

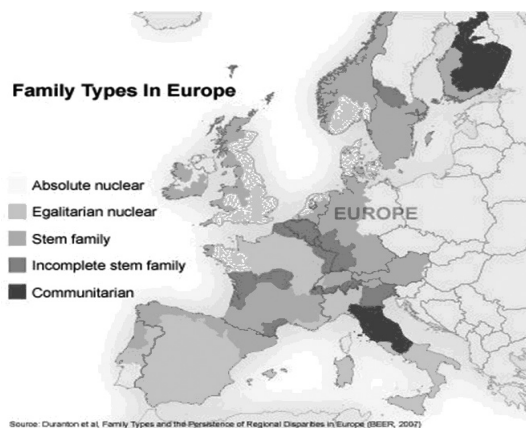
Regional Variation in Household Structure in early 20th century Ireland

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Introduction

E. Todd defined the extended family in his *L'Invention De L'Europe* as follows: Extended families with several generations living under one roof. One child – generally, but not always, the eldest – marries and has children that remain in the household in order to preserve the lineage. The rest have the choice of remaining unmarried within the household or of marrying and leaving the home or becoming soldiers or priests. The house and the land are inherited by the son who stays at home. Others may receive some financial compensation. The inheriting son, who stays at home, remains under the formal authority of the father [E. Todd, 1990 : 38]

Map 1. Traditional family systems of Europe



Source : G. Duranton et al. 2007, 8.

The map 1 created by Todd shows that families in Ireland constituted stem families. While stem families existed across Ireland, there were also some regional differences. Since some regional variation was found in the formation of the stem family in eastern and western Ireland during the period from the latter half of the 19th century to the early 20th century, Todd's map

needs to be revised.

In the following chapters, we first examine *Family and Community in Ireland* by Arensberg and Kimball, which presented the stem family system in Irish rural communities for the first time in the 1930s, then propose a hypothesis of regional variation in the stem family system based on the examination results, and verify the hypothesis by using census data. While the authors conducted research on the Irish family based on the census data by county [Y. Shimizu, 2011, 2012, 2014], they used the national census data of Ireland this time. This is their first Irish family research attempt based on an analysis of 100 % of the census data.

1. Research on the Stem Family by Arensberg and Kimball

It is well known that *The Irish Countryman* by Arensberg and *Family and Community in Ireland* by Arensberg Kimball, both American cultural anthropologists, constitute the pioneering studies on the Irish family. However, it is not widely known that their studies were part of the projects in the Harvard Irish Survey, which was led by E. Hooton of Harvard University and comprised of cultural anthropology, archaeology, and physical anthropology projects [Anne Byrne, Ricca Edmondson and Tony Varley, 2001, 17].

The reason that Harvard researchers chose Ireland as the target region of their study was based on their recognition that Ireland was a highly homogeneous society [Arensberg, C. & Kimball, 2001] and that it was the last frontier region in Europe. Their studies started from the Yankee City study conducted by the Harvard group and constituted the application of the theoretical paradigm of Yankee City to a contemporary civil society in the West.

In the summer of 1931, W. Lloyd Warner (who had already started a study on the Irish American community as part of the Yankee City Study), who was well known as a researcher on Yankee City in the cultural anthropology project, conducted an interview-based preliminary survey in various parts of Ireland together with Arensberg. As a result of the survey, they came to recognize that County Clare was a microcosm of Ireland and selected it as a target region [Anne Byrne, Ricca Edmondson and Tony Varley, 2001, 44].

Consequently, the three districts of Lough, Rynamona, and Inagh in County Clare were selected as the target areas of the field work. Later, Warner went home and Kimball joined Arensberg as a research collaborator. Eventually, Arensberg and Kimball took charge of the research project on Irish communities, which was completed in 1934 [Anne Byrne, Ricca Edmondson and Tony Varley, 2001, 22].

While the details of their research are discussed later, some criticisms on their research methods and theories came from Gibbon, who claimed from a historical and methodological perspective that social changes could not be fully explained by functionalist theory [Gibbon, P.,

1973, 491], and Brody who claimed that the traditional farm life and the values of farming communities had already collapsed in western Ireland due to modernization [Brody H. 1974, 70]. Despite such criticisms, many researchers conducted research based on the studies by Arensberg and Kimball after World War II up to the present [Wilson, T.M. & H. Donnan, 2006, 22]. Even today, the studies on Ireland by Arensberg and Kimball are considered significant.

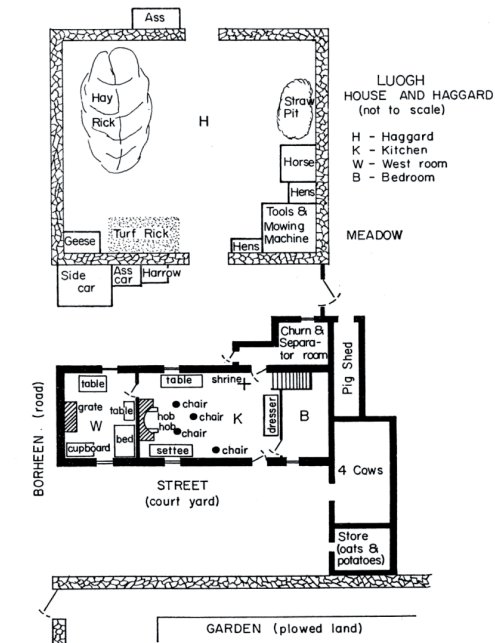
Their research framework follows the framework of Warner's Yankee City study: It features the functionalist theory, which focuses not on individual lives or events, but on relationships between individuals and regards the mutual dependency in social relationships as a social system. According to Arensberg and Kimball's research, the characteristics of the stem family can be described by the three keywords of dowry system, matchmaking, and inheritance system.

Conceptually speaking, a stem family is formed by the cohabitation of parents and their married son and his family, and it is matchmaking that acts as the impetus for the formation of a stem family [Arensberg, C., 1951, 72–80]. However, as preconditions to matchmaking, the transfer of the patriarchal rights to a son designated by the patriarch and the one-child land inheritance system were required, which represented the inheritance of the patriarchal rights by a son and the rite of passage from childhood to adulthood [Arensberg, C. 1959, 58–59]. Thus matchmaking took place upon the transfer of the patriarchal rights from the patriarch to a son. A matchmaker made arrangements with the families and negotiated for a dowry between the bride and bridegroom's families. This negotiation was an important event for the two families [Arensberg, C. 1951, 72–80, Arensberg, C. & Kimball, S. 2001, 135–139]. While the dowry was a payment for a bride to establish her social status in the bridegroom's family [Arensberg, C. 1959, 77], the bridegroom's family appropriated it to defray the costs of a dowry of a daughter, retirement income, the settlement of debts, or house renovation costs [Breen, R. 1980, 255–272]. Thus, the dowry system served as a guarantee of the success of matchmaking, and the matchmaking system was tightly combined with impartible inheritance, although Arensberg and Kimball gave little attention to the inheritance system in their research papers. The marriage of a son via matchmaking led to the moving of his parents into the west room as discussed below.

Figure 1 is a schematic plan created by Arensberg and Kimball of a typical house and premise in County Clare. In the house, there was a kitchen in the center with a table, chairs, and a hob, where family members got together, a bedroom on the right, and a west room with a bed, a grate, and a table. Next to these rooms were a cowshed, a pig shed, and a storage space for oats and potatoes. Behind the house was a garden called a haggard, where there could be found a rickyard, a straw pit, a stable, a poultry shed, and a shed for farm equipment. The house and haggard were where the farm family members worked and conducted their daily activities.

The west room was viewed as a reserved room for the use of the patriarch and his wife, into

Figure 1. Schematic plan of a typical farmer's house and farmyard in County Clare



Source: C. M. Arensberg & S. T. Kimball, 2001, 34.

which they moved after the marriage of their heir [Arensberg, C. 1959, 27]. The moving of the patriarch and his wife to the west room was understood as follows: While the new status they had acquired led to a change in their behavior in and attitude to human relationship [Arensberg, C. 1959, 28], moving to the west room was viewed as something to ensure the formation and maintenance of a stem family, not as a change that allowed the family system to deviate from the stem family system. This is where the use of structural functionalism by Arensberg and Kimball can be seen.

Before the 19th century, a consanguine community called a clachan comprising domestic groups, whose houses formed a compact village within the lands held the group on the rundale system, existed in Ulster and Connacht [Taro Matsuo, 1973, 132]. Families in this community had farm land and common land inside the community of congested houses. However, in the mid-19th century, the clachan system collapsed surely not generally as you say at end of para that the system lasted to end of century in west and the land was redistributed within the group who now lived in separate dwellings each surrounded by its own lands. Farmers worked and lived in the spaces of their homes and farm land in the wake of the collapse of the rundale system. Therefore, many of the activities that defined human relationships within these spaces were conducted by separate family unites. However, the rundale system remained in County Mayo and Connacht until the latter half of the 19th century.

Thus a stem family was formed by the combination of the aforementioned variables such as matchmaking, the dowry system, the inheritance system, and the west room, and this was the ideal type of the stem family formulated by Arensberg and Kimball.

2. Theoretical Framework of the Irish Family

Based on the previous studies by Arensberg and Kimball, the authors propose the following hypothesis about a change in the form of the Irish family: In the early 19th century, the nuclear family based on the partible land inheritance system was predominant in Ireland. Around the mid-19th century, however, the inheritance system among landholders changed from the partible inheritance system to the impartible inheritance system due to the following reasons: the Great Famine in 1845, land integration via enclosure by landlords, which resulted from the eviction of tenant farmers, resistance by landlords to land fragmentation, depletion of farmland, industrial underdevelopment in Ireland, and the collapse of the domestic linen industry, which represented proto-industrialization in the area around Belfast [Clarkson, L.A. 1981, 237]. Along with these changes, the one-child inheritance system was established, where the patriarch designated his heir and passed the patriarchal rights over to the heir at some point in time. The combination of this inheritance system and the dowry-based matchmaking system led theoretically to form the stem family and the family situations that support the norm were established.

The dowry-based matchmaking system is said to have existed before the Great Famine as the stem family norm [Shoji Yonemura, 1981, 143]. However, in light of Fitzpatrick's 1852 theory [Fitzpatrick, David, 1982, 58], Collins' theory of 1850 and later [Collins, Brenda, 1993, 368], and Breen's theory of a change after the Great Famine [Breen, Richard, 1980, 252], a hypothesis can be proposed that the stem family was formed along with a change in the inheritance system after the mid-19th century. After the formation of the stem family norm, patriarchs had and maintained strong control over land and agricultural labor and began to cherish a strong desire to leave their family names on their land [Gabriel, Tom, 1977, 73]. In reality, patriarchs tended to continue holding patriarchal power and postpone the designation of their heirs and the transfer of family assets to the heirs.

Consequently, the designated sons were forced to postpone their marriage and inheritance until the aging or deaths of their parents, leading to an increase in late or non-marriage cases. This tendency was intensified by the penetration of celibacy and late marriage practices across Ireland at the time. Sons other than the heir had to settle for some financial compensation and to work in Dublin, Belfast, or Cork, or emigrate to England or America, or remain home. Thus, the stem family norm was most prevalent in Ireland from the end of the 19th century to the early 20th century.

Based on the understanding of how the nuclear family system shifted to the stem family system as discussed above, the authors propose a theoretical framework that the Irish family system changed drastically to around the time of the Great Famine. The dowry-based matchmaking system and the impartible inheritance system were established, and in the early 20th century stem families, not conventional nuclear families, were predominant in Ireland.

On the other hand, a regional variation in the Irish stem family existed there were more stem families among small to medium-scale farmers in western Ireland than among large-scale farmers in eastern Ireland. Arensberg and Kimball, who conducted their first survey in agricultural villages in Ireland in the early 1930s, confirmed the existence of stem families in the medium-scale farming area in County Clare, suggesting that the regional variation resulted from the difference in situational elements, which supported the stem family norm.

At this point, the authors tentatively regard peasant society as the conceptual social structure of agricultural villages in western Ireland. D.F. Hannan pointed out the three basic features of the peasant. Its main features a familial economy, where farms are owned or securely rented and are large enough to support a family but not large enough to employ labor, (2) a subsistence economy, where production for market is not the dominating purpose of production, (3) where impartible inheritance was the norm, as in Ireland, stem family arrangements characterize the social structure. [D.F. Hannan, 1982, 142-3]

In such a peasant society, while small-scale farmers had to have a side job or work as migrant workers to make a living, medium-scale farmers were able to make a living by farming solely by family members and did not require any wage-earners. Therefore, in peasant society in western Ireland, traditional farmers selected the transfer of land to their heirs, rather than having them leave home to work outside, as an effective family strategy. Heirs waiting for inheritance and children other than heirs remaining home tended to marry late or stay single.

On the other hand, different from peasant society in western Ireland, large-scale farmers in eastern Ireland constituted a commercial agricultural society as they could not manage their farms by family members alone and required agricultural laborers and agricultural servants. The farmers in eastern Ireland adopted an adaptive strategy where while designated boys became heirs, children other than the heir worked in Dublin, which had capital and commercial functions, or already industrialized Belfast, or emigrated to America after receiving some financial compensation. The agricultural laborers employed by large farmers were landless workers, who were able to get married if their economic conditions allowed, or stayed single. The adaptive family strategy for these workers was either to form simple family households if they could get married, or to form solitary or non-family households if marriage was not possible.

Thus, the difference in the family situational element of farming scale, such as small, medium,

or large-scale farming, had a causal relationship with the family strategy for the formation of the stem family. The authors assume, therefore, that the difference in the family situational element had a great impact on the formation of the stem family and propose a hypothesis about a regional variation that while the stem family norm in western Ireland was supported by the family situational element, the stem family norm was weak in eastern Ireland, leading to the predominance of simple family households, which were determined by the family situational element in eastern Ireland.

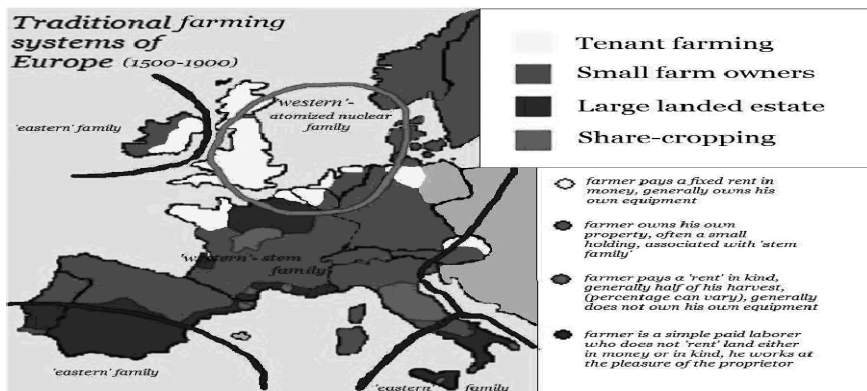
The authors attempt to verify the aforementioned hypothesis about the regional variation in the formation of the Irish stem family by using the GIS and linkage techniques based on the census returns of 1901 and 1911. The regional variation is examined below through variables such as landholding scale, farm management, demographic variables (solitaries, marriage rate, birth rate, death rate and marriage age), and the age of household heads, household size, household formation, and the number of kin. This article is based on the facts obtained from the analysis of 1901 and 1911 census returns.

The 1901 and 1911 census returns were used for this article: The population was 4,429,861 and the number of households was 874,045 in 1901, while the population was 4,375,691 and the number of households was 908,881 in 1911. The linkage data include 80,780 households (hits: 33.8%) in County Antrim (Ulster), County Mayo (Connaught), County Clare (Munster), and County Meath (Leinster), which were selected randomly from the four provinces during the ten-year period from 1901 to 1911. Name, gender, and age were used as variables of the linkage data.

3. Agriculture in Ireland

The map of the traditional farming system of Europe by Todd shows that while small-scale farming by land owners was concentrated in western Ireland, eastern Ireland featured large-scale

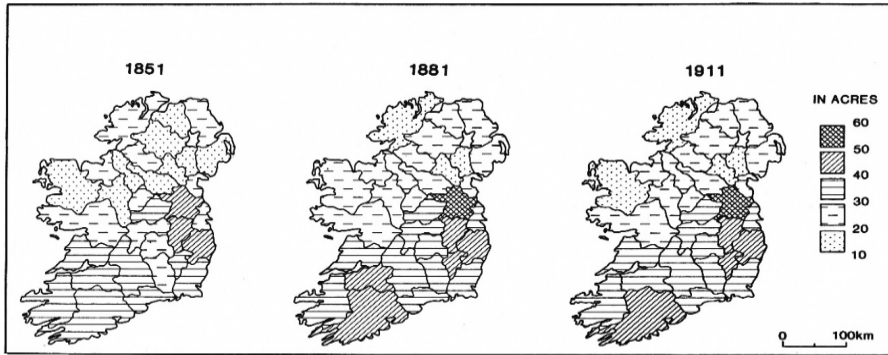
Map 2. Traditional farming system of Europe



Source: E. Todd, *L'Invention de l'Europe*, 1996.

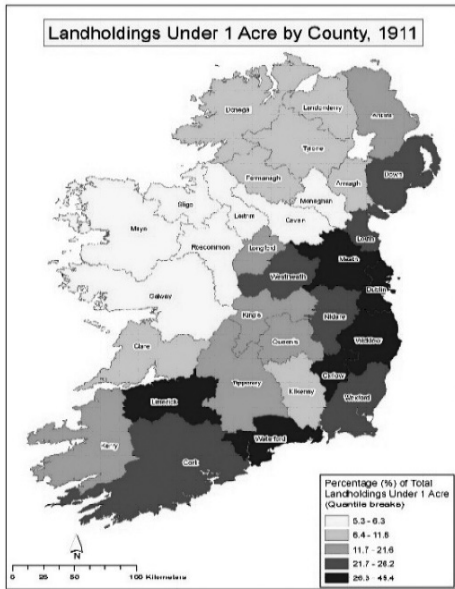
tenant farming, which seems to be almost meaning distributed (Map 2). The achievements of Todd's research are discussed in detail below.

Map 3. Average Size of Landholdings, 1851-1911 (excluding holdings under 1 acre)

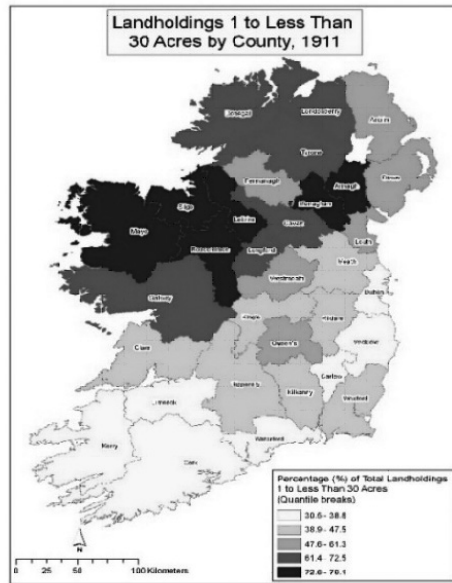


Source: Michael Turner, 1993, 307.

Map 4.

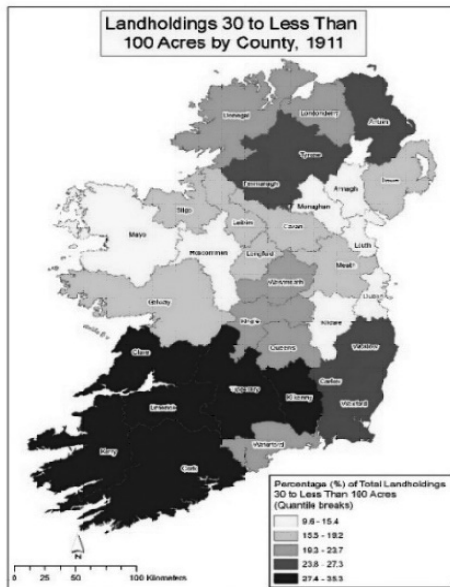


Map 5.

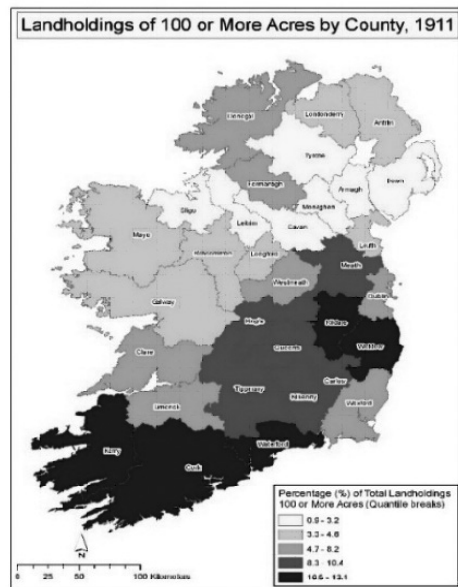


The number of landholders from 1851 to 1911 was 60,800 in 1851, 57,800 in 1881, and 60,800 in 1911. While the number of landholders temporarily declined due to the mini-famine in 1881, it recovered its 1851 level in 1911. When the farmers during this period were classified into four categories (landholdings of less than 1 acre, landholdings of 1 to less than 30 acres, landholdings of 30 to less than 100 acres, and landholdings of 100 acres or more), there was a clear difference between eastern and western Ireland with a line from Dundalk Bay to Galway Bay. The map 3 of

Map 6.



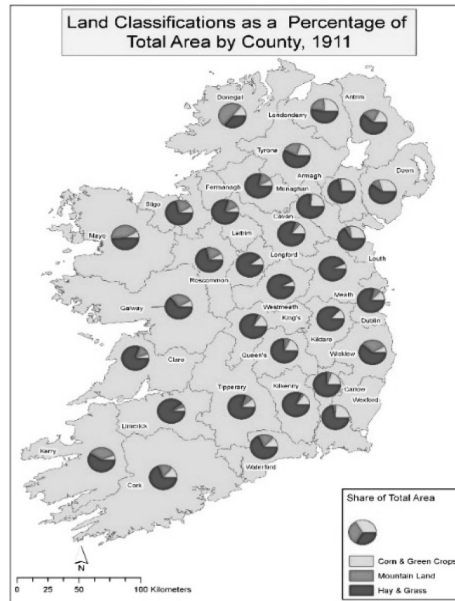
Map 7.



average landholdings in 1851, 1881, and 1911 [M. Turner 1993, 90] showed similar distributions across all three years: Landholdings of less than 1 acre were concentrated in Leinster and Munster, whereas landholdings of 1 to less than 30 acres were concentrated in Ulster and Connaught and landholdings of 100 acres or more were concentrated in Leinster and Munster. Moreover, these distributions corresponded with the distribution of the average estimated value of land by province.

While in western Ireland, landholdings of less than 1 acre were few in number, landholdings of less than 30 acres accounted for more than 70%, demonstrating that western Ireland was a small to medium-scale farming region. On the other hand, in eastern Ireland, although landholdings of less than 1 acre (landless farmers) were greater in number than in western Ireland, landholdings of 100 acres or more were much more numerous than in western Ireland, demonstrating that eastern Ireland was a large-scale farming region. Landholders of less than 1 acre were employed by large-scale farms. Landholdings of 1 to 30 acres were more evident in western Ireland than in eastern Ireland, demonstrating that western Ireland was a small-scale farming region where side jobs were required to make a living. In particular, there were many seasonal migrants to England and Scotland in County Mayo, County Sligo, and County Roscommon. Landholdings of 30 to 100 acres in the southwestern part of Ireland show that this area was characterized by medium-scale farmers managed their farms with assistance of family members. Landholdings of 100 acres or more, large-scale farmers, were concentrated in eastern Ireland, particularly in County Meath,

Map 8.

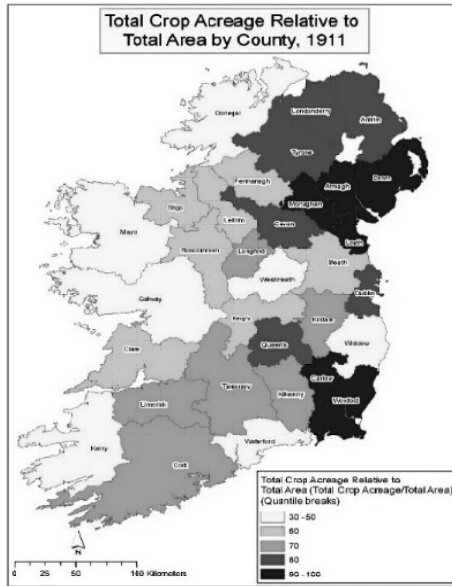


County Waterford, and County Cork. These were areas where commercial livestock farming was conducted by employing agricultural workers. These maps made the difference in landholding scale in Ireland clear: small to medium-scale farming was practiced in Connaught and Ulster whereas large-scale farming was practiced in Munster and Leinster. (Map 4~7)

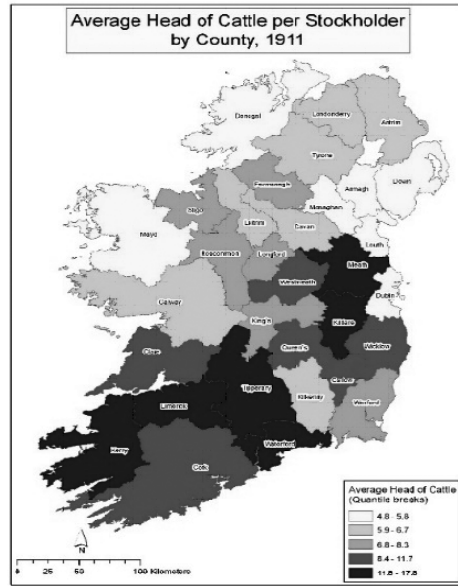
An examination of land use in Ireland showed that to the west of a line from most of western Ireland was occupied by mountains, particularly in County Donegal, County Mayo, and County Kerry, where mountains accounted for about 50% of the land. While part of the remaining land was used for hay and grass, the land area for the cultivation of cereals was very limited. On the other hand, in eastern Ireland, there were few mountains and the land area used for hay and grass was remarkably large. Part of the land was also used for the cultivation of cereals. In short, eastern Ireland was blessed with better conditions for farming than western Ireland. The rich land was also fit for commercial livestock farming. (Map 8)

While in eastern Ireland except County Wexford and County Carlow, tillage centered on Ulster, most tillage in western Ireland was used for the cultivation of potatoes mainly for personal consumption. (Map 9) An examination of the average number of cattle per cattle breeder to the east of a line from Dundalk Bay and Galway Bay shows (Map 10) that it was high with cattle breeders with more than 12 head of cattle in County Meath, County Kildare, County Tipperary, County Limerick, County Waterford, and County Kerry. However, since cattle of over 2 years of age centered on eastern Ireland, such as County Meath and County Kildare, and cattle of one year

Map 9.



Map 10.



of age or younger centered on western Ireland, such as County Kerry, County Limerick, and County Clare, it can be said that while the fattening of calves was actively practiced in western Ireland, eastern Ireland bought the fattened calves and grew them to adult cattle to sell in Dublin or export to England and Wales as fattened animals.

From the above examination, a regional variation was found in agriculture: While livestock farming was more actively practiced than grain farming in eastern Ireland where there were many large-scale landholdings, mixed agriculture of grain farming and livestock farming was practiced in western Ireland where there were many small to medium-scale landholdings.

5. Population Structure

While the population of Ireland reached its peak (8.29 million) in 1845, it declined by 1.6 million people (-20%) due to the Great Famine in 1845 and by 470,000 people (-9.1%) in the ten years from 1881 to 1891 due to the crisis of near-famine conditions in 1879. As a result, the Irish population in 1911 was 4.39 million (Table 1). When the decline in population during the period from 1821 to 1911 was examined by province (Table 2), the population decline was particularly great in Munster (-58%) and Connaught (-57%) whereas it was less in Leinster (-40%) and Ulster (-33%), showing that Munster and Connaught lacked a deterrent to population decline. However, after great famine, population in four provinces was experienced the same degree of decline, but Leinster and Ulster did a population decline until 1871 and did not decrease at that of small famine after it too much. On the other hand, in Munster population decline was

Table 1. Amount and Rate of Change in the population of Ireland 1821-1911

	Total population	Actual Change	Percent of Change
1821	6802		
1831	7767	966	14.2
1841	8175	408	5.3
1845	8295	120	1.5
1851	6552	-1623	-19.9
1861	5799	-753	-11.5
1871	5413	-387	-6.7
1881	5175	-238	-4.4
1891	4705	-470	-9.1
1901	4459	-246	-5.2
1911	4390	-69	-1.5

Source: D. A. E. Harness 1831, 274.

Table 2. Population of Ireland by Province 1821-1911

	Leinster	Munster	Ulster	Connaught	Ireland
1821	1.8	2.0	2.0	1.1	6.8
1831	1.9	2.2	2.3	1.3	7.8
1841	2.0	2.4	2.4	1.4	8.2
1851	1.7	1.9	2.0	1.0	6.6
1861	1.5	1.5	1.9	0.9	5.8
1871	1.3	1.4	1.8	0.8	5.4
1881	1.3	1.3	1.7	0.8	5.2
1891	1.2	1.2	1.6	0.7	4.7
1901	1.2	1.1	1.6	0.6	4.5
1911	1.2	1.0	1.6	0.6	4.4

Note: the unit of population is million persons.

Source: W. E. Vaughan and A. J. Fitzpatrick, 1978, 3-16.

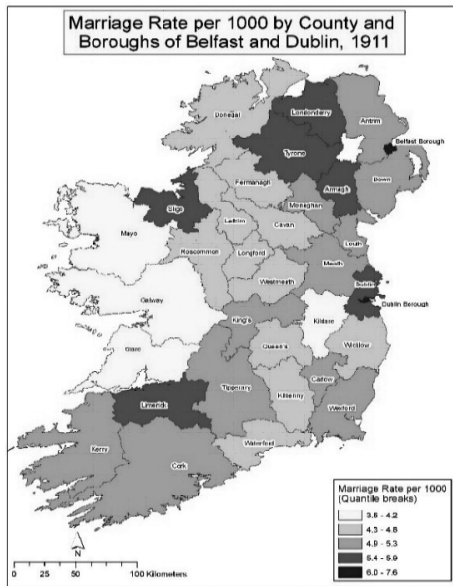
experienced after famine every ten years. In addition, it was Connaught a population decline was accepted in the same degree.

In other words, push factor was vulnerable to Munster and Connaught and there was little job opportunity in the city and the UK and the United State were accepted after the small famine.

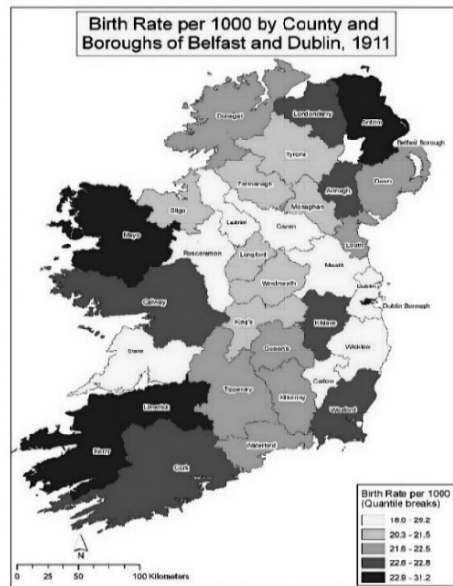
We think six main factors influenced post famine demographic development: the changing rural class structure, rising age at marriage, declining marriage and birth rate, a static death rate and emigration. The combination of these six factors was unique to Ireland [Lee, J., 1973, 1]

In this chapter, the Irish population is examined based on the following four factors: regional crude marriage rate, crude birth rate, crude death rate, and emigration rate by province. First of all, the examination of changes in the crude marriage rate (the number of marriages per 1000 population) showed (Table 3) that it declined from 7 before the Great Famine to 5 in 1871 and

Map 11.



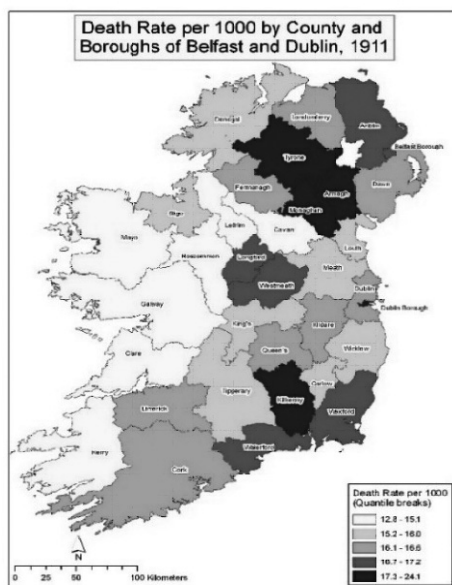
Map 12.



then to 4 due to food shortages caused by the mini-famine in 1879, and recovered to the 5 level in 1911. While the crude marriage rate did not decline in Leinster, it declined in the provinces of Munster, Ulster, and Connaught. Particularly in Connaught, where the near-famine had a great impact as people there lived in part on potatoes, the crude marriage rate radically declined from 5 in 1865 to 3 in 1881. In short, marriage rate in 1911 showed a high-east, low-west distribution. (Map 12)

This decline in the marriage rate was related to the percentages of never married people aged 45 to 54 (Table 4). Among the never married people in 1851 after the Great Famine, males accounted for 10% and females accounted for 13%. The percentages gradually increased to 20% and 18.5%, respectively, in 1891 and radically rose to 75% and 55% in 1911 [M. O'Grada, 1994, 215]. The non-marriage rate among people aged 25 to 34 was 43% for males and 28% for females before the Great Famine. It then increased and reached 75% and 55%, respectively, in 1911 [J.P. Kent, 2002, 530]. The non-marriage rate by province in 1911 was 81% in Connaught, which was higher than Munster (76%), Leinster (69%), and Ulster (62%) [L. Kennedy and C.A. Clarkson, 1993, 168]. This was due partly to late marriage among heirs, which was caused by the prolonged holding of patriarchal rights by fathers, as discussed later. The marriage age seems to have increased during the period from 1845 to 1911 among males from 25 to 33 and females from 25 to 28 [J. Lee, 1973, 3]. The 1911 data showed that the age for the first marriage among males was 30.4 and 26.7 among females. When the age of the first marriage was examined by province, Connaught was highest (33 among males and 28 among females), followed by Munster (31 and

Map 13.



27), Leinster (30 and 26), and Ulster (30 and 26), demonstrating that people in western Ireland tended to marry later than people in eastern Ireland. Moreover, the increase in the number of single people in Munster and Connaught in 1911 was attributable not only to the low marriage rate and famines, but also to the enforcement of Catholic doctrine by priests [E.E. McKenna, 1978, 239-240]. Thus, the decline in the marriage rate was associated not only with the number of never married people, but also with the late marriage of heirs due to the delayed inheritance of farmland and the difficulty in getting married among non-heirs.

For the birth rate (Table 5), it was high in Ireland before the mini-famine, and it rapidly declined after the crisis of 1879, which equally impacted all provinces. The birth rate in 1911, however, clearly showed a high-west, low-east pattern. The decline in the birth rate was largely attributable to tendencies to marry late or stay single. The average number of children in 1911 was highest in Connacht (5.9), followed by Munster (5.8), Leinster (5.1), and Ulster (5.1).

Table 3. Rate of Marriage per 1000 persons by Province 1865-1911

	1865	1871	1881	1891	1901	1911
Leinster	5.3	5.6	5.0	5.0	5.3	5.6
Munster	5.5	5.5	3.7	4.0	4.6	5.1
Ulster	5.5	5.3	4.5	5.2	5.6	5.8
Connaught	4.6	5.0	3.3	3.3	4.0	4.3
Ireland	5.3	5.4	4.2	4.6	5.1	5.4

Source: Annual Report of Registrar-General of Marriages, Births and Deaths in Ireland, 1865, 1871, 1881, 1901 and 1911.

Table 4. Percentage never Married among Population Aged 45-54 years by Sex and Province

	Men					Women				
	Ireland	Leinster	Munster	Ulster	Connaught	Ireland	Leinster	Munster	Ulster	Connaught
1841	10	13	9	10	7	13	14	11	15	8
1851	12	15	10	13	7	13	14	10	15	8
1861	15	19	12	16	10	14	17	12	16	10
1871	17	21	13	19	12	17	19	13	19	12
1881	17	22	14	19	11	17	21	13	20	10
1891	20	25	17	21	14	19	22	14	23	10
1901	24	28	21	24	19	22	25	17	26	14
1911	27	31	27	26	25	25	28	22	27	18

Source: D. Fitzpatrick, 1985, 129.

Table 5. Rate of Birth per 1000 persons by Province 1865-1911

	1865	1871	1881	1891	1901	1911
Leinster	23.6	25.7	24.5	23.0	22.4	23.5
Munster	25.4	29.4	24.1	22.2	22.0	22.8
Ulster	26.1	27.6	24.7	21.0	23.9	23.7
Connaught	24.5	29.8	23.5	22.0	21.2	22.3
Ireland	25.0	28.1	24.5	23.1	22.7	23.3

Source: Annual Report of Registrar-General of Marriages, Births and Deaths in Ireland, 1865, 1871, 1881, 1901 and 1911.

(Map 12) This result and the fact that the marriage rates in Munster and Connaught were lower than Leinster and Ulster seem to suggest that Connaught and Munster were prolific provinces, which was supported by the average number of children in 1911: 6 in County Mayo, 5.9 in County Galway, 5.8 in County Roscommon, and 5.5 in County Sligo in Connacht, while 6.2 in County Kerry, 6.1 in County Clare, 5.7 in County Limerick, and 5.6 in County Cork in Munster.

While the death rate in Ireland (Table 6) rose temporarily in 1881 and 1891 due to the mini-famine, it recovered its pre-famine levels after 1891. When the death rate was examined by province, it was high in Leinster and Ulster during the period from 1865 to 1911 and low in Munster and Connaught (high-east, low-west pattern). This fact was supported by the map 13 of the death rate per 1000 persons in 1911. Compared to other countries in Europe, the death rate

Table 6. Rate of Death per 1000 persons by Province 1865-1911

	1865	1871	1881	1891	1901	1911
Leinster	18.5	19.0	20.2	19.8	20.0	18.5
Munster	15.7	16.5	17.2	17.2	16.4	15.5
Ulster	16.4	15.0	17.5	19.3	18.6	16.8
Connaught	12.8	13.0	13.3	15.2	13.8	14.0
Ireland	16.2	16.4	17.5	18.4	17.8	16.6

Source: Annual Report of Registrar-General of Marriages, Births and Deaths in Ireland, 1865, 1871, 1881, 1901 and 1911.

in Ireland was lowest, which was attributable to the country's low infant mortality rate [J. Lee, 1973, 6].

The aforementioned analysis of marriage rate, birth rate, and death rate showed that there had been natural population growth due to the high birth rate and low death rate despite a decline in the marriage rate in Ireland: The natural population growth per 1000 persons was 8.3 during the period from 1861 to 1871, 8 from 1871 to 1881, 5.3 from 1881 to 1891, 5.3 from 1891 to 1901, and 5.6 from 1910 to 1911. The decline in population due to emigration during these periods was -15.2, -12.5, -16.5, -16.3, and -11.9, respectively [C. O'Grada, 1994, 225]. As a result, the population structure during these periods showed a population decline due to the cancellation of natural population growth by emigration.

According to the First Annual Report of the Registrar-General of Marriages, Births and Deaths in Ireland, during the year 1864 the number of persons who left the ports of Ireland amounted to 114,169, of these 60,692 were males and 53,477 females. Of the whole number 17.3% were from Leinster, 42.4% from Munster, 17.4% from Ulster and 15.9% from Connaught, but 7.0% did not state the county or province to which they belonged. [1864, 15]

In 1881, according to the returns obtained by the Royal Irish Constabulary and Metropolitan Police, who acted as enumerators at the several Irish seaports, number of emigrants who left Ireland during the year 1881 amounted to 78,417, of these, 40,106 were and males were and 38,311 females. Of the whole number, Ulster was a lot of first, 30.7%, but Munster 27.7%, Connaught 20.8%, Leinster 20.7%. Of the emigrants in 1881, 14.7% were under 15 years of age, 76% were between 15 and 35 years and 9.3% were 35 or upward [1881, 29].

In 1891, the number of the emigrants was 59,623 people, of which males were 30,046 and females 29,577 and Munster was a lot of first 41.4%, followed as Ulster (22.2%), Connaught (20.8%), and Leinster (15.6%) [1891, 20]. In 1901, the number decreased to 39,613 than front of it, of which females were more (21,486) than males (18,127). There were the still most Munster and a ratio of emigrant was 41.4% and in the following the order was Connaught (28%), Ulster (22.1%), Leinster (8.6%). [1901, 20]

While after the famines, the number of emigrants increased in Ulster, Munster, and Leinster, it decreased after 1881. On the other hand, the number of emigrants to America radically increased in Connaught, an impoverished region, after 1881 (Table 8). Before the mini-famine, the partible inheritance system existed in Connaught, which enabled most people to live on the inherited land. However, after the inheritance system shifted to the impartible inheritance system, Connaught suffered greatly from the mini-famine in 1879, and the emigration rate in Connaught increased radically in 1881 to 18.7% and continued to be higher than the emigration rates of other provinces despite a gradual decline thereafter (16.3% in 1891, 16.7% in 1901, and

Table 7. Rate of Emmigration per 1000 by County in Ireland

	1841	1851	1881	1891	1901	1911
Ulster						
Antrim	14.9	18.9	13.5	12.7	9.1	4.5
Armagh	9.5	16.8	11.4	12.5	9.5	6.0
Cavan	7.6	11.5	16.1	16.2	14.9	10.7
Donegal	5.6	9.0	10.2	14.7	11.2	7.3
Down	12.8	23.9	10.9	9.9	7.0	5.6
Fermanagh	9.4	9.0	12.6	12.4	10.4	6.7
Londonderry	9.9	19.2	13.3	15.4	10.2	6.0
Monaghan	6.4	8.6	13.8	13.3	10.7	6.2
Tyrone	10.0	17.7	13.5	15.1	12.0	7.5
Leinster						
Carlow	6.9	11.5	11.7	14.6	12.9	6.6
Dublin	35.1	45.2	6.0	5.4	4.1	2.3
Kildare	14.7	16.5	8.8	9.3	7.4	3.5
Kilkenny	8.9	10.2	10.8	11.4	10.2	5.1
Kings	12.0	15.3	14.4	14.9	12.1	5.8
Longford	6.6	8.1	20.4	19.7	15.8	10.6
Louth	5.8	9.7	10.2	8.3	6.3	4.4
Meath	10.7	13.6	14.9	12.7	9.0	5.8
Queens	10.2	10.7	12.8	15.7	13.8	5.9
Westmeath	8.3	13.4	13.0	11.9	10.0	4.8
Wexford	9.5	11.6	11.8	10.3	7.0	3.2
Wicklow	10.0	11.6	7.1	7.7	6.2	2.8
Munster						
Clare	8.1	7.4	17.8	18.7	20.1	13.9
Cork	12.0	25.9	19.5	16.4	18.0	14.7
Kerry	5.5	6.6	16.8	20.3	24.6	18.3
Limrick	9.7	12.9	19.0	15.6	14.7	8.6
Tipperary	19.8	23.5	18.5	15.2	14.6	9.7
Waterford	13.0	11.9	14.4	14.5	14.7	9.5
Connaught						
Galway	11.2	11.9	12.9	15.9	20.2	16.1
Leitrim	9.8	6.5	14.8	19.2	19.4	12.9
Mayo	7.1	8.6	10.6	14.3	18.8	17.4
Roscommon	11.8	12.1	13.3	14.4	17.1	13.3

Source: Census of Ireland, 1841, 1851, 1881, 1891, 1901 and 1911.

Table 8. Emigration Rates per 100 by Age in Census Years

Region	1881		1891		1901		1911	
	United States	Other	United States	Other	United States	Other	United States	Other
Leinster	10.9	1.8	6.9	0.8	2.4	0.6	2.6	1.1
Munster	12.7	3.7	18.3	2.9	12.4	2.8	6.8	0.6
Ulster	8.8	5.0	6.7	1.5	3.1	2.4	3.5	4.1
Connaught	18.7	1.3	16.3	0.9	16.7	0.4	10.5	0.4

Source: T. J. Hatton and J. G. Williamson, 1993, 587.

10.5% in 1911).

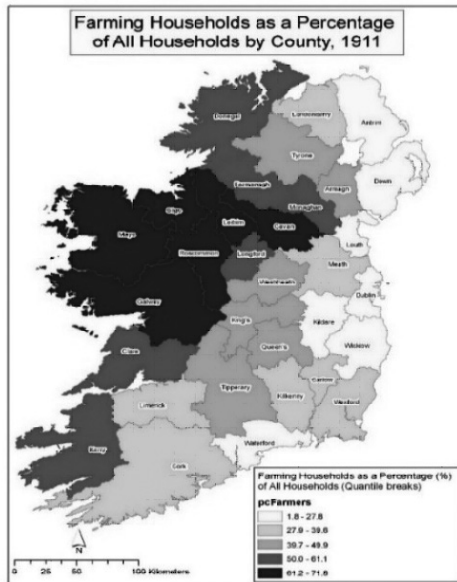
Based on the above analysis, it became clear that the population structure of Ireland suffered not only from the Great Famine in 1845, but also from the 1879 crisis showed a radical population decline as the natural growth of the population was canceled out by an increase in emigrants. It was also characterized by a decrease in the marriage rate, an increase in the number of the never married people, and late marriage among heirs in rural villages, and these demographic features

were closely related to the family structure of Ireland.

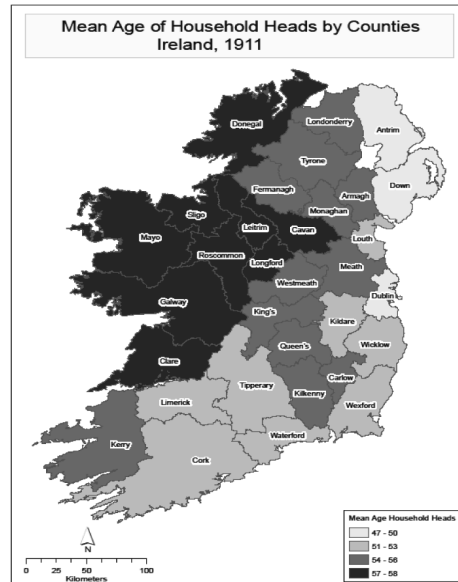
6. Household Structure

1) Age of household heads

Map 14.



Map 15.



For the occupation of household heads, the percentage of farmers was more than 50% in western Ireland with a line connecting County Donegal, County Cavan, County Clare, and County Kerry as the boundary, whereas it was less than 50% in eastern Ireland. The average age of household heads was high in western Ireland (over 57) (under the almost same boundary), whereas it was under 56 in eastern Ireland. That is, the age of household heads was higher in western Ireland where there were more householders. (Map 14~16)

The average age of householders in County Antrim, which was selected for linkage data, was 47.0 in 1901 and 48.7 in 1911, whereas it was 52.3 and 54.3 in County Meath, 53.3 and 56.2 in County Clare and 53.5 and 57.5 in County Mayo. The results show that the average age of householders was higher in western Ireland than in eastern Ireland (Table 9). The higher age of householders in western Ireland seemed to have resulted from the predominance of agriculture, prolonged holding of patriarchal rights by patriarchs, and late marriage among heirs. This situation coupled with late marriage discussed later led to the predominance of the multiple family household.

For the marital status of householders (Table 10), while the percentage of married household

Map 16.

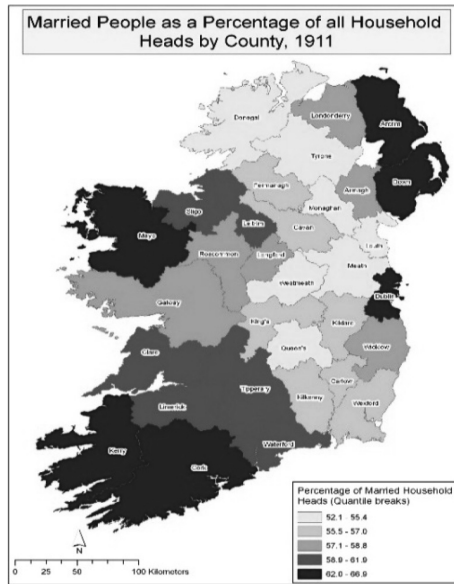


Table 9. Age of Household Heads in Co. Antrim, Co. Clare, Co. Mayo and Co. Meath

County	Year	~ 19	20~29	30~39	40~49	50~59	60~69	70~79	80~89	90~	Total	N
Antrim	1901	0.1	7.5	17.1	20.7	20.6	19.5	10.8	3.5	0.3	100.0	38,774
	1911	0.2	6.2	16.8	20.5	19.7	17.2	15.4	3.6	0.3	100.0	39,204
Clare	1901	0.1	4.4	13.3	20.5	23.3	22.6	11.4	4.0	0.5	100.0	20,937
	1911	0.1	2.7	12.3	19.1	21.1	20.8	20.0	3.4	0.4	100.0	20,559
Mayo	1901	0.2	3.8	13.3	18.5	23.1	25.6	10.9	4.1	0.5	100.0	37,179
	1911	0.2	2.4	11.4	18.3	18.6	21.0	23.2	4.4	0.5	100.0	37,054
Meath	1901	0.2	5.5	14.1	19.8	23.7	23.5	10.3	2.7	0.2	100.0	15,302
	1911	0.2	4.8	15.2	19.6	19.1	19.6	18.3	2.9	0.3	100.0	14,856

Source: Census Returns of Ireland, 1901 and 1911, Natinal Archives Dublin.

Table 10. Avarage Age of Marriage of Household head and Wife in 1911

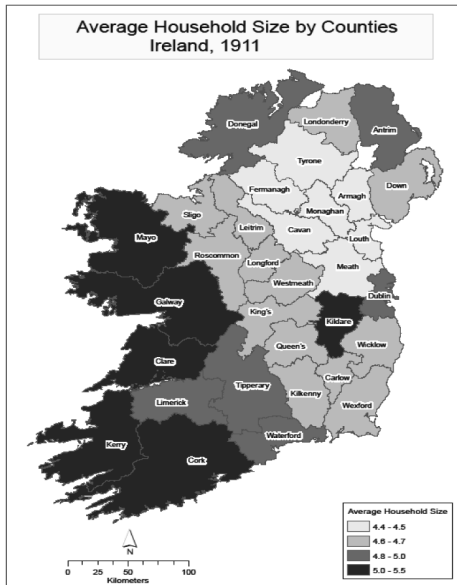
	Male	Female		Male	Female
Antrim	27.7	24.8	Queens	33.2	27.6
Armagh	30.0	26.3	Westmeath	32.4	26.7
Cavan	31.7	28.4	Wexford	31.0	27.1
Donegal	32.3	27.4	Wicklow	31.1	26.3
Down	28.5	25.3	Clare	32.8	28.0
Fermanagh	32.2	27.4	Cork	30.4	26.1
Londonderry	30.2	26.2	Kerry	31.1	27.0
Monaghan	32.9	27.8	Limerick	31.2	26.9
Tyrone	32.1	27.4	Tipperary	31.8	27.2
Carlow	31.7	27.2	Waterford	30.7	26.3
Dublin	28.2	24.5	Galway	32.0	27.3
Kildare	30.7	25.9	Leitrim	31.2	29.0
Kilkenny	31.6	27.4	Mayo	32.0	27.6
Kings	32.0	27.1	Roscommon	32.8	28.2
Longford	33.1	28.8	Sligo	32.3	28.3
Louth	30.6	26.2	Ireland	30.1	26.4
Meath	32.5	26.9			

Source: Census Returns of Ireland, 1911, Nationa Archibes Dublin.

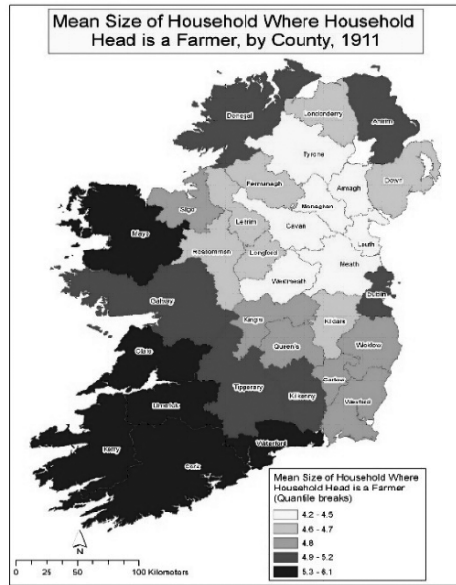
heads was over 60% in Connaught and Munster, there were many counties in Ulster, except County Antrim and County Down (where the percentage was over 60%), and Leinster in eastern Ireland where the percentage was 55% or less. Since County Antrim and County Dublin had the big cities of Belfast and Dublin, respectively, there were many employed workers, who tended to marry early.

2) Household Size

Map 17.



Map 18.



The sizes of households can be roughly grouped into the following three areas, one to the west of a line from County Mayo to County Waterford, another to the east of a line from County Fermanagh to County Meath, and the third a region between these two areas. (Map 17 and 18)

While relatively large families were concentrated in western Ireland, there were smaller

Table 11. Size of Households in Co. Antrim, Co. Clare, Co. Mayo and Co. Meath

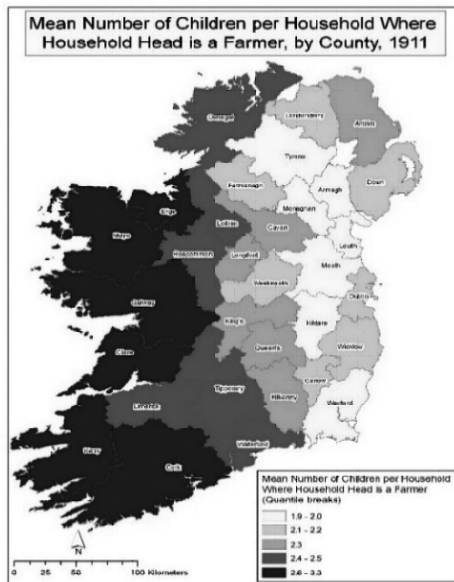
County	Year	1	2	3	4	5	6	7	8	9	10	Total (%)	N	Average
Antrim	1901	6.4	13.5	16.8	16.8	15.2	11.8	8.1	5.2	3.2	4.0	100.0	38,843	4.8
	1911	8.6	15.5	15.1	14.8	13.2	10.4	8.0	5.7	3.6	4.1	100.0	39,336	4.6
Clare	1901	5.9	11.9	13.0	14.2	13.3	11.4	9.5	7.4	5.5	8.0	100.0	20,965	5.4
	1911	6.4	12.5	14.7	15.2	13.8	11.3	8.9	6.5	4.5	6.3	100.0	20,662	5.1
Mayo	1901	4.7	10.8	13.3	14.9	14.1	12.4	10.0	7.7	5.2	6.9	100.0	37,241	5.3
	1911	5.4	11.6	13.6	14.8	14.1	12.0	10.1	7.4	5.0	6.0	100.0	37,164	5.2
Meath	1901	10.3	16.2	16.4	14.4	12.2	9.9	7.0	5.1	3.6	4.9	100.0	15,325	4.6
	1911	10.9	17.7	16.2	15.0	12.5	9.3	6.9	4.6	3.0	4.0	100.0	14,930	4.8

Source: Census Returns of Ireland, 1901 and 1911, National Archives Dublin.

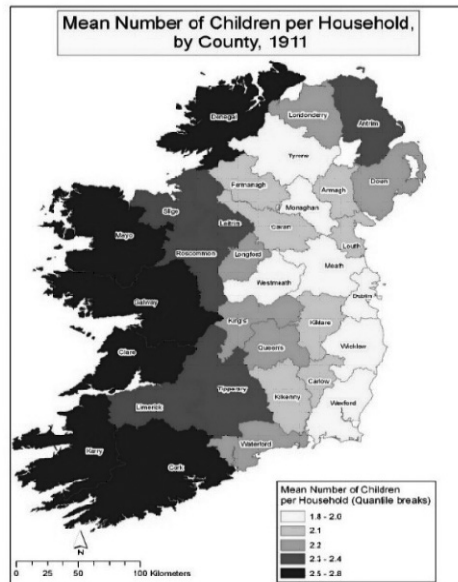
families in eastern Ireland. For the average household size in the four counties (Table 11), it was 4.8 in 1901 and 4.6 in 1911 in County Antrim, 4.6 in 1901 and 4.8 in 1911 in County Meath, 5.4 in 1901 and 5.1 in 1911 in County Clare, and 5.3 in 1901 and 5.2 in 1911 in County Mayo. Moreover, according to the sizes of households in the four counties, the household size reached a peak of two to three persons in County Meath and County Antrim, whereas it reached a peak of four persons in County Clare and County Mayo. The latter two counties continued to show higher numbers than the former two counties after the peak. This result reconfirmed that the size of households in western Ireland was greater than in eastern Ireland. It was assumed that this difference in the size of households arose from the difference in the number of children.

3) Number of Children

Map 19.



Map 20.



On a map with a line of County Londonderry, County Tipperary and County Cork, the average number of children was higher to the west than to the east. (Map 19 and 20) Moreover, the number of children of farmers showed the same distribution pattern as the average number of children. The fact that there were a greater number of children in western Ireland was attributable to the aforementioned fertility and the greater number of children among farmers. The sizes of households directly reflected the greater number of children among farmers.

A comparison of the average number of children in four counties in 1901 and 1911 (Table 12) showed that the average number of children was higher in County Clare and County Mayo than

Table 12. Percentage of Number of Children in Co. Antrim, Co. Clare, Co. Mayo and Co. Meath

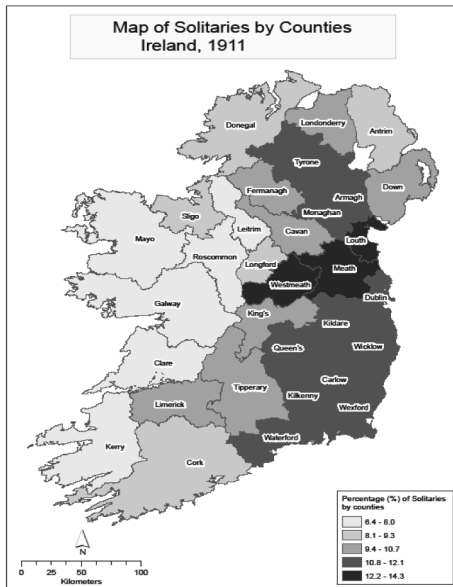
County		1	2	3	4	5	6	7	8	9	10~	Total (%)	N	Average
Antrim	1901	27.0	23.8	18.7	13.2	8.0	4.5	2.5	1.2	0.5	0.5	100.0	30,926	2.3
	1911	22.7	22.0	18.0	13.1	9.9	6.6	4.0	2.0	1.0	0.7	100.0	26,672	2.2
Clare	1901	16.1	20.2	18.2	13.9	10.9	8.4	5.7	3.1	1.9	1.5	100.0	15,865	2.8
	1911	17.1	22.5	18.3	14.5	10.4	7.1	4.8	2.7	1.5	1.1	100.0	14,931	2.5
Mayo	1901	15.1	24.2	17.1	13.7	10.8	8.2	5.3	3.0	1.5	1.0	100.0	30,272	2.9
	1911	15.7	25.1	17.7	13.9	10.4	7.5	4.9	2.7	1.2	0.9	100.0	29,441	2.8
Meath	1901	21.6	22.9	17.8	13.7	9.3	6.7	4.1	2.2	1.0	0.7	100.0	9,806	2.1
	1911	22.2	23.1	19.1	13.3	9.4	5.7	3.8	2.0	0.8	0.6	100.0	9,108	1.9

Source: Census Returns of Ireland, 1901 and 1911, National Archives Dublin.

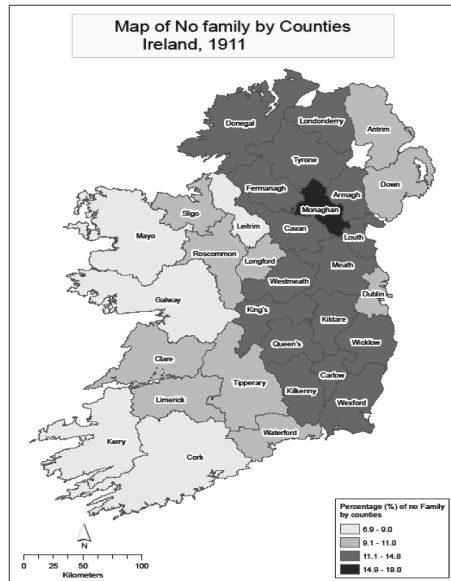
in County Antrim and County Meath. The number of children aged 18 or older was 3,037 in County Antrim, 6,329 in County Clare, 5,978 in County Mayo, and 5,715 in County Meath. The number of older children was highest in County Clare and County Mayo. It can be said from these results that the sizes of households correlated with the number of children and that the households in western Ireland, which were characterized by a low marriage rate and late marriage, formed large-scale households based on prolificacy and many children among farming households.

4) Household Structure

Map 21.

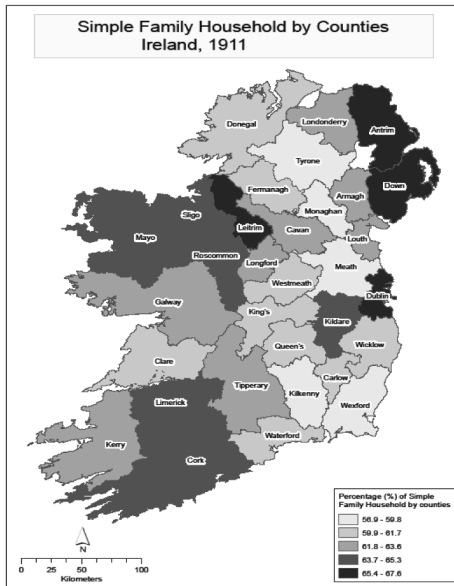


Map 22.

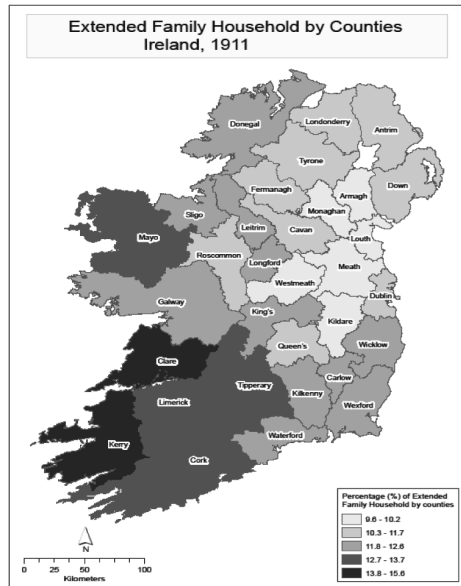


An examination of the household structure based on the Hammel/Laslett household type

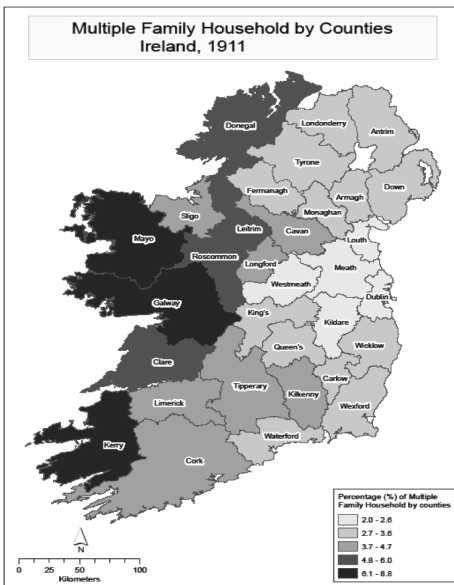
Map 23.



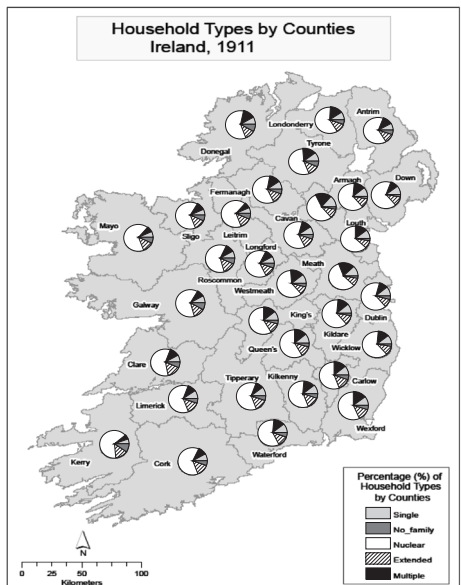
Map 24.



Map 25.

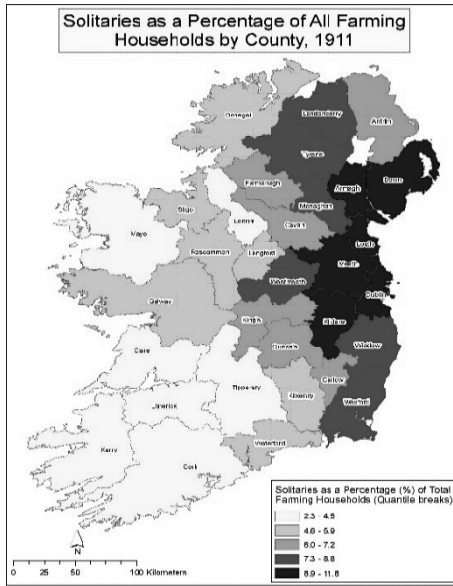


Map 26.



showed that the degree of family formation was higher in western Ireland than in eastern Ireland with a line from County Mayo to County Tipperary serving as the boundary. (Map 21~28) The multiple family household, a typical stem family, predominated in counties Donegal, County Roscommon, County Clare, and County Kerry. On the other hand, along a line from Londonderry

Map 27.



Map 28.

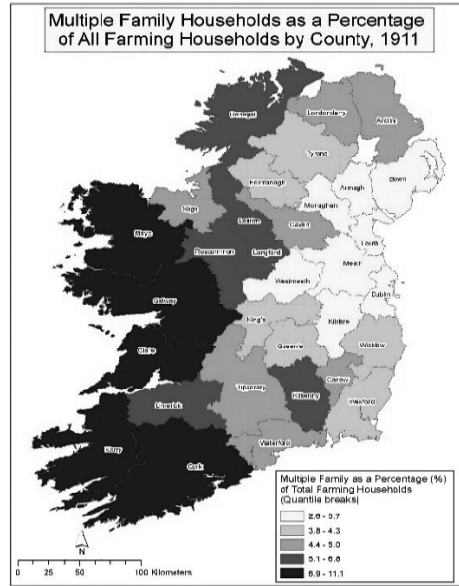


Table 13. Composition of Households in Co. Antrim, Co. Clare, Co. Mayo and Co. Meath

	Antrim		Clare		Mayo		Meath	
	1901	1911	1901	1911	1901	1911	1901	1911
Solitaries	7.3	10.8	7.9	8.0	5.9	6.4	13.4	14.3
No family	9.3	11.7	7.0	9.7	5.4	6.9	13.1	14.5
Simple family households	63.8	63.9	65.1	61.7	68.9	64.9	61.0	58.8
Extended family households	16.8	10.5	14.7	15.4	12.0	13.0	10.0	9.9
Multiple family households	2.9	3.1	5.1	5.2	7.8	8.8	2.5	2.5
Total (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No	38,766	39,257	20,887	20,598	37,154	37,104	15,263	14,894

Source: Census Returns of Ireland, 1901 and 1911, National Archives Dublin.

to Limerick, there were more solitaries to the east than to the west. The simple family household existed more in urban areas, such as County Antrim including Belfast and Dublin, and in western Ireland where solitaries were relatively few in number. An examination of the household structure by province showed that the percentage of the extended family household was higher percentages again in Connaught (12.3%) and Munster (12.9%) than in Leinster (11.1%) and Ulster (11.0%). The percentage of the multiple family household was higher in Connaught (7.1%) and Munster (4.7%) than Leinster (2.7%) and Ulster (3.4%). For the household structure among farmers, it became clear that the number of solitaries showed a high-east, low-west pattern, while the number of multiple family households was characterized by a high-west, low-east pattern.

A closer examination of household types in four counties showed that the percentages of

Table 14. Composition of Households in Co. Antrim, Co. Clare, Co. Mayo and Co. Meath

Categories	Class	Antrim		Clare		Mayo		Meath	
		1901	1911	1901	1911	1901	1911	1901	1911
1. Solitaries	1a. Widowed	3.3	3.6	3.3	2.7	2.6	2.4	3.5	3.1
	1b. Single	3.9	7.2	4.7	5.3	3.3	4.0	10.0	11.2
2. No family	2a. Co-residence siblings	3.6	7.8	5.2	6.2	4.2	4.9	10.8	11.1
	2b. Co-residence kins	5.6	3.1	1.6	1.7	1.1	1.3	2.1	2.3
	2c. Persons not related	0.1	0.8	0.2	1.7	0.1	0.6	0.2	1.0
3. Simple family households	3a. Married couples	5.9	7.4	5.9	5.9	5.1	5.0	6.7	7.5
	3b. Married couples with children	43.6	43.3	42.3	39.6	47.4	44.3	37.7	35.8
	3c. Widowers with children	4.9	4.4	4.9	4.7	5.0	4.7	5.2	4.6
	3d. Widows with children	9.4	8.8	12.0	11.5	11.4	10.9	11.5	10.9
4. Extended family households	4a. Extended upwards	3.1	2.7	5.9	5.9	4.8	5.1	2.1	1.9
	4b. Extended downwards	4.2	3.4	3.4	3.0	3.1	2.8	3.0	3.1
	4c. Extended laterally	8.6	3.3	4.3	4.8	3.5	3.9	3.9	3.7
	4d. Combinations of other extentions	1.0	1.1	1.2	1.7	0.6	1.2	0.8	1.2
5. Multiple family households	5a. Secondary unit upwards	0.9	0.8	2.2	2.6	1.0	1.3	0.7	0.6
	5b. Secondary unit downwards	1.7	2.1	2.8	2.5	6.8	7.4	1.7	1.8
	5c. Secondary units lateral	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.1
	5d. Frdreches	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	5e. Other multiple family househols	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (%)		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N		38,766	39,257	20,887	20,598	37,154	37,104	22,624	14,894

Source: Census Returns of Ireland, 1901 and 1911, National Archives Dublin.

solitary and no-family households were particularly high in County Meath in 1901 (27%) and 1911 (29%) whereas the percentage of extended family and multiple family households was about 13% in each year. Since simple family households were also relatively few in number in County Meath, family formation in County Meath seems to have been weak. County Antrim was similar to County Meath in that while there were many solitary and no family households, multiple family households were few in number. On the other hand, in County Mayo, the percentage of multiple family households was 7.8% in 1901 and 8.8% in 1911 and the percentage of extended family households was 12% and 13%, respectively, whereas the percentages of solitary and no family households were both low. In County Clare, while the percentage of both extended and multiple family households was 20%, the percentages of solitary and no family households were similar to those in County Antrim. From these results, it became clear that the percentage of the stem family was high in County Mayo and County Clare and low in County Antrim and County Meath, demonstrating a regional variation that the stem family was more prevalent in western Ireland than in eastern Ireland.

Next, the authors examined the family structure based on the linkage data of the four counties in 1901 and 1911 (Table 15). In County Antrim and County Meath, the persistency of the solitary (S) household was 42.5% in 1901 and 47.8% in 1911, while that of the non-family household (NF) was 42.5% and 49.5%. On the other hand, it was 35.4% and 33.0% in County Clare, and 33.3% and 29.7% in County Mayo. A comparison of these results suggests that the degree of family formation was higher in County Clare and County Mayo than in County Antrim and County

Meath. In County Mayo with many stem families, the rate of shifting from the simple family household (SFH) to the extended family household (EFH) was 9.2% and that from SFH to the multiple family household (MFH) was 7.5%. In County Clare, the rate of shifting from SFH to EFH was 10.1% and that from SFH to MFH was 4.3%. On the other hand, in County Antrim, where the percentage of stem family was low, the rate of change from SFH to EFH was 8.2% and that from SFH to MFH was 3.6%. In County Meath, the rate of change from SFH to EFH was 7.4% and that from SFH to MFH was 2.7%. These results showed that the rate of change from the simple family household to the stem family was higher in western Ireland than in eastern Ireland, suggesting that the stem family norm was more firmly maintained in western Ireland than in eastern Ireland.

Table 15. Movement of Household type from 1901 to 1911 in Co. Antrim, Co. Clare, Co. Mayo and Co. Meath

County	Categories	1	2	3	4	5	Total (%)	N
Antrim	1. Solitaries	42.5	13.2	34.9	7.5	1.9	100.0	106
	2. No Family	25.8	42.5	24.7	6.5	0.5	100.0	186
	3. Simple family households	4.0	1.9	82.2	8.2	3.6	100.0	1,512
	4. Extended family households	4.7	17.5	56.1	18.5	3.3	100.0	428
	5. Multiple family households	6.9	9.2	56.3	19.5	6.9	100.0	87
Clare	1. Solitaries	35.4	6.3	45.7	9.4	3.1	100.0	127
	2. No Family	14.5	33.0	38.0	10.6	3.9	100.0	179
	3. Simple family households	3.5	2.6	79.5	10.1	4.3	100.0	2,206
	4. Extended family households	1.7	3.6	61.4	29.5	3.8	100.0	634
	5. Multiple family households	2.0	5.4	46.9	32.0	13.6	100.0	147
Mayo	1. Solitaries	33.3	7.1	44.0	3.6	10.7	100.0	84
	2. No Family	9.9	29.7	44.0	14.3	2.2	100.0	83
	3. Simple family households	3.6	2.3	77.4	9.2	7.5	100.0	1,971
	4. Extended family households	1.4	2.5	66.4	24.7	4.7	100.0	359
	5. Multiple family households	3.4	1.7	53.8	12.0	29.1	100.0	117
Meath	1. Solitaries	47.8	11.0	30.9	8.4	1.8	100.0	391
	2. No Family	14.5	49.5	27.0	8.0	1.0	100.0	391
	3. Simple family households	4.4	3.4	82.2	7.4	2.7	100.0	2,528
	4. Extended family households	3.5	7.0	57.9	27.7	3.9	100.0	458
	5. Multiple family households	8.6	9.9	44.4	13.6	23.5	100.0	81

Note and Source: Census Returns of Ireland, 1901 and 1911, National Archives Dublin.

1=Solitaries, 2=No family, 3=Simple family households, 4=Extended family households, 5=Multiple family households.

In the para below alter shifting to change or the extended family household, in County Antrim, while the persistence of the extended family household was weak (18.5%) and the rate of change from EFH to SFH (56.3%) and that from EFH to NF (17.5%) were rather high, the rate of change from EFH to MFH was relatively low (3.3%). In County Clare, the persistence of EFH was 29.5%, while the rate of change from EFH to SFH was 61.4% and that from EFH to MFH was 3.8%. In County Mayo, the persistence of EFH was 24.7%, while the rate of change from

EFH to SFH was 66.4% and that from EFH to MFH was 4.7%. In County Meath, the persistence of EFH was relatively high (27.7%), while the rate of change from EFH to SFH was 57.9% and that from EFH to MFH was 3.9%. In short, EFH was characterized by a short persistence period, the high rate of change to SFH, and the low rate of change to MFH.

For the multiple family household (MFH), the persistence of MFH was high in County Mayo (29.1%) and County Meath (23.5%) and low in County Clare (13.6%) and County Antrim (6.9%). The rate of change from MFH to SFH was high in all counties. However, in County Clare, while the rate of change from MFH to SFH (46.9%) and that to EFH (32%) were high, the rate of change to S and that to NF were low. In County Mayo, due to the long persistence of the multiple family household, the rate of change from MFH to SFH was 53.8% and that to EFH was 12.0%. In County Meath, while MFH lasted a long time, there were diverse patterns with the lowest change to EFH, the highest change to SFH, and some changing to S and NF. In County Antrim, the persistence of MFH was low and there were diverse changing patterns, including MFH to SFH, MFH to EFH, and MFH to S, and MFH to NF.

Based on the aforementioned dynamic analysis of household forms in 1901 and 1911, the fact that County Clare and County Mayo were better positioned than County Meath and County Antrim in terms of moving from the simple family household to the extended family household suggests that County Clare and County Mayo maintained a stronger stem family norm. In other words, the stem family norm was more firmly established in western Ireland than in eastern Ireland.

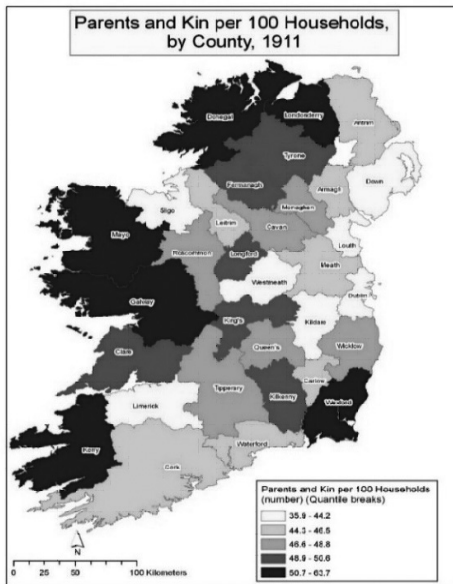
An examination of household class levels based on the linkage data of 1901 and 1911 showed that in County Clare, the rate of move from 3b to 3c was highest (7.5%), followed by 3b to 4a (3.4%), 3b to 5b (3.2%), 3b to 4c (2.8%), and 3b to 4b (2.6%). In Class 5, the rate from 5b to 3b was highest (32.1%), followed by continuing 5b (25.0%) and 5b to 3c (14.3%). For 5a, the move from 5a to 3b was highest (34.8%), followed by 5a to 4a (20%), 5a to 4c (15.7%), and continuing 5a (10.5%). The result showed that in County Clare, the pattern changed from the simple family household to the multiple family household; the 5b pattern in the multiple family household held their ground whereas the persistency of 5a was low; and both 5a and 5b shifted to 3b. In County Mayo, the persistence of 3b was markedly high (66.1%): the county was also characterized by some change from 3b to 5b (6.1%) and 5b remained (35.8%). On the other hand, in County Meath, 3b remained was remarkably high (70.8%); move from 4a to 3b (51.4%) and from 4b to 3b (31.0%) were high; 4b high remained (20.7%); There was little change from 3b to 5b and a low change from 4b to 5b.

In short, while a move from the simple family household to the multiple family household was found in County Clare and County Mayo in western Ireland, there was none in County Meath.

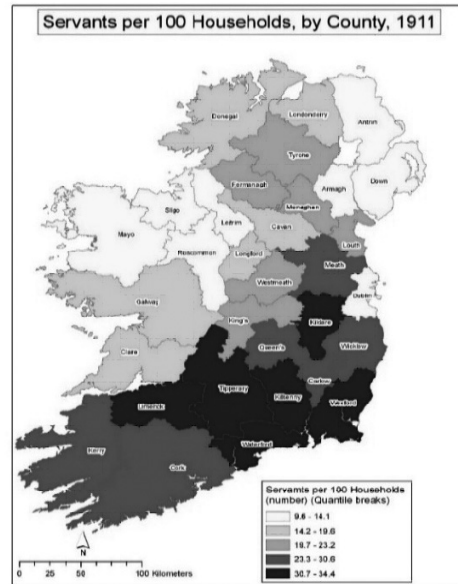
This difference clearly showed that the stem family was a family form more predominant in western Ireland than in eastern Ireland. Conceptually, the household forms shift dynamically from 3b to 5b to 5a to 4a to 3b. While a complex patterns of change existed among Irish households, the move found from the simple family household to the multiple family household gave rise to the stem family norm.

5) Number of resident relatives

Map 29.



Map 30.



An examination of the number of resident relatives per 100 households [R. Wall, 1983, 500] showed that it was higher in western Ireland than on the eastern side of a line from County Londonderry and County Kerry (though with County Wexford in eastern Ireland and County Sligo in western Ireland as exceptions). (Map 29) For servants, they were concentrated in the southeastern part of Ireland, which corresponded with the commercial large-scale farming region. In this region, the farming scale was too large to be managed only by family members with assistance and therefore, servants and agricultural workers were required. (Map 30)

A comparison of the number of resident relatives among the four counties (Table 16) showed that it was highest in County Mayo in both 1901 and 1911 (65 and 67, respectively), followed by County Clare (51 and 54), County Antrim (50 and 51), and County Meath (47 and 49). While kin in County Clare and County Mayo included many stem family members, such as parents, siblings in law, and grandchildren, kin in County Meath included many collateral relatives, such as

Table 16. Resident Relatives and Others by Relation to Household head in Co. Antrim, Co. Clare, Co. Mayo and Co. Meath

Year	Co. Antrim		Co. Clare		Co. Meath		Co. Mayo	
	1901	1911	1901	1911	1901	1911	1901	1911
Parents	4.3	4.0	8.7	9.6	2.7	2.3	5.9	6.8
Siblings	15.4	16.2	14.2	16.8	21.6	20.9	10.5	12.2
Siblings in law	1.6	1.8	2.0	2.1	1.8	1.8	1.6	1.8
Children in law	2.3	2.5	3.5	3.4	1.2	2.5	7.8	8.6
Nephews and Nieces	9.6	9.3	7.4	6.5	9.1	8.4	6.6	6.2
Grandchildren	14.2	13.7	12.7	11.8	8.9	9.8	30.9	28.9
Other relatives	2.8	3.2	2.8	3.7	1.6	3.3	2.0	2.9
Total kin	50.2	50.7	51.3	53.9	46.9	49.0	65.3	67.2
Servants	17.2	15.4	18.1	15.9	27.1	23.3	9.4	8.5
Lodgers	1.6	1.2	2.0	1.9	1.8	1.4	1.3	1.1
Boarders	8.2	9.2	4.6	5.0	5.2	6.5	3.4	3.8
Visitors	3.4	2.9	4.2	3.3	3.2	3.1	2.5	2.1

Note: unit = persons.

Source: Census Returns of Ireland, 1901 and 1911, National Archives Dublin.

siblings, nephews, and nieces. While the number of resident relatives in County Antrim was similar to that in County Clare, the resident relatives in County Antrim did not include many parents, but included many siblings, nephews, and nieces, demonstrating that the formation of the multiple family household was weak.

7. Conclusion

In this article, the authors proposed the hypothesis that while the Irish family system moved from a nuclear family system, which had existed until the mid-19th century, to the stem family system, some regional variation characterised the formation of the stem family between western and eastern Ireland. The hypothesis was verified by using the national census returns of 1901 and 1911 and GIS and linkage techniques. This verification process can be summarized as noted below.

In western Ireland, while the marriage rate was lower than eastern Ireland, the birth rate was high and the death rate was low. After the 1870s, the number of never-married persons increased in Ireland, particularly in Leinster and Ulster. The causes of this increase served to lower the rate of household formation. While the number of never-married persons increased in Connaught and Munster, it was canceled out by fertility and low mortality, leading to the formation of households larger than the households in other provinces. On the other hand, while the population in Connaught and Munster showed a natural increase, it was cancelled out by increased emigrants to America, leading to the demographic structure characterized by population decline.

In western Ireland, the age of never-married persons increased in 1911 compared to 1901. This was due to the prolonged holding of patriarchal rights by household heads. The fact that the household heads did not pass their patriarchal rights to their heirs early and kept them waiting for inheritance without getting married led to an increase in the number of late marriages and unmarried persons. In particular, this tendency was stronger among households in western Ireland as the late marriage of heirs due to waiting for inheritance and the departure of children other than heirs as emigrants were considered to be effective strategies for the well-being of the family in western Ireland. On the other hand, in eastern Ireland, it was easier for children other than heirs to find jobs within Ireland, such as in Dublin and Belfast, or emigrate to America or England. Moreover, there were many landless agricultural workers and servants in eastern Ireland. These people had an option of forming a family or staying single depending on their economic situation. These people formed simple family households, which inhibited the formation of the stem family.

For the forms of households, in Connaught and Munster in western Ireland, the percentages of the extended family household and the multiple family household were 18.2% and 18.9% (among farmers: 20.4% and 24%), respectively, in 1901 and 19.4% and 18.6% (among farmers: 21.7% and 26.5%) in 1911. On the other hand, in western Ireland including Ulster and Leinster, the percentages were 17% and 16.6% (among farmers: 19.5% and 19%) in 1901 and 14.4% and 13.8% (among farmers: 17% and 18.9%) in 1911. Thus, the two forms of households showed a high-west, low-east pattern. The percentages of the two household forms were high among farmers in all four provinces and higher in 1911 than 1901. The percentage of farmers was higher in western Ireland than in eastern Ireland.

Based on the aforementioned analyses, it was found that there were more stem families in western Ireland than in eastern Ireland, forming a peasant society in the small to medium-sized agricultural region where subsistence farming was practiced. Strictly speaking, however, western Ireland here means Connaught and part of Munster (County Clare and County Kerry).

In eastern Ireland, a commercial agricultural community meant that while some stem families were found, the degree of family formation was weak through family factors, such as ease of leaving home, and high potential of choosing a simple family household among landless agricultural laborers. The formation of the stem family was hardly found in eastern Ireland. Because the norm of stem family in eastern Ireland was weaker than western Ireland and the family situational factor of eastern Ireland less supported a direct norm of stem family. As a result, there was little formation of the stem family in Ireland more than western Ireland. That when a landless worker forms a household, being easy to form a simple family household and a life bachelorhood person are not less likely to form a family; is due to; of the direct stem family was

not more likely to be formed. In other words, in eastern Ireland which is commercial agriculture society, stem family is formed also. Nevertheless because eastern Ireland area approached the labor market of Dublin City and Belfast City, eastern Ireland was easy to begin work, and a reason that it was easy to emigrate again from Dublin Port and the Dundalk Port was considered to be a family situational factor. As a result, I was more likely to form a simple family household when a landless worker formed a household. In addition, it is thought that the increase in single person prevented the formation of stem family throughout the life. In the end as a mentioned through stem families existed in eastern Ireland, they were relating far fewer than in western Ireland.

Moreover, the linkage data showed that while the simple family household became to the multiple family households, in other words, typical stem families, in western Ireland, such a change was weak in eastern Ireland. In short, in western Ireland, the stem family norm was strongly held by families and the norm was supported by family situational factors. On the other hand, in eastern Ireland, while the stem family norm existed, it was not supported by family situational factors. From these findings, it was verified that there was a regional variation in the formation of the stem family in western and eastern Ireland. While the correlation between stem families and small to medium-scale farming was strong and weak in regions of large-scale farming, the authors could not clearly explain the contrast in causal relationship in the two cases. This point needs to be elucidated in the future.

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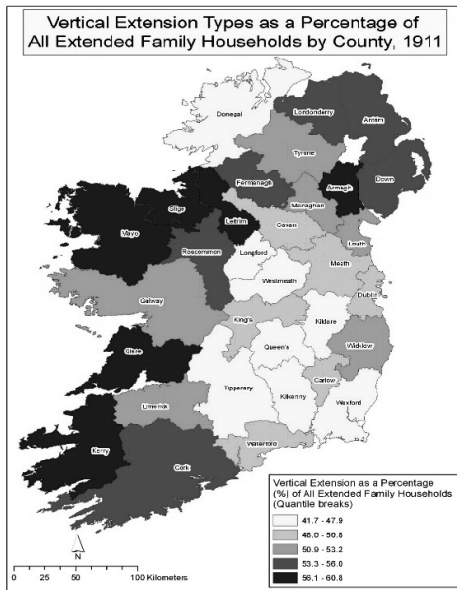
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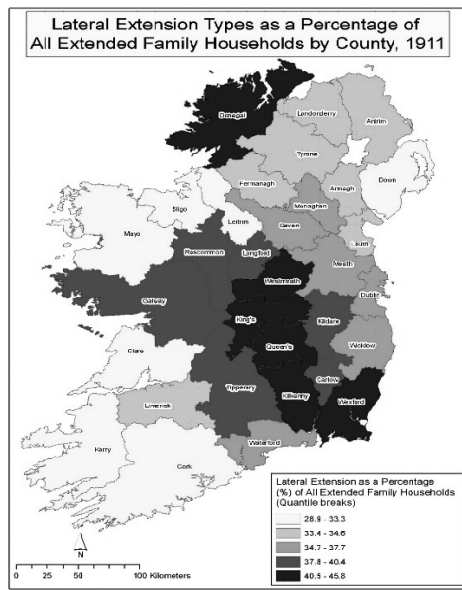
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Appendix

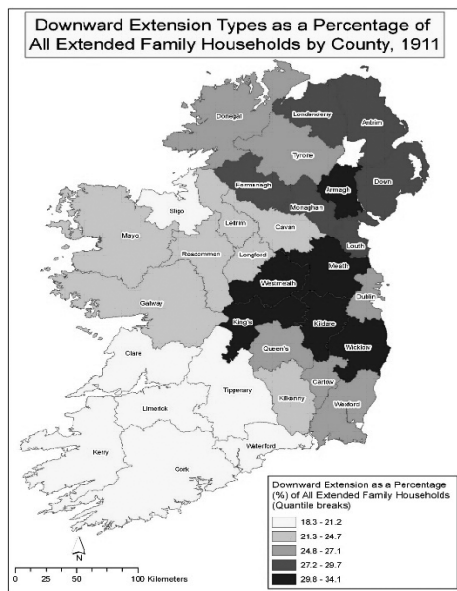
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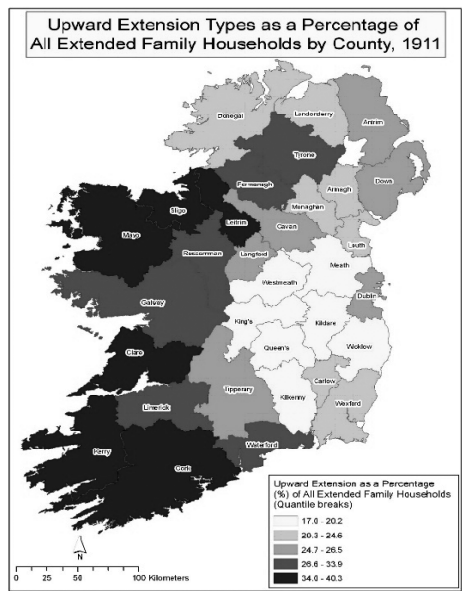
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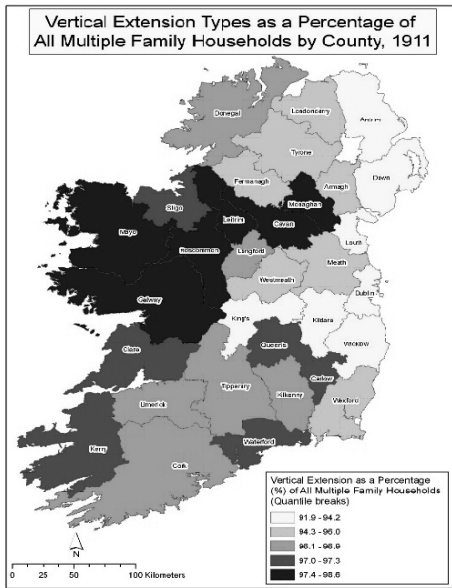
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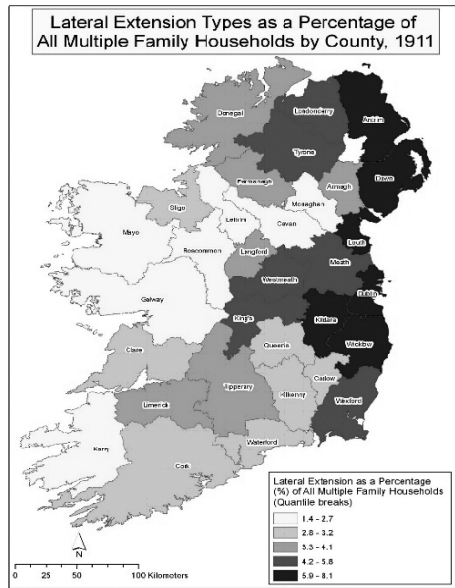
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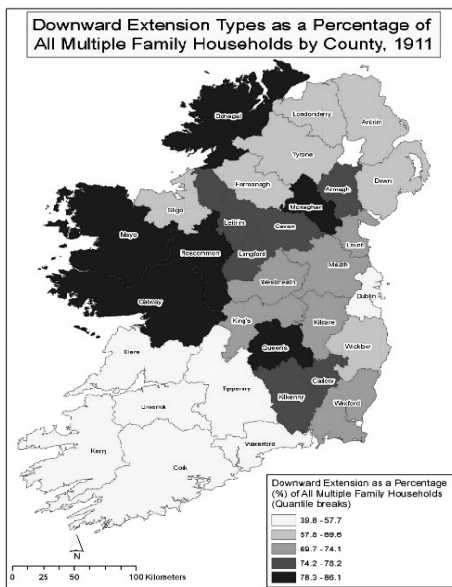
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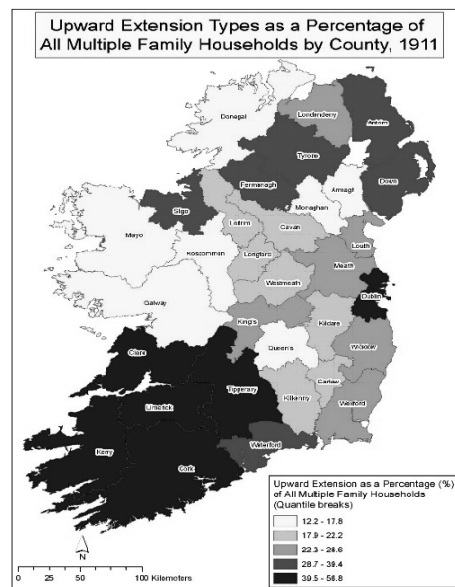
Map 6.



Map 7.



Map 8.



Regional Variation in Household Structure in early 20th century Ireland

SHIMIZU Yoshifumi

In this article, the author proposed the hypothesis that while the Irish family system moved from a nuclear family system, which had existed until the mid-19th century, to the stem family system, some regional variation characterized the formation of the stem family between western and eastern Ireland. The hypothesis was verified by using the 100% census returns of 1901 and 1911, GIS and linkage techniques.

For the forms of households, in Connacht and Munster in western Ireland, the percentages of the extended family household and the multiple family household were 18.2% and 18.9% (among farmers: 20.4% and 24%), respectively, in 1901 and 19.4% and 18.6% (among farmers: 21.7% and 26.5%) in 1911.

On the other hand, in eastern Ireland including Ulster and Leinster, the percentages were 17% and 16.6% (among farmers: 19.5% and 19%) in 1901 and 14.4% and 13.8% (among farmers: 17% and 18.9%) in 1911. Thus, the two forms of households showed a high-west, low-east pattern. The percentages of the two household forms were high among farmers in all four provinces and higher in 1911 than 1901. The percentage of farmers was higher in western Ireland than in eastern Ireland.

Based on the aforementioned analyses, it was found that there were more stem families in western Ireland than in eastern Ireland, forming a peasant society in the small to medium-sized agricultural region where subsistence farming was practiced.

Keywords: Ireland, 100% census data, GIS, Linkage data, Regional variation of stem family