

# Women and Work in Hamilton, Ontario: A Case Study and a Research Challenge

ERIC W. SAGER\*

*This article tests two hypotheses about the labour force participation of women in Hamilton in 1911: first, that single women took paid jobs to compensate for lack of jobs or low earnings among male kin; second, that the need for labour in their households discouraged single women from entering the labour force. These hypotheses are tested by using the entire population of Hamilton, as recorded in the 1911 census. Neither hypothesis receives strong confirmation. The tentative conclusion is that non-material motives were likely to be highly significant in the movement of women into paid labour in this period. This article uses only a small fraction of the sources available on the subject of women and work in Canada, and new empirical riches offer unprecedented opportunities for historians interested in women and work.*

*Le présent article met à l'épreuve deux hypothèses concernant la participation des femmes sur le marché du travail à Hamilton en 1911 : premièrement, que les femmes célibataires occupaient des emplois rémunérés pour faire contrepoids au chômage ou à la sous-rémunération des hommes; deuxièmement, que les travaux ménagers dont il fallait s'occuper décourageaient les femmes célibataires d'intégrer le marché du travail. Aucune de ces hypothèses, vérifiées à l'aune du recensement complet de la population de Hamilton en 1911, ne s'avère entièrement. La conclusion provisoire fait valoir que des motifs non matériels ont sans doute eu un rôle très important dans l'intégration des femmes à la population active à cette époque. Cette recherche fait appel à une fraction à peine des sources disponibles sur la question des femmes et de la main-d'œuvre au Canada. Ce genre de nouvelles données empiriques ouvre des débouchés sans précédent pour les historiens s'intéressant à la question des femmes et du marché du travail.*

WHY DID MANY young women take paid jobs a century ago, while others did not? Those who entered the paid labour force stood near the beginning of a profound change in the life course of women, a change that began in the nineteenth century, continued slowly and unevenly in the first half of the twentieth century,

\* Eric Sager is Professor in the Department of History at the University of Victoria. The research for this paper was made possible by the Canada Foundation for Innovation, which funded the Canadian Century Research Infrastructure. The author acknowledges the generous and valuable comments of Bettina Bradbury and two anonymous readers.

and accelerated in the third quarter of the century, in Canada and elsewhere. The context and conditions of change were very different in the early 1900s than in the 1950s and 1960s, of course. The rise in female labour-force participation is not a simple or linear trajectory, and we should avoid the temptation to impute motives from later times to the women of 1911. The voices of the wage-earning women of the late twentieth century resonate strongly; the voices of their ancestors are heard less often in the sources that exist today.

Yet those earlier women did leave us a testimony, however muffled and second-hand it may be. In the spring of 1911 a team of interviewers went to every home in the city of Hamilton, Ontario, and conducted a survey. The interviewers were legally empowered to ask 41 questions about every person in every household in the city. In Hamilton and the adjacent Barton township they found 85,068 people, and the records they produced are a treasure for social and economic historians—the only comprehensive survey of the city’s population in the second decade of the twentieth century.<sup>1</sup> This survey, of course, was the census, part of the national census of that year. The Hamilton 1911 database is one of the complete-coverage “oversamples” compiled for selected Canadian locations by the Canadian Century Research Infrastructure Project.<sup>2</sup>

For all their challenges and limitations, national censuses remain our most important source on the Canadian population. Before the mid-twentieth century, the census was the only national record of the people of Canada that was not highly selective in representing populations in terms of class, gender, ethnicity, or location. The Canadian censuses of the early twentieth century are particularly strong in asking questions about the economic condition and labour-force participation of individuals. The 1911 census asked 14 questions about economic condition, including the annual earnings of wage earners.<sup>3</sup> For the historian of labour and family, the census has unique potential: since individuals were enumerated by dwelling and by household (columns 1 and 2), it is possible to locate workers, both male and female, together with the members of their households and within the family economy. For the specific question posed at the beginning of this paper, the census is an indispensable source. The census permits a contribution to knowledge through the systematic testing of answers to specific questions, a testing that no accumulation of instances or impressionistic reports, however large, can allow.<sup>4</sup>

1 Hamilton city had a population of 77,061 in 1911. Our data entry staff entered Barton township and part of Ancaster, and these are included in the present analysis; hence the total of 85,068.

2 For access to the 1911 Hamilton database, please contact the author. On the CCRI, see <http://www.canada.uottawa.ca/ccri/CCRI/>.

3 There were questions on chief occupation, secondary occupation, whether one was an employer or employee or working on own account, where one was employed, weeks employed at chief occupation, weeks employed at secondary occupation, hours worked per week at chief occupation, hours worked at secondary occupation, earnings from chief occupation, earnings from secondary occupation, and value of any insurance held. The census schedule and enumerator instructions are on the CCRI web site. “Chief occupation or trade,” entered in column 17, was defined as “the word or words which most accurately indicate the particular kind of work done by which the individual earns money or money equivalent.” Instructions to enumerators were more detailed and precise than ever before: there were five pages of instructions relating to chief occupation. The information was to be collected for the census year, June 1, 1910 to May 31, 1911. The Canadian census was a *de jure* census: people were to be enumerated at their normal or habitual place of abode.

4 The same argument about macro- and microhistorical scales is well stated in Naomi R. Lamoreaux,

I begin with two hypotheses, each based on observations in the recent literature on women and work in the late nineteenth and early twentieth centuries. In her important synthetic paper on “the quiet revolution that transformed women’s employment,” Claudia Goldin argues that the change in women’s labour-force participation rates in the United States from 1890 to 1930 was associated with changes in labour supply (women offering their labour for wage employment), which in turn were influenced by the level of earnings by male kin.<sup>5</sup> For married women particularly, an increase in the income of husbands had a negative effect on the labour-force participation of wives. The earnings of wives were not high enough to substitute for an increase in husbands’ earnings or to compensate for the social stigma associated with the work of wives outside the home. Goldin’s observation persuaded me to apply a similar “substitution” hypothesis to women in Hamilton: women entered the labour force to substitute or compensate for the absence of an adequate family wage provided mainly by men. The labour-force participation of women was inversely associated with the earnings of male kin and with the ability of male kin to find wage-paid jobs. This hypothesis is nicely illustrated in the experience of a Hamilton woman remembering her first job:

We came here in 1911—I would be 12. Before December dad wasn’t working... He was going to the factories looking for work. So we got down to the Imperial Cotton mill, down on Sherman Avenue, and he goes to the office. The man says, “we’ve got nothing for you, but we can for the little girl if you want...” He looks at me and says, “Do you want to?” “Yes.” So he gives me his lunch and I started in to work.<sup>6</sup>

The second hypothesis begins with what we know about the enormous and varied burden of household work in a period when technological change had not eased these burdens for working-class families. As Susan Thistle has argued for the United States, the industrial economy could be a threat to women’s domestic economy; keeping one’s female kin at home may have been a better means of ensuring family survival.<sup>7</sup> The hypothesis is that the labour-force participation of

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“Rethinking Microhistory: A Comment,” *Journal of the Early Republic*, vol. 26 (Winter 2006), pp. 555-561. Lamoreaux’s piece will help readers to understand why, for economic historians and other social scientists, the only results likely to be of real interest in the present article are those in the Appendix.

- 5 Claudia Goldin, “The Quiet Revolution that Transformed Women’s Employment, Education, and Family,” *American Economic Review*, vol. 96, no. 2 (May 2006), pp. 1-21. Bettina Bradbury argues that “the greater the margin of financial manoeuvre within a family, the less likely daughters appear to have been to work outside the home.” See Bettina Bradbury, *Working Families: Age, Gender and Daily Survival in Industrializing Montreal* (Toronto: Oxford University Press, 1993), p. 143. See also Ileen A. Devault, “Family Wages: The Roles of Wives and Mothers in U.S. Working-Class Survival Strategies, 1880-1930,” *Labor History*, vol. 54, no. 1 (February 2013), pp. 1-20.
- 6 Jane Synge, “Young Working Class Women in Early 20<sup>th</sup> Century Hamilton: Their Work and Family Lives” in A. H. Turritin, ed., *Proceedings of the Workshop Conference on Blue-Collar Workers and their Communities* (Toronto: York University Department of Sociology, 1976), p. 140.
- 7 Susan Thistle, *From Marriage to the Market: The Transformation of Women’s Lives and Work* (Berkeley: University of California Press, 2006), p. 33. On the importance of girls’ labour in the home, see Bradbury, *Working Families*, pp. 141-151. The conflict between domestic and non-domestic wage work is one theme in chapter 2 of Lindsey McMaster, *Working Girls in the West: Representations of Wage-Earning Women* (Vancouver: University of British Columbia Press, 2007), pp. 44-87. On domestic responsibilities and family pressures, see also Suzanne Morton, *Ideal Surroundings: Domestic Life in a Working-Class Suburb in the 1920s* (Toronto: University of Toronto Press, 1995), pp. 138-142. On efforts by farm families

women, and especially young single women, was inversely associated with the level of domestic labour required to sustain the family, insofar as these burdens can be measured. Mothers were likely to keep working-age daughters at home and to allow them into the labour force only when the benefit from their wage earnings outweighed the cost of foregoing their domestic labour. This hypothesis also has its place in the testimony of women of that era. On the subject of “system in housekeeping,” one woman wrote to the Toronto *Globe* in 1911 to argue that “modern conveniences” had done nothing to ease the burden of housekeeping. She insisted that the labour of children in the home was indispensable: “Your children will soon grow up and help you. Then the worst is over.”<sup>8</sup>

The enormous advantage of the census database is that it allows us to confirm or reject these hypotheses, for large numbers of women, with a degree of confidence that no other source will allow. I begin with general observations and proceed to simple two-way relationships, such as the relationship between having (or not having) a paid job and the level of earnings in a family. If more women have paid jobs where the earnings of other family members are low, this result may suggest a relationship. It is important to understand, however, that such a result would be merely suggestive. It would not confirm a relationship between family earnings and the labour-force participation of women. An acceptable level of confirmation can be achieved only when other conditions are held constant; only then may we infer that an association between earnings and female labour-force participation exists, independent of other conditions. Multivariate analysis is therefore essential, and a specific type (logistic regression) is used in this paper.

Hamilton is a good location for the testing of the two hypotheses. By 1911 it was an industrial city with a large proportion of its labour force in manufacturing, especially metal products and textiles. Hamilton has received much attention from historians, from the well-known studies of the nineteenth-century commercial town by Michael Katz and his colleagues to more recent studies of craft workers and of wealth.<sup>9</sup> In Hamilton, as elsewhere, women entered capitalist wage labour later, and at a very different pace, than did men. Even in this industrial city, only 30.2 per cent of women aged 15 through 64 were recorded as part of the measured, wage-paid labour force. The change over recent decades had been modest: the rate

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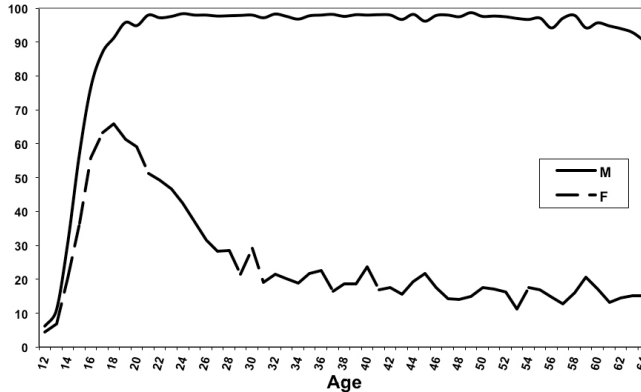
to retain the labour of young women on the farm, see Kenneth Sylvester, “Immigrant Parents, Ethnic Children and Family Formation in the Early Prairie West,” *Canadian Historical Review*, vol. 84, no. 4 (December 2003), pp. 585-612.

8 “Lucy,” *Globe* [Toronto], May 2, 1911, p. 5.

9 Michael Katz, *The People of Hamilton, Canada West: Family and Class in a Mid-Nineteenth-Century City* (Cambridge, MA: Harvard University Press, 1975); Michael B. Katz, Michael J. Doucet, and Mark J. Stern, *The Social Organization of Early Industrial Capitalism* (Cambridge, MA: Harvard University Press, 1982); Bryan D. Palmer, *A Culture in Conflict: Skilled Workers and Industrial Capitalism in Hamilton, Ontario, 1860-1914* (Montreal and Kingston: McGill-Queen’s University Press, 1979); Robert B. Kristofferson, *Craft Capitalism: Craftworkers and Early Industrialization in Hamilton, Ontario, 1840-1872* (Toronto: University of Toronto Press, 2007); John C. Weaver, *Crimes, Constables and Courts: Order and Transgression in a Canadian City, 1816-1970* (Montreal and Kingston: McGill-Queen’s University Press, 1995) and *Hamilton: An Illustrated History* (Toronto: Lorimer, 1982); Craig Heron, *Working in Steel: The Early Years in Canada, 1883-1935* (Toronto: McClelland & Stewart, 1988). Peter Baskerville’s study of gender and wealth also has a focus on Hamilton: *A Silent Revolution? Gender and Wealth in English Canada, 1860-1930* (Montreal and Kingston: McGill-Queen’s University Press, 2008).

was 25.1 per cent in 1881.<sup>10</sup> Labour-force participation was highly age-specific for women, but not for men (Figure 1).

**Figure 1: Labour Force Participation (%) by Age, Men and Women, Hamilton 1911**



**Source:** Hamilton 1911 census database. For women aged 12 through 64, N = 21,755 (without occupation) and N = 8,884 (with occupation). For men, N = 3,020 (without occupation) and N = 30,106 (with occupation).

Labour-force participation for women was also highly marital-specific. The labour force participation of wives was low: only 6 per cent of married women were reported as having an occupation.<sup>11</sup> In urban Canada, married women's contributions to the family economy were primarily non-waged. These contributions were not less important for being so, but there appears to be an important contrast to patterns in Europe, where married women's labour-force participation was generally higher than in urban Canada at the beginning of the twentieth century.<sup>12</sup> It may be that the paid work of wives was seriously under-enumerated in Canada. It is possible that the culture of masculinity and attachment to the "family wage" ideal resulted in a reluctance to report the paid work of wives

10 The estimate for Hamilton in 1881 is derived from the enumerated population of Canada in 1881, as contained in the complete-coverage database compiled by the Family History Department of the Church of Jesus Christ of Latter-Day Saints, available from the North Atlantic Population Project (<http://www.nappdata.org/>).

11 While the proportion of married women who had a stated occupation was low (6 per cent), the proportion of all women with a stated occupation who were married was higher—11 per cent. The latter percentage is higher because among women aged 15 to 64 many more were married than single. Even though a small proportion of married women had paid jobs, they could be a significant proportion of the female labour force.

12 Peter Baskerville and Eric Sager, *Unwilling Idlers: The Urban Unemployed and their Families in Late Victorian Canada* (Montreal and Kingston: McGill-Queen's University Press, 1998), pp. 114-117. The point receives dramatic confirmation in an unpublished paper by Evan Roberts and Sula Sarkar, "The Comparative Historical Geography of Women's Work" (Minnesota Population Center, 2008). I am grateful to Evan Roberts for showing me this important paper. In 1881 the rate of married women's paid employment in Canada was about the same as for white women in the northern United States. The rate was much higher for married women in Britain and Norway and for black women in the United States. See Evan Roberts, "Her Real Sphere: Married Women's Labor Force Participation in the United States, 1860-1940," *Journal of Economic History*, vol. 69, no. 2 (2009), pp. 554-558.

even in urban areas (quite apart from the absence of stated occupations for women doing non-waged work, such as farming). Reluctance to report the work of single women was less likely by 1911, however, since their entry into the labour force had long since been commonplace in urban Canada.<sup>13</sup> In the analysis that follows I indicate whether the focus is on all adult women or only single adult women.

By 1911, of all single women aged 15 through 64 in Hamilton, 65.2 per cent were in the paid labour force—a much higher proportion even than that for widows (30.7 per cent). This participation rate signalled a change among single women: three decades earlier, only 48.5 per cent of single women had paid occupations. By 1911 young, single women were more likely than their predecessors to enter the labour force in their teens and to stay in paid work in their twenties. Although the reported participation of married women also increased between 1881 and 1911, nevertheless the small rise in the overall participation rate for all women since 1881 can be attributed almost entirely to the increased movement of teenaged women into paid employment and the increasing duration of their stay in the labour force. Delayed marriage may also have contributed to the increasing labour-force participation rates, because the proportion of older women—those aged 30 or more—who had never married was higher in 1911 than in 1881 (a reflection of the decline in marriage rates that persisted until the end of the century in Canada, a trend that was reversed in the early twentieth century). The relationship between delay or avoidance of marriage and labour-force participation is a complex subject, but it is likely that women who delayed marriage in the early 1900s had an incentive to remain in paid employment. The influence was probably reciprocal, and we know that the availability of paid work was associated with the delay in marriage, although not so clearly to lifelong avoidance of marriage (such is the conclusion of Stacie Burke for Canada in 1901).<sup>14</sup>

Most wage-earning women lived with close kin. Taking a paid job resulted from a combination of individual choice and family strategy, in which familial expectations constrained women's choices and their use of personal earnings. In Hamilton in 1911 almost 47 per cent of women wage-earners were daughters of their household head. Others were wives or other relatives of the head. Slightly over 13 per cent were lodgers, and 12 per cent were domestic servants in the households in which they lived. The lodgers included both immigrants and Canadian-born, but a majority of the domestics were first-generation immigrants.

13 The main source of under-enumeration is likely to be the failure to report short-term or part-time paid work. Under-enumeration of short-term and irregular work could occur when enumerators were instructed to report a person's "chief occupation" or (as in 1931) the last occupation in which a person was "regularly employed." Comparing census data with employer-supplied employment information in industry for British Columbia suggests that the latter yields a higher labour-force participation rate; see Eric Sager, "Women in the Industrial Labour Force: Evidence for British Columbia, 1921-53," *BC Studies*, no. 149 (Spring 2006), pp. 56-57. We should not assume, however, that women's paid employment was more subject to seasonal variation than that of men. The *Postal Census of Manufactures*, taken in 1916 for the calendar year 1915, gathered data from all industrial employers in Canada. The results indicate that women's work was *less* subject to seasonal variation than that of men. For all industries, winter (December/January) total employment for men was 11 per cent below summer employment (July/August). For women, winter total employment was actually slightly higher than summer employment!

14 Stacie Burke, "Marriage in 1901 Canada: An Ecological Perspective," *Journal of Family History*, vol. 26 no. 2 (April 2001), p. 213.



The city had attracted a wave of immigrants in the previous decade: 36 per cent of the population were first-generation immigrants. Of these, almost 70 per cent had arrived after 1900. Despite their origins in countries where the labour-force participation of women was generally higher than in Canada, immigrant women in Hamilton were slightly less likely than Canadian-born women to have reported occupations.<sup>15</sup> The pattern of work varied among ethnic groups, however, and not all Europeans were under-represented in paid labour. Germans (both Catholics and Lutherans), for instance, had above-average participation rates.

Did women enter the labour force when their male kin were out of work, under-employed, or in a low-wage job (the “substitution” hypothesis)? The first answer is that women (whatever their marital status) *were* more likely to be in the paid labour force if their household head had no reported occupation than if the household head was employed.<sup>16</sup> Nevertheless, the difference is not very marked, even for single women (most of whom were daughters of the head of the household).<sup>17</sup> Furthermore, most household heads did have jobs. Lack of employment by the household head tells us little about why some women had paid jobs and some did not.

Confirmation of the hypothesis would require that poor earnings by the household head be associated with increased participation in the labour force. There appears to be no connection: among women (single, married, or widowed) with paid jobs, the mean earnings of their household heads compared well with the mean earnings of heads co-residing with women outside the labour force.<sup>18</sup> An enormous advantage of the census microdata is that we can look not only at individual earnings, but also at the pooled earnings of families and households. More significant than the head’s earnings were the total earnings of family members. In this analysis, women’s earnings are deducted from the pooled earnings of family members, because we want to know what the earnings would have been prior to any contributions from women. Where pooled earnings net of women’s contributions were low, the participation rate of women was above the average for all women.<sup>19</sup> The pattern is not consistent, however: as pooled family earnings rise, the labour-force participation of women falls only slightly below the

15 Of all immigrant women aged 15 through 64, regardless of marital status, 23.5 per cent had reported occupations.

16 Among women not themselves household heads, living in households where the head had no reported occupation, 47.7 per cent had a reported occupation.

17 At this point in the analysis I include only women who were relatives of the household head. Among never-married women whose household head had no reported occupation, 63.7 per cent had an occupation; this rate compares with 57.8 per cent for single women living with a household head who did have an occupation. Also excluded from the calculations are women who were themselves heads of a household. Among household heads, 6.8 per cent were women; 32 per cent of female household heads reported an occupation—only slightly above the proportion for all women.

18 Excluding women household heads, the mean earnings of heads were \$712 in households in which women had occupations, and \$723 in those in which women had no stated occupation. The means may be deceptive, of course. If we group the head’s earnings into categories, women living in households with lowest household head earnings (less than \$250) had a labour-force participation rate of 28 per cent—close to the overall rate. The focus here is on the working class: I select only households where the head was an employee, because the enumerators reported earnings consistently only for employees.

19 Where total family earnings, net of women’s contributions, were lowest—less than \$250—the participation rate of women was 45 per cent.

overall average.<sup>20</sup> Looked at another way, almost half of women with occupations were living in households in which pooled family earnings were above the mean.

A more sensitive measure of family material condition is pooled family earnings per capita (per-person in the household).<sup>21</sup> The substitution hypothesis predicts that the labour-force participation of women would be high in the poorest earnings quintile. To an extent this is so: among women living in the poorest fifth of families, the participation rate was above average at 34.8 per cent. This rate is not very much above the mean, however, and almost two-thirds of women in these poor families remained outside the labour force. The same result is obtained if we look only at single women: those living in the poorest families had a labour-force participation rate only slightly above average.<sup>22</sup> Of course many may have been working for wages on a short-term or part-time basis during the year, but clearly the family response to poverty did not automatically lead to the deployment of women into the labour force. Knowing the level of family earnings gives one no advantage in predicting whether women were in paid labour or not.

The hypothesis that women were being drawn into wage labour by the need to supplement low earnings of others in their families receives, at best, only partial confirmation. This finding does not mean that women in paid work made insignificant contributions to the family income: where women were in the labour force, they contributed, on average, 37 per cent of family earnings (earnings of non-kin in the household, such as lodgers and domestics, are excluded). It does, however, make it even more surprising that the labour-force participation of single women in low-income families was not higher. Goldin's observation "that the (negative) income effect from increased husbands' income greatly exceeded the (positive) substitution effect from increased wives' earnings" may still apply to *married* women in Hamilton,<sup>23</sup> but it seems unlikely that the conclusion applies to women in general.

Apart from earnings levels, is there evidence that women were deployed into wage labour when their male kin were having difficulty finding jobs? Perhaps women were more likely to be in the labour force if a family had few or no sons, especially no son with an occupation. Several tests of this hypothesis yield the same conclusion: there was no substitution effect. Where women lived in households in which there was no occupied son, those women were *less* likely to have an occupation than if there was an occupied son.<sup>24</sup> The same result appears for

20 Where women lived in households whose pooled family earnings were above \$1,500, not including women's earnings, the labour force participation of women was 25 per cent.

21 On the assumption that the consumption needs and costs of children were less than those of adults, I have weighted children under 12 at 0.5 in the per capita calculations.

22 For single women related to the household head (most were daughters), the participation rate was 63.2 per cent for those in the poorest fifth of families. The overall mean was 60.2 per cent. The highest participation rate (68.6 per cent) was for women in the middle quintile of earnings per capita.

23 Goldin, "The Quiet Revolution," p. 4. See also footnote 34.

24 Women living in households in which at least one daughter was present had a labour-force participation of 25.9 per cent where there was no occupied son. If there was one occupied son, 32.5 per cent of women had an occupation. If there were two or more occupied sons, 34.7 per cent of women had an occupation. The same result appears whether we include all women or only single women. Lodgers and domestics and other non-kin are excluded, since we are focusing here on the relationship between a woman's chances of having an occupation and her familial context. The effect of lodgers or domestics on labour-force participation



women in households where there was at least one son aged 12 to 24 and at least one daughter of the same age: a woman was *more* likely to have an occupation if a son or sons had jobs. Rather than substituting for men, women appear to have entered wage labour together with their male kin. Entry into the labour force was a shared experience.<sup>25</sup>

If we find no strong evidence to support the first hypothesis, does this mean that we should accept the second? It may be that a critical constraint upon the deployment of women into wage labour was the need for their labour in a range of productive and reproductive tasks in the home. A thorough test of the second hypothesis is not easy, because the census does not contain many of the types of information that we would like to have in order to estimate domestic workloads. Nevertheless, pertinent evidence exists, especially in the ratios of adults to dependents. Certainly a household with more adults in the family (non-kin excluded) seems to have been more likely to send single women into the labour force.<sup>26</sup> Perhaps the presence of several adults meant an adequate supply of domestic labour, in which case it was easier to release single women into the labour force.

What was the effect of the presence of young children in a household? At the stage of the family cycle when both young children and young adults were present, the family was likely to experience contradictory pressures. On the one hand, maintaining household earnings at this stage might encourage the deployment of women into the labour force. On the other hand, sending women into jobs meant releasing young women from sharing the burden of child care. Wives, as we have seen, were rarely in the labour force, whether or not they had children. The 1911 census suggests that the additional domestic burden of child care did not persuade families to keep single women at home. The presence of children *increased* the probability that a woman had an occupation, especially if there were two or more children.<sup>27</sup> Furthermore, a working son did not change this decision: in families with both young children and a son in the labour force, the labour-force participation of single women was high.<sup>28</sup>

Did the presence of several daughters in their teens or twenties make it easier to send one of those daughters into the labour force? To some extent it may have done: the labour-force participation of single women was higher in households with three or more such daughters than in households with only one such daughter.

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probabilities is discussed later.

- 25 Another way of testing the hypothesis is to look at sex ratios within the family. If women lived in households in which young women out-numbered young men, were they more likely to be in the labour force? The answer is affirmative. In those rare instances where there were both young men and young women (aged 12 to 24), but the young women out-numbered young men by three or four, women were more likely to have a stated occupation. Nevertheless, even where young men were more numerous than young women, women were in the labour force—their participation rates only slightly below average.
- 26 Among young women living in households with four or fewer adults (persons aged 15 or more), the proportion of single women with reported occupations was 55 per cent. In households with eight or more adults, this proportion rises to 66 per cent.
- 27 If there were no children 14 and under, the participation rate of single women was 60.7 per cent. With two children, the rate was 65.1 per cent; with four or more children, it was 70.4 per cent.
- 28 Where there were four or more young children and at least one working son, the labour-force participation of single women was 74.7 per cent. Once again, only women related to the family head are included.

The difference, while clear enough, is not huge, however: even where there were a few daughters and several young children to care for, young women entered the labour force, and they did so almost as frequently as when there were no young children.<sup>29</sup>

Taking in lodgers or boarders was a means of earning income, at a cost of additional domestic labour. Lodgers were a type of dependent, whose presence might encourage the family to keep young women at home. In Hamilton the presence of a lodger did not increase the chances that a single woman or daughter would remain at home, although the tendency to stay at home increased slightly if there were multiple boarders.<sup>30</sup> Most lodgers or boarders were men, and mothers may have been concerned to limit contact between their daughters and the male lodger. Only where the domestic burdens were increased by the presence of both young children and multiple lodgers does the labour-force participation of single women fall, but even in this case the decline is not steep.<sup>31</sup>

Although a definitive answer is, of course, impossible, there is little here to confirm either of our hypotheses. The connections between family circumstance and women's work are obviously very complex, and the movement of women into the labour force cannot be reduced to any one condition—even something so obvious as the need to supplement low earnings of male kin. It is not possible to find a definitive set of conditions that explain the labour-force participation of large numbers of young women. We are left necessarily with multiple conditions and subtle changes in probability associated with each condition. The advantage of census microdata is that it collects into one place an exceptionally long list of personal and family information, all of which can be used in the analysis. Also, everything in the list can be used simultaneously. Thus, if one holds constant such things as ethnicity and the presence of young children, does the level of family earnings affect the chances of a woman being in the labour force? Since no single condition can by itself have a decisive influence, our analysis is necessarily multivariate.

I focus now on never-married women who were co-residing with kin, and, as in the previous analysis, on households in which the head was an employee.<sup>32</sup> I have considered ten familial conditions that might have a bearing on women's employment: family per capita earnings (an additional test replaced per capita earnings with earnings of the household head); the occupation of the household head (aggregated into eight categories); whether or not there were children under the age of 14 in the household; whether there was no son with an occupation or

29 In families with four or more children under the age of 14 and one daughter only of working age, 63 per cent of those daughters were in the labour force; if there were three or more daughters of working age, 74 per cent were in the labour force.

30 Among single women (family members) aged 15 and over, living in households with one lodger, the labour-force participation rate was 62 per cent. The rate falls, but only slightly, to 55 per cent where there were two or more lodgers.

31 Where there were two or more young children and two or more lodgers, the labour force participation of daughters falls to 44 per cent.

32 The exclusion of employers and those "working on own account" is necessary because one of the variables is per capita earnings, and the census-takers were required to report earnings only for employees or wage-earners. It follows that class cannot be a variable in the regression.

one or two sons with jobs; the ratio of men to women in the family; the number of daughters aged 12 to 24 in the family; whether or not a woman was a first-generation immigrant; the ethno-religious identity of the woman; whether there were lodgers in the household; and whether or not there was a domestic servant in the household. The table of results appears in the Appendix.

Logistic regression confirms most of the previous conclusions. The “substitution” hypothesis receives no clear confirmation. It is true that, among the more prosperous working-class families, women were less likely to have a paid job. Where pooled family earnings (or the head’s earnings) put the family in the top two earnings quintiles, the probability that a woman would have a paid job falls. The change in the odds is not large, however, and the effect has statistical significance for only one earnings quintile—the most affluent. The earlier conclusion is confirmed: earnings levels influenced the movement of women into paid labour, but this factor alone does not explain much. It is the case that, where there were more adult men than adult women in the family, the less likely was a single woman to have a job (and this result does have statistical significance). This finding does not mean that there was a simple trade-off or inverse relationship between employed men and employed women, however. The presence of sons with jobs (most often a woman’s brother) was positively associated with the movement of single women into wage labour: far from substituting for the labour of men, young women were *more* likely to be in the labour force if they lived in a household in which the head’s son (usually the young woman’s brother) had a job, and more likely still if there were two or more employed sons.

The influence of domestic burdens is also unclear. The one clear result is that the presence of multiple boarders may have encouraged single women to remain in the home. Where there were two or more lodgers in the household, the odds of a single woman having paid employment fall—almost certainly reflecting the need for additional labour in the household. On the other hand, the presence of a domestic servant meant that a woman was *less* likely to be in the labour force. This result is unlikely to be simply a reflection of the influence of family earnings levels. If young children added to domestic work loads, did their presence have a negative effect on women’s labour force participation? Apparently not: most of the single women in this analysis were daughters, and it seems that assistance in the care of young children did not take priority over having a paid occupation. Perhaps it was easier for a young woman to have a paid job if she had sisters in their teens or twenties who could share the domestic work load? At first glance this appears to be so: the more daughters in their teens or twenties, the higher the labour-force participation of women. Here is perhaps some modest confirmation that an adequate supply of female domestic labour eased the path of some women into paid labour outside the home. This confirmation is meagre, however: the change in the odds is small, and the significance levels are marginal.<sup>33</sup>

33 In bivariate analysis (cross-tabulating occupation/no occupation for unmarried daughters with number of daughters of working age in the family), the result suggests some difference. Among daughters of working age who had no sister or only one sister of working age in the family, 55 per cent were in the labour force. Among those with three or more sisters, 64 per cent were in the labour force. We can hardly argue that our second hypothesis is confirmed on the basis of so small a difference.

Other variables less directly related to our hypotheses yield no significant results. The occupation of the household head has little impact. If we compare women whose household head was employed in manufacturing with women whose family heads had other occupations, it seems that the odds fall in categories where the head was not in manufacturing. The result is significant only where the head was in a profession or in sales, however. Whether a woman was an immigrant made no significant difference to her odds of having paid employment: our earlier result relating to immigrant disadvantage is not confirmed. The ethno-religious identity of women had little effect, except possibly for Irish Catholics, who were more likely to have paid employment than English Anglicans.

At this point readers who have had the patience to follow me through this analysis might think it disappointing that my hypotheses are not unambiguously confirmed, but I am in no way disappointed. On the contrary, it seems to me that the absence of clear confirmation is a finding of some importance. An entire subject area—the movement of single women into wage labour and the family context of that movement—deserves re-thinking. The more rare entry of married women into paid labour also requires further work, and preliminary results for Hamilton in 1911 suggest that Claudia Goldin's conclusion does apply: the most important influence was a decline in family earnings.<sup>34</sup>

Why, then, were some women in a wage-paid job in 1911, while so many others were not?<sup>35</sup> A definitive answer is not possible, of course. Whatever combination of sources we use, including oral-historical memory and individual testimony from the time, we can only arrive at a short list of conditions within which the movement between domestic and non-domestic work makes sense. This movement resulted from a complex of decisions and choices, and for daughters those decisions were likely the result of conversations with mothers—the managers of household expenditures to whom daughters usually gave their wage earnings. Those conversations would relate to the trade-off between wage earnings and domestic labour, and the choice was not simply between one or the other, but about the balance between the two. Especially at the low end of the earnings scale, the conversations were also likely to relate to the deployment of women in an informal economy of domestic production, barter, and exchange.<sup>36</sup> Conversations between daughters and mothers were surely also guided by considerations of the balance between present benefit and potential future gains, to both the daughter

34 The same multivariate analysis applied to married women indicates a decline in the odds of a married woman having a paid job as per capita family earnings (net of women's earnings) rise, and the result has significance. Another significant deterrent to labour-force participation of wives was the presence of two or more young children.

35 We must remember, of course, that the census is a snapshot, a survey of reported behaviour in a single census year. Comprehensive as it is, it does not tell us how many women moved into and out of paid labour over a longer period or over the life course. Probably a very large proportion of those young women who did not have reported occupations in 1911 had some experience of paid labour at some time during their teens or twenties.

36 Referring particularly to the 1881 census, Olson and Thornton note that the census under-reported women's cash-generating activities, such as earnings from market stalls. Despite the more rigorous training of census enumerators in 1911, under-reporting of such work no doubt continued. See Sherry Olson and Patricia Thornton, *Peopling the North American City: Montreal 1840-1900* (Montreal and Kingston: McGill-Queen's University Press, 2011), pp. 204-205.

and the family, from the daughter's employment.<sup>37</sup> Jane Synge's informants commented on long-term returns from employment experience and on parental awareness that daughters might need to fend for themselves. "They wanted us capable of doing something. We probably wouldn't have money all of our lives."<sup>38</sup>

There is no denying that the material benefit of wage earnings was likely to be an important motive for entering the labour force. Nevertheless, the results presented in this paper suggest that we should also attach significance to motives not directly related to immediate material needs within the family economy, especially for single women living in working-class households where family earnings were relatively high. If we look outside Hamilton's working class, the motive of familial need diminishes, or so the testimony of Jane Synge's informants suggests.<sup>39</sup> Whatever their social class, for many daughters, wage employment meant mobility, including movement out of one's parental home, and employment outside the home may have answered a desire for independence. A high proportion of employed women in Hamilton were not living with their birth families. At least 38 per cent of women with occupations were lateral kin (sister of the head, aunt, niece, cousin) or non-kin (lodgers, domestics, other employees). Family bonds often remained strong, of course, and daughters from farm families were expected to return a portion of their wages to their parents, as Jane Synge's informants confirmed.<sup>40</sup> Nevertheless, taking a job away from home allowed a young woman to reconcile family duty with a desire for independence.<sup>41</sup> Years earlier the Ontario Bureau of Industry referred to the "daughters of country farmers who prefer city life and fixed hours of work, even at low wages, rather than remain at home, on the farm."<sup>42</sup> Rural women who moved from the parental home and became teachers, such as Jessie and Anne McQueen—Jean Barman's "sojourning sisters"—are exemplars of those who combined familial duty with a self-affirming independence.<sup>43</sup> The movement of women out of domestic service and into other

37 Women's wage earnings related to the family's "investment horizon," according to Olson and Thornton in *Peopling the North American City* (p. 213). Earnings from multiple family wage-earners could assist with the purchase of a home, payment of debts, and the purchase of labour-saving devices in the home. See Bradbury, *Working Families*, pp. 154-160.

38 Jane Synge, "Untitled Draft" (July 1980), p. 165. This work is also cited as "Family and Community in Hamilton, 1900-1930" (John Weaver Collection, History Department, McMaster University) by Craig Heron, "Boys Will Be Boys: Working-Class Masculinities in the Age of Mass Production," *International Labor and Working-Class History*, vol. 69 (Spring 2006), p. 28 note 8. The work is an unpublished history of working men and women and the family economy, based on Synge's many interviews with men and women who had grown up in or near Hamilton in the early twentieth century. I am indebted to John Weaver for sending me a copy.

39 Synge, "Untitled Draft," pp. 145-174.

40 *Ibid.* (pp. 82-144) includes testimony from several women who moved from farms to the city.

41 Referring to women who took jobs in factories, Alice Kessler-Harris says that "the joy of relative independence, recurrent in the literature, is difficult to discount." See Alice Kessler-Harris, *Out to Work: A History of Wage-Earning Women in the United States* (Oxford: Oxford University Press, 1982), p. 34. Carolyn Strange refers to the "new attractions" and "new freedoms" that wage labour in the city offered young women. See Carolyn Strange, *Toronto's Girl Problem: The Perils and Pleasures of the City, 1880-1930* (Toronto: University of Toronto Press, 1995), p. 38. On escaping the restrictions of family, see also Joanne J. Meyerowitz, *Women Adrift: Independent Wage Earners in Chicago, 1880-1930* (Chicago: University of Chicago Press, 1988), pp. 17-18.

42 Ontario Bureau of Industry, *Annual Report* (1887), p. 28, quoted in Strange, *Toronto's Girl Problem*, p. 38.

43 Jean Barman, *Sojourning Sisters: The Lives and Letters of Jessie and Annie McQueen* (Toronto: University

occupations, which gathered pace in the first decades of the twentieth century, also indicates a desire for independence and a preference for fixed hours away from the workplace, regardless of any modest material advantage afforded by live-in domestic service.<sup>44</sup>

Even for daughters living with parents, a job meant time away from home and a new independence of both father and mother. Sons who took paid jobs often followed their fathers: in Hamilton, 25 per cent of sons were working in the same occupation category as their fathers; 11 per cent in manufacturing had exactly the same occupation as their fathers. The same was not true of daughters, who went into the more narrow range of occupations designated "female." When they went into manufacturing, women usually went into sex-segregated work roles and found themselves associating for long hours with other women. Just as for boys, taking a job was a major turning point in a girl's life, and a contradictory one.<sup>45</sup> The job meant long hours, stress and danger; it also meant a degree of independence, a big step towards adulthood, and a new solidarity with female peers.

As Ileen DeVault argued many years ago, women's work choices may also have related to "less objective" and therefore more subjective factors, such as status and self-esteem.<sup>46</sup> To the extent that even low-paid white-collar jobs afforded a benefit in terms of status, single women in Hamilton were finding such jobs. In 1911 15.6 per cent of single women with jobs were in the clerical-secretarial sector, 7 per cent were sales clerks, and another 13.9 per cent were in teaching or nursing or another "professional" job (18 per cent were in the service sector, including domestic service, and 40 per cent were in manufacturing, including mainly cotton and woollen mills and clothing production).<sup>47</sup> Taking a wage-paid job and contributing cash to the family economy also involved a change of status within the home, as Jane Synge argued. Part of this change can be related to the size of daughters' contributions, and these were not insignificant. The 1911 census suggests that the disparity between the earnings of daughters and earnings of sons is not so great as previous research has suggested, at least for Hamilton: the mean annual earnings amounted to \$317 for daughters in Hamilton, compared to \$475 for sons.<sup>48</sup> Furthermore, the arithmetic mean can be misleading. More

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of Toronto Press, 2003); Eric W. Sager, "Women Teachers in Canada, 1881-1901: Revisiting the 'Feminization' of an Occupation," *Canadian Historical Review*, vol. 88, no. 2 (June 2007), pp. 201-236.

44 Eric W. Sager, "The Transformation of the Canadian Domestic Servant, 1871-1931," *Social Science History*, vol. 31, no. 4 (Winter 2007), pp. 509-537.

45 Craig Heron, "Boys Will Be Boys: Working-Class Masculinities in the Age of Mass Production," *International Labor and Working-Class History*, vol. 69 (Spring 2006), p. 18.

46 Ileen A. DeVault, "'Give the Boys a Trade': Gender and Job Choice in the 1890s" in Eva Baron, ed., *Work Engendered: Toward a New History of American Labor* (Ithaca, NY: Cornell University Press, 1991), p. 200. On the mix of material and non-material attractions of work, see also Tamara K. Hareven, *Family Time and Industrial Time: The Relationship Between the Family and Work in a New England Industrial Community* (Cambridge: Cambridge University Press, 1982), pp. 69-84.

47 Lisa Fine argued that clerical work was perceived as a "good job" and had the potential to alter some women's perceptions of the world of work. See Lisa M. Fine, *The Souls of the Skyscraper: Female Clerical Workers in Chicago, 1870-1930* (Philadelphia: Temple University Press, 1990), pp. 42, 139-140. On the status of jobs in sales, see also Suzanne Morton, *Ideal Surroundings*, p. 146.

48 Jane Synge estimated "average yearly earnings for female children" in 1911 to be \$246.80. This is closer to my finding of \$242 as the mean earnings of all females aged 10 to 19 for Hamilton in 1911. My estimate of \$317 includes all women whose relation to head of household was "daughter," regardless of age. See



important is the finding that, in households where at least one daughter had a paid job, daughters in a majority of households were contributing more than 23 per cent of total family earnings. Turning over wage earnings to mother, making a personal contribution to the family economy, was a source of pride: "I came home and plonked it [my pay] on the table, happy as a lark. At that time they [her brothers and sisters] were all small."<sup>49</sup> The change of status was also related to the shift in work roles. Long hours spent outside the home limited the young woman's responsibility for household labour: those "chores" became increasingly the responsibility of younger children.

The wage itself was an ambivalent signifier, denoting oppressive bonds but also a new status, that of the consumer. Among working-class women in Hamilton, that status was certainly limited by the small amounts of spending money that mothers allowed daughters to keep from their wages. As well, the "pleasure oriented culture that swept women's lives" in New York at the turn of the century may not have been so advanced in Hamilton.<sup>50</sup> Nevertheless, according to Nan Enstad, even an embryonic consumer culture offered "a new range of representations, symbols, activities and spaces" and allowed working women "a place to dream in their daily lives."<sup>51</sup> When the silent movies came to Hamilton in 1910, the place to dream expanded. "We'd go to the show for 5 cents, get popcorn, and later a bag of chips wrapped in newsprint and by the time we got home it would be finished."<sup>52</sup> There was more than material reward in such small expressions of freedom and choice.

Wage-paid work was often a step towards marriage, as Jane Synge learned from her informants.

While work in factories and shops was certainly arduous and involved long hours, most of the women interviewed looked back on that period of their lives with pleasure. These working women had often met their husbands directly through work. Some women described the panic they had felt at any suggestion that they stop working to keep their mothers company at home.<sup>53</sup>

In Canada marriage usually meant a release from paid labour outside the home and a return to the burdens of domestic work regulated by the needs and working hours of others. Confining and burdensome as it often was, marriage was also a

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Jane Synge, "The Transition From School to Work: Growing Up Working Class in Early 20<sup>th</sup> Century Hamilton, Ontario" in K. Ishwaran, ed., *Childhood and Adolescence in Canada* (Toronto: McGraw Hill, 1979), p. 254.

49 Anonymous, quoted in Synge, "Young Working-Class Women," p. 139.

50 Kathy Peiss, *Cheap Amusements: Working Women and Leisure in Turn-of-the Century New York* (Philadelphia: Temple University Press, 1986), p. 37.

51 Nan Enstad, *Ladies of Labor, Girls of Adventure: Working Women, Popular Culture and Labor Politics at the Turn of the Twentieth Century* (New York: Columbia University Press, 1999), pp. 6, 206. Suzanne Morton argues that, for single women in the 1920s, "the most important place for the consumption of romance was the workplace." See Suzanne Morton, "The June Bride as the Working-Class Bride: Getting Married in a Halifax Working-Class Neighborhood in the 1920s" in Bettina Bradbury, ed., *Canadian Family History: Selected Readings* (Toronto: Copp Clark Pitman, 1992), p. 366.

52 One of Synge's women informants in her "Untitled Draft," p. 76.

53 Synge, "Young Working-Class Women," p. 143.

shift into a form of management—the management of a household, the “managing and stretching of wages,” the management of domestic production.<sup>54</sup> As Joyce Burnette says in her controversial study of gender and work in Britain, “withdrawal from market work is not necessarily bad” for women.<sup>55</sup>

Among the conditions of work-related decision-making were other changes in the life course of this generation of urban women. This generation had been through the compulsory school systems created in the late nineteenth century. Schooling had ambiguous effects: it socialized girls into gender-specific and domestic roles; at the same time it could be conducive to the expectation of a dual wage-earning and familial role, and it may have contributed to a transformation of subjectivities, to the development of self-interest and the confidence to assert that interest in reproductive and other realms.<sup>56</sup> Certainly literacy was key to the movement of women into clerical work, teaching, and nursing. Literacy rates among domestic servants had risen rapidly in the late nineteenth century, and literacy offered an escape from servility: “Some of my happiest hours are spent in my kitchen, with my feet in the oven, and one of my favourite books, and in this age of literature and with the wages that a good servant can command, no one need be without plenty of reading material.”<sup>57</sup>

Is there an echo here of the “assertiveness” that Peter Baskerville detected among women property holders in English Canada, in the wake of married women’s property acts and changes in property holding and wealth transfers in this period?<sup>58</sup> His focus was mainly on those outside the working class, but there may be a parallel among working-class women. To dispose of property, to be executor or testator, was an enabling act of selfhood within the webs of patriarchy; to earn a wage in one’s own name, even when that wage was shared with family, was surely a similar realization of independent identity within the bonds of family.

Non-material motives and other conditions relating to women’s subjectivity are intriguing hypotheses, with plenty of support from the existing literature. Even if we admit the importance of such motives and conditions, they do not easily fit as answers to a question framed for testing against census microdata: why did

54 Bradbury, *Working Families*, pp. 152-181.

55 Joyce Burnette, *Gender, Work, and Wages in Industrial Revolution Britain* (New York: Cambridge University Press, 2008), p. 326.

56 Meg Gomersall, “Education for Domesticity? A Nineteenth-Century Perspective on Girls’ Schooling and Education,” *Gender and Education*, vol. 6 (1994), pp. 1-12. On the paradoxical effects of schooling, see also Regenia Gagnier, *Subjectivities: A History of Self-Representation in Britain, 1832-1920* (New York: Oxford University Press, 1991), pp. 196-199. On education and “the quest for autonomy,” see Alison MacKinnon, *Love and Freedom: Professional Women and the Reshaping of Personal Life* (Melbourne: Cambridge University Press, 1997), pp. 221-225, although her focus is on professional women. Schooling is also related to the broader question of cultural changes and attitudes towards women in paid jobs. Raquel Fernandez offers an intriguing econometric argument about “a rational, intergenerational *learning* process in which individuals are endogenously learning about married women’s long-run payoff from working” in “Cultural Change as Learning: The Evolution of Female Labor Force Participation over a Century,” *American Economic Review*, vol. 103, no. 1 (February 2013), p. 473.

57 *Globe* [Toronto], January 27, 1886, cited in Genevieve Leslie, “Domestic Service in Canada, 1880-1920” in Janice Acton, Penny Goldsmith, and Bonnie Shepard, eds., *Women at Work: Ontario, 1850-1930* (Toronto: Canadian Women’s Educational Press, 1974), p. 84.

58 Peter Baskerville, *A Silent Revolution? Gender and Wealth in English Canada, 1860-1930* (Montreal and Kingston: McGill-Queen’s University Press, 2008), p. 239.

some women enter the labour force while others, in the same time and place, did not? Schooling, consumerism, and a desire for independence were ubiquitous conditions, and their differential influence among daughters and within familial conversations lie beyond measurement and perhaps ultimately beyond knowing except at the level of instances and anecdotes. To my specific question this paper has offered the beginnings of an answer, in which familial need for women's wages and the constraining need for women's household labour are not independent or paramount conditions of movement into the labour force. This paper also describes a research opportunity opened up by vast new sources on women and work and by the complementary intersection of a range of historical methods. The impact of schooling is not completely beyond measurement, for instance: missing in the regression model in the Appendix is a proxy for educational attainment (the census gives months in school for children, but not level of schooling attained), and it might be possible to derive such a proxy.<sup>59</sup>

As well, the limits of a single time and place are receding rapidly. The expanding universe of census datasets allows us to observe virtually all women in Canada at specific moments in time, such as 1881, and very large representative samples of women across time between 1852 and 1951.<sup>60</sup> Do the findings for Hamilton in this paper represent an anomaly? What difference did geographic location make to the labour-force participation of single and married women? How did the mix of school attendance, domestic work, and labour-force participation change over time? How did the contributions of women to family earnings change over time and space? How should analysis of literary, textual, and oral-historical sources be integrated with analyses based on census data? This short essay about women in Hamilton has looked at only a fragment of our vast research infrastructures. I am happy to leave the challenge and the opportunity to others. Today, graduate students interested in women and the family economy have the gift of open-access research collections of a size and richness scarcely dreamed of by their predecessors a generation ago. Has there ever been a better time to embark on the study of women and work?

59 I am grateful to Gilliam C. Hamilton (Department of Economics, University of Toronto) for this suggestion.

60 For the 1852 census, see the Programme de recherche en démographie historique at the Université de Montréal at <http://www.prhd.umontreal.ca/census/en/main.aspx>. The entire enumerated population of Canada in the 1881 census is available in machine-readable format from the North Atlantic Population Project at <https://www.nappdata.org/napp/>. For the 1891 census of Canada, see the 1891 Census Project at the University of Guelph at <http://census1891.ca/>. For the 1901 census, see the Canadian Families Project at <http://web.uvic.ca/hrd/cfp/>. On the census databases from 1911 to 1951, see the User Guide at <http://ccri.library.ualberta.ca/enindex.html>; see also Eric W. Sager and Peter Allan Baskerville, "Canadian Historical Research and Pedagogy: A View from the Perspective of the Canadian Century Research Infrastructure," *Canadian Historical Review*, vol. 91, no. 3 (September 2010), pp. 533-551. Currently the only complete-coverage population microdata available in machine-readable format is from the 1881 census, but efforts are currently under way to create complete-coverage databases for other years, and so the universe will continue to expand.

**Appendix: Logistic Regression: Change in Odds of Having/Not Having Paid Employment (Single Women, Hamilton, 1911)\***

Variable	B	Exp(B)	Sig.
<b>Family per capita earnings</b>			.000
<i>(reference: lowest 5<sup>th</sup>)</i>			
2 <sup>nd</sup> quintile	.113	1.120	.268
3 <sup>rd</sup> quintile	.002	1.002	.982
4 <sup>th</sup> quintile	-.180	.836	.124
Highest quintile	-.932	.394	.000
<b>Head's occupation</b>			.000
<i>(reference: manufacturing)</i>			
Professional	-.598	.550	.000
Clerical	-.302	.740	.040
Sales	-.462	.630	.003
Service	-.290	.748	.047
Primary	-.246	.782	.092
Transport	-.159	.853	.278
Labour	.174	1.190	.500
<b>Number of children</b>			.263
<i>(reference: none)</i>			
1 child	.036	1.037	.696
2 or more	.174	1.190	.102
<b>Employed sons</b>			
<i>(reference: none)</i>			
1 or 2 employed sons	.237	1.268	.003
3 or more	.362	1.437	.047

\* This analysis uses only single women who were co-resident with kin; most were daughters of the household head, and others were nieces, sisters, or other relatives. Logistic regression is a standard procedure for estimating associations when the dependent variable is a dichotomy, as it is here (having/not having a stated chief occupation). The procedure estimates the probability that an event will occur, and then converts the probabilities into odds, or odds ratios. Where B is negative and Exp(B) is below 1, this indicates a fall in the odds of being in the labour force. If the association is to have statistical significance, we would expect to see a sig. less than .05 or, more cautiously, less than .01. Thus, for instance, we can accept that the odds of a single woman being in the labour force fall (Exp(B) is .394) in a family in the most prosperous earnings quintile, and that this result has statistical significance.

\*\* This "ratio" is simply the result of subtracting the number of adult men in the family from the number of adult women. "Fewer men" indicates that the number of adult women exceeds the number of adult men by two or more. "Same" indicates a net difference of -1, 0, or +1. "More men" indicates that men exceed women by two or more.

Variable	B	Exp(B)	Sig.
<b>Ratio: adult men / women**</b>			
<i>(reference: fewer men)</i>			
Same	-.349	.705	.000
More women	-.462	.630	.009
<b>Immigrant or not</b>			
<i>(reference: Canadian-born)</i>			
Born outside Canada	.128	1.136	.158
<b>Ethno-religious identity</b>			
<i>(reference: English Anglican)</i>			
English other	-.070	.932	.501
Irish Catholic	.397	1.487	.004
Irish Protestant	-.084	.919	.500
Scot Presbyterian	.008	1.008	.947
Scot other	.044	1.045	.770
European Catholic	-.006	.994	.980
European Protestant	.006	1.006	.980
<b>Number of lodgers</b>			
<i>(reference: none)</i>			
One lodger	.076	1.079	.564
Two or more	-.422	.646	.001
<b>Number of domestics</b>			
<i>(reference: none)</i>			
One or more domestics	-1.274	.280	.000
<b>Number of daughters aged 12-24</b>			
<i>(reference: none or one)</i>			
Two or more	.208	1.231	.018
Three or more	.309	1.362	.008
Constant	.713	2.040	.000