	1	421	.14	.000
IE*income	1	421	2.76	.007
Generation*IE*Income	1	421	1.42	.003

Note. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

**Table 6. Univariate Effects of Generation, IE, and Family Income on Memetic Engagements.**

	Meme Knowledge		Meme Spreading		Meme Creating	
	<i>F</i>	Partial $\eta^2$	<i>F</i>	Partial $\eta^2$	<i>F</i>	Partial $\eta^2$
Generation	300.68***	.416	66.13***	.136	22.35***	.050
IE	30.4***	.067	10.75**	.025	12.56***	.029
Income	7.14**	.017	5.25*	.012	.84	.002
Generation*IE	16.44***	.038	2.18	.005	1.15	.003
Generation*income	3.54	.008	.13	.000	2.47	.006
IE*income	.20	.000	.81	.002	1.34	.003
Generation*IE*income	.10	.000	.41	.001	.15	.000

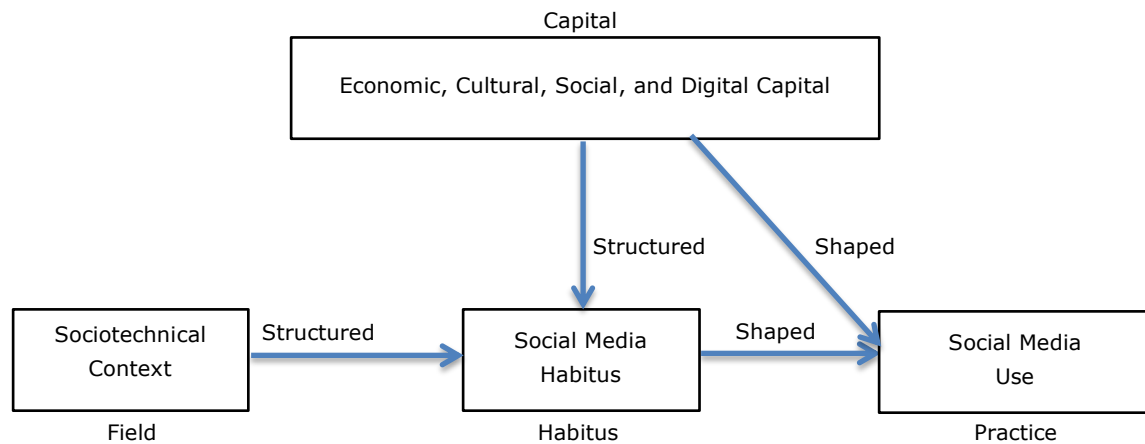
Note. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

### Discussion

There are several theoretical and practical implications of this study. To begin, one common interpretation of the digital divide revolves around distinct generational notions of the digital native versus the digital immigrant (Premsky, 2001). In this regard, age is viewed as the key differentiator for new technology adoption and engagement. However, even with frequent identifications and application of age as a significant predictor in Internet adoption and use (e.g., Rice & Pearce, 2015; van Deursen & van Dijk, 2014), digital divide studies have not fully explained why age differences are associated with disparities in social media use. In this article we argue that simply treating age as the explanatory factor would be reductive and even lead to ageism and bias in technological development and diffusion. Instead, we jointly employed Mannheim's (2013) conceptualization of generation and Bourdieu's (1984, 1990) works on field, habitus, and capital to explore how age difference or a cohort effect is structured in multidimensional and contextual ways. In this study, we reframed Chinese '70s-born and '90s-born cohorts as two generations with different characteristics that were shaped in distinct sociotechnical contexts, which further structured unique habitus about Internet use. The '70s-born cohorts differed from '90s-born cohorts in habitus relating to their perception of WeChat, Internet skill, and WeChat information contact experience. Our study results suggested that these differences are associated with distinct contexts in terms of ICT development and information education opportunities (Dai, 2002), and contribute to more understandings of the age difference in social media use. In these ways, our study serves as a heuristic in terms of unpacking multiple layers of contextual influences on generational differences in social media use.

Second, this study offered a conceptual model that contributes to better understandings of the interrelations and complexities between online practices and digital social inequality. As Halford and Savage (2010) have pointed out, one shortcoming of current digital divide studies is that they place Internet use and inequality into a simple input-output model neglecting the complex ways in which they shape each other. The Bourdieusian approach, on the other hand, views Internet use as occurring in social spaces made up of interrelated fields constraining and shaping each other, with distinctive user habitus and capital (Ignatow & Robinson, 2017). Specifically, in Bourdieu's (1984) *Distinction*, he constructed a formula to indicate the connections between habitus, capital, field, and practice: "[ (Habitus) and (Capital) ] + Field = Practice" (p. 101). In the current study, we attempted to concretize this formula. We found that '70s-born and '90s-born cohorts' habituses for WeChat use were structured within different sociotechnical contexts (field), as well as dependent on their family income (economic capital) and information education

(cultural capital). Embracing different habituses and economic and cultural capital, '70s-born and '90s-born exhibited distinct WeChat use (practice) about not only frequencies but also patterns of WeChat activities and memetic engagements. Hence, drawing upon and extending Bourdieu's (1984, 1990) conceptualization of field, habitus, and capital, findings from our study yield a conceptual model to relationally approach (part of) connections between digital social inequality and Internet use (see Figure 2).



**Figure 2. Conceptual model.**

Third, this study deepened understanding of the disparities in social media use, particularly in the Chinese context. Based on and extending prior literature, in the current study we applied the conceptualizations of capital-enhancing activities (DiMaggio et al., 2004) and memetic engagements (Cheong & Chen, 2015; Shifman, 2013) to examine how generational differences are associated with digital social inequalities in both offline and online fields. The Internet combines two mutually influenced fields: It is a virtual representation or digital extension of the offline social field as well as an online field itself (Julien, 2015; Levina & Arriaga, 2014). Literature has discussed how online activities related to work, health, and education (i.e., capital-enhancing activities; Hargittai & Hinnant, 2008) would influence individuals' life chances in the real world. Moreover, in response to the call for research on "new types of inequality" (van Dijk, 2006, p. 223) in the information society, we tentatively discussed disparities in online life chances through the investigation of memetic engagements. In the current study, we found that although the two-generation cohorts did not differ in terms of capital-enhancing activity frequencies, the '90s-born cohorts participated in more memetic engagements than the '70s-born cohorts. These results add to our knowledge about digital social inequality in terms of not only how social media use can influence opportunities in the real world (DiMaggio et al., 2004), but also how the Internet as an online field with its own participatory nature and value system can affect user contribution and online social status (Julien, 2015; Levina & Arriaga, 2014; Shifman, 2014).

Fourth, this study provides a deeper understanding toward the formation and characteristics of digital generations and the nuances in social media use among generational cohorts across different



backgrounds. Here, we argued that to understand differences in the habitus and social media use between Chinese '70s-born and '90s-born cohorts, we must understand the contexts grounding these generations. Prior literature has indicated that in China's specific context, two series of historical events may be associated with differences in '70s-born and '90s-born cohorts' social media habitus and practice: economic reform and Open-Door policy (late 1970s–), which greatly boosted China's economy with implications on its value system (Egri & Ralston, 2004); and China's endeavor in informationization (1990s–), including the Golden Bridge Project and information education, that helped the rapid development and diffusion of ICTs, and trained skilled ICT users (Dai, 2002). Our findings supported the literature. As the results showed, the '90s-born cohorts had higher Internet skills, more frequent WeChat information contact through mediated ways, more realized the importance of WeChat functions, and, in turn, had more frequent participation in WeChat activities about self-expression, mobile payment, and third-party services than the '70s-born cohorts.

Furthermore, nuances in WeChat use among generational cohorts across different backgrounds should be highlighted (Ignatow & Robinson, 2017). Situating digital-generation cohorts into four groups (i.e., '70s-born with information education, '70s-born without information education, '90s-born with information education, and '90s-born without information education), we examined how digital social inequalities interacted with age and information education. The '70s-born cohorts without information education showed significantly less capital-enhancing activities and memetic engagements than other three groups, but no significant difference was observed among them. This finding supported van Deursen and Helsper's (2015) argument that simply offering services would not enhance Internet use among disadvantaged groups. We also found that low-income users reported less memetic engagements than those with upper-middle income. Similarly, Robinson (2009) found that low-income families took a more task-oriented stance for Internet use and tried to avoid what they perceived as wasteful online activities; whereas upper-mid-income families adopted a more exploratory or playful stance that encourages both necessary and unnecessary online activities. Interpretations of users' memetic engagements should be highlighted here: Although memetic engagements were not deemed as "necessary" (Robinson, 2009, p. 492) as other social media activities that are directly connected to tangible benefits (e.g., making a free phone call), it can help users increase digital capital that is convertible to economic, social, and cultural capitals (Calderon Gomez, 2020; Ragnedda, 2018). Ignatow and Robinson (2017) further noted that the limited use of Internet for only necessities (i.e., taste for the necessary) is ultimately counterproductive and reinforces disadvantages. As debates about the nature of digital literacy and education proceed, insights from this study underscore the complexities of digital generations and their digital social inequalities connected to social media use.

### **Limitations and Future Directions**

There are some limitations of the study. First, the current investigation used a nonrandom sample, which did not fully represent the '70s-born and the '90s-born cohort population. The recruitment method limits the generalizability of the findings to other populations. For the '90s-born cohorts, most of our sample were college students studying at a public university in Midwestern China. There are differences among people living in different parts of China, as well as among people with different professions, in adoption and use of digital technologies (Fong, 2009). This study only examined a slice of

the '70s-born and the '90s-born cohorts in China and, therefore, future research should recruit participants with more diversity and better representability.

Second, further research should explore more aspects of social media habitus and forms of capital. Habitus is a complex concept that "takes many shapes and forms" (Reay, 2004, p. 431), and is difficult to be operationalized and quantified (Edgerton & Roberts, 2014). Therefore, our research serves as a tentative exploration of the interconnected dimensions of social media habitus and its influence on practices. Future research can incorporate more dimensions (e.g., aspiration; Dumais, 2002) to add more knowledge about the structure of social media habitus and the mechanism of habitus-practice interaction. Moreover, current research explored how economic and cultural capital interacts with social media use by focusing on family income and information education, respectively. However, they are not the only forms of economic and cultural capital. For example, besides information education, cultural capital also includes other academic qualifications, achievements, and credentials awarded for people's efforts in education and occupation (Robinson, 2009). We also did not include social capital (i.e., resources linked to social networks and interpersonal relationships; Bourdieu, 1986) in this study, which is associated with disparities in social media practices (Lambert, 2016). Future research can enlarge the scope of the investigation to showcase a more holistic model of connections between different digital generations, multiple capital forms, and social media use.

### References

- Ahuvia, A. C. (2002). Individualism/collectivism and cultures of happiness: A theoretical conjecture on the relationship between consumption, culture and subjective well-being at the national level. *Journal of Happiness Studies*, 3(1), 23–36. doi:10.1023/A:1015682121103
- Blank, G. (2017). The digital divide among Twitter users and its implications for social research. *Social Science Computer Review*, 35(6), 679–697. doi:10.1177/0894439316671698
- Blank, G., & Reisdorf, B. C. (2012). The participatory web: A user perspective on Web 2.0. *Information, Communication & Society*, 15(4), 537–554. doi:10.1080/1369118X.2012.665935
- Bourdieu, P. (1984). *Distinction*. Cambridge, MA: Harvard University.
- Bourdieu, P. (1986). The forms of capital. In J. Richardson (Ed.), *Handbook of theory and research for the sociology of education* (pp. 241–258). Westport, CT: Greenwood.
- Bourdieu, P. (1990). *The logic of practice*. Palo Alto, CA: Stanford University Press.
- Bourdieu, P. (2002). Habitus. In J. Hillier & E. Rooksby (Eds.), *Habitus: A sense of place* (pp. 27–34). Burlington, VT: Ashgate.

- Bourdieu, P., & Wacquant, L. J. (1992). *An invitation to reflexive sociology*. Chicago, IL: University of Chicago Press.
- Calderon Gomez, D. (2020). The third digital divide and Bourdieu: Bidirectional conversion of economic, cultural, and social capital to (and from) digital capital among young people in Madrid. *New Media & Society*, 23(9), 2534–2553. doi:10.1177/1461444820933252
- Castells, M. (1996). *The information age: Economy, society and culture, vol. 1. The rise of the network society*. Maiden, MA: Blackwell Publishers.
- Cheong, P. H., & Chen, Y. (2015). Memetic engagement as middle path resistance: Contesting mainland Chinese immigration and social cohesion. In W. Chen & S. Reese (Eds.), *Networked China: Global dynamics of digital media and civic engagement* (pp. 93–124). New York, NY: Routledge.
- China Bureau of Statistics. (2018). *Annual report*. Retrieved from <https://data.stats.gov.cn/easyquery.htm?cn=C01>
- China Internet Network Information Center. (2009, May 26). *History of China's Internet*. Retrieved from <http://www.cnnic.net.cn/hlwfzyj/hlwxzbg/>
- China Internet Network Information Center. (2017, December 27). *2016 China social media and user behavior report*. Retrieved from <http://www.cnnic.cn/hlwfzyj/hlwxzbg/sqbg/201604/P020160722551429454480.pdf>
- China Internet Network Information Center. (2019, August 30). *The 44th survey report*. Retrieved from <http://www.cnnic.cn/hlwfzyj/hlwxzbg/hlwtjbg/201908/P020190830356787490958.pdf>
- China National Language Resources Monitoring and Research Center. (2017). *Chinese popular online memes*. Retrieved from [http://china.cnr.cn/xwwgf/20171221/t20171221\\_524071021.shtml](http://china.cnr.cn/xwwgf/20171221/t20171221_524071021.shtml)
- Crossley, N. (2001). The phenomenological habitus and its construction. *Theory and Society*, 30(1), 81–120. doi:10.1023/A:1011070710987
- Dai, X. (2002). Towards a digital economy with Chinese characteristics? *New Media & Society*, 4(2), 141–162. doi:10.1177/14614440222226316
- DiMaggio, P. (1979). Review essay on Pierre Bourdieu. *American Journal of Sociology*, 84(6), 1460–1474. doi:10.1086/226948
- DiMaggio, P., Hargittai, E., Celeste, C., & Shafer, S. (2004). Digital inequality: From unequal access to differentiated use. In K. Neckerman (Ed.), *Social inequality* (pp. 355–400). New York, NY: Russell Sage Foundation.

- Dumais, S. A. (2002). Cultural capital, gender, and school success: The role of habitus. *Sociology of Education, 75*(1), 44–68. doi:10.2307/3090253
- Edgerton, J. D., & Roberts, L. W. (2014). Cultural capital or habitus? Bourdieu and beyond in the explanation of enduring educational inequality. *Theory and Research in Education, 12*(2), 193–220. doi:10.1177/1477878514530231
- Egri, C. P., & Ralston, D. A. (2004). Generation cohorts and personal values: A comparison of China and the United States. *Organization Science, 15*(2), 210–220. doi:10.1287/orsc.1030.0048
- Fong, M. W. (2009). Digital divide between urban and rural regions in China. *The Electronic Journal of Information Systems in Developing Countries, 36*(1), 1–12. doi:10.1002/j.1681-4835.2009.tb00253.x
- Gao, K. (2012, August 15). *Slavery is out, the web is in: China updates ancient morality text for young*. Retrieved from <https://www.theguardian.com/world/2012/aug/15/china-morality-text-respect-parents>
- Halford, S., & Savage, M. (2010). Reconceptualizing digital social inequality. *Information, Communication & Society, 13*(7), 937–955. doi:10.1080/1369118X.2010.499956
- Hargittai, E., & Hinnant, A. (2008). Digital inequality: Differences in young adults' use of the Internet. *Communication Research, 35*(5), 602–621. doi:10.1177/0093650208321782
- Ignatow, G., & Robinson, L. (2017). Pierre Bourdieu: Theorizing the digital. *Information, Communication & Society, 20*(7), 950–966. doi:10.1080/1369118X.2017.1301519
- Inglehart, R., & Baker, W. E. (2000). Modernization, cultural change, and the persistence of traditional values. *American Sociological Review, 65*(1), 19–51. doi:10.2307/2657288
- Julien, C. (2015). Bourdieu, social capital and online interaction. *Sociology, 49*(2), 356–373. doi:10.1177/0038038514535862
- Jung, J. Y. (2008). Internet connectedness and its social origins: An ecological approach to postaccess digital divides. *Communication Studies, 59*(4), 322–339. doi:10.1080/10510970802467387
- Kvasny, L. (2005). The role of the habitus in shaping discourses about the digital divide. *Journal of Computer-Mediated Communication, 10*(2), Article 5. doi:10.1111/j.1083-6101.2005.tb00242.x
- Lambert, A. (2016). Intimacy and social capital on Facebook: Beyond the psychological perspective. *New Media & Society, 18*(11), 2559–2575. doi:10.1177/1461444815588902

- Levina, N., & Arriaga, M. (2014). Distinction and status production on user-generated content platforms: Using Bourdieu's theory of cultural production to understand social dynamics in online fields. *Information Systems Research, 25*(3), 468–488. doi:10.1287/isre.2014.0535
- Mannheim, K. (2013). *Man and society in an age of reconstruction* (Vol. 2). New York, NY: Routledge.
- Meikle, G. (2016). *Social media: Communication, sharing and visibility*. New York, NY: Routledge.
- Montag, C., Becker, B., & Gan, C. (2018). The multipurpose application WeChat: A review on recent research. *Frontiers in Psychology, 9*, Article 2247. doi:10.3389/fpsyg.2018.02247
- Mossberger, K., Tolbert, C. J., & Hamilton, A. (2012). Measuring digital citizenship: Mobile access and broadband. *International Journal of Communication, 6*, 2492–2528.
- Mossberger, K., Tolbert, C. J., & Stansbury, M. (2003). *Virtual inequality: Beyond the digital divide*. Washington, DC: Georgetown University Press.
- Norris, P. (2001). *Digital divide: Civic engagement, information poverty, and the Internet worldwide*. Cambridge, UK: Cambridge University Press.
- Orsmond, D. (2019). *China's economic choices: Where to from here?* Retrieved from <https://www.think-asia.org/handle/11540/11720>
- Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon, 9*(5), 1–6. doi:10.1108/10748120110424816
- Ragnedda, M. (2018). Conceptualizing digital capital. *Telematics and Informatics, 35*(8), 2366–2375. doi:10.1016/j.tele.2018.10.006
- Reay, D. (2004). 'It's all becoming a habitus': Beyond the habitual use of habitus in educational research. *British Journal of Sociology of Education, 25*(4), 431–444. doi:10.1080/0142569042000236934
- Rice, R. E., & Pearce, K. E. (2015). Divide and diffuse: Comparing digital divide and diffusion of innovations perspectives on mobile phone adoption. *Mobile Media & Communication, 3*(3), 401–424. doi:10.1177/2050157915590469
- Robinson, L. (2009). A taste for the necessary: A Bourdieuan approach to digital inequality. *Information, Communication & Society, 12*(4), 488–507. doi:10.1080/13691180902857678
- Shifman, L. (2013). Memes in a digital world: Reconciling with a conceptual troublemaker. *Journal of Computer-Mediated Communication, 18*(3), 362–377. doi:10.1111/jcc4.12013
- Shifman, L. (2014). *Memes in digital culture*. Cambridge, MA: MIT Press.

- Spitzberg, B. H. (2014). Toward a model of meme diffusion (M3D). *Communication Theory, 24*(3), 311–339. doi:10.1111/comt.12042
- van Deursen, A. J., & Helsper, E. J. (2015). The third-level digital divide: Who benefits most from being online? In L. Robinson, S. R. Cotten, J. Schulz, T. M. Hale, & A. Williams (Eds.), *Communication and information technologies annual* (pp. 29–52). Bingley, UK: Emerald Group Publishing Limited.
- van Deursen, A. J., Helsper, E. J., & Eynon, R. (2016). Development and validation of the Internet Skills Scale (ISS). *Information, Communication & Society, 19*(6), 804–823. doi:10.1080/1369118X.2015.1078834
- van Deursen, A. J., & van Dijk, J. A. (2014). The digital divide shifts to differences in usage. *New Media & Society, 16*(3), 507–526. doi:10.1177/1461444813487959
- van Dijk, J. A. (2006). Digital divide research, achievements and shortcomings. *Poetics, 34*(4–5), 221–235. doi:10.1016/j.poetic.2006.05.004
- van Teijlingen, E., & Hundley, V. (2002). The importance of pilot studies. *Nursing Standard, 16*(40), 33–36. doi:10.7748/ns2002.06.16.40.33.c3214
- Vishwanath, A., & Goldhaber, G. M. (2003). An examination of the factors contributing to adoption decisions among late-diffused technology products. *New Media & Society, 5*(4), 547–572. doi:10.1177/146144480354005
- Zhu, J. J., & He, Z. (2002). Perceived characteristics, perceived needs, and perceived popularity: Adoption and use of the Internet in China. *Communication Research, 29*(4), 466–495. doi:10.1177/0093650202029004005
- Zillien, N., & Hargittai, E. (2009). Digital distinction: Status-specific types of Internet usage. *Social Science Quarterly, 90*(2), 274–291. doi:10.1111/j.1540-6237.2009.00617.x