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Understanding Courtship
among Japanese Youth

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Understanding Courtship among Japanese Youth:

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Abstract

This study examines courtship and activities leading to courtship among Japanese youth. Courtship is an important topic because it influences the chances of eventual marriage. The analyses of the Japanese Life Course Panel Survey show 42 percent of young unmarried people without a partner actively sought a dating partner during the past year. The most popular activity among both men and women was asking friends for introductions, followed by drinking parties. Men tended to engage in partner-search activities when they were highly educated, had a full-time job, intended to get married, and had opportunities to meet the opposite sex. Among women, the intention to marry was the key factor in predicting the likelihood of partner-search activities, in addition to family assets. The effect of the partner search on the chances of finding a partner appears to be greatest for the men and women least likely to engage in partner searches.

Keywords: courtship, dating, Japan, youth, propensity score matching

1. INTRODUCTION

Young people experience a number of events that mark a transition to adulthood. Graduating from school and getting a first job (transitioning from school to work), finding a partner and getting married (transitioning through courtship to marriage), and childbirth and family formation (transitioning to parenthood) are among the most significant events. Many young people experience all these events, but some do not undergo these processes. Furthermore, these transitions do not always occur in an orderly fashion.

Japanese youth, like those in many other countries, face the same transitions to adulthood. Most Japanese young people experience transitional events in an orderly fashion, but notable changes have occurred in recent years. One of the most dramatic demographic changes to attract the attention of the academics, policy makers, and the mass media in Japan is the change in marriage behavior: the new habit of delaying marriage and declining marriage rate (Retherford, Ogawa, and Matsukura 2001; Tsuya and Bumpass 2004; Raymo and Ono 2007; Raymo and Iwasawa 2008a; Shirahase 2009).

The proportion of people who are single by age-group and survey year in Japan is shown in Figure 1a. The dark bars on the right represent 2005, the most recent period. The trend indicates an increasing proportion of single people in the 25 to 29 and 30 to 34 age groups for both men and women. Until the 1970s, the rate for the 25-29 age group was 46 percent for men and 18 percent for women, but the rate for the same age group in 2005 was 71 percent and 59 percent, respectively. The increase for the 30-34 age group has been even more dramatic: from 8 percent in 1950 to 47 percent in 2005 among men and from 6 percent to 32 percent among women.

Figure 2 shows the trends in the rate of the never-married reflecting the approximate proportion of adults still single at 50. The rate has increased sharply since the 1980s, especially for men. The numbers indicate that about 16 percent of 50-year-old Japanese men, almost six times the rate of 1980, are single in 2005. Figure 3 presents the trend in the mean age at which Japanese marry for the first time. The mean age has been gradually increasing for both men and women since 1975, reaching 31 for men and 29 for women by 2005. Although the mean age has been going up recently, the majority (58 percent) of women were married between the ages of 20 and 29 and the majority (59 percent) of men were married between the ages of 25 and 34 in Japan in 2008. These figures are higher than are those of many Western nations (United Nations 2010). The most popular ages of marriage for both men and women are still concentrated in the limited age range considered the most appropriate by the Japanese (Brinton 1992).

Despite the apparent increase in delayed marriages and the lowered marriage rate, no clear trend towards a weakening of interest in marriage or intention to marry is apparent among the Japanese young people. A survey of Japanese single people aged 18 to 34 conducted by the National Institute of Population and Social Security Research reports

no clear decline in the proportion of young men and women who intend to marry. Even in 2007, 87 percent of male and 90 percent of female youths replied that they would eventually get married. However, when they were asked if they would like to get married within the year, 56 percent of males and 49 percent of females replied that they would not. These percentages have remained virtually unchanged since 1982 (National Institute of Population and Social Security Research 2007b; Japanese Cabinet Office 2011).

One of the main reasons for the renewed attention given to the marriage behavior of Japanese youth is that it relates directly to fertility and the aging of the national population. While the correlation between marriage and fertility has been weakening in many industrializing nations (Kiernan 2001; Heuveline, Timberlake, and Furstenberg 2003), marriage and childbirth are still closely related events in Japan, despite the increasing incidence of premarital cohabitation, delayed marriage, and divorce (Raymo, Iwasawa, and Bumpass 2004; Raymo and Iwasawa 2008a). The most significant demographic change taking place in contemporary Japan is the declining fertility rate (Hodge and Ogawa. 1991; Atoh 2001). Fertility is relevant to the shifting balance between the working population and the retired generation and to the shrinking demographic base of support for the nation's social security system. Japan's fertility rate has been declining since around 1970. During the last 40 years, the rate has been running below the replacement rate of 2.08, represented by the bold line in the figure (National Institute of Population and Social Security Research 2010)

There are two main reasons for the decline in fertility: the decline in the number of children born to married couples, and the decline in the marriage rate. The trend which became most apparent in the recent period is the decline in the proportion of married couples with more than three children. The average number of children per married couple was 2.83 in 1962, but only 2.09 in 2005 (National Institute of Population and Social Security Research 2010). This has had a direct effect on the fertility rate. Nonetheless, Japanese couples continue to plan to have at least one child. A report by the National Institute of Population and Social Security Research (2007a) shows the distribution of the ideal number of children among married couples. The most popular responses were two (46 percent in 2005) and three children (42 percent in 2005), while those who did not want children comprised only three percent in 2005. Therefore, virtually all Japanese couples want to have children, and most eventually have them. They have recently begun, however, to have fewer of them.

The other reason for the declining fertility rate concerns marriage. As out-of-wedlock babies are still extremely rare in Japan, marriage and childbirth are closely linked, and shying away from marriage will result in a fewer number of babies born. Figure 3 shows the proportion of births outside of marriage by country. The proportion of out-of-wedlock babies in Japan was about two percent in 2008, far below the rates in Western industrial nations.

Further evidence of young people's reluctance to give birth outside of marriage is the increasing trend towards non-marital conceptions and bridal pregnancies (when a

couple's first child is born within the first eight months of marriage). The Japanese vital statistics special report shows that about one in four first-born children were classified as a product of a bridal pregnancy in 2009. Furthermore, 80 percent of the first babies of mothers aged 15 to 19 and 60 percent of first babies of mothers aged 20 to 24 were conceived before the women were married (Ministry of Health, Labour and Welfare 2011). Raymo and Iwasawa (2008b) claim that the increase in bridal pregnancies since the 1970s has been highest among women with relatively little education.

There is a sudden increase in the interest in marriage and dating among the mass media, and even among government officials and politicians. Special agencies are being set up by local governments to assist the young people with their mate-searching activities. They do not employ or endorse the old match-making system, but provide young people with socializing opportunities and parties, in order to boost marriage and eventually birth rates. Despite the increasing attention given them by the media, we know very little about Japanese dating behavior and the processes that lead to marriage (Sato, Nagai, and Miwa 2010).

This paper focuses on courtship and activities leading to courtship. It examines the processes by which young people find prospective marriage partners and the factors affecting their partner-search activities. The paper will examine the following three questions: (1) How prevalent are the activities leading to finding a partner? (2) Who is actively engaged in searching for a partner? (3) Does actively searching for a partner affect the actual probability of finding a partner?

2. DATA, VARIABLES, AND METHODS

This study uses the Japanese Life Course Panel Surveys (JLPS), which consist of follow-ups on youth who were aged 20 to 34 in 2007 and the middle-aged who were 35 to 40 in 2007. The first wave of the JLPS was conducted in Japan between January and April of 2007. Using the electoral and resident registries, the youth and middle-aged samples were drawn from the population of the respective age groups. Respondents were first sent a letter explaining that they were chosen at random and asking them to take part in the survey which involves follow-ups. If they agreed to take part in the first survey but refused to be followed-up, they were not asked to participate in the survey. The need to consent to take part in the follow-up surveys undoubtedly reduced the response rate, but it was hoped that the consent would increase the retention rate. The questionnaires were distributed by mail and picked up by the staff of a professional survey company. The response rate for the youth sample was 34.5%, yielding 3367 responses, and the response rate for the middle-aged sample was 40.4%, yielding 1433 responses.

The second wave of the JLPS was conducted from January to March of 2008. All the respondents who returned their questionnaires in 2007 were followed-up. The questionnaires were sent by mail and were collected by the staff of a professional survey

company. The retention rate was 80.7% for the youth sample yielding 2719 responses, and 86.9% for the middle-aged sample yielding 1246 responses. We will use the courtship status of waves 1 and 2, so our analysis is restricted to the respondents who completed the second wave. For the details of the survey, please see Ishida et al. 2008, Ishida et al. 2009, and Yamamoto and Ishida 2010.

The main variables used in this paper relate to the presence of a partner and partner-search activities. Both waves 1 and 2 of the JLPS asked unmarried respondents whether they had a dating partner at the time of the survey (courtship status variables). Table 1 shows the cross-tabulation of the presence of a dating partner for waves 1 and 2. Wave 1 contained 1285 non-married respondents without a partner (65 percent of the total respondents) while 699 respondents had a partner (35 percent). The chances of having a partner in wave 2 were greatly affected by the presence of a partner in wave 1. A total of 69 percent of respondents who had a partner in wave 1 had a partner in wave 2, and 12 percent of them had gotten married. These proportions among the respondents who did not have a partner in wave 1 were much lower (14 percent and 1 percent, respectively). Our analysis of courtship will be restricted to the respondents who did not have a partner in wave 1 because we wish to examine the transition from not having a partner to having a dating partner.¹ The variable relating to the partner-search was asked of all unmarried respondents. In wave 2, these respondents were asked to report all activities they had done in order to find a partner over the past year.

Other variables which are likely to influence both the likelihood of engaging in partner-search activities and the chances of finding a partner are considered in our analysis.² The first set of variables relates to the respondents' social background. The JLPS wave 1 asked a number of questions about socio-economic backgrounds when the respondents were about 15 years old. These questions are: father's social class (categorized as white-collar class, self-employed, and others (the last category is the base)), father's attendance to institutions of higher education, mother's attendance to institutions of higher education, the number of books at home, the living standard compared with other households (that is, whether it was above average), parents' home ownership, possession of a private room, possession of a piano, parents' possession of summer house, whether the respondent was brought up in a warm home environment, whether the parents were ever unemployed, and whether the parents were ever divorced.

The second set of variables pertains to the respondents' highest level of educational attainment: high school graduation or less (base category), post-secondary vocational school, junior college, and university/graduate school. The third set of variables is

¹ We exclude from our analysis eight respondents who did not have a partner in wave 1 and got married in wave 2 because these respondents were not asked the question about their partner-search activities between waves 1 and 2.

² Because we combine the youth sample and the middle-aged sample, we categorized respondents into four groups: those aged 20 to 24, 25 to 29, 30 to 34, and 35 to 40 at wave 1. The last group was used as the base category in the analysis.

related to labor market experience: respondent's entry employment status (full-time employment or not), entry occupation (white-collar job or not), employment status in wave 1 (full-time employment or not), occupation in wave 1 (white-collar job or not), individual income in wave 1, and whether the respondent worked long hours (10 hours or more per day) in wave 1. The fourth kind of variable is co-residence with parents (whether the respondent lived with a parent in wave 1). Finally, the fifth set of variables involves the circumstances of the respondents' partner-search and marriage: whether there were many of the opposite sex whom the respondent could talk and whether the respondent intended to get married in the future. The positive responses to these two questions were coded with a score of 1; otherwise, they were given 0.

The methods used in this paper are logistic regression and propensity score matching technique. Since sub-classification matching using the propensity score is not a popular method (Rosenbaum and Rubin 1983; 1984), it is described in detail in the analysis section.

3. ANALYSIS

Partner-search activities

We begin our analysis with the distribution of partner-search activities. The proportion of unmarried respondents who had engaged in any kind of partner-search activities between waves 1 and 2 was 42 percent. Men (at 43 percent) and women (at 41 percent) had very similar percentages. It is hard to judge whether these figures are high or low without any benchmark, but they are probably lower than what people would have imagined given the prevalence of the notion of partner-search in contemporary Japan.

Table 2 shows the various activities in which unmarried youth engaged while trying to find a partner.³ The most popular activity was asking friends for introductions. More than half of the men and women who engaged in at least one activity used this method. Taking part in drinking parties was another popular activity for both men and women. Using the internet and mobile phones was not a popular method, and only five percent of the men and women who did actively search a partner used commercial dating services.

Determinants of partner-search activities

We next examine the determinants of the partner-search activities: to discover what kinds of people were active in searching partners. Table 3 presents the results of the logistic regression predicting the likelihood of engaging in partner search activities. Among men, age, education, current employment, marriage intention, and opportunities to meet the opposite sex all had significant effects. Men aged 20 to 24 were more

³ The question was in multiple choice formats, so respondents are asked to report all the activities they engaged in. The proportion was calculated using the number of respondents who chose at least one activity as the denominator.

likely to search for a partner than men of other age groups. None of the social background variables exerted significant direct effects on the partner-search activities of men. Men with higher education (either junior college or university) were more likely to engage in partner-search activities than those with only high school education or less. Men who had a full-time job during wave 1 were more likely to search actively for a partner than those who had a part-time job. If men declared the intention to get married in wave 1, they were more likely to engage in a partner search. Finally, men with many or a few opportunities to meet and talk to the opposite sex were more likely to engage in a partner search.

Among women, those aged 25 to 29 were more likely to engage in partner-search activities than those of other age groups. Education or labor market experience did not have any significant effect. However, family assets (private room or second house) exerted significant direct effects. When a woman had a private room while growing up and her family had a summer house, she had a greater likelihood in engaging in a partner search. In addition, just like men, intention to get married in wave 1 had a strong effect. Women who intended to get married in wave 1 were more likely to search for a dating partner between waves 1 and 2 than those who did not.⁴

Counterfactual framework of assessing the effect of partner-search

Next, we will examine whether searching actively for a potential partner really made a difference to the likelihood of finding a partner.⁵ In order to address this question, we will use a counterfactual framework that closely follows the logic of an experimental design (Rubin 1974; Rosenbaum 1995). We define “causal effect” as the potential difference in outcomes obtained between two settings. One setting is the outcome obtained after an individual received the treatment, and the other is the outcome obtained after the same individual did not receive the treatment. Of course, the same individual cannot simultaneously be exposed to the treatment and not. This is what Holland (1986) called the “fundamental problem of causal inference.”

What we would ideally like to examine is that the difference in the outcomes between the two individuals who are exactly the same, except for the treatment, so that we know that the difference in the outcomes is due only to the treatment. In order to avoid the fundamental problem and still address the issue of causal inference, we will use the method of matching treated individuals (equivalent to treatment in an experiment) with non-treated individuals (equivalent to control in an experiment). This will ensure that the treated are, on average, identical to the non-treated, based on observed characteristics which are determined prior to the treatment (before the experiment begins). In a randomized experiment, both observed and unobserved characteristics of

⁴ We did not distinguish the causal ordering among control variables because all these variables are determined prior to treatment (see below). However, social background, education, and entry employment are determined prior to characteristics in wave 1 and are likely to influence wave 1 characteristics.

⁵ See Miwa (2010) for an earlier attempt to estimate the effect of partner search on the likelihood of finding a partner.

the treatment and control groups are assumed to be identical on average. In our observational study, we can match the individuals in the two groups based only on observed characteristics (Rubin 1977; Rosenbaum 1995).

The counterfactual framework requires that we specify the treatment, outcome, and control variables used to match the individuals in treatment and control. Figure 4 describes our analytic strategy for estimating the causal effect of treatment within the counterfactual framework.⁶ Our treatment consists of partner-search activities between waves 1 and 2, and our outcome is the presence of a dating partner in wave 2. Our control variables are the observed characteristics of the individuals prior to treatment. They include social background variables, education, labor market experience up until wave 1, co-residence with parents in wave 1, and marriage intention and opportunities to meet the opposite sex in wave 1.

Our analytic strategy requires the following steps. First, we estimate the probability of receiving treatment by running a binary logistic regression model predicting the probability of engaging in partner-search activities using observed characteristics of the individual prior to treatment. These probabilities comprise the estimated propensity scores for each individual in our study. Second, we examine the distribution of propensity scores for the treatment and control groups, making sure that their distributions follow our expectations: the treatment group should have, on average, higher propensity scores than the control group. Third, based on the propensity scores, treatment cases are matched to control cases so that the two have the balanced distributions of the covariates. Of the possible methods of matching cases, we use the exact matching and sub-classification methods (Rosenbaum and Rubin 1983; 1984). We match treatment and control cases exactly on gender and then group individuals into strata of estimated propensity scores, so that treatment and control cases have very similar, if not identical, propensity scores. Fourth, we examine to make sure that the treatment and control groups have balanced distributions of covariates within the strata.

Fifth, we examine the heterogeneity in the treatment effect. We ask whether the effect of treatment (that is, the effect of the partner search) is the same for individuals with differing propensities for engaging in partner-search activities. Following Brand and Xie (2010), we distinguish between positive selection effect and negative selection effect.⁷ For the positive selection effect, the effect of the partner search is most pronounced among individuals who are most likely to engage in partner-search activities, because these individuals are likely to be fully committed to finding a partner and aware of the benefits of actively looking one. The presence of a negative effect implies that the effect of the partner search is strongest among individuals who are least likely to engage in partner-search activities probably due to a very low probability of

⁶ This figure and the procedure are constructed following the discussion by Harding (2003).

⁷ For examples of the positive and negative selection, please see, for example, Bryk, Lee, and Holland (1993), DiPrete and Engelhardt (2004), Morgan (2001), and Tsai and Xie (2008).

their finding a partner (especially when they do not actively search for one); partner-search activities are likely to make a large difference for these people.

Propensity score matching

Figures 5a and 5b present the distributions of propensity scores for the treatment group and the control group among men and women. In estimating propensity scores, we included in the logistic regression a wide range of covariates that are available in the survey (as described in the variable section). As expected, among both men and women, the distribution of the propensity scores for the treatment group is skewed toward the higher end, while that for the control group is skewed toward the lower end. These distributions imply that the individuals in the treatment group tend to have a higher probability of engaging in partner-search activities than those in the control group. The other important observation is that there is not much overlap between the two distributions at the very high and low ends. In other words, we are not able to match individuals in treatment group with very high propensity score with those in the control group, and we do not have any matching cases in the treatment group where the propensity score is very low.

Based on these propensity scores, we constructed four propensity score strata as shown in Table 4. In constructing the strata, we excluded the non-matching cases with very high and very low scores, restricting our analysis to the region of common support. The region of common support is the overlap region containing both treated and control cases.⁸ Table 4 shows that the mean propensity scores are not significantly different between the treatment and the control group within each stratum for both men and women. The table also shows that the mean scores for both the treatment and control groups are very different across strata.

We can now assume that treatment and control cases are the same based on observed characteristics within the strata. Figures 6a and 6b show the main findings of our study. The effects of engaging in partner-search activities on the likelihood of finding a partner in wave 2 are shown in separate propensity score strata. Let us begin with men (Figure 6a). The effects of partner-search activities among men who are likely to engage in such activities (those in strata 2, 3 and 4) are negative: the active search for a partner actually appears to reduce their chances of finding one, rather than to increase them. Since the effects in strata 2 to 4 are negligible, we may probably assume that there is no apparent effect for men who are likely to engage in partner-search activities. However, among men who are least likely to engage in partner-search activities (those in stratum 1), we find a positive effect. This finding is consistent with the negative selection effect which suggests that partner-search activities make a large difference for those least likely to engage in such activities.

For women (Figure 6b), we find a similar story. While the effect of the partner search is negligible or negative among women most likely to engage in such activities (those in

⁸ By adopting the common support region, we excluded 11 male cases and 40 female cases.

strata 3 and 4), the positive effect of the partner search is most pronounced among women who are less likely to search for a partner (those in strata 1 and 2). Again, we find that the effect of treatment is not homogenous across people in different propensity score strata. An active search for a dating partner seems to increase the likelihood of finding one only for those who are least likely to engage in that activity.⁹

Figures 7a and 7b present the chances of finding a partner by treatment and propensity score strata for men and women. The differences in the percentages between those who did and did not engage in active search for a partner were used to compute the figures in Figure 6. These final figures show that for the men and women who did not actively search for a partner (those in the control group), their chances of finding a partner is clearly reduced when they were least likely to engage in partner-search activities (see scores in stratum 1). So for the men and women least likely to search for a partner, their chances of finding one are very low if they did not actually look for a partner. The benefit of an active partner search is the greatest among the men and women least likely to search for a partner; for them the likelihood of finding a partner is increased through partner-search activities. In short, we find evidence of a heterogeneous treatment effect and a negative selection effect.

SUMMARY AND CONCLUSIONS

This paper has focused on the question of courtship and activities leading to courtship. Courtship, or the existence of a stable dating partner, is an important topic because it influences the chances of eventual marriage. The result from the analyses of the Japanese Life Course Panel Survey showed that 69 percent of the respondents with a partner in wave 1 still had a partner and 12 percent were married a year later. For respondents without a partner in wave 1, the chances of having a partner or getting married decreased sharply to 14 percent and 1 percent, respectively. Courtship is an important first step on the path to marriage. The major question then deals with how these young people go about finding a partner.

This paper first examined the prevalence of partner-search activities among Japanese youth. Our analyses of the Japanese Life Course Panel Survey indicated that 42 percent of young unmarried people without a partner actively sought a dating partner during the past year. The most popular activity among both men and women was asking friends for introductions, followed by drinking parties. Using internet, mobile phones, and commercial dating services were not popular at all.

When we asked what kinds of people actively searched for a partner, we found that men between 20 and 24 and women between 25 and 29 were more likely to search for a partner than were men and women of other age groups. Men tended to engage in partner-search activities when they were highly educated, had a full-time job, intended

⁹ For both men and women, none of the effects of partner-search is significant at the 5 percent level because neither stratum has a large number of cases.

to get married, and had opportunities to meet the opposite sex. Among women, the intention to marry was the key factor in predicting the likelihood of partner-search activities, in addition to family assets.

We examined the effect of partner-search activities on the likelihood of finding a partner within the counterfactual framework. We defined treatment as partner search activities between waves 1 and 2 and outcome as the presence of a dating partner in wave 2. We tried to assess whether there were heterogeneous treatment effects. The results suggest that the effects of the partner search were not homogenous across groups with differing likelihoods of engaging in partner-search activities for both men and women. The benefit (that is, finding a partner) appears to have been greatest for the men and women least likely to engage in partner searches. Among those likely to look actively for a partner, the active search did not produce a positive impact on their chances of landing a dating partner.

More than 40 percent of young Japanese were engaged in activities to find a dating partner. Nonetheless, our analyses suggest that we should not overestimate the effect of partner-search activities on the likelihood of finding a partner. The youth most likely to engage in partner-search activities tend to be more successful in finding partners than are those least likely to engage in them, regardless of whether or not they actively looked for a partner. In contrast, among people least likely to engage in partner-search activities, their chances of finding a partner were very low if they were not actively looking for a partner. The effect of partner search seems to be most effective for this group, and an active partner-search is likely to make a large difference for these people.

We understand that our analyses have several limitations. First, the use of the counterfactual framework based on propensity score matching does not control for unobserved covariates which may affect the treatment and control groups (Rosenbaum 1995; Rosenbaum and Rubin 1983; 1984). If the two groups differ by unobserved causal factors (such as personality traits), our estimates of the effect of treatment (partner-search activities) on the outcome (finding a partner) may be biased and may ignore heterogeneity caused by unobserved covariates. Second, we were not able to disaggregate the effect of partner-search by the types of partner-search activities. Ideally, we would like to know the effectiveness of the type of activities, but the number of cases for each individual activity was too small to conduct disaggregated analyses (cf. Miwa 2010). Third, if many more people become actively looking for a partner, including those who are least likely to engage in such activity, the negative selection effect may not be present. The effect of partner-search is likely to be dependent on the number of people who actually engage in active search.

Finally, we can draw several implications from our analyses. Having a partner has a strong influence on the chances of eventual marriage. Among respondents who had a partner in wave 1, about a quarter were married in wave 2 or 3, while the same percentage was substantially lower at 2 percent among respondents who did not have a partner in wave 1. Therefore, in order to boost marriage rate and eventually birth rate,

courtship formation is the key process.

We learned from our analyses that partner-search activities increased the chances of finding a partner for young people least likely to search for a partner, so there are benefits of search activities for some people. We also learned that good education and full-time entry employment were important factors increasing the likelihood of engaging in partner-search activities among men. Furthermore, for both men and women, intention to get married was the strongest predictor of whether people actively look for a partner. Although education and labor market positions did not exert direct effect on the likelihood of active partner-search among women, they affected women's intention to get married; Women with university education and white-collar employment were more likely to have intention to get married than those without.¹⁰ Therefore, securing early socio-economic foundation of young people is closely linked to intention to get married which in turn affects courtship formation and marriage prospects. All these results imply that earlier life events such as education and employment are correlated with later events about family formation. Successful completion of higher education and entry into full-time or white-collar employment seem to have long-lasting influence on courtship and marriage prospects. Courtship and marriage among Japanese youth must be understood within the sequence of earlier life events and transitions.

¹⁰ This observation is based on the analysis of running a logistic regression of marriage intention on all other covariates observed prior to the treatment (table not shown).

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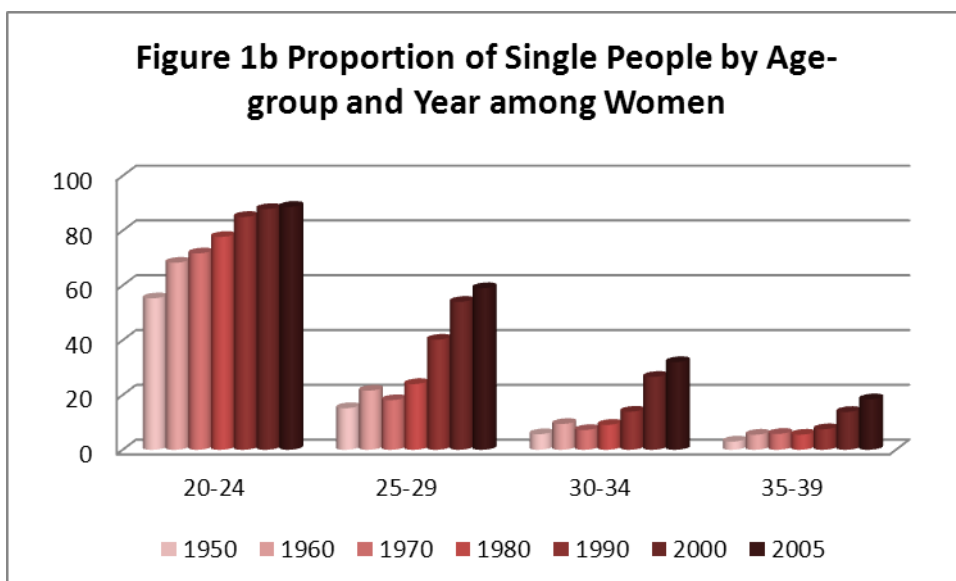
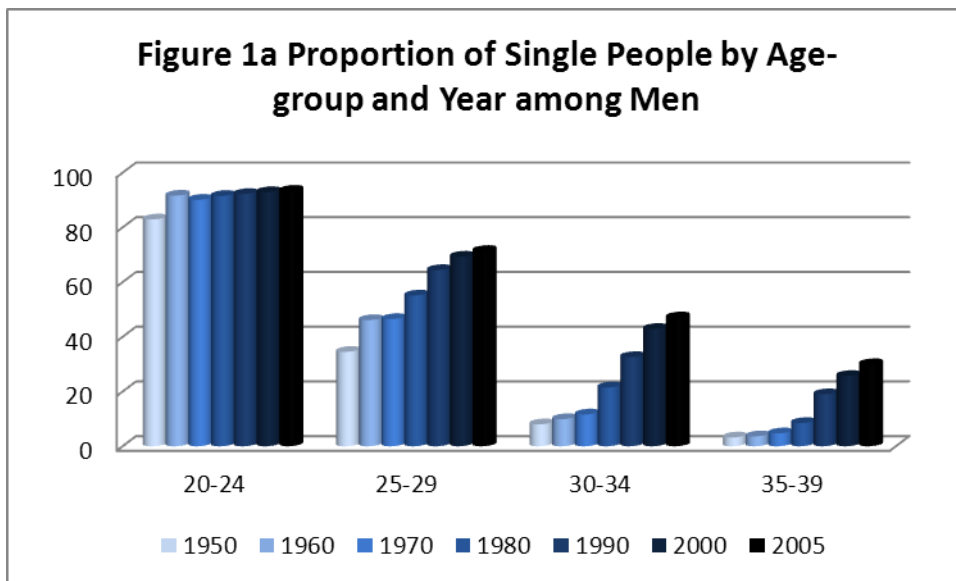
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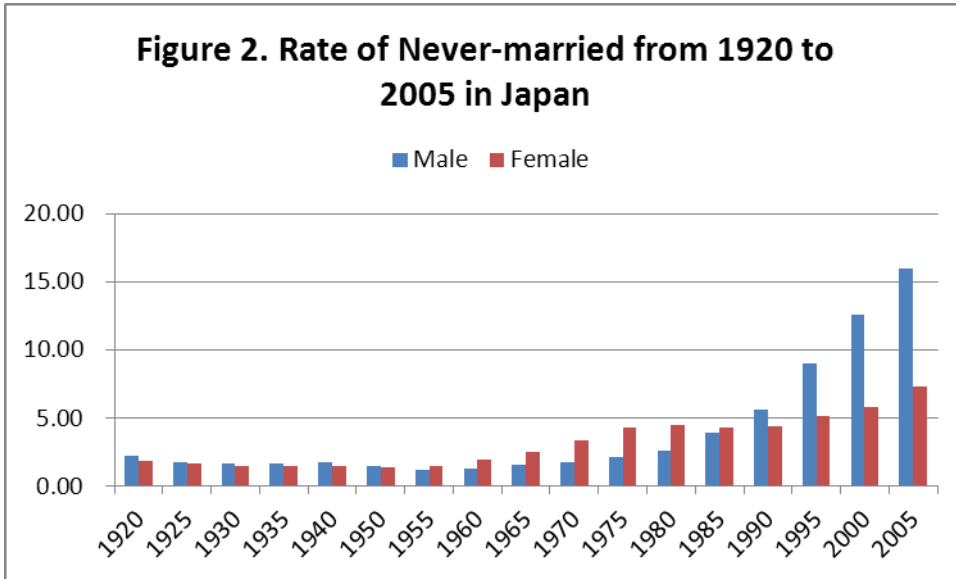
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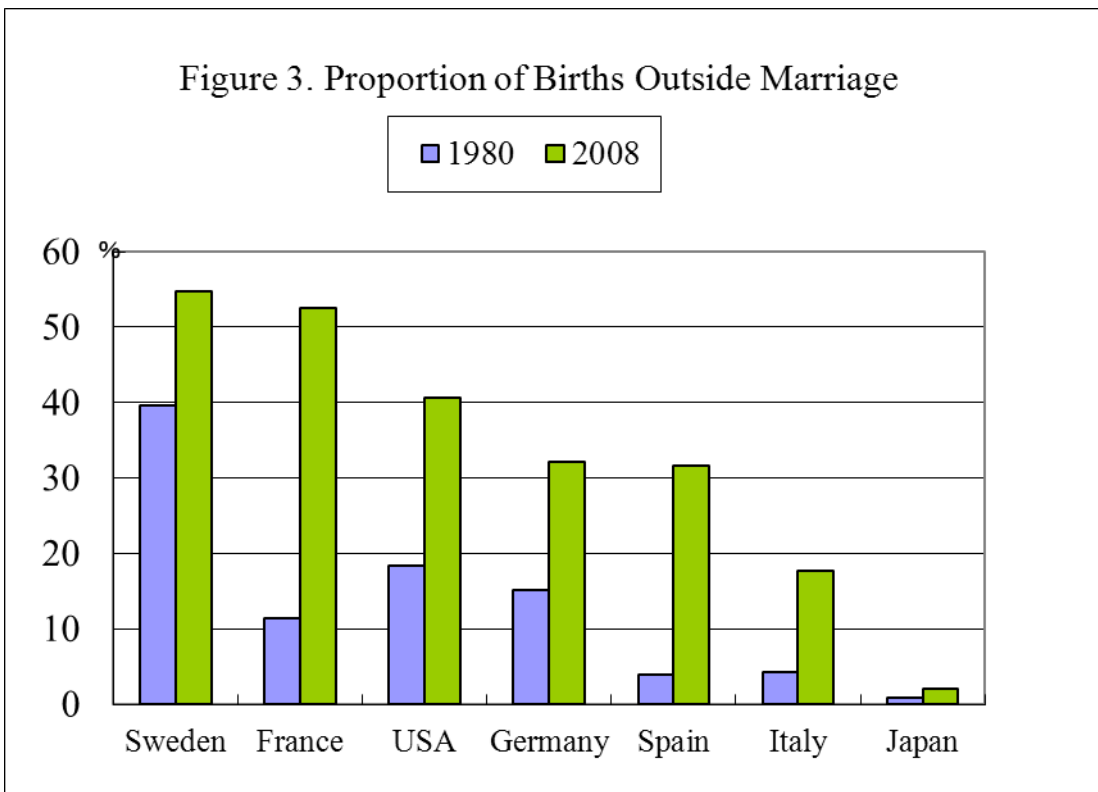
Figures and Tables



Source: *Population Census of Japan* (Statistics Bureau, various years)



Source: *Latest Demographic Statistics 2010* (National Institute of Population and Social Security Research 2010)



Source: *Statistical Abstract of the United States 2011* (U.S. Bureau of the Census. 2011)

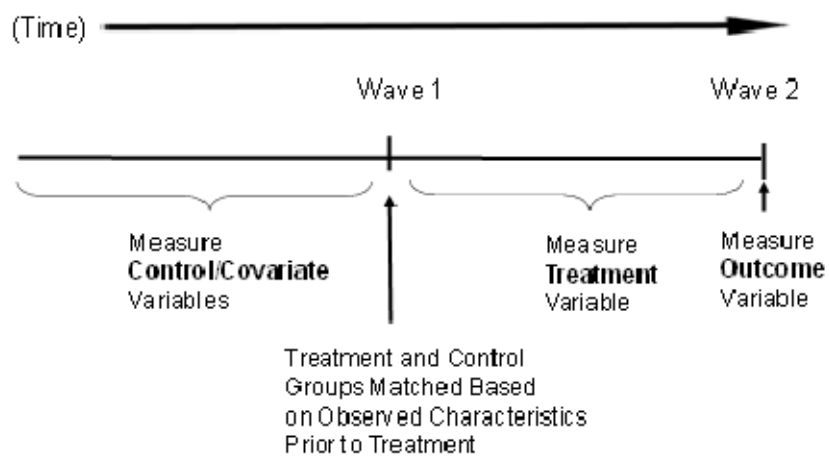


Figure 4 Causal Effect in the Counterfactual Framework

Figure 5a Distribution of Propensity Scores for the Treatment and the Control Group among Men

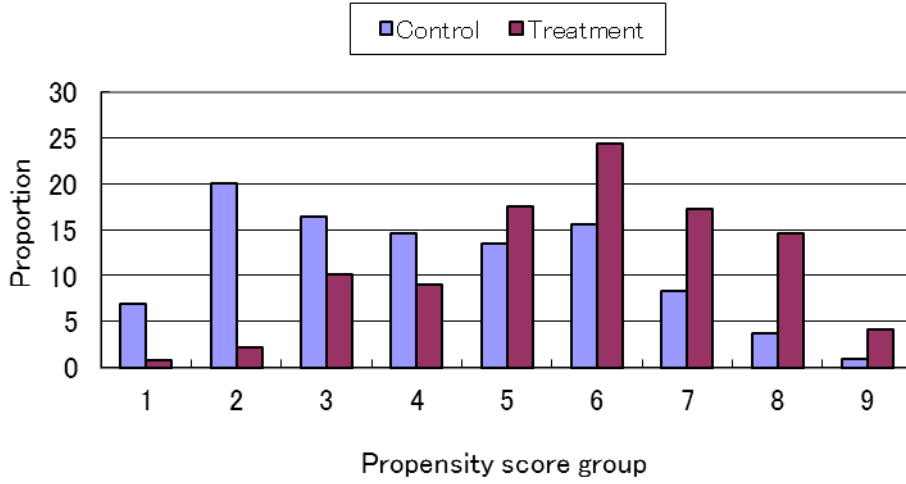


Figure 5b Distribution of Propensity Scores for the Treatment and the Control Group among Women

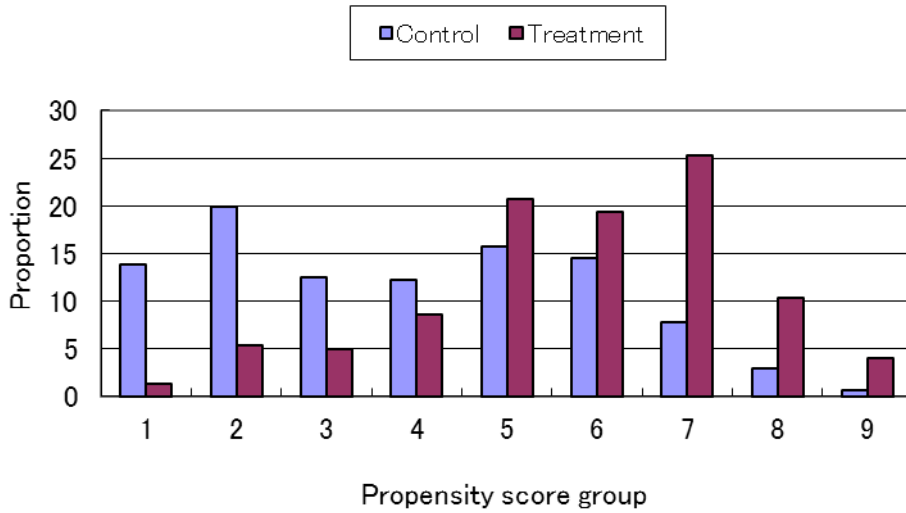


Figure 6a Difference in the Effect of Partner Search by Propensity Score Strata among Men (%)

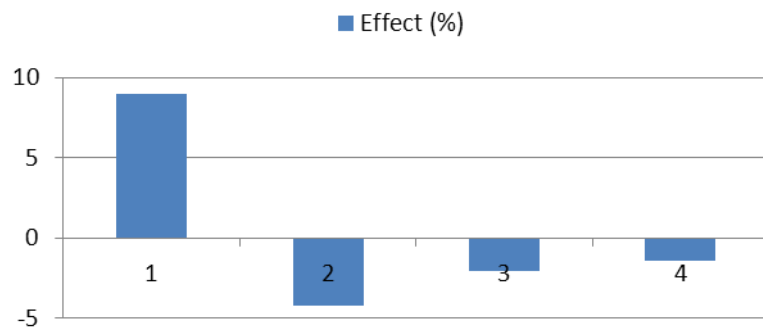


Figure 6b Difference in the Effect of Partner Search by Propensity Score Strata among Women (%)

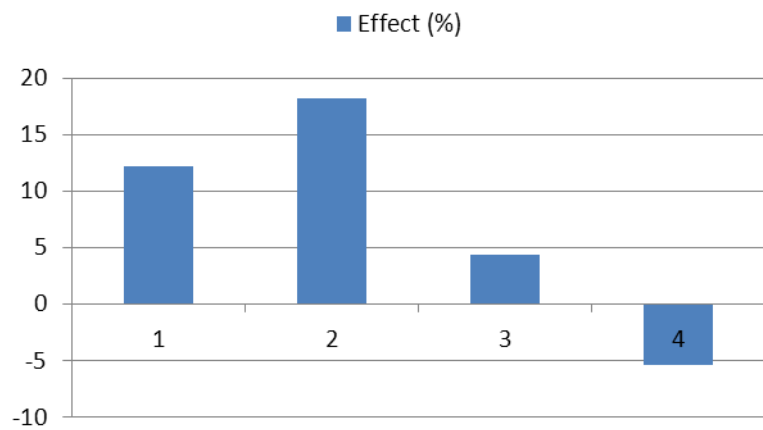


Figure 7a Chances of Finding a Partner by Treatment by Propensity Score Strata among Men (%)

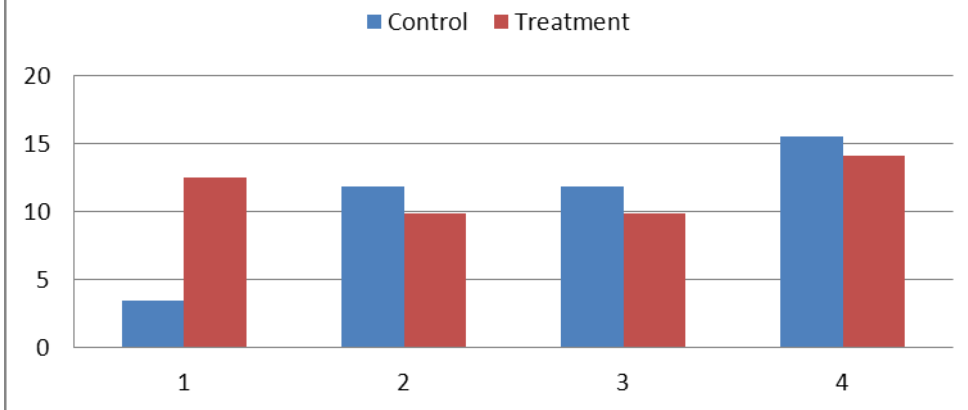
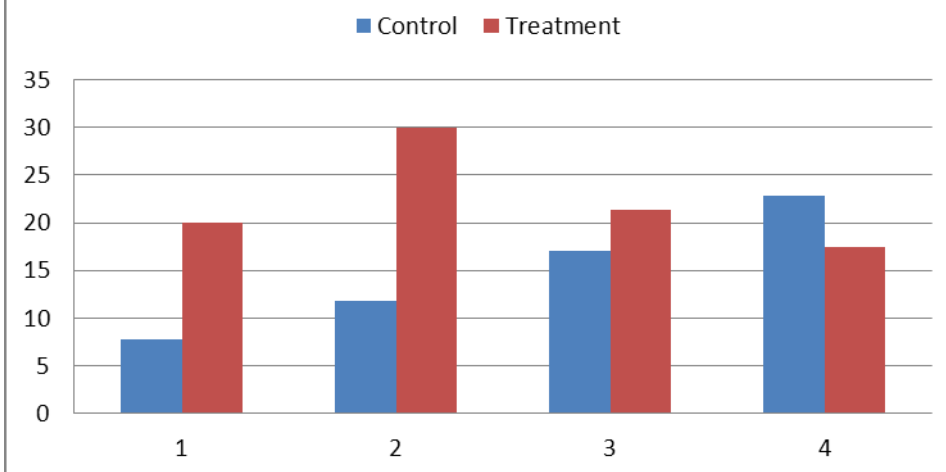


Figure 7b Chances of Finding a Partner by Treatment by Propensity Score Strata among Women (%)



Wave 1	Wave 2			total
	no partner	partner	married	
no partner	1103 (85.8)	174 (13.5)	8 (0.6)	1285 (100.0)
partner	133 (19.0)	485 (69.4)	81 (11.6)	699 (100.0)

	Male	Female
Ask friends for introduction	55	59
Take part in drinking parties	45	44
Ask colleagues and boss	23	21
Take part in enrichment lessons and hobby meetings	15	17
Take courses and join club activities	14	9
Use internet and mobile phone	14	7
Ask parents and siblings	8	12
Take part in arranged dates	5	6
Use dating services	5	5

Table 3 Logistic Regression Predicting the Likelihood of Engaging in Partner Search Activities

Variables	Men		Women	
	Estimate	Standard error	Estimate	Standard error
Age group				
20–24 years old	0.598 +	0.332	0.088	0.337
25–29 years old	0.192	0.309	0.524 +	0.319
30–34 years old	0.097	0.286	0.020	0.324
Father's class				
white-collar	-0.091	0.234	0.085	0.261
self-employed	0.050	0.256	-0.413	0.293
Father's education	0.181	0.259	-0.271	0.263
Mother's education	0.272	0.276	0.370	0.277
Number of books	-0.073	0.062	-0.019	0.072
Living standard	-0.234	0.237	0.113	0.262
Home ownership	0.078	0.228	-0.111	0.263
Assets				
own room	-0.153	0.217	0.408 +	0.240
summer house	0.517	0.698	1.453 +	0.771
piano	0.146	0.220	-0.331	0.227
Warm home	0.072	0.120	0.138	0.125
Parent not unemployed	-0.046	0.249	-0.418	0.290
Parent not divorced	-0.358	0.376	0.457	0.423
Education				
post-sec vocational	0.486 +	0.282	-0.415	0.324
junior college	1.749 *	0.868	0.190	0.324
university	0.543 *	0.247	0.020	0.300
Entry job full-time	0.166	0.261	0.267	0.267
Entry job white-collar	-0.095	0.250	-0.189	0.290
Wave 1 job full-time	0.828 **	0.284	0.039	0.281
Wave 1 job white-collar	-0.471 +	0.243	0.311	0.290
Wave 1 long working hours	0.231	0.217	0.029	0.281
Income	0.001	0.001	0.127	0.104
Wave 1 co-residence	0.303	0.227	0.130	0.258
Wave 1 marriage intention	1.442 **	0.226	1.834 **	0.259
Wave 1 opportunity to meet	0.551 **	0.189	0.271	0.204
Constant	0.938	0.785	-0.929	0.703
Log-likelihood chi-square	727.0976		615.4121	
Probability	0.000		0.000	
sample size	615		533	
Note: The estimate of income is multiplied by 100.				
+ p < .10; * p < .05; ** p < .01 (two-tailed tests).				

Table 4. Mean and the Number of Cases by Propensity Score Strata					
Strata	Mean		Cases		t-test
	Treatment	Control	Treatment	Control	
Men					
[.00, .20]	0.142	0.135	8	86	0.407
[.20, .40]	0.300	0.293	51	108	0.678
[.40, .60]	0.508	0.503	112	101	0.549
[.60, 1.00]	0.704	0.685	92	45	1.607
Women					
[.00, .20]	0.132	0.114	15	104	1.563
[.20, .40]	0.322	0.304	30	77	1.416
[.40, .60]	0.497	0.491	89	94	0.724
[.60, 1.00]	0.685	0.684	86	35	0.104

東京大学社会科学研究所パネル調査プロジェクトについて

労働市場の構造変動、急激な少子高齢化、グローバル化の進展などにもない、日本社会における就業、結婚、家族、教育、意識、ライフスタイルのあり方は大きく変化を遂げようとしている。これからの日本社会がどのような方向に進むのかを考える上で、現在生じている変化がどのような原因によるものなのか、あるいはどこが変化してどこが変化していないのかを明確にすることはきわめて重要である。

本プロジェクトは、こうした問題をパネル調査の手法を用いることによって、実証的に解明することを研究課題とするものである。このため社会科学研究所では、若年パネル調査、壮年パネル調査、高卒パネル調査の3つのパネル調査を実施している。

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東京大学社会科学研究所パネル調査プロジェクト ディスカッションペーパーシリーズについて

東京大学社会科学研究所パネル調査プロジェクトディスカッションペーパーシリーズは、東京大学社会科学研究所におけるパネル調査プロジェクト関連の研究成果を、速報性を重視し暫定的にまとめたものである。

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