

**Cross-National Patterns of Social Capital Accumulation:  
Gender, Network Resources, and Aging in the United States, China, and Taiwan**

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Extended Abstract for PAA 2012

This study follows up on a recent call for more research on a broad set of individual resources termed “life course capitals,” which include human, social, health, and personal capitals (O’Rand 2006). Each of these resources tends to vary across individual life courses and contributes to wealth, well-being, and mortality. Identifying unique age-based trajectories of these life course capitals can therefore assist in explaining social inequality (McDonald and Mair 2010). In particular, the long-term patterns of accumulation, maintenance, and erosion of these resources as individuals age can uncover processes of cumulative advantage/disadvantage (DiPrete and Eirich 2006). Furthermore, exploring these patterns in cross-national contexts can help to explain the ways in which distinct institutional arrangements, cultural repertoires, and historical contingencies influence social stratification.

While age variation in some of the life course capitals has been examined extensively (e.g., health; Chen, Yang and Liu 2010; Willson, Shuey and Elder 2007), relatively few studies have examined age-based trajectories of social capital (but see Cornwell, Laumann and Schumm 2008; Kalmijn 2003; Wellman et al. 1997). Instead, the majority of the work on the dynamics of social capital has focused on historical shifts in social capital (McPherson, Smith-Lovin and Brashears 2006; Paxton 1999; Putnam 2000). Our recent research (McDonald and Mair 2010) examined variation in employment-based connections and daily social interaction across age within the United States. We find that while work connections tend to increase with age, social interaction steadily declines.

We build on this earlier analysis in several ways. First, we consider how the general pattern of social capital accumulation may vary across multiple societies. Earlier studies have shown that transitions in institutional arrangements can have a profound impact on the character of social ties (e.g., Angelusz and Tardos 2001). As such, one should expect the accumulation of social resources to vary substantially across distinct institutional fields. We therefore compare the age-based trajectories of occupational network connections and daily social contact in the U.S., China, and Taiwan. These three societies are useful to compare because they offer distinct institutions, cultures, histories, and demographics. We draw on our understanding of each of these key features to predict and explain the differences that we observe.

Second, we examine gender disparities in the accumulation of social resources within each country. This analysis will help to clarify how unique social contexts may contribute to patterns of social capital convergence, divergence, or equality across the life course. Our earlier examination of gender differences in social network resources in the United States was purely descriptive (McDonald and Mair 2010) and therefore failed to explore the potential explanations for variation in social capital as individuals age. We therefore attempt to both identify and

explain these gender differences in social capital accumulation within each of the three aforementioned societies.

### **Cross-national patterns of social capital accumulation**

The distinctive cultural, institutional, historical, and demographic features of the U.S., China, and Taiwan lead to different predictions about the process of social capital accumulation within those contexts. China and Taiwan are steeped within the Confucian tradition which emphasizes the importance of society, the group, and the family. Conversely, the America is known for its emphasis on individualism, which promotes a “go-it-alone” approach to succeeding in life (Hochschild 1995). These cultural differences imply that Chinese and Taiwanese residents will have higher overall levels of social capital resources than Americans. Alternatively, the U.S. has had a long tradition of community and civic participation (Tocqueville 1945), which suggests the importance of developing a set of institutional connections. So while Confucianism stresses informal, family-based relations, civic-mindedness implies the development of formal ties to individuals who are connected to social and economic organizations. Therefore, one might expect that Americans would be connected to people in a broader array of occupations than Chinese or Taiwanese individuals.

The three societies also maintain important differences in economic and social institutions which are linked to their unique historical circumstances. In established market economies such as what is found in the U.S., workers generally display a pattern of accumulation of work-based connections across their working lives, with a slight decline in occupational network diversity at the end of their working careers (Erickson 2003; McDonald and Mair 2010). China has only recently begun to transition from state socialism to a more market-based economy. Taiwan made the transition to a market economy earlier than China (during the mid to late 1960s compared to the late 1970s). The transition has had a dramatic impact on the way in which life has been organized, leading to significant migration from rural to urban areas and creating tremendous opportunities for employment in urban centers, particularly among younger workers. This shift toward market relations is likely to have generated opportunities for individuals to connect with a broader array of individuals than was previously possible.

### **Gender inequality in social capital accumulation**

One can also expect differential patterns of social capital inequality to emerge in each of the three social contexts. Prior theory and research suggest two conflicting possibilities. On the one hand, there is ample reason to anticipate greater social capital divergence by gender in the U.S. than in the two Asian societies. The male-female gap in social capital may increase with age because of the weak enforcement of legal protections for women who are subject to gender discrimination and stereotyping. Previous research has shown that the *laissez-faire* approach to economic policy—an approach which has intensified during the last 30 years—has resulted in substantial inequality in economic rewards (Neckerman and Torche 2007). Consequently, we might expect to observe greater gender divergence in social capital resources across age in the U.S. than in China or in Taiwan.

On the other hand, the traditional nature of the Chinese and Taiwanese societies, which tend to promote gender stratification, might lead one to expect to find larger male-female gaps in social connections in these countries than in the United States. The traditional ethic in these countries is buttressed by the emphasis on hierarchical family relationships which tend to center

on patriarchs. Furthermore, while the women's movement in the U.S. has had some success in reducing the rampant occupational sex segregation of an earlier era (Tomaskovic-Devey et al. 2006), the market reforms instituted in China and Taiwan do not appear to have accounted for this phenomenon. In fact, recent research has shown that the market reforms have in fact increased occupational sex segregation (Hang-Yue 2002). To the extent that women are isolated in specific occupations, this could likely constrain their access to contacts in various occupational environments as well as their overall levels of social interaction.

### **Data and methods**

The data for this study come from the "Social Capital: Its Origins and Consequences" project. This was a telephone survey of residents in three societies (the U.S., China, and Taiwan) conducted from November 2004 to March 2005. The U.S. and Taiwanese samples are based on national random-digit dialing procedures. In China, random telephone sampling was conducted within the major cities and surrounding areas of 22 provinces and 5 autonomous regions. Respondents were eligible if they were between the ages of 21 and 64 and worked for pay at some point in their lives. A total of at least 3,000 survey respondents were interviewed within each of the three societies.

The survey offers a comprehensive set of questions on the social connections of workers, along with their background, personal, geographic, and employment characteristics. The occupational networks of respondents were measured by a set of position generator questions. Respondents were provided with a list of 21 different occupations and asked if they knew someone within each occupation.<sup>1</sup> The list covered a wide range of occupations, from janitors to CEOs. The dependent variable of interest is the total number of occupations for which respondents had a contact. This measure has been referred to in the past as extensity and serves as a measure of the diversity of occupational connections. Lin and colleagues (Lin, Fu and Hsung 2001) have noted the importance of this measure, as it serves as an indicator of the breadth of social connections that can be useful for job mobility.

A second indicator of social connectivity is the amount of daily contact that in which individuals engage. Respondents were asked, "On average, about how many people do you make contact with in a typical day? (On a one-on-one basis, including all the people that you say hello, chat, talk, write, or discuss matters with, whether you do it face-to-face, by telephone, by mail, or on the internet, whether you personally know the person or not.)" The seven response categories ranged from 0 to more than 100 people. These categories were converted to approximate the midpoints for each category (0, 3, 7, 15, 35, 75, and 125). This single-item indicator has been previously shown to tap into both expressive and instrumental aspects of network relationships (Fu 2005).

The analyses presented below examine age variation in these two indicators of social capital. Note that this study is cross-sectional, which does not allow one to distinguish aging from cohort effects. Of course, this would be a limitation of all potential network data sources, as there are no known sources of national data (let alone international data) that contain detailed information on occupational networks and daily interaction in a long-term panel framework.

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<sup>1</sup> The U.S. and Taiwan also had a position generator item on whether or not the respondent knew someone who was a legislator. This item was dropped because it did not appear in the Chinese questionnaire.

## **Preliminary analyses**

We start by examining the baseline differences in social capital resources across age for each of the three countries. For this, we ran OLS regression with occupational network extensity and daily contact as the dependent variables, predicted only by age. To capture curvilinear age effects, we include a basic age effect along with a squared and a cubed age term. Based on the results from the models, we estimated average extensity scores at each age and plotted the estimates in Figure 1. Daily contact estimates are plotted against age in Figure 2.

The results for extensity show three very different relationships. The first thing to note is the significantly higher level of occupational connections known in Taiwan (mean = 8.18) than in the U.S. (7.10) or in China (7.11). The age-based trajectories of social capital are also distinctive. The U.S. sample shows a general accumulation of social capital as people age, with a leveling off and slight decline beginning around the time that they reach about 45 years old. The Taiwan sample also shows a substantial increase in social connectivity early in the work career, but also shows an equally sharp decline that begins at age 38. The China sample shows almost no increase in social capital across age. Instead, we observe a relatively consistent decline from about the late 20s all the way to the oldest working ages.

Figure 2 shows that Taiwanese individuals report the highest overall level of daily contact, followed by the Chinese and then Americans. While the differences in the amount of daily contact across countries are quite large, the age-based patterns are similar in the three countries. In general, we see a decline in the daily contact as people age, although the slope of the decline is less steep in the United States than in the Asian societies.

Next we examine gender differences in social capital across age within each of these three contexts. Figure 3 shows the curves for occupational network extensity. Generally speaking, the results offer evidence of cumulative disadvantage across the life course, as the gender gap in social capital tends to expand with age. In the U.S., we observe relatively few differences in the number of occupational connections among men and women throughout most of the working years, but while women's occupational extensity declines while they are in their fifties, men's connections remain constant and even expand in their later working career years. China maintains a relatively large and significant gender gap in access to occupational connections throughout the life course and this gap is greatest at the oldest working ages. In Taiwan, female workers maintain similar access to social capital during the early portion of their careers. However, the gap between men and women begins to expand once individuals enter their thirties to the point where men maintain a significant advantage in social resource access during the middle and late career years.

Figure 4 presents the age variation in daily contacts in the three countries. Again we observe some interesting similarities and differences across the three contexts. To begin with, women experience a relatively constant decline in daily contact across age in the U.S., China, and Taiwan. The age-based patterns for men are more erratic. In the U.S., men report less contact than women in the early part of their careers, but experience late career resurgence in daily contact to the point where their daily contact exceeds that for women. In China, daily contact remains constant across the middle career ages before declining to levels comparable to women

in the late career years. In Taiwan, substantial increases in daily contact erase their early career deficit in contact relative to women. Taiwanese men maintain a significant daily contact advantage over women during the middle and later portions of the work career. Overall, the results show an expansion of the gender gap in daily contact during the middle portions of the career, followed by significant convergence at the oldest working ages.

### **Future Directions**

The preliminary results presented here offer a descriptive view into the cross-society differences in social capital accumulation across the life course. They hint at the ways that cultural, institutional, and historical factors can influence how individuals establish and maintain ties with people in diverse occupational fields and how their contact with others changes as they age. We intend to build on our analysis in order to better explain these divergent age-based patterns.

First, we will examine in greater detail the overall patterns of social capital accumulation across the three societies by incorporating information from the Social Capital survey on the background, residential, family, employment, and civic participation characteristics of respondents. The contribution of each of these various sets of factors will be evaluated based on the extent to which they influence the shape of the age curves. Confidence intervals (95%) surrounding each of the age estimates can be used to infer significant gaps in social capital access across societies. We also intend to draw on aggregated data from the World Values survey in order to offer further insights into the differences in the cultural context which may further contribute the disparate patterns identified here. In short, this kind of analysis will help us to explain the extent to which the differences are due to demographic/compositional differences, cultural differences, or historical and cohort-based differences.

A similar strategy will be employed to answer various questions about the gender differences in the accumulation and decline in social capital across the life course. Controlling for respondent differences will help us to explain why we see gender divergence in social capital accumulation across all three societies. We can also explore the different timing of the emergence of the gender gaps (late in the U.S., early in China, and in the middle of the career for Taiwan)? This will allow us to examine precisely what factors best explain these cross-country and cross gender gaps. Overall, the findings from this and subsequent analyses offer the potential for elucidating the social, cultural, and institutional mechanisms that are generative of inequality. They can be used to understand how access to life course capitals varies across the life course, how these resources influence opportunities, and how this process ultimately affects wealth, well-being, and mortality.

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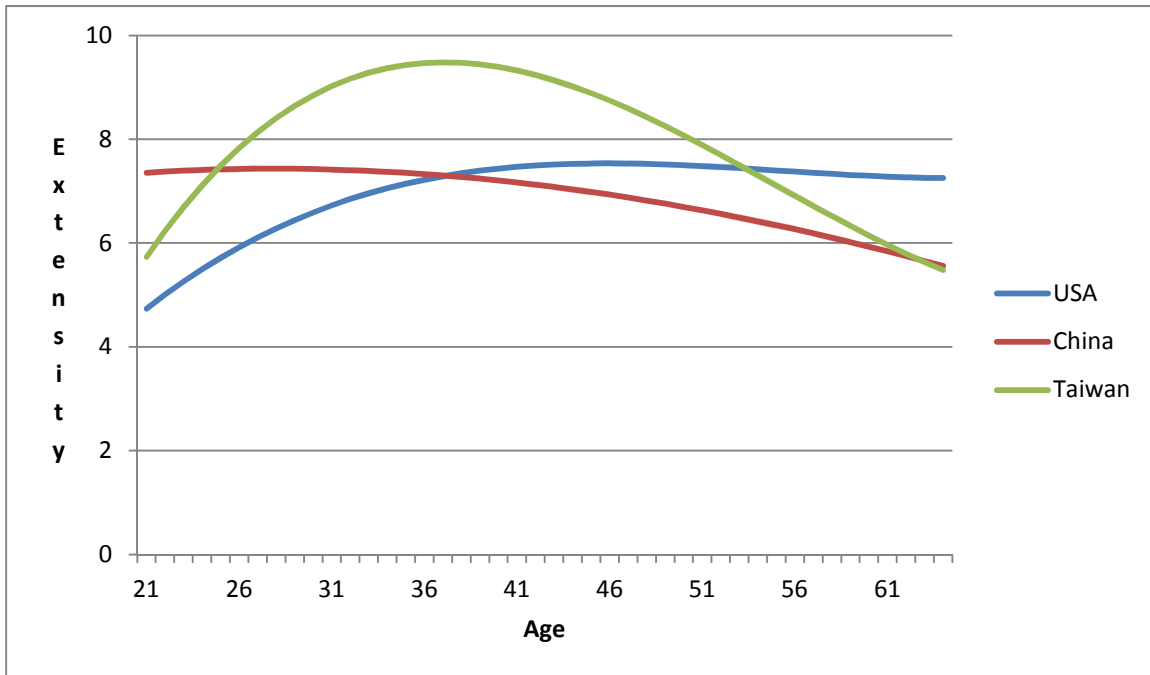


Figure 1. Occupational Network Extensivity by Age and Country

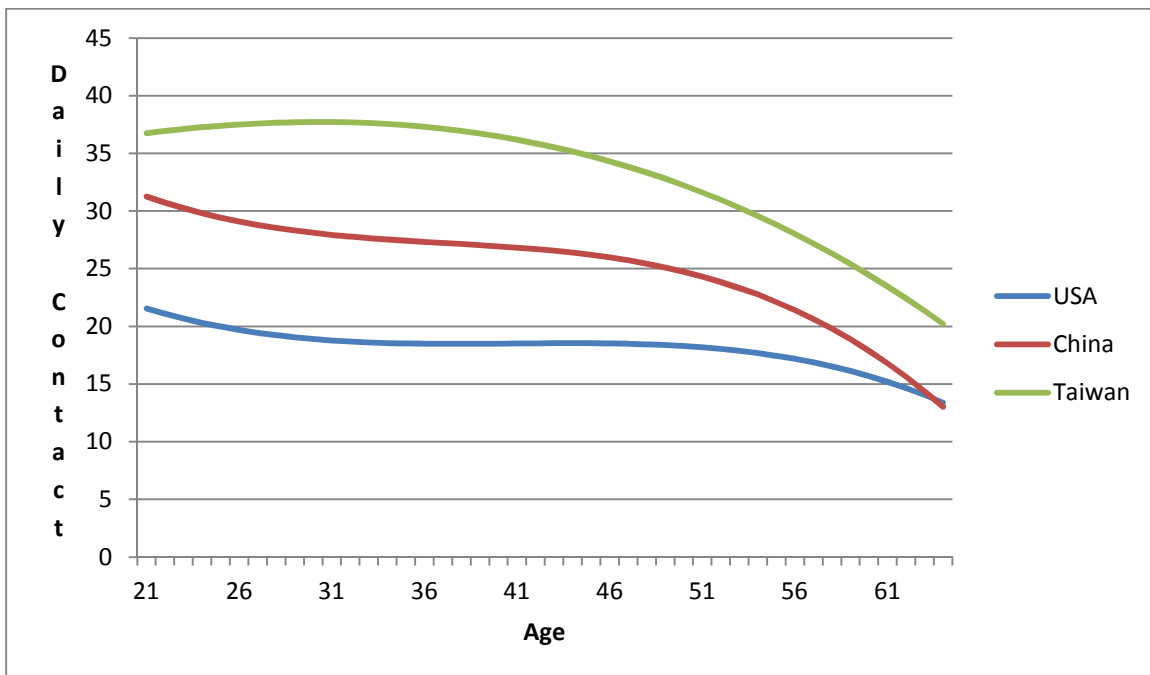


Figure 2. Daily Contact by Age and Country

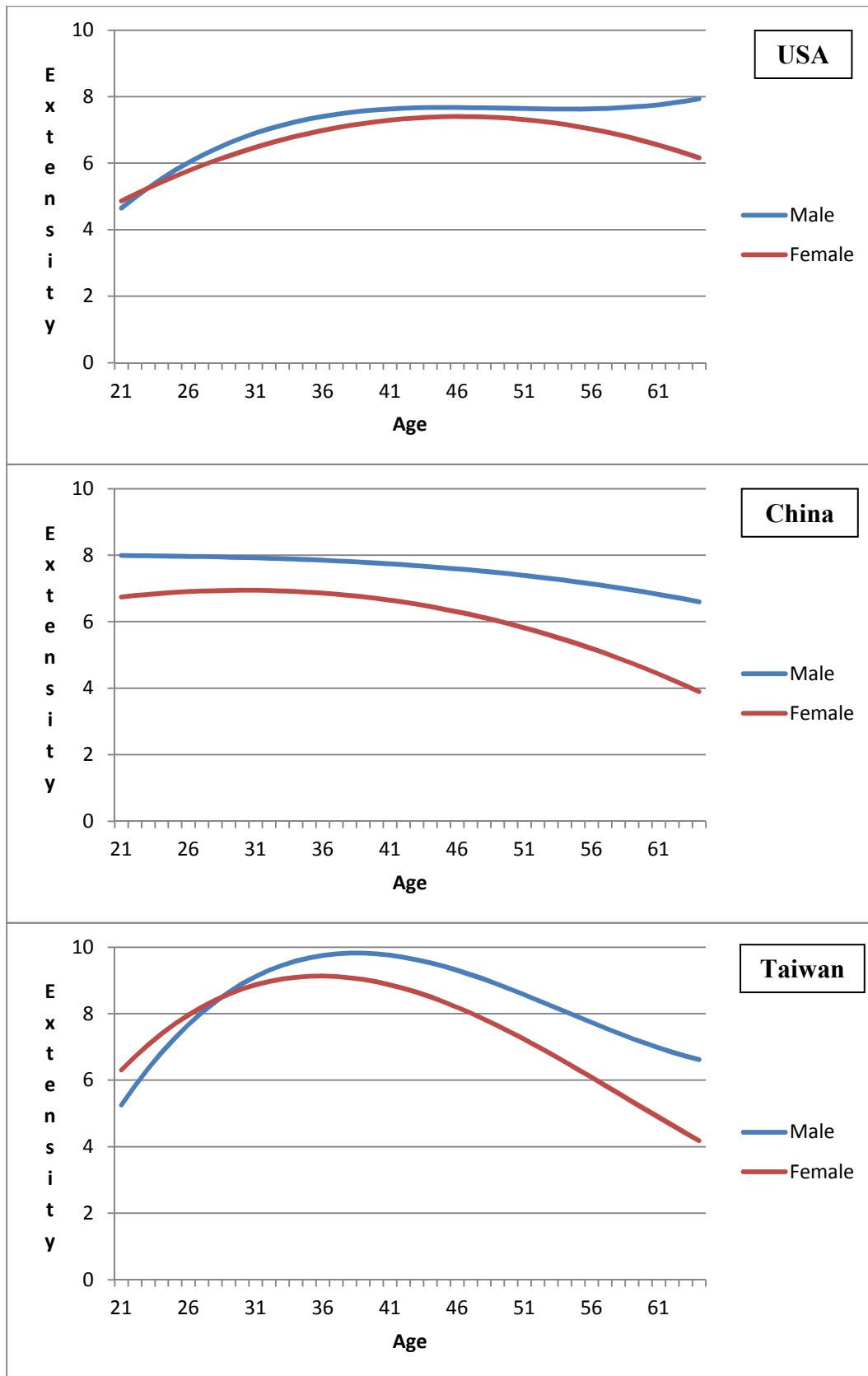


Figure 3. Occupational Network Extensity by Age and Gender: USA, China and Taiwan



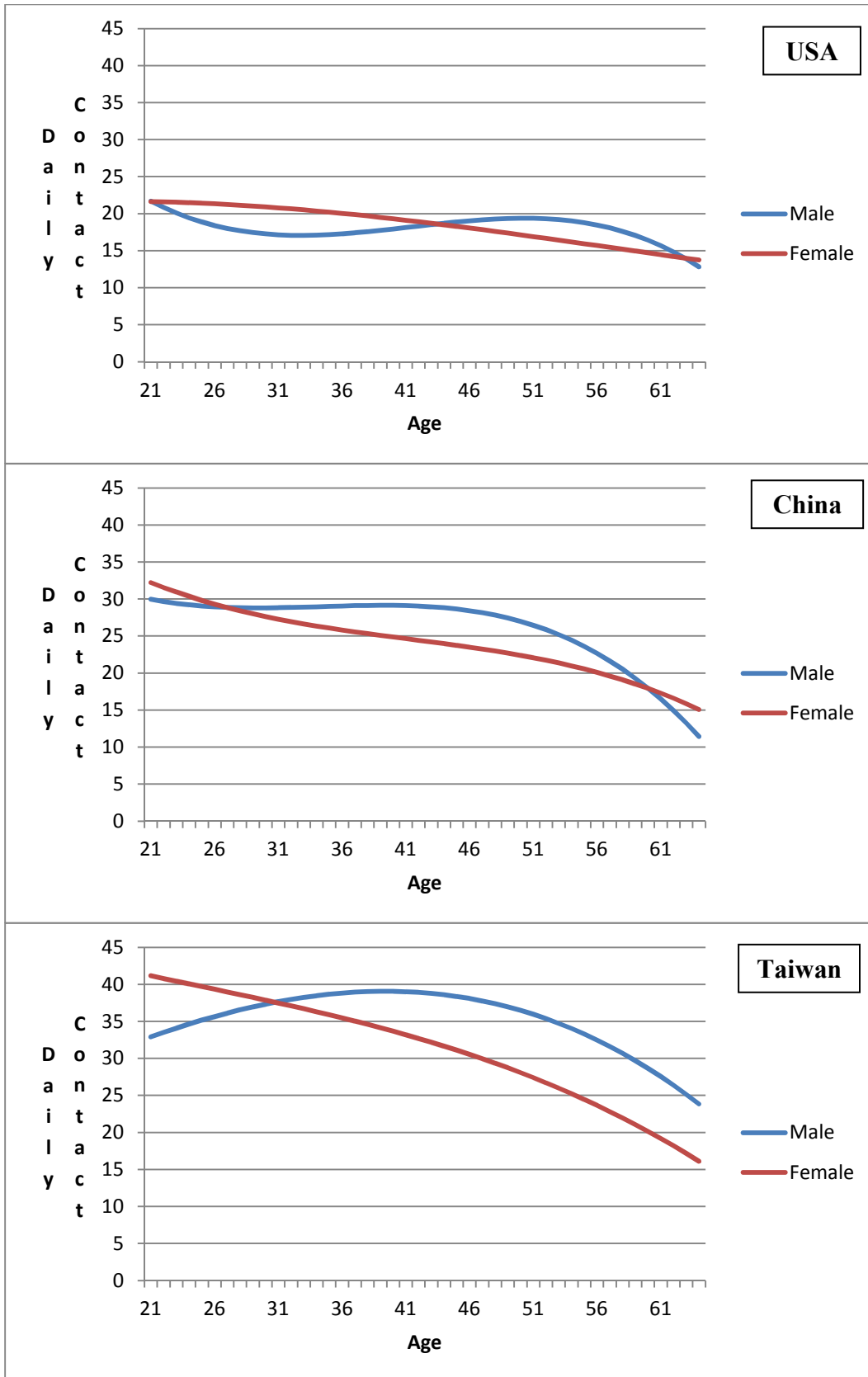


Figure 4. Daily Contact by Age and Gender: USA, China, and Taiwan