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特　　集

『第 5 回全国家庭動向調査（2013年）』の個票データを
利用した実証的研究（その 2 ）

Common Family Boundaries: Changes and Determinants of Married Women's Perception

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The author examined married women's perception of common family boundaries, utilizing the pooled data of 1st (1993) to 5th (2013) National Survey on Family in Japan conducted by the National Institute of Population and Social Security Research. Logistic regression analysis on whether or not one included as "family" each type of kin (wife's and husband's parents, wife's and husband's siblings, son and his wife, and daughter and her husband) indicated, among other findings, that higher education contributed to a more exclusive boundary, while having children tended one towards including children and their spouses but excluding parents and siblings as family. Logistic regression decomposition analyses revealed that individual changes and cohort replacement equally contributed to the increase in perceiving siblings as family, whereas individual changes explained more than 70% of the changes for other types of kin.

I. Introduction

According to the National Character Survey, since the 1970's, the highest percentage of people surveyed have named "family" as the most important thing in life in an open-ended question, among other responses, such as "life, self, health" and "love, spirit, happiness" (Institute of Statistical Mathematics 2014). This subjective claim of importance is consistent with the impact of the legal and social definition of "family" on one's life. Obviously, the rights to which one has access as well as obligations depend on one's family membership defined by law and social norms, regardless of how one feels subjectively. The right to private information about a particular person depends on whether one is "family". Even if not required by law, one's relationship as family is used as a screening criterion in practice. For example, whether one is allowed to see a patient in an intensive care unit in the hospital, whether one could be informed about the details of medical conditions, to claim a particular person as beneficiary for a life insurance, and so on are all decided on the basis of "family relationships," demarcating a clear line between those who are *in* a family and those who are not. Campaigns to promote consumption are likewise built on family

membership, albeit at times less stringently than what is defined by the law. Family gym membership, family credit card, family discount for mobile phone, and so on and so forth fill advertisements today. Obligations are likewise built around family membership.

The legal definition of the family on the basis of blood and marital ties might seem an unambiguous criterion. At the same time, the subjective definition of the family is more intricate and has implications for one's everyday life and emotional and social well-being. A fuller consideration of the "definition of the family" cannot be confined to the legal realm and we should pay attention to the different levels and realms in which boundaries between family and non-family are marked. In the least, we need to consider these realms: structural, as pertains to the law and policies; normative, as pertains to common practices and general beliefs; and the personal, as pertains to the individual's subjective definitions and perceptions. These realms are in reality intertwined, but they are also analytically distinct. This paper will focus on the subjective definitions through examining quantitative data from survey, specifically with respect to whether a kin member is considered family or not.

Even among people who are connected via blood ties and/or marriage sanctioned by law, there is a boundary that separates one type of relationship from another. For example, a daughter's husband might not be one's family, while a son's wife might be. Common expressions of "marrying off" one's daughter, "giving away" one's daughter to her spouse and his family, and "daughter-in-law/*yome* coming into [the groom's] family" indicate that the boundary is understood differently for married sons and married daughters. Likewise, it is conceivable that one might consider grandparents as "family" but not their siblings. Changes might also occur over time. When one is a child, his/her parents tend to be the closest kin. If one marries, then, the spouse's parents and siblings enter into one's world. In addition, a child's marriage might or might not change the perception of "family".

When referring to the "subjective definition" of family, one is therefore not just referring to a simple question of inclusion and exclusion but a drawing of the boundary in terms of a few dimensions, namely, function, characteristics, and substance (who are included/what relationships are included). The complexity in the drawing of boundaries to differentiate family from non-family among kin is an important sociological question because mapping these boundaries provides insights into intricate patterns of social interactions and kin relationships. It also shows the hold of, or freedom from, norms embedded in the family system with the legacy of the patriarchal *ie* system as well as the family registration system of *koseki* which sets limits to changes of family norms and practices. All these in turn have implications for community development as well as social policies, especially those targeting "family", as legally or normatively defined.

Preliminary analyses of the 1st (1993) to the 5th (2013) National Family Survey of Japan conducted by the National Institute of Population and Social Security Research (2015) show that there is an expanding trend in the common boundaries of family among married women (see Figure

1). In other words, more and more types of kin are considered to be one's "family member". For example, the proportion responding that a "married daughter" is generally considered as one's family member regardless of whether or not they live together increased from 35.0% in 1993 to 71.0% in 2013. The figures were 20.0% and 42.7% for husband's siblings. The logical questions to ask would include first, what factors determine such perception of boundaries of common families, and second, what factors bring about the overtime changes observed. Taking the lead from these questions, I will explore two issues in this paper. First, I will examine how people's understandings of normative family boundaries vary by such socio-economic characteristics as the level of education, and familial experiences such as having children, having siblings, and living with parents. Second, I will chart how the perception of family boundaries changes over the years and apply the decomposition method to identify the underlying forces of such changes, specifically examining whether the changes are brought about by cohort replacement (i.e., changes attributed to older cohort with particular ideas being replaced by a younger cohort at a later time point who might have different ideas) or by individual changes (the same group of people holding certain ideas come to hold different ideas with the passage of time).

II. Extant Studies in the Perception of Family Boundaries

A few quantitative studies to date have provided some insights on how people draw family boundaries. Such studies include attempts at differentiating levels of identifying "family boundary" and those that look at the correlates of how people define family subjectively.

Nishino (2000) differentiates among three analytical levels in looking at family boundary: normative, common and person-specific. Normative boundary is understood to be the institutionalized notion of family which individuals have internalized, viz. people's belief of what family boundary ought to be. Common boundary captures what people perceive family to be generally. Person-specific boundary is what individual thinks about family boundary based on his/her personal experiences. However, Nishino found that the frequency of interaction or whether one lived with a person did not correspond exactly to the person-specific boundary. Further, there was a lot of overlap in common family boundary and person-specific boundary for parent-child relationship. For example, women who perceived their mother as their family also tended to perceive, generally, daughter and her mother as family, and vice versa. Likewise, those who included their mother and father within their person-specific boundary tended also to think that siblings and grandparents were family members generally; however, they did not necessarily include non-kin such as boarders, maids or friends as family members.

Other studies examined either perception of common boundary or person-specific boundary, to use Nishino's terms. Fujimi and Nishino (2004) examined whether or not people regarded particular people to whom they were related as their family, i.e. person-specific boundary, based on the 1998

National Family Research of Japan (NFRJ). They found that the following kin members were more likely to be considered as family members: those who were closer to the person in kinship relationships, those connected by biological ties more than marriage ties, the younger generation more than older generation, and lineal rather than collateral kin.

Nonoyama (2007) undertook analyses of the 1998 NFRJ data, focusing on the relationship between parents and married children who were not living with parents in order to explore his claim that people's perception of family boundary is based not so much on structural or normative factors, but that it reflects individual preferences as indicated by the frequency of contact. Among children, he found that the proportion perceiving fathers and mothers as family members was lower for those in their 50s, and that daughters tended to see their own parents as family members more than they did their parents-in-law. Among parents, the percentage perceiving sons as family members was slightly higher than that for daughters but the difference was less than 10%. In separate analyses, he included the presence or absence of parents/parents-in-law, of spouse, level of contact with the mother, and so on. Overall, he argued for a lack of any clear patterns that support patrilineality.

Different from the foregoing studies on person-specific boundaries, Nagayama and Ishihara (1990), based on three regional surveys conducted in the mid-1980s, examined how married women perceived common familial boundaries.[1)] They found that relatively siblings tended not to be but parents and children tended to be considered as family. However, parents were perceived as family if they were living together, but children were perceived as so regardless of whether or not they were living together (i.e. unconditionally).[2)] Nagayama and Ishihara identified variations in how family was perceived: one group included the oldest son and husband's parents unconditionally, and daughter and wife's parents if they were living together; another group included the oldest married son, married daughter as well as husband's and wife's parents regardless of whether they lived together. They interpreted the former as reflecting the embracement of "traditional Japanese 'ie' norm" and the latter the adoption of new norms of family membership based on affection.

Nishioka and Saitsu (1996) also examined how common familial boundary was perceived by married women, drawing on the 1993 National Survey on Family in Japan, the same survey analyzed in the current paper. They focused on differences in perception by the respondent's age,

1) In answering the question on common family boundaries, respondents might think about actual persons in the categories and/or imagine such persons in their life rather than thinking about a typical family (Nonoyama 2007). In fact, group interviews on the National Survey on Family in Japan questionnaire confirmed that many women answered the questions based on their own situation (National Institute of Population and Social Security Research 2016).

2) Nonoyama (2007) warns that these questions reflect unspoken assumption about family form held by family sociologists involved. He argues that focusing on whether one lives together, especially for the oldest son, assumes a typical form of family and unfairly leads the respondents to think in a particular framework. In contrast, Yamada (1994) listed various relational arrangements, including financial and legal arrangement. From a similar perspective, Powell, et al. (2010) analyzed how the various arrangements, including same-sex or opposite sex couples, married or not married, having or not having children, affect whether or not people perceive them as family in the U.S..

residential area, level of education, income, age of youngest child, whether or not the respondent was living with her parents or in-laws. They also examined the response distribution as well as the average scores calculated from three response categories. Notable findings include the following: women who tended to have a broader perception of the family were younger in age, resided in a densely inhabited district, were living apart from their husband's or their own parents, and had lower income. Women living in non densely inhabited districts, those with low level of education and those in their 50s and 60s tended to perceive married son, his wife, and children as family members compared to those with higher level of education and were living in densely inhabited districts.

The analyses undertaken by Nishioka and Saitsu (1996) focused mostly on bivariate relationships between the perception of each type of kin and socio-economic factors. In contrast, using the 2008 data of the same survey, Kamano (2011) undertook multivariate analysis and found quite a complex pattern of the perception of parents and siblings of wife and husband, married son and daughter, and grandparents of both sides. It was found that living in a densely inhabited district increased the likelihood of unconditionally perceiving as family parents of both sides, wife's siblings, married son and daughter, husband's siblings and grandparents of both sides. Not having children tended the respondent towards perceiving as family parents and siblings of both sides, whereas living with husband's parents disposed the respondent towards perceiving as family parents of both sides and married children. Demographic and socioeconomic characteristics also had an effect: women born in later years tended to perceive all types of kin as family unconditionally while having a higher level of education lowered the likelihood of perceiving siblings on both sides as family members.

One finding in most of these studies was that younger people consistently considered all types of kin as family members. However, the analyses were undertaken only at one single time point. Nishioka and Saitsu (1996) noted that whether the differences by age observed in their study had come from changes associated with aging or from generational difference could not be determined, but speculated that the difference by age was mostly due to the latter. Given that the National Survey on Family in Japan has been conducted five times over a 20-year period, it is possible to examine the underlying forces in the difference by age observed in a single survey, which is one of the aims of the current research. Differently put, the repeated cross-sectional data makes it possible to look into the over-time changes.

III. Method

1. Data

The present analysis uses pooled data of the 1st (1993) to the 5th (2013) National Family Survey of Japan conducted by the National Institute of Population and Social Security Research, which is

a nationally representative cross-sectional survey. Each survey follows the same sampling method based on census tracts. In the most recent 2013 survey, 300 tracts were randomly selected from the 1,088 census tracts that had been chosen by a systematic sampling method for the Comprehensive Survey of Living Conditions of People on Health and Welfare conducted via Ministry of Health, Welfare and Labour. The questionnaires were distributed to all households in the selected census tracts, and ever-married women in each household were asked to fill out the survey. If there were more than one such woman in a household, the youngest one was selected, and if there were none, the head of the household filled out the first few household-related questions. For the analysis, I use the responses of women who were married at the time of the survey. The respective sample sizes and response rates for the respective surveys are as follows: 6,083 (valid response rate 80.6%), 6,993 (87.7%), 7,252 (76.9%), 6,870 (78.1%), and 6,409 (78.4%), with a total of 33,607 cases (National Institute of Population and Social Security Research 2015).

2. Items Used in the Analyses

The key item for this analysis is the question on how women perceive family generally (viz. common family boundary). The perception of family boundaries is captured by the following question: "Do you think that generally, the following people are one's "family member"? Please respond by taking into account whether or not one lives with the person in question." The response categories include (a) family, regardless of whether one lives together or lives apart; (b) family, if one lives together; and (c) not a family even if one lives together. I consider the first response (a) as indicating that the kin in question is considered a family member unconditionally ("unconditional family member" hereafter). The analysis focuses on one's family of orientation (parents and siblings), and spouse's and one's family of procreation (children and their spouses): parents, husband's parents, wife's siblings, husband's siblings, married son, married daughter, son's wife and daughter's husband.

Other variables used are year of survey, year of birth of the respondents, the level of education (dummy coded as "lower secondary school", "upper secondary school", "specialized training college", "junior college/technical college", "universities and graduate school", with "upper secondary school" as a reference category), employment status (dummy coded as "full-time employee", "part-time employee", "self-employed, including family business" and "housewives/-others", with "part-time employee" as a reference category), number of husband's siblings, number of wife's siblings, living with wife's own parents (dummy coded as "living with at least one parent" and "others (living apart, deceased, or unknown)"), living arrangement with husband's parents ("living with at least one of husband's parents" and "not living with either parents (living apart, deceased, or unknown)"), parental status ("have children" and "do not have children"), and the size of household (number of people the respondent live with). The descriptive statistics of each variable is presented in Table 1.

Table 1. Summary Statistics for All Variables in the Analysis, by Survey Year

Dependent Variables	Survey Year					
	1993	1998	2003	2008	2013	All
Perceive as Family Members						
Wife's Parents [WP] (%)	44.5	69.7	67.8	78.2	78.4	68.1
n	5,505	6,320	6,518	6,205	5,725	30,273
Husband's Parents [HP] (%)	42.8	64.8	65.5	71.2	70.1	63.2
n	5,515	6,303	6,490	6,153	5,702	30,163
Wife's Siblings [WS] (%)	25.7	38.6	41.3	51.1	56.1	42.7
n	5,457	6,177	6,344	6,099	5,649	29,726
Husband's Siblings [HS] (%)	20.0	30.0	35.0	38.9	42.7	33.5
n	5,453	6,180	6,292	6,088	5,640	29,653
Married Son [Son] (%)	53.2	59.5	63.7	68.6	73.2	63.6
n	5,544	5,866	6,212	5,973	5,453	29,048
Married Daughter [Dau] (%)	35.0	55.1	60.6	66.2	71.0	57.7
n	5,477	5,881	6,194	5,973	5,295	28,820
Son's Wife [SW] (%)	51.0	54.2	58.8	63.8	65.2	58.5
n	5,538	5,819	6,160	5,705	5,208	28,430
Daughter's Husband [DH] (%)	31.8	49.6	55.4	60.1	62.2	51.9
n	5,479	5,824	6,147	5,701	5,211	28,362
Independent Variables	Survey Year					
	1993	1998	2003	2008	2013	All
Year of Birth (%)						
1889-1929	8.9	7.0	3.7	2.8	1.2	4.7
1930-39	17.3	15.5	12.4	11.0	7.5	12.7
1940-49	27.9	25.9	22.8	21.7	19.8	23.6
1950-59	27.8	26.5	24.6	22.3	23.7	24.9
1960-69	17.0	19.4	22.4	20.5	21.6	20.3
1970-79	1.0	5.6	13.4	18.4	18.7	11.6
1980-1993			0.7	3.2	7.6	2.3
n	6,083	6,993	7,252	6,870	6,409	33,607
Age (%)						
29 or under	9.5	7.9	6.8	4.8	3.5	6.5
30-39	24.9	20.8	22.1	19.9	15.2	20.6
40-49	30.4	27.8	22.1	20.4	21.9	24.4
50-59	20.9	23.4	26.2	23.3	21.9	23.2
60-69	11.1	14.7	15.4	19.9	23.1	16.8
70 or older	3.2	5.6	7.4	11.7	14.4	8.5
n	6,083	6,993	7,252	6,870	6,409	33,607
Education (%)						
Lower secondary school	18.9	16.5	15.6	14.1	13.2	15.6
Upper secondary school[1)]	43.7	43.3	42.1	43.1	40.9	42.6
Specialized training college	8.9	10.5	10.1	10.1	11.9	10.3
Junior/Technical college	15.0	16.1	19.8	18.7	20.8	18.1
University/Graduate school	7.2	8.0	9.8	12.0	11.1	9.7
NA[2)]	6.4	5.5	2.6	2.0	2.2	3.7
n	6,083	6,993	7,252	6,870	6,409	33,607
Employment Status (%)						
Full-time	16.8	17.4	15.1	17.2	13.6	16.0
Part-time[1)]	17.4	15.3	23.4	23.5	28.5	21.6
Self-employeed	12.6	7.1	12.7	11.8	11.5	11.1
Housewife/Other	45.5	58.1	45.3	42.2	42.8	46.9
NA[2)]	7.7	2.1	3.4	5.4	3.5	4.4
n	6,083	6,993	7,252	6,870	6,409	33,607
Parental Status (%)						
No children[1)]	8.0	8.3	9.8	9.3	9.2	8.9
Have children	89.2	90.3	89.3	89.7	90.2	89.7
NA[2)]	2.8	1.4	0.8	1.1	0.7	1.3
n	6,083	6,993	7,252	6,870	6,409	33,607
Wife's Parents (%)						
Living together	5.0	3.7	5.1	4.9	5.2	95.2
Not living together/deceased[1)]	95.0	96.3	94.9	95.1	94.8	4.8
n	6,083	6,993	7,252	6,870	6,409	33,607
Husband's Parents (%)						
Living together	15.3	10.6	14.5	11.6	14.1	86.8
Not living together/deceased[1)]	84.7	89.4	85.5	88.4	85.9	13.2
n	6,083	6,993	7,252	6,870	6,409	33,607
Number of Husband's Siblings (mean)	3.67	3.51	3.30	3.17	3.03	3.33
standard deviation	(1.74)	(1.69)	(1.60)	(1.51)	(1.42)	(1.61)
n	5,776	6,679	7,093	6,521	6,223	32,292
Number of Wife's Siblings (mean)	3.59	3.48	3.23	3.09	3.00	3.27
standard deviation	(1.68)	(1.65)	(1.53)	(1.44)	(1.36)	(1.55)
n	5,894	6,797	7,189	6,673	6,269	32,822
Household Size (mean)	3.69	3.45	3.46	3.27	3.27	3.43
standard deviation	(1.35)	(1.22)	(1.36)	(1.26)	(1.30)	(1.31)
n	6,083	6,993	7,252	6,870	6,409	33,607

1) Used as a reference category in logistic regression analysis
2) Excluded from logistic regression analysis

3. Analysis

(1) Analysis 1: Socio-economic characteristics and familial experiences on perception of normative family boundaries

Analysis of various attitudes toward the family has found that level of education and employment status of women to have an impact (Dorius and Alwin 2010). Likewise, women's perception of common family boundary is also expected to vary according to the level of education and employment status (Nishioka and Saitsu 1996, Kamano 2011).

In addition, it is safe to assume that familial experiences would also affect women's perception of common family boundaries. For example, whether one has children might impact on how she perceives common understanding regarding family boundaries pertaining to children as well as their spouses–the son's wife or the daughter's husband. Similarly, the number of siblings she has might have an impact on how she perceives common understanding as to whether the wife's siblings are one's family, and how many siblings her husband has in turn would affect how she views husband's siblings. Other experiences that can shape one's view of the wife's and the husband's parents include whether a woman is living with her parents and whether she is living with her husband's parents. Therefore, in addition to the respondent's educational attainment and employment status, the current analysis would also consider parental status, number of one's siblings, number of spouse's siblings, residence (whether or not she lives with her parents, whether or not she lives with her husband's parents), and household size (Nishioka and Saitsu 1996, Kamano 2011).

The expected association between experiences and perception as delineated above assumes a direct effect: having siblings might affect how a woman perceives siblings but not how she sees parents, whereas living with husband's parents might affect how she views common family boundaries regarding parents, but not siblings. However, whether this is indeed borne out has yet to be systematically examined. Therefore, in the analysis, I will examine the same familial experiences on all eight types of kin for comparative purposes and also to explore the possibility of indirect effects of such familial experiences. In examining the effects of socioeconomic characteristics and familial experiences, I will control for women's year of birth and year of survey.

(2) Analysis 2: Exploring the underlying sources of change using logistic regression decomposition method

Another set of analysis examines the sources of changes in women's perception of family over the years. The changes over the years in a social phenomenon, such as attitudes, consist of three elements: age effects (biological or physical changes that occur with age, the accumulation of social experiences, changes in roles and statuses, all of which might bring about changes in views and beliefs), period effects (changes specific to a certain historical period, which can be attributed to social, cultural, physical changes within the environment that might affect everyone living

through that historical period); and cohort effects (the group of people born in the same year share certain characteristics and experiences, contributing to holding the similar attitudes).

In this analysis, graphs will first be presented to depict changes in the percentage of women perceiving that each type of kin as family by survey year, age and birth cohort.

Next, a logistic regression composition method will be used to identify the very nature of the sources of changes. The logistic regression decomposition method (Lee, Tufiş and Alwin 2010) utilized here follows the same principle as the linear decomposition method used for approximating sources of aggregate social change, such as attitudes toward certain issues in the population shown through repeated cross-sectional surveys, as in the current paper (Firebaugh 1992, 1997). Aggregate social change consists of net change among individuals and population turnover–the former is intra-cohort change and the latter, changes in the relative sizes of cohorts. Put differently, this method identifies the segment of change brought about by cohort replacement and by individual change (i.e., intra-cohort change, or "period effect").

In repeated cross-sectional surveys, each survey year equals the sum of the respondent's age and year of birth, and hence, it is impossible to estimate age, period and cohort simultaneously due to identification problem. In any APC analysis, it is necessary to make a prior assumption to address this dilemma. In a logistic regression decomposition method, which is a variation of the linear decomposition method, cohort and period effects are estimated with the assumption that age effect is zero. In the analysis here, however, it is not necessary to assume that aging has no effect on how women perceive common family boundaries. I argue that it is not aging per se, but experiences associated with aging, such as experiences of marriage, having children and work, all of which are life events associated with aging, that affect how one view family boundaries. In the current analysis, all respondents are married, and further, whether or not they have child(ren) and their employment status will be controlled for, and hence, it is reasonable not to include age effect in the model (see Doris and Alwin 2010 for a similar argument).

In the first step of the logistic regression decomposition, the logistic regression model is estimated as

$$\ln ((\pi)/(1-\pi))=a + b_1SY + b_2BY$$

where π represents the probability of perceiving the kin in question as a family member regardless of whether a person lives with the kin (i.e. unconditional), and $1-\pi$ the probability of not perceiving the kin in question as a family member unconditionally. In the rest of the formula, b_1 and b_2 are logit coefficients, SY is survey year, and BY, birth year. In the second step of decomposition, the logit coefficients b_1 and b_2 and the differences in survey year and the mean of year of birth are used to compute the individual change and cohort replacement components in the following manner:

Individual change: $IC= b_1 (SY_{tf} - SY_{t0})$

Cohort replacement: $CR= b_2 (BY_{tf} - BY_{t0})$

SY_{tf} - SY_{t0} is the time elapsed from time 0 and time f. For example, if the earliest survey year analyzed is 1993 and the latest, 2013, SY_{tf} is equal to 2013, SY_{t0} is equal to 1993, SY_{tf} - SY_{t0} therefore would be 2013-1993=20. BY_{tf} is the mean birth year at time f, and BY_{t0}, at time 0 (Lee, Tufiş and Alwin 2008). The proportion of total change (the sum of IC and CR) attributed to individual change and to cohort replacement is computed by simply dividing IC by the total and CR by the total.

The present analysis consists of two decomposition analyses. In the first decomposition analysis, the net change is decomposed into cohort replacement and individual changes (Model 1). In doing so, the year of survey and the individual's year of birth are included in the logistic regression analysis for each type of kin. In the second decomposition analysis, the effects of socio-economic characteristics and familial experiences are controlled for (Model 2). The control variables considered here are the same as those examined in Analysis 1, namely, the level of education, employment status, parental status, living arrangement in relation to parents, sibling status and household size. This second decomposition analysis examines the relative contribution of cohort replacement and individual changes to the total change observed, taking into account the changes occurred in the composition of population on these socio-economic characteristics and familial experiences between 1993 and 2013. Since the control variables are the same as the factors examined in Analysis 1, the coefficients obtained from the earlier logistic regression will be used to compute the % changes attributed to each of the socio-economic characteristics and familial experiences. The coefficient for each variable is multiplied by the difference in mean of 1993 and 2013 of the respective variables. The purpose here is to see the relative contribution of cohort replacement and individual changes, controlling for changes in the socio-economic characteristics and familial experiences.

IV. Results

(1) Analysis 1: Socio-economic characteristics and familial experiences on perception of normative family boundaries

The results of logistic regression analyses for the eight types of kin are shown in Table 2. For all eight types of kin, the survey year shows statistically significant positive effect, indicating that controlling for other factors, there are significantly more women who perceive that each type of kin as family members in later survey years.[3] In other words, the later the time period, the more likely that each type of kin is seen as "family member" generally even after controlling for the women's socio-economic characteristics and familial experiences. Year of birth also shows a statistically significant positive effect for all kin types, indicating that the later a woman is born, the more likely she perceives each type of kin as unconditional family members. In other words, younger women

3) The results are almost identical when survey years are treated as dummy variables with 1993 as a reference category: all the coefficients for are positive and significant.

tend to exhibit a more inclusive perception of the family, viz. a broader common family boundary.

The effect of the level of education varies among types of kin. The positive statistically significant effects of dummy coded "lower secondary school" indicate that having a lower secondary school education, compared to being an upper secondary school graduate, increases the likelihood of perceiving wife's and husband's siblings and son and his wife as "family" generally. A junior college education, in comparison to an upper secondary school education, decreases the chance of perceiving siblings of wife and husband as "family." Having a university education decreases the likelihood of perceiving each type of kin as "family". In other words, having a higher education leads to narrower or more exclusive common family boundaries, whereas having less than an upper secondary school education leads to broader boundaries.

Employment status also affects how women perceive common family boundaries. Being a full-time employee, in comparison with being a part-time employee, has a statistically positive effect on perceiving as family members wife's parents, husband's parents and wife's siblings. Self-employment has a negative effect on including daughter and her husband and wife's parents as "family". The status of a housewife, as opposed to that of a part-time employee, has a positive effect on perceiving as family members wife's parents, wife's siblings, husband's siblings and married son.

Turning to familial experiences, the negative coefficients indicate that the greater the number of husband's siblings, the less likely married women perceive parents and siblings of both sides as common family members. Similarly, the greater the number of wife's siblings, the less likely wife's parents and siblings are perceived as common family members, but the more likely son's wife is perceived as a family member.

Having or not having children also has varying effects depending on the type of kin. Negative effects are observed for parents and siblings of both sides and married son: having a child seems to dispose one towards viewing the family of origin of both husband and wife as not part of family generally. On the other hand, having children tends to make one perceive son's wife and daughter and her husband as family members. Considered together, by having children, women tend towards not perceiving family of origin on both sides as family but perceiving children's family of choice (family of procreation) as family, with the exception of married son.

Living with husband's parents (as opposed to not living with them or "other" arrangement, including deceased) has a negative effect on perceiving as family wife's and husband's parents, husband's siblings, daughter and her husband. Living with wife's parents (i.e. the woman's own parents), on the other hand, has a positive effect on perceiving as family wife's parents but a negative effect with respect to husband's parents and siblings.

Finally, household size has negative effects on perceiving as family all types of kin except for married son, indicating that the greater a woman's household size, the less she tends to perceive these kin as family members generally.

(2) Analysis 2: Decomposition of Net Change into Cohort Replacement and Intra-cohort Changes

The graphs show the changes in the percentage of women perceiving that each type of kin as family by survey year (Figure 1), age (Figure 2) and birth cohort (Figure 3). In 1993, married son and son's wife had the highest percentages but were surpassed by wife's parents and caught up by husband's parents and married daughter. The patterns by age and birth cohort are almost the same. Older people at any survey point and also the older cohorts tend to exclude siblings, and daughter and her husband to a lesser extent, but such differences are less prominent among younger people and also those born in the later years.

The results of decomposition analyses are presented in Table 3. Model 1 decomposes the net changes into changes attributed to cohort replacement and those to individual changes. The results of logistic regression analysis with survey year and year of birth for estimating logit coefficients are shown in the upper part of Table 2. The decomposition analyses for all types of kin in both models show that the direction of change indicated by cohort replacement and individual changes are the same, confirming that either force tends toward a broader perception of the family.

The results for Model 1 show that individual changes explain more than 75% of the changes observed in the perception of whether parents, children and their spouses are unconditionally family members: 77.4% for wife's parents, 83.0% for husband's parents, 84.1% for married son, 80.5% for married daughter, 93.5% for son's wife and 84.7% for daughter's husband. On the other hand, the same analyses show that for wife's and husband's siblings, individual changes and cohort replacement contribute almost equally to the increase in the proportion of women who perceive them as family members generally.

Model 2 informs us as to whether the foregoing changes mostly explained by individual changes would remain after taking into account changes in socio-economic characteristics and familial experiences of women over this period, namely, the level of education, employment status, number of siblings of the wife, number of siblings of the husband, presence of child(ren), whether one lives with parents and household size. The results show that after these changes are being controlled for, the proportion taken up by individual changes is the greatest for husband's parents (78%), with cohort replacement contributing less than 20% (17%). For wife's parents, son and his wife, daughter and her husband, over 70% is explained by individual changes, and about quarter by cohort replacement. For siblings, there is equal contribution of both sources of changes, about 50% each.

In Model 2, the percentage of overall changes explained by individual changes and cohort replacement varies for some types of kin. The differences from Model 1 are most obvious for son's wife and married son. For son's wife, the contribution of individual changes decreases from 93.5% to 75.7% while that of cohort replacement increases from 6.6% to 23.6%. For married son, the figures are 84.1% and 69.2% for individual changes and 15.9% and 28.6% for cohort replacement. With respect to the perception of parents and siblings, the results remain almost the same for

Table 2. Logistic Regression Models of Perception of Kin as "Family Members" (Pooled Data, 1993-2013) and Changes in Mean (1993 to 2013)

Kin	Wife's parents			Husband's parents			Wife's siblings			Husband's siblings		
Model 1	B	S.E.	Changes in mean	B	S.E.	Changes in mean	B	S.E.	Changes in mean	B	S.E.	Changes in mean
Survey year	.058 ***	.002	20	.044 ***	.002	20	.034 ***	.002	20	.025 ***	.002	20
Year of birth	.028 ***	.001	11.841	.015 ***	.001	11.812	.057 ***	.001	11.749	.046 ***	.001	11.722
Intercept	-169.9 ***	4.205		-118.1 ***	3.884		-180.3 ***	4.158		-141.2 ***	4.145	
-2 Log-Likelihood	32289.306			35053.232			32936.263			32070.879		
Cox-Snell R^2	0.074			0.038			0.141			0.090		
Nagelkerke R^2	0.104			0.052			0.190			0.125		
McFadden Pseudo R^2	0.062			0.029			0.111			0.074		
N	27584			27506			27124			27097		
Model 2	B	S.E.	Changes in mean	B	S.E.	Changes in mean	B	S.E.	Changes in mean	B	S.E.	Changes in mean
Survey year	.054 ***	.002	20	.042 ***	.002	20	.033 ***	.002	20	.025 ***	.002	20
Year of birth	.028 ***	.001	11.841	.016 ***	.001	11.812	.059 ***	.001	11.749	.048 ***	.001	11.722
Lower secondary school	.025	.042	-0.071	-.019	.041	-0.072	.211 ***	.045	-0.069	.240 ***	.046	-0.070
Specialized training college	.057	.047	0.027	.021	.044	0.028	.052	.045	0.027	-.003	.045	0.027
Junior/Technical college	.017	.038	0.054	.012	.036	0.054	-.077 *	.036	0.054	-.130 ***	.037	0.052
Universities/Graduate school	-.116 *	.048	0.040	-.162 ***	.045	0.041	-.202 ***	.046	0.038	-.341 ***	.047	0.039
Full-time	.161 ***	.045	-0.039	.086 *	.042	-0.039	.105 *	.042	-0.038	.048	.043	-0.037
Self-employed	-.115 *	.049	-0.015	.049	.047	-0.016	-.075	.049	-0.015	-.023	.051	-0.017
Housewives/Other	.072 *	.035	-0.063	.046	.033	-0.060	.124 ***	.034	-0.064	.104 **	.035	-0.062
# of Husband's siblings	-.021 *	.009	-0.645	-.054 ***	.009	-0.652	-.023 *	.010	-0.641	-.041 ***	.010	-0.640
# of Wife's siblings	-.056 ***	.010	-0.594	.006	.009	-0.597	-.031 **	.010	-0.578	.000	.011	-0.590
Presence of child(ren)	-.329 ***	.060	-0.008	-.256 ***	.054	-0.008	-.468 ***	.053	-0.008	-.477 ***	.052	-0.008
Live with wife's parents	.183 **	.069	0.005	-.319 ***	.063	0.004	.014	.067	0.004	-.135 *	.069	0.005
Live with husband's parents	-.246 ***	.046	-0.016	-.117 **	.044	-0.015	-.029	.046	-0.015	-.137 ***	.048	-0.016
Household size	-.091 ***	.015	-0.413	-.064 ***	.014	-0.416	-.081 ***	.015	-0.416	-.049 ***	.015	-0.415
Intercept	-162.739 ***	4.486		-113.864 ***	4.156		-179.737 ***	4.477		-144.202 ***	4.470	
-2 Log-Likelihood	31961.63			34834.129			32619.861			31738.6		
Cox-Snell R^2	0.085			0.045			0.151			0.101		
Nagelkerke R^2	0.119			0.062			0.203			0.140		
McFadden Pseudo R^2	0.071			0.035			0.120			0.084		
N	27584			27506			27124			27097		

Kin	Married son			Married daughter			Son's wife			Daughter's husband		
Model 1	B	S.E.	Changes in mean	B	S.E.	Changes in mean	B	S.E.	Changes in mean	B	S.E.	Changes in mean
Survey year	.038 ***	.002	20	.058 ***	.002	20	.031 ***	.002	20	.050 ***	.002	20
Year of Birth	.013 ***	.001	11.622	.024 ***	.001	11.820	.004 ***	.001	11.956	.015 ***	.001	11.933
Intercept	-100.1 ***	3.904		-161.739 ***	4.012		-70.610 ***	3.789		-129.724 ***	3.871	
-2 Log-Likelihood	33978.074			33789.671			34880.259			34619.814		
Cox-Snell R^2	0.027			0.072			0.014			0.047		
Nagelkerke R^2	0.038			0.097			0.018			0.063		
McFadden Pseudo R^2	0.021			0.055			0.010			0.035		
N	26473			26294			25931			25910		
Model 2	B	S.E.	Changes in mean	B	S.E.	Changes in mean	B	S.E.	Changes in mean	B	S.E.	Changes in mean
Survey year	.032 ***	.002	20	.052 ***	.002	20	.026 ***	.002	20	.046 ***	.002	20
Year of Birth	.023 ***	.001	11.622	.030 ***	.001	11.820	.013 ***	.001	11.956	.022 ***	.001	11.933
Lower secondary school	.136 ***	.042	-0.070	.031	.042	-0.072	.104 *	.041	-0.075	.025	.042	-0.075
Specialized training college	-.046	.045	0.024	-.029	.045	0.026	-.071	.043	0.027	-.036	.044	0.028
Junior/Technical college	-.066	.036	0.054	-.041	.036	0.056	-.043	.035	0.057	-.034	.035	0.057
Universities/Graduate school	-.198 ***	.045	0.041	-.111 *	.046	0.043	-.275 ***	.044	0.044	-.207 ***	.044	0.044
Full-time	.014	.009	-0.040	.019	.042	-0.037	.066	.041	-0.036	.029	.041	-0.036
Self employed	.017	.010	-0.016	-.136 **	.048	-0.016	.000	.047	-0.016	-.113 *	.047	-0.016
Housewives	.244 ***	.054	-0.061	-.007	.034	-0.062	-.003	.033	-0.064	-.007	.033	-0.064
# of Husband's siblings	-.047	.064	-0.638	-.001	.009	-0.635	.011	.009	-0.652	.003	.009	-0.637
# of Wife's siblings	-.033	.045	-0.580	-.002	.010	-0.599	.023 *	.010	-0.599	.008	.010	-0.600
Presence of child(ren)	-.136 ***	.015	-0.003	.189 ***	.054	-0.002	.179 ***	.053	-0.003	.108 *	.053	-0.003
Live with wife's parents	.059	.042	0.003	-.086	.065	0.003	.057	.064	0.004	.005	.064	0.003
Live with husband's parents	-.034	.048	-0.017	-.218 ***	.045	-0.016	.021	.044	-0.016	-.160 ***	.045	-0.015
Household size	-.017	0.034	-0.419	-0.115 ***	0.015	-0.408	-0.130 ***	0.014	-0.406	-0.108 ***	0.014	-0.402
Intercept	-107.152 ***	4.202017936		-163.822 ***	4.303816199		-77.593 ***	4.081		-133.011 ***	4.159	
-2 Log-Likelihood	33778.007			33580.220			34693.456			34440.598		
Cox-Snell R^2	0.035			0.080			0.021			0.054		
Nagelkerke R^2	0.048			0.107			0.028			0.072		
McFadden Pseudo R^2	0.027			0.061			0.015			0.040		
N	26473			26294			25931			25910		

***: p<0.001 **: p<0.01 *: p<0.05

Note: Reference categories are "Upper secondary school" for education, "Part-time" for employment status, "no children" for parental status, "not living with any of her parents/deceased" for whether or not one lives with her parent(s), and "not living with any of the husband's parents/deceased"for whether or not one lives with her husband's parent(s).

Figure 1. Percentage Perceiving Each Kin as "Family Member", by Survey Year

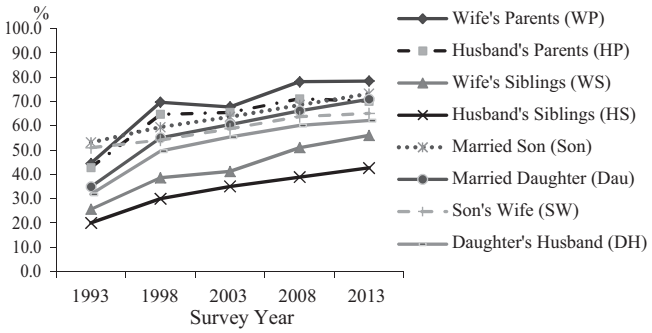


Figure 2. Percentage Perceiving Each Kin as "Family Member", by Age (Pooled Data, 1993-2013)

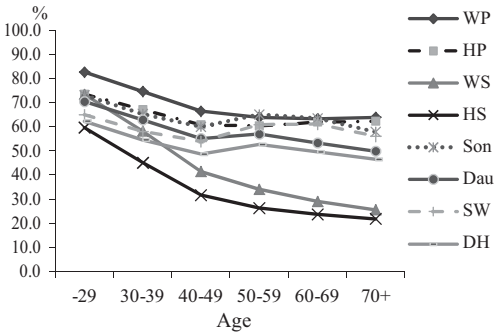
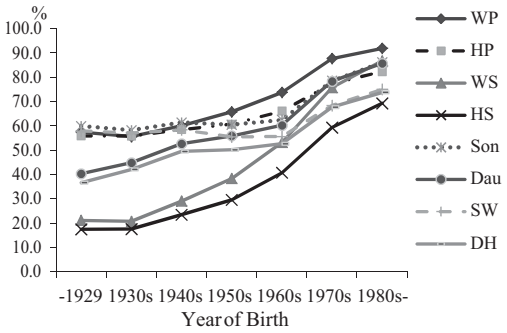


Figure 3. Percentage Perceiving Each Kin as "Family Member", by Year of Birth (Pooled Data, 1993-2013)



* % for Figure 1: See Table 1 (Dependent Variables)

* % for Figure 2:

	WP	HP	WS	HS	Son	Dau	SW	DH
-29	82.7	73.6	73.4	59.7	73.1	70.5	65.0	62.3
30s	74.6	67.1	58.2	45.2	65.3	62.9	58.1	54.5
40s	66.4	60.8	41.5	31.7	59.9	55.1	53.9	48.7
50s	63.9	60.4	34.1	26.4	65.1	57.0	60.9	52.7
60s	63.3	62.0	29.1	23.7	63.5	53.3	61.1	49.6
70s	63.9	62.3	25.6	21.8	57.9	49.9	56.1	46.5

* % for Figure 3:

	WP	HP	WS	HS	Son	Dau	SW	DH
-1929	57.5	55.9	21.1	17.4	59.9	40.4	57.9	36.6
1930s	55.6	55.8	20.7	17.6	58.2	44.8	57.1	42.1
1940s	60.0	58.5	29.1	23.5	61.4	52.7	58.4	49.5
1950s	65.8	60.7	38.3	29.6	60.5	55.9	55.5	50.2
1960s	73.8	66.1	53.2	40.7	62.5	60.2	55.6	52.7
1970s	87.7	77.4	75.8	59.4	78.6	78.4	68.4	67.7
1980s	91.9	82.4	86.8	69.3	86.1	85.7	75.0	73.8

Models 1 and 2, with individual changes explaining more than three quarters of the net change with respect to wife's and husband's parents and half of the net change for siblings of both sides.

Some results on the contribution of control factors are worth mentioning, despite that such an analysis is not the focus of the paper. The contribution of these factors is minuscule in terms of relative proportion, affirming that most of the over-time changes can be attributed to individual changes, and also to a lesser extent to cohort replacement. Thus said, household size, number of siblings, education level and employment status are both statistically significant and make greater than 1% contribution in magnitude on the perception of some types of kin. Decrease in household size from 1993 to 2013 contributes to the increase in the percentage perceiving as family parents and siblings of wife and husband, daughter and her husband and son's wife; the percentage is highest at 7.8% for son's wife, followed by daughter's husband 3.6% and married daughter 3.2%. Decrease in the number of husband's siblings on the average contributes to the increase in percentage perceiving husband's parent and siblings generally as family members, contributing 3.3% to the net increase observed in perception of husband's parents and 2.5% to that of husband's

Table 3. Decomposition of Changes between 1993 and 2013 in the Perception of Kin as "Family Member"

	Wife's parents		Husband's parents		Wife's siblings		Husband's siblings	
	Logit Change	% of Change Explained	Logit Change	% of Change Explained	Logit Change	% of Change Explained	Logit Change	% of Change Explained
Model 1								
Individual Changes	1.151 ***	77.42	0.884 ***	82.95	0.678 ***	50.17	0.505 ***	48.38
Cohort Replacement	0.336 ***	22.58	0.182 ***	17.05	0.674 ***	49.83	0.539 ***	51.62
Total Change	1.487		1.066		1.352		1.044	
Model 2								
Individual Changes	1.087 ***	72.35	0.839 ***	77.97	0.650 ***	47.23	0.504 ***	47.02
Cohort Replacement	0.336 ***	22.38	0.187 ***	17.39	0.692 ***	50.27	0.562 ***	52.36
% IC / (IC+CR)		*76.38*		*81.77*		*48.44*		*47.31*
Lower secondary chool	-0.002	-0.12	0.001	0.13	-0.015 ***	-1.06	-0.017 ***	-1.57
Specialized training college	0.002	0.10	0.001	0.06	0.001	0.10	0.000	-0.01
Junior/Technical college	0.001	0.06	0.001	0.06	-0.004 *	-0.30	-0.007 ***	-0.63
Universities/Graduate school	-0.005 *	-0.31	-0.007 ***	-0.61	-0.008 ***	-0.56	-0.013 ***	-1.25
Full-time	-0.006 ***	-0.42	-0.003 *	-0.31	-0.004 *	-0.29	-0.002	-0.17
Self-employed	0.002 *	0.12	-0.001	-0.07	0.001	0.08	0.000	0.04
Housewives	-0.005 *	-0.30	-0.003	-0.26	-0.008 ***	-0.58	-0.006 **	-0.60
# of Husband's siblings	0.014 *	0.91	0.035 ***	3.26	0.015 *	1.06	0.026 ***	2.45
# of Wife's siblings	0.033 ***	2.21	-0.004	-0.34	0.018 **	1.29	0.000	-0.02
Presence of child(ren)	0.003 ***	0.18	0.002 ***	0.20	0.004 ***	0.27	0.004 ***	0.33
Live with wife's parents	0.001 **	0.06	-0.001 ***	-0.12	0.000	0.00	-0.001 *	-0.06
Live with husband's parents	0.004 ***	0.26	0.002 **	0.16	0.000	0.03	0.002 ***	0.20
Household size	0.038 ***	2.52	0.027 ***	2.48	0.034 ***	2.45	0.020 ***	1.90
Total change	1.503		1.077		1.376		1.073	
Change in dependent variable, 1993 to 2013	0.347		0.280		0.308		0.232	

	Married son		Married daughter		Son's wife		Daughter's husband	
	Logit Change	% of Change Explained	Logit Change	% of Change Explained	Logit Change	% of Change Explained	Logit Change	% of Change Explained
Model 1								
Individual Changes	0.749 ***	84.07	1.161 ***	80.52	0.621 ***	93.45	1.006 ***	84.70
Cohort Replacement	0.142 ***	15.93	0.281 ***	19.48	0.044 ***	6.55	0.182 ***	15.30
Total Change	0.891		1.442		0.664		1.188	
Model 2								
Individual Changes	0.636 ***	69.23	1.050 ***	72.31	0.517 ***	75.74	0.910 ***	76.23
Cohort Replacement	0.263 ***	28.64	0.359 ***	24.71	0.161 ***	23.60	0.258 ***	21.58
% IC / (IC+CR)		*70.74*		*74.53*		*76.24*		*77.94*
Lower secondary school	-0.010 ***	-1.05	-0.002	-0.16	-0.008 *	-1.15	-0.002	-0.15
Specialized training college	-0.001	-0.12	-0.001	-0.05	-0.002	-0.27	-0.001	-0.08
Junior/Technical college	-0.004	-0.39	-0.002	-0.16	-0.002	-0.36	-0.002	-0.16
Universities/Graduate school	-0.008 ***	-0.89	-0.005 *	-0.33	-0.012 ***	-1.79	-0.009 ***	-0.77
Full-time	-0.001	-0.06	-0.001	-0.05	-0.002	-0.35	-0.001	-0.09
Self-employed	0.000	-0.03	0.002 **	0.15	0.000	0.00	0.002 *	0.15
Housewives	-0.015 ***	-1.62	0.000	0.03	0.000	0.03	0.000	0.04
# of Husband's siblings	0.030	3.30	0.000	0.03	-0.007	-1.06	-0.002	-0.17
# of Wife's siblings	0.019	2.06	0.001	0.07	-0.014 *	-2.03	-0.005	-0.39
Presence of child(ren)	0.000 ***	0.04	0.000 ***	-0.03	-0.001 ***	-0.09	0.000 *	-0.02
Live with wife's parents	0.000	0.02	0.000	-0.02	0.000	0.04	0.000	0.00
Live with husband's parents	0.001	0.06	0.004 ***	0.24	0.000	-0.05	0.002 ***	0.21
Household size	0.007	0.79	0.047 ***	3.24	0.053 ***	7.75	0.044 ***	3.64
Total change	0.918		1.452		0.683		1.194	
Change in dependent variable, 1993 to 2013	0.212		0.367		0.367		0.310	

***: p<0.001 **: p<0.01 *: p<0.05

Note: Reference categories are "Upper secondary school" for education, "Part-time" for employment status, "no children" for parental status, "not living with any of her parents/deceased" for whether or not one lives with her parent(s), and "not living with any of the husband's parents/deceased"for whether or not one lives with her husband's parent(s).

siblings. Decrease in the percentage of housewives on the aggregate level over time contributes to the reduction of the proportion considering married son as a family member by 1.6%. This means that if not for the decrease in the proportion of housewives on the aggregate level, the overtime increase observed in the percentage perceiving married son as "family" would have been even greater. Aggregate increase in university-educated women lowers the percentage considering husband's sibling as family by 1.3% and son's wife by 1.8%.

V. Discussion

The first analysis shows that there is significant amount of variation among socioeconomic and family experiences variables in their effects on diverse types of kin, but some patterns can be discerned and perhaps readily explained as well. A higher education, as noted above, generally leads to a more exclusive perception of family boundary generally. Full-time employment and housewife status both dispose one to be more inclusive and self-employment less so. Having children disposes one to exclude family of origin but include children's family of choice as family. Living with her own parents makes one more inclined to see wife's parents but not husband's parents or siblings as family, but living with husband's parents does not have the same parallel effect. The bigger the household size, the less she sees kin as family members except for married son. In most cases, patterns are similar between son and son's wife, and also between daughter and daughter's husband (see also Nishioka and Saitsu 1996).

It is difficult to identify consistent mechanisms to explain these patterns, or perhaps, different mechanisms are at work, depending on the types of kin, or there might even be multiple mechanisms that at times contradict one another.

Mechanisms might be ideational or experiential. For the former, as has been explored in extant studies, the idea of married son being perceived as unconditional family indicates a patrilineal view of the family. Experiences arguably call forth more intricate mechanisms.

One mechanism might be the experience or expectations of kinwork. The more a married woman relies on kin or is involved in kinwork, as indicated by perhaps full-time employment as well as housewife status, living with her parents, and having children, the more likely she is inclusive in her perception of kin as family or at least inclusive of those she is apparently in close contact with. Consistent with this hypothesis is that finding that being self-employed, which includes women working in family-owned business, leads to not recognizing women's side of the family, namely, wife's parents and daughter and her husband, which might be a reflection of her own environment and experiences. This hypothesis obviously does not explain all the patterns noted here, most noticeably the effects of higher educational attainment and household size, but it does prompt further research on the mechanisms linking one's experiences with one's perception of common family boundaries.

Network might be another environmental mechanism at work. The higher educational attainment which leads to including fewer types of kin in their perception of common family could partly be because of more diverse and wider social network outside kinship that comes with education. Since the relationship is observed not only for son and his wife but for all other types of kin, it indicates more than the rejection of patrilineal view; it could indicate an way of thinking that does not automatically associate kin with "family". On the other hand, a full-time employment status tends one towards seeing parents and own siblings might be the reflection of actual interaction.

The foregoing interpretation can be seen as consistent with the findings from Analysis 2. The significance here lies in the finding that for the majority of kin types, it is not the replacement of ideas of the older cohorts by those held by the younger cohorts through a simple turnover, but more than that, people's ideas actually changed over this period. This confirms that the ways in which people perceive the common family change at the individual level. However, there is a caveat here. The perception of siblings departs from this pattern in that cohort replacement has a part to play in accounting for the change: the change in perception of siblings as family is accounted by both individual changes and cohort replacement equally. The actual place of siblings in familial and social interactions might have changed through the years and it is worth exploring it separately in future analysis. Generally, the overall patterns notwithstanding, the differences in perceptions of different types of kin suggest that it is fruitful to allow for different mechanisms connecting individual and social contexts to family boundary.

VI. Conclusion

The present paper examined married women's perception of what is family generally, focusing specifically on which kin is included as family members. Women's level of education and employment status, as well as familial experiences, were related to such perception, controlling for respective factors. In addition, the analyses of over-time change revealed that individual changes contributed to the changes in perception more than cohort replacement did, even after controlling for the changes in women's socio-economic characteristics and familial experiences.

The current research points to areas for further analysis. Isolated factors that have not been incorporated into the current analysis can be explored. Taking the cues from extant research, a further study can examine the over-time pattern in the relationship between the perception of common family boundary and other familial attitudes (as described as norms by Nishino) (see also Kamano 2014). Other individual level factors can also be explored in greater detail, such as the changes in one's living arrangement and how they might be associated with perception of common family boundary.

More systematically and perhaps theoretically grounded, some hypotheses have been suggested above that aim at identifying mechanisms connecting individual level characteristics and

experiences to perception of family boundary, including the amount of kinwork one is expected and engages in, the breadth and diversity of one's social network. At the same time, the findings pertaining to over-time pattern, after controlling for these individual level characteristics and experiences, point to the exploration of an interface between societal changes and individual perception via individual exposure to such societal changes. Discussion of "intimate circles", alternative family forms, changes in policies concerning family, and so on, at the societal or even legal level, are factors that have not been captured in the current analysis but which might well have an effect on an individual's life and how she sees family generally.

Another direction in which one can pursue further research is to explore and map more systematically the differences and similarities among kin type perceived as family or not as family. Indeed, the very construction of these questions, listing separately married son and married daughter, and son's wife and daughter's husband, is embedded in the research interest of family sociologists, which is to examine the family boundary in relation to the *ie* system and ideas based on that system, which in turn is built upon hierarchy of gender, age (and birth order) and generation (Nonoyama 2007). A more systematic analysis can be undertaken by focusing on women's side and men's side of kin categories and its connection to *ie* ideology, as well as how the patterns change over time.[4)]

While the current analysis and the future research envisioned both focus on "family boundary", it is important to note that the analysis should not be confined in differentiating among kin, viz. categories of people more or less considered as family or at least a larger familiar group. Indeed, the inclusion of non-marital and non-blood related groups (see footnote 3) in future over-time data collection would enrich our understanding not only of familial boundary but also more generally, and importantly, the pattern of social interactions, expectations and even intimacy, that could affect the effectiveness of social policies, particularly in relation to care work and community development.

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4) The *ie* ideology differentiates between son and daughter. Civil Law Article 750 requires each couple to choose either his or her surname upon submitting marriage registration paper, and 98% of marrying couples choose that of husband's, who is in turn the head of *koseki* (see Chapman and Krogness 2014 for details of *koseki* system). Differentiating sons, or to be precise oldest son, from daughters, indicates that the idea of lineal linkage is important, on the basis of which relationships and expectations are formed, such as the responsibility of oldest son for the family.

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