

Farm Women's Work Patterns

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Abstract

This comparative study examines farm women's work patterns in Ontario and Prince Edward Island. It is based on two sample surveys (N343 and 167 respectively) conducted in 1982-83. The study takes account of tasks performed in the home, in the yard (chores) and on the farm. Off-farm work is also considered. Women's multifaceted work involvement is reduced by factor analytic techniques into fewer meaningful work dimensions. Levels of work intensity for each dimension are established by means of indicators as well as an OWI ("overall work intensity") measure for all women's unremunerated work is constructed. The findings show that farm women carry heavy workloads, that less than 10% are solely homemakers and that women's OWI is independent of off-farm work. Differences between the two samples and the conceptualization of "women's work" are also discussed.

Introduction

The accounting of women's unpaid, non-market work has always presented difficulties, particularly when dealing with small, entrepreneurial, business or farm units, where work and family life are conducted in close proximity. The easiest and most common and conventional response in these cases, was to ignore women's work or to dismiss it as inconsequential and valueless in terms of the enterprise. Recently, this view of women's unremunerated work is being challenged in many quarters, forcing social scientists to rethink their conceptions of work and the criteria used in the assessment of its importance.¹ Farm women's work is no exception to this general trend. Although farm women's work was frequently seen as contributing to the prosperity, success or survival of the farm (Kohl, 1976; Rasmussen et al., 1978), serious attempts to document women's contribution to

agriculture are a relatively recent development in this field of study.²

This study aims at describing the diversity of tasks that farm women perform in the home, doing "chores," gardening and/or on the farm, in two Canadian provinces: Ontario and Prince Edward Island. Furthermore, it attempts to discover common, underlying patterns of farm women's work in these two regions of Canada. It is based on two surveys carried out in the early 1980s. In both surveys, farm women were the respondents and made inputs into the development of the research questions.³

The Research Problem and Focus

More often than not farm women's work, whether in the household, in the yard or on the farm, because of its organization, falls into that category which lies "outside the market pricing

mechanism" and therefore, presents problems of "recognition" or visibility.⁴

Traditionally, economists attempted to deal with this problem either by concentrating on the determination of either the volume of work inputs, as in "time-budget" studies, or on work outputs: the number of "cared for persons" for example, as initial steps leading to the imputation of monetary values to work processes - services - or outputs - products - (for recent reviews see Barrera, 1983; Goldschmidt-Clermont, 1982; and Murphy, 1980).

Sociologists, on their part, have concentrated more on the descriptive aspects of women's work, as determined by the sexual division of labour and by gender roles in the farm family (Wilkening, 1981; Ross, 1983; Rosenfeld, 1981; CRDC 1979; de Vries P.J. and G. McNab, 1982; Fassinger and Schwarzweller, 1982). However, in most of these cases work is still conceptualized as a dichotomy of unproductive work and "real", productive work. "Productive" work is that which has a direct and visible market link -expressed in monetary transactions; work is defined as "unproductive" where this link is less clear or visible. Such definition unduly restricts the types of activity which can be considered "real" work and obscures the relationship between paid and unpaid activities. Furthermore, this definition excludes consideration of "social" and "status" production and maintenance activities, which take place in the family and the community, on unremunerated bases, although comparable activities in the remunerated sphere are seen as *work* (Kahn-Hunt, 1982; Kaplan-Daniels and Cloward, 1982; Cebotarev, 1984; Papanek, 1979: 775-81).⁵

In recent history, not only the conceptions of women's work (Bock and Duden, 1984), but its assessment is clouded by theoretical, ideological and practical consideration. Theoretically, women's work does not fit the economist's formulation of economic or productive work because it

takes place in the nonmonetized, family or household sphere. Moreover, the connection between household production of goods and services and the broader economy is seldom acknowledged. More often than not, the household in modern society is seen as subordinate to and dependent on the market and on market-supplied goods and services. The existence of household production (for family consumption, well-being or saving) in modern society, has only recently been rediscovered.⁶

On ideological bases, women's work is often ignored because of an uncritical acceptance and application of the middle-class gender role and division of labour ideals. It is often simply assumed that women do not take part *directly* in economic activities, totally disregarding women's objective socioeconomic positions and responsibilities, even if women in fact do perform such work, as in the case of farming.⁷ Furthermore, because the notion of "work" is derived from a *male* labour-market model, the diffuse, unspecialized and multifaceted nature of most of women's work makes comparisons difficult.

Pragmatically, it was and still is hard for those who are attempting to assess it, to chart women's daily activities because they do not necessarily follow the clear, predictable pattern of most male occupations, making parallels almost impossible. Moreover, women's work seldom has a definite starting time and almost never an ending point. Quite often women's work intrudes on the time for rest, recreation or sleep. Another particular characteristic of this work is that the involvement in several simultaneous activities is not the exception but the norm, which allows some social scientists to claim that women do not just perform a double, but a triple daily workload (ILO, Arizpe, 1982; Hale, 1982; Koski, 1983). Furthermore, there are certain areas of women's work which, because of their potential for gratification, are difficult to distinguish from what some might call leisure activities (Vanek, 1980: 4270).⁸

Needless to say, to define women's unpaid, domestic work as nonwork is advantageous, practical for the state, the male family members and for their and the women's employers.

In modern North America, farm family life increasingly resembles urban family life, but farm women's work pattern is much more multifaceted than that of urban women, thus further multiplying the difficulties in its assessment.

In spite of this, the last few years saw an upsurge of research on farm women's work, both in Canada and in the United States (Graff, 1982; Koski, 1983; CRDC, 1979; Shaver, 1983; Jones and Rosenfeld, 1981; Ross, 1982; Fassinger and Schwarzweller, 1982, to cite only a few). Some of the most interesting findings emerge from historic studies of farm women's work which relate it to trends in the agriculture division of labour of farm families and demonstrate the relative importance of subsistence and market production to the prosperity and the survival of the family farm (Sachs, 1982; Flora and Stitz, 1985). Anthropological and historical evidence suggests that the conception of farming as a purely masculine occupation emerged relatively recently (Boserup, 1970; Etienne and Leacock, 1982; Pfeifer, 1975); and that this may have been the result of the modernization of agriculture and of its integration into a capitalist, market economy (Graff, 1982; Sachs, 1982; Gladwin, 1985). As recently as in the 1930s, farming and farm work was among the ten leading female occupations in Canada and the United States (Acton et al., 1974: 276; Berch, 1982: 11-13; see also Table 1). In Canada, women's involvement in farm work is on an increase, relative to that of men as well as in absolute numbers although proportionately it oscillates between 2.5% and 4.0% (Smith, 1983; and Table 1), and household production also seems to play an important role in the persistence of farming itself (Reimer, 1982; Ireland, 1983).

In this study we conceptualize productive work in a broader way to include women's unremunerated work, whether in the household or on the farm. We distinguish, however, between *direct* and *indirect* economic work (i.e., that which earns cash directly and that which makes the earning of cash possible or substitutes for cash outlays). Following the sociological tradition, we shall describe the variety of work roles that farm women perform, as well as attempt to reduce them to fewer basic, underlying dimensions by means of factor analytic procedures.

We hypothesize that farm women's work is rationally organized (both "formally" and in terms of Weber's "substantive" rationality) and that from the relatively large number of descriptive categories, an identifiable, common pattern will emerge.

Further, we shall develop a "work intensity" index for specific activities and an overall one, to discover the extent to which farm women's *indirect* economic activities constrain their involvement in *direct* economic work and the extent to which the overall work intensity limits farm women's participation in off-farm employment.

We also acknowledge the continuity and linkage between the larger economic structure (which we examine through involvement in off-farm work), the farm enterprise *and* the farm household, although we hypothesize that the structure and social relations within the latter are not totally subordinated or defined by either the farm enterprise *or* the larger economy, but that within the household there exists an area of "indeterminacy" (Cebotarev, Blacklock, McIsaac, forthcoming).⁹ Thus, although we do expect to find certain commonalities and underlying patterns in farm women's work, we also anticipate finding some variations which may be partly due to the "indeterminacy" in the farm household.

Research Procedures and Sources of Data

The basic data for this comparative study came, as mentioned previously, from two original farm women surveys carried out in 1982 and 1983.

The Concerned Farm Women (CFW) survey was designed (with assistance of the senior author) and conducted by a group of farm

women during the summer of 1982. The farm population in this study comprised farm families living in selected townships of Bruce and Grey Counties, Ontario.¹⁰ The sample frame was derived from voters' lists, selecting addresses along rural roads and verifying the occupation of the addressees with the township clerk; only complete farm families were included in this survey. The final sampling frame consisted of 3,000 addresses from which a 20% sample was randomly drawn.

TABLE 1
Historic Trends: Population, Labour Force
and Women in Agriculture, Canada 1881-1981

	Total Population	Total Labour Force	Total Female Labour Force	Female Agri. Labour Force	% of FALF
1881	4,306,118	1,377,585	N.A.	N.A.	
1891	4,801,071	1,606,369	195,990 (11.7%)	11,638	5.9
1901	5,518,606	1,782,832	237,949 (13.3%)	8,421	3.5
1911	7,179,650	2,723,634	364,821 (13.4%)	15,094	4.1
1921	8,775,853	3,164,348	489,058 (15.5%)	16,315	3.3
1931	10,363,240	3,197,612	665,302 (17.0%)	24,079	3.6 ¹
1941	11,489,713	4,195,591	832,840 (18.5%)	19,146	2.3 ²
1951	13,984,389	5,314,913	1,163,893 (22.0%)	32,099	2.8 ³
1961	18,200,689	6,342,289	1,760,450 (33.3%)	66,081	3.8
1971	21,568,311	8,626,925	2,961,210 (34.3%)	106,845	3.6
1981	24,343,180	12,054,155	4,796,945 (39.8%)	125,740	2.6

Sources: Census of Canada, 1921. Census of Canada, 1961. Women at Work in Canada. Department of Labour, 1964. Women in the Labour Force 1971: Facts and Figures. Women's Bureau, Labour Canada. Population Census: Canada and Provinces, 1971, cat. #94-717, Vol. III, Part 2, table 2 (Sept. 74) and for 1981, cat. #92-920.

¹ - Gainfully occupied 10 years and over

² - Gainfully occupied 14 years and over

³ - Labour force = 14 years and over

The data collection was done by means of self-administered questionnaires. Six hundred were sent out to farm women in the summer (June-July) of 1982. In spite of the length of the questionnaire and the busy work time on the farms, a 60% return was obtained which yielded 343 complete, usable cases.

The Prince Edward Island (PEI) data came from mailed, self-administered questionnaires, completed by farm women in the late spring of 1983. The 10%, simple random sample (N300) was drawn from a computer listing of the PEI Department of Agriculture. This sample frame represents over 95% of all PEI farm families.¹¹ Only farmer wives or women farm operators were asked to complete the questionnaires. The data collection stage took place in May-June of 1983. The return rate was 60%, which yielded 167 complete, usable cases. Thirty-seven farm women were randomly selected from the original sample for indepth, qualitative interviews.

The Instrument

Although the questionnaires in these two surveys differed in emphasis and length, there was considerable similarity in questions regarding the farm enterprise, the demographic and life cycle states of the families and particularly the work performed by farm women. Most importantly, the questionnaires completed by women were constructed from a farm women's perspective to insure that activities and experiences as lived by farm women could be recorded. In this comparative study we only use information which relates to farm women's work, describing the many and varied tasks women perform in the home, on the farm and in off-farm employment.¹²

Besides being interested in capturing the diversity of farm women's work as an indicator of the breadth of their contribution to the farm family and enterprise (Reimer, 1983) we also wished to obtain measures of work-intensity with which these various activities were pursued. Thus, the

list of farm women's tasks, making reference to various types of activities which are normally associated with farm women's work, was complemented by a three-point scale, assuring us, even if only roughly, of a measure of work intensity.

Information about type and reason for undertaking off-farm work was also collected. In order to discover the existence of underlying work dimensions, both simple and complex statistical techniques were used. In the first place, simple tables were constructed describing the overall frequency or incidence of various work activities. Secondly, factor analytic techniques were used to reduce the variety of responses and discover the existence of underlying dimensions and work patterns.

The Samples

An examination of the samples suggests that the farm women respondents were a fairly representative cross section of the farm population in their respective regions, with the exception of containing a larger proportion of respondents from the larger and wealthier farm enterprises (see Tables 2, 3, 4). The age distribution in the two samples was also comparable: most respondents fell into a 25-54 years range (Table 5). The educational attainment of respondents in the PEI sample appear considerably higher than that in the CFW survey.¹³ On the whole, however, the samples are fairly comparable to each other as well as with census data for the corresponding regions.

Farm Women's Work Pattern

Since household work is normally associated with "women's work", we begin our examination of the indirect "economic" work of farm women with how tasks are divided in the household between women and the rest of the family. In this regard, the findings show that the "traditional" division of labour by sex persists on the farm; however, work is divided in a rather *lop-*

TABLE 2
Farm Size Distribution*

In Acres	CFW %	%**	PEI/S %
< 70	6.0%	(11.5)	1.0%
70 - 129	28.0%	(25.1)	9.0%
130 - 239	31.0%	(29.2)	28.0%
240 - 399	21.0%	(19.2)	30.0%
400 - 599	8.0%	(6.2)	13.0%
560 - 759	2.0%	(2.4)	6.0%
760 - 1,119	2.0%	(1.5)	3.0%
> 1,120	1.0%	(0.5)	0.0%
NR	10.0%		10.0%
	<u>100.0%</u>		<u>100.0%</u>

* For CFW N=343 and for PEI/S N=165 unless otherwise stated.

** Data from Agriculture Census, State Canada 83, sp. printout Data for PEI not available in same breakdown.

TABLE 3
Major Types of Farm Operation

Type	CFW %	%	PEI/S %	%
Dairy	16.4%	(18.8)	34.5%	(29.7)
Beef	40.2%	(52.0)	8.0%	(21.0)
Hogs	5.2%	(6.0)	9.0%	(9.8)
Sheep	2.0%	(0.0)	0.6%	(0.0)
Mixed Livestock	20.0%	(4.0)	4.0%	(0.0)
Poultry	0.3%	(1.7)	0.0%	(0.9)
Wheat	0.0%	(0.2)	0.0%	(0.2)
Small grains	1.0%	(8.1)	0.0%	(3.2)
Mixed crops	4.1%	(0.9)	0.6%	(13.2)
Grains	0.6%	(3.0)	0.6%	(0.0)
Vegetables and fruits	0.6%	(0.9)	2.4%	(1.9)
Tobacco	0.0%	(0.0)	1.2%	(***)
Potatoes	0.0%	(0.0)	19.4%	(***)
Other (cow/calf)	9.0%		3.0%	(0.0)
Combination	0.0%		15.8%	(11.4)
	<u>99.4%</u>		<u>99.1%</u>	

*** We support that these are accounted by the Agriculture Canada's category of "Other field crops" = 19.1.

sided fashion: there seems to exist a clear delimitation of what is seen as "women's work" into which men do not seem to enter much and which is the prime responsibility of females (wives-daughters) in the household; and the work sphere of men into which women seem to enter as a matter of necessity. Household responsibilities are definitely a "female" work area on the farms in our two samples.

Without any exaggeration, it can be concluded that farm women in both samples do most, if not all, of the household work. Such tasks as cooking, shopping, laundry and cleaning for the family fall almost 100% "regularly" on their shoulders (Table 7). If, as other Canadian studies suggest, housework on farms can take as much as 50 plus hours *per week* (CRDC, 1979; Koski, 1983), it becomes obvious that without any additional work responsibilities, farm women have a full-time job on their hands.

Housework is thus everpresent in farm women's lives, and so, whatever else women do, it has to be seen as work *over and above* a person's *normal* (40 hrs.) workload. This is so in spite of the use of modern technological gadgets and labour-saving devices available in North American households (Abel, 1973). Notwithstanding all these modern facilities, some studies show women's household labour has *not* decreased substantially over the last 50 years because new standards have been instituted and the overall amount of household maintenance, repair and support work has increased in direct proportion to the "technification" of the household (Burns, 1975; Vanek, 1981). A similar argument is made about agricultural work: as agriculture becomes intensified, agricultural support activities increase. According to this interpretation, women are not necessarily pushed out of agriculture, but they are pulled into activities which make a more productive agriculture possible (Ember, 1981). This point has to be kept in mind when considering women's involvement in *direct* economic work (which represents only a lesser part of women's work).

TABLE 4
Gross Sales 1982*

In Dollars	CFW	PEI/S
< 4,999	5% (15.3)**	4%
5,000 - 9,999	6% (10.6)	7% (31.8)**
10,000 - 14,999	8% } (8.8)	3%
15,000 - 24,999	11% }	3%
25,000 - 49,999	13% (16.2)	20% (39.1)
50,000 - 74,999	14% }	13%
75,000 - 99,999	10% } (15.5)	10%
100,000 - 199,999	17% (15.3)+	20% (25.2)+
200,000 - 299,999	4%	>200,000 14%
300,000 - 399,999	3%	
400,000 - 499,999	2%	
> 500,000	5%	NA 6%
	<u>100%</u>	<u>100%</u>

* Percentages have been rounded to the closest decimal.
 ** From Agriculture Census Statistics Canada 1981.
 + Refers to \$100,000 and over.

TABLE 5
Age Distribution of Farm Women

Age	CFW	PEI/S
< 25	2%	1.0%
25 - 34	21%	18.0%
35 - 44	30%	23.0%
45 - 54	25%	29.0%
55 - 59	13%	12.0%
60 - 64	5%	9.0%
65 - 69	3%	4.0%
> 70	1%	4.0%
	<u>100%</u>	<u>100%</u>

TABLE 6
Farm Women's Formal Education Attainment

CFW, N=328	%	PEI/S	%
Grade 10 or less	32.0%	Grade 10 or less	24.0%
Grade 11-13	29.3%	Grade 11-12	22.0%
Technical	10.0%	Vocational	
University	17.4%	Technical	17.0%
College	11.3%	University	25.0%
		Professional	11.0%
NA = 15 (% calculations include these: 4%)			
	<u>100.0%</u>		<u>100.0%</u>

The lower percentage of farm women who report that they "regularly" take care of children and the elderly reflects the smaller number of households with youngsters and the aged in them in the samples.

An important area of women's "indirect" economic contributions lies in the category of "farm support" work in "farm service" activities. These activities, although not normally considered productive, are nevertheless *essential* for the smooth running of the farm enterprise.¹⁴ Between one-fifth and one-third of farm women in both samples are regularly engaged in this type of work, with the exception of the repair of farm machinery and buildings, which may require specialized skills. When the "occasional" involvement in this work is taken into consideration, well over one-half of farm women perform these services (Table 7).

Farm management is perhaps the most important "farm support" activity on modern, North American farms. It is also the activity which is, to a great extent, delegated to farm women (Ross, 1983; EPOC, 1984; Koski, 1983).

For our analysis we have divided these activities into "routine" and "decision-making" components. Table 7 shows that about one-half of farm women in our sample are regularly responsible for routine management activities, such as bookkeeping, paying bills, answering the telephone (regarding farm business). A lower proportion of farm women were in charge of labour supervision. This may be a reflection of the number of farms in our samples which use hired or family labour (other than the spouse) in the enterprise. In the management "decision-making" category, two activities are notable in terms of frequency or women's participation: they are "daily decision-making/collecting information" and "entertaining business/promoting produce", comprising 39% and 31% in the CFW and 10% and 9% in the PEI samples, respectively; whereas in the other, more crucial decision-

making areas farm women's involvement was much lower: less than 10% of the farm women were regularly making crop policy, sales promotion or sales with business or contract decisions in both of our samples.

Our findings thus suggest that long-term farm decision-making is an almost exclusive domain of the (male) farmer himself.

The involvement of farm women in "direct" economic work, i.e., farming, is also shown on Table 7 (off-farm employment, another "direct" economic activity, will be discussed later). In all, the six farm work activities listed in Table 7 (plowing, discing, field work with machinery; fertilizing, spraying insecti-pesticides; harvesting; feeding and caring for livestock; milking and other barn chores; veterinary attention, doctoring), a higher proportion of the Ontario sample (up to one-third) reported involvement than the women in the PEI sample, which reached barely one-fifth. However, when regular and occasional activities were taken together, the differences became less pronounced.

This rough assessment of farm women's work patterns provides an idea of the range of activities average farm women perform. Of course, it is not a total listing of all work done by farm women - the descriptive list would be very lengthy - it should be seen only as an indication of the versatility of most farm women. It is often claimed that the farmer is a "jack-of-all-trades". This saying seems to apply even more to farm women who, in addition to various farm related activities, have the entire range of household work, to say nothing of the socio-emotional work that women perform to keep families and communities together.¹⁵

In the next section we shall reduce this range of women's work descriptions to fewer dimensions since we have hypothesized that some of these activities will cluster together into discernible patterns.

TABLE 7
Selected Activities Carried Out By Farm Women*
(Ontario CFW and PEI/Survey)

	CFW			PEI/S		
	1 %	2 %	3 %	1 %	2 %	3 %
Household Work						
Child Care	68.3	5.3	73.6	79.6	7.0	86.6
Care of the aged or ill	6.4	7.2	13.6	33.1	22.3	55.4
General household chores	-	-	-	95.0	4.0	99.0
Cook for family	96.7	1.7	98.4	97.0	3.0	100.0
Family laundry	95.3	1.7	97.0	99.4	.6	100.0
Shop for family	96.2	1.5	97.7	95.0	5.0	100.0
Farm Support Work: (a) Services						
Repair farm machinery	3.0	16.9	20.0	8.0	0.0	8.0
Repair farm buildings	9.0	43.8	52.8	-	-	-
Get supplies/parts	35.6	49.2	84.8	19.6	58.9	78.5
Cook for hired help	39.9	36.7	76.6	34.0	41.0	75.0
Clean/laundry/hired help	10.9	13.5	24.4	-	-	-
Farm Support Work: (b) Management: routine						
Keeping accounts	60.6	15.3	76.0	63.1	17.5	80.6
Livestock records	34.2	18.4	52.6	63.1	12.0	75.1
Paying farm/household bills	51.1	32.7	83.8	45.5	21.2	66.7
Preparing tax statements	16.9	26.7	43.6	44.2	11.0	55.2
Answering phone	65.0	26.4	91.4	75.5	19.6	95.1
Supervising hired labour	6.3	29.6	36.0	8.0	46.0	54.0
Supervising family labour	20.7	32.9	53.6	8.0	46.0	54.0
Farm Support Work: (c) Management: decision making						
Daily decisions/collecting information	39.0	10.0	49.0	10.0	56.0	66.0
Crop related decisions	3.0	16.6	19.6	4.0	19.0	23.0
Deal with buyers	1.7	13.9	15.6	1.0	9.0	10.0
Deal with consumers/promoting farm produce	3.9	21.1	25.0	9.0	12.0	21.0
Deal with salesmen/negotiate contracts	5.6	32.5	38.1	7.0	19.0	26.0
Entertain business personnel/promoting produce	31.1	32.9	64.0	9.0	10.0	19.0
Farm Work						
Plowing (field work/machinery)	14.5	25.3	39.8	4.9	23.6	28.5
Fertilizing	3.4	6.8	10.2	3.1	8.6	11.7
Harvesting	27.5	32.5	60.0	20.4	44.4	64.8
Feeding livestock	37.4	41.1	78.5	9.2	57.8	67.0
Milking other chores	18.4	10.3	28.7	9.2	19.6	28.8
Veterinary, doctoring	30.9	38.8	69.7	4.5	41.1	45.6

1 = Work done on a regular bases

2 = Work done occasionally

3 = Regular and occasional work taken together

Development of Work Dimension Indicators

In order to determine the underlying dimensions of farm women's work patterns and to make our findings comparable with others, procedures used for index development in other farm women's work studies were also employed here (see Fassinger and Schwarzweller, 1980; Ross, 1983).

This procedure consisted of first quantifying and then analyzing women's responses to work questions.¹⁶ Common factor analysis (principal factor method) was used to bring out relationships between the various work activities (CFW=31; PEI/S=39). The questions which represent three conceptually logical work area subdivisions (housework, farm support work and farm field work) were analyzed jointly. The resulting factors, which fell into conceptually clear cut and meaningful categories, served as bases for creating "work area" index scores. These latter were based, with a few exceptions, on selected variables with loadings of $> .400$ (see Tables 8 and 9).

In order to obtain a single score of farm women's overall work intensity (OWI), an index was constructed, to represent women's work involvement in a percentage value, taking into consideration both the variety of tasks (diversity) and frequency of performance (intensity).¹⁷

Off-farm work (OFW) was also included in the analysis with values of 0 for nonemployment, 1 for part-time and 2 for full-time employment.

Farm Women's Work Dimension

In this section we present the results of factor analysis of the responses to activity questions of both the CFW and the PEI surveys.

The varimax rotated factor analysis of the 31 variables included in the CFW survey revealed

the presence of ten distinct work dimensions in the work repertoire of Ontario farm women. They are represented by the following factors:

Factor 1 - "Financial Management and Book-keeping" (BKKP) was specified by 5 variables: keeping farm accounts (.796); keeping livestock records (.606); paying farm bills and banking (.812); preparing income tax returns (.380) and answering business phone calls (.516).

Factor 2 - "Family/Housework" (FHW) was specified by: doing laundry for family (.902), shopping for the family (.835) and cooking, washing dishes and cleaning for the family (.912).

Factor 3 - "Animal Care and Chores" (ACCH) was specified by: feed and water livestock (.687); perform milking and barn chores (.550); clean barns (.638); and help with farm animals, doctoring, birth, etc. (.695).

Factor 4 - "Machine Farm Work" (MCHFW) was based on the following variables: harvesting (.695); plowing, discing, cultivating (.628); and operating truck/machines as part of farm work (.511).

Factor 5 - "Farm Business Decision-making" (FBDM) was specified on the bases of the following variables: decide on cropping or stocking policy for coming year (.596); deal with wholesale buyers in product marketing (.644); deal directly with consumers (.305); and deal with sales people about buying supplies/equipment (.395).

Factor 6 - "Manage Family" (MF) was specified by variables: supervise work of family members (.836); and care for children, including transporting them (.417); decide on daily work tasks (.425).

Factor 7 - "Farm Support Work" (FSUW) was specified by variables: supervise hired help

TABLE 8
Factor Analysis of Tasks Performed by Farm Women (CFW)
 (Loadings represent the varimax rotated solution)

Variable Names	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10
Ploughing	.033	.014	.220	.628	.039	.095	.017	.115	.370	.073
Fertilize	.046	.003	.114	.165	.133	.034	.059	.086	.506	.013
Harvesting	.057	.071	.202	.695	.048	.113	-.025	.120	.092	.005
Drive truck	.129	-.020	.125	.511	.181	.161	.097	.196	-.045	.049
Feed livestock	.139	.083	.687	.289	.094	.125	-.018	.089	.013	-.143
Milk	.086	.005	.550	.011	.028	.053	.048	-.023	.048	.240
Clean barn	.005	-.019	.638	.128	.121	.096	.031	.144	.235	.019
Doctor animals	.151	.083	.695	.272	.047	.040	.087	.197	-.049	-.118
Other chores	.070	-.013	.165	-.043	.086	-.143	.065	.077	.141	-.025
Other chores	-.016	.052	-.030	-.099	.179	.004	-.007	-.023	.087	.009
Farm accounts	.796	.049	.071	.010	.058	.081	.019	.027	.017	.085
Farm records	.606	-.024	.206	.011	.147	.062	.159	.080	.062	-.023
Banking	.812	.048	.055	.149	-.040	.137	.064	.133	-.010	.101
Prepare income tax	.380	.006	.036	.060	.171	-.006	.058	.027	.114	.201
Answer phone	.516	.207	.046	.068	.122	.069	.154	-.011	-.042	-.045
Supervise help	.244	-.047	.124	-.009	.228	.153	.484	.269	.077	-.079
Supervise family	.144	.022	.124	.110	.131	.836	.170	.128	.061	.025
Decide who does what	.188	-.007	.215	.173	.368	.425	.095	.158	.199	-.089
Decide cropping	.157	-.031	.121	.161	.596	.015	.090	.219	.092	.011
Deal with wholesale buyers	.130	-.044	.072	.179	.644	.049	.082	.066	.068	.016
Deal with consumers	.115	.018	.158	-.009	.305	.083	.115	.125	-.071	.203
Deal with sales people	.212	.004	.242	.156	.395	.104	.039	.256	-.141	.325
Repair machinery	.026	.005	.187	.235	.255	.090	-.008	.492	.306	.046
Repair buildings	.084	.029	.224	.240	.203	.041	.035	.583	.084	.055
Pick up repairs	.295	.117	.076	.253	.039	.139	.132	.397	-.034	.235
Care of children	.128	.156	.068	.132	-.002	.417	.117	.006	-.028	.082
Care of elderly	.066	-.002	-.019	.020	.030	.021	.129	.035	.018	.301
Cook for hired help	.097	.183	.059	.038	-.019	.116	.549	.014	-.040	.123
Clean for hired help	.059	-.006	.057	-.029	.077	.044	.614	.072	.179	.185
Family laundry	.054	.902	.050	.003	.017	.028	.065	-.007	.015	-.016
Family shopping	.098	.835	.060	.020	-.000	.075	.109	.080	-.036	.040
Family cooking	.064	.912	-.016	.033	-.006	.061	.034	-.014	.031	-.015
Entertain business people	.213	.174	-.081	.160	.143	.087	.374	.127	-.173	.035
Unrotated solution, Eigenvalue	6.71	2.88	2.22	1.61	1.44	1.41	.1.20	1.18	1.09	1.02
Total variance explained after rotation	18.9	7.8	5.5	3.5	2.8	2.7	2.0	1.8	1.3	1.2
Variance explained before rotation	63%									

TABLE 9
Factor Analysis of Tasks Performed by Farm Women (PEI/S)
 (Loadings represent the varimax rotated solution)

Variable Names	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10
Child care	-.032	-.075	.095	.156	-.022	.038	.042	-.004	-.219	.038
Meal preparation	.017	.091	.017	-.020	.012	-.005	.031	.094	.026	.050
Laundry	.000	-.020	.009	-.018	.004	.003	-.014	.565	.011	.263
Grocery shopping	.034	-.062	-.069	-.060	.017	.011	.065	.225	.108	.639
Garden	.043	.046	.218	.026	-.127	-.106	.192	.034	.481	.052
Care family members	.071	-.026	-.038	.064	.081	.044	.471	-.001	.126	.066
Food preserving	-.010	-.223	.121	.018	.081	.101	.242	.273	.397	-.041
Household chores	-.004	.003	-.014	.036	.017	-.082	.099	.686	.071	-.036
Meals hired help	.101	.110	.023	-.040	.004	-.010	.553	.095	.149	-.032
Garden lawn	.084	.029	.007	.185	-.002	.036	.228	.022	.472	.113
Care farm animals	.087	-.036	.159	.705	.237	.041	.081	-.042	.059	.052
Milking, egg chores	-.129	.135	.154	.504	.069	-.006	-.106	-.003	.128	-.093
Help, farm animals	.062	.126	.110	.728	.155	.157	.073	.076	-.030	-.066
Hand field work	.074	.007	.602	.166	.238	-.064	-.079	.003	.218	-.161
Help with crops	.108	.091	.657	.328	.157	.060	.013	-.039	.072	.141
Grow, package, sale	.150	.140	.682	.120	.112	.260	.030	.056	-.001	-.090
Plough, disk, etc.	.017	-.027	.337	.322	.496	.061	.046	-.033	-.010	-.069
Fertilize, spray	-.105	.133	.144	.133	.760	.163	.028	.032	-.011	-.026
Get supplies, parts	.224	.063	.300	.311	.145	.247	.337	-.058	-.070	.259
Farm machine repairs	.024	.152	.066	.176	.637	-.050	.078	.016	-.043	.088
Farm finance records	.908	.041	.038	.138	-.038	-.006	-.026	-.031	-.000	-.056
Home finance records	.714	.094	.049	-.012	-.110	.026	.105	-.010	.096	.026
Prepare bills, etc.	.843	.082	.081	-.025	-.040	.099	-.010	.049	.027	.008
Pay household bills	.473	.185	.030	-.004	-.030	.175	.192	-.082	-.203	.231
Budget cash flow	.566	.291	.056	.038	.216	.026	.255	-.048	-.124	.010
Arrange credit, etc.	.275	.630	-.069	.115	.222	.147	-.026	-.039	.107	-.024
Farm income tax	.601	.113	.022	-.044	.080	.097	.105	.016	.089	-.028
Messages, phone	.204	-.237	.000	.307	.000	.246	.215	.046	.024	-.195
Employee payroll	.435	.126	.238	.033	-.012	.369	-.143	-.037	.107	.023
Supervision	.313	.170	.208	.147	.270	.419	-.006	.038	.143	-.000
Purchase insurance	.299	.506	-.086	.012	.055	.238	-.029	-.048	-.010	.036
Get decision info.	.333	.309	-.077	.163	.059	.362	.153	.130	.015	-.287
Production records	.432	.397	.088	.062	.052	.164	.045	.176	.148	-.131
Purchase equipment	.117	.422	.200	.219	-.056	.198	-.038	-.011	.057	-.187
Market farm product	.080	.407	.313	-.003	.158	.367	.266	.023	-.064	-.026
Promote farm product	.179	.121	.063	.112	.035	.557	.056	-.099	-.062	.035
Work with business	.487	.196	.149	.006	.047	.266	.087	.036	.064	.039
Decide cropping	.202	.555	.311	.109	.031	-.190	.104	-.085	-.051	.123
Contracts	.160	.461	.143	-.079	.309	.080	.133	.057	-.043	-.063
Unrotated Solution										
Eigen values	7.44	3.44	2.29	1.85	1.80	1.52	1.38	1.33	1.31	1.21
	(6.96)	(3.02)	(1.73)	(1.32)	(1.08)	(1.02)	(1.01)	(0.84)	(0.82)	(0.72)
Total Explained Variance before rotation	19.1%	8.8%	5.9%	4.8%	4.1%	3.9%	3.6%	3.4%	3.4%	3.1%
After rotation	37.0%	16.0%	9.2%	7.3%	5.8%	5.4%	4.5%	4.4%	4.1%	2.1%

• Common variance = 97%

Bold loadings represent item used in factor specification and index construction

•• The initial solution explained 60% of the variance.

(.484); cook for hired help (.549); clean and wash for hired help (.614); and entertain business visitors (.374).

Factor 8 - "Farm Service/Work" (FSEW) was specified by variables: maintaining/repairing farm machinery (.492); maintaining/repairing farm buildings (.583); and picking up parts and supplies (.397).

Factor 9 - "Fertilizing" (FERT) represented just one variable, fertilizing and applying herbicidal insecticides (.506).

Factor 10 - "Care of the Elderly" (CEF) was specified by variable, "care for the elderly and chronically ill" (.301).

The PEI/S activity questions contained more items than the CFW's questionnaire - 39 vs. 31. However, the factor analysis yielded very comparable results suggesting that we may be tapping identical work dimensions in both surveys.

The same procedure revealed the following dimensions in the work pattern of PEI farm women:

Factor 1 - "Bookkeeping and Financial Management" (BKBP) was practically identical with Factor 1 in the other data set. It was specified by the following variables: keeps farm records (.908); keeps house finance records (.714); prepares bills/statement (.843); pays farm and household bills (.473); prepares budget (.566); prepares income tax forms (.601); prepares employee payrolls (.435); keeps production records (.432); and works with lawyers, accountants and other professionals (.487).

Factor 2 - "Farm Decision-making and Management" (FBDM) was specified by: arrange for finance and credit (.630); purchase of insurance (.506); decide on purchase of equipment (.422); market farm products (.407); decide on cropping plans (.555); negotiate contracts for growing or selling (.461).

Factor 3 - "Hand Farm Work" (HDFW) was specified by: field work without machine (.602); harvesting crops (.657); grading, packaging, preparing products for sale (.682).

Factor 4 - "Animal Care and Chores" (ACCH) was specified by variables: feed, water, care of animals (.705); perform milking and/or egg gathering chores (.504); help with farm animals, doctoring, birth, etc. (.728); and answer phone (.307).

Factor 5 - "Machine Farm Work" (MCHFW) was specified by variables: plowing, discing, cultivating (.496); apply fertilizer, herbicide, insecticide (.760); maintain and/or repair farm machinery (.637).

Factor 6 - "Farm Support Work" (FSUW) was specified by variables: supervise work of employees and/or family members (.419); collection of information used in decision-making (.362); promote farm products (.557); market farm products (.367).

Factor 7 - "Farm Service Work" (FSEW) was specified by the unlikely group of variables: care of the aged or ill family members (.471); cook meals for hired help (.553); get supplies and parts (.337).

Factor 8 - "Family/Housework" (FHW) was specified by: family laundry (.565); regular household chores, cleaning, making beds, etc. (.686).

Factor 9 - "Home Food Production" (HFW) was specified by variables: vegetable gardening (.481); food preservation (.397); and flower garden care (.472).

Factor 10 - "Shopping" (GRFSHP) was based on grocery shopping (.639).

These emerging factors provided a more meaningful and succinct interpretation of farm women's work patterns. The revealed "work areas"

helped to clarify and specify farm women's contribution to family and farm, and might be useful in the interpretation of economic value to their work.

The factors, although highly comparable, have also highlighted some differences between farm women in Ontario and PEI. Note that such household activities as food preparation and child care did not load highly on any one factor, in the PEI sample due to the lack of variation on these activities: all PEI farm women do this work on a regular basis (100% of the time). It would appear that the character of farm women's roles in PEI is more "traditional" than that of farm women in Ontario.

Farm Women's Off-Farm Employment

In our study, 65% of Ontario and 69% of PEI farm women held no off-farm jobs. Around one-fifth (18% and 21%) held part-time off-farm jobs, in both provinces. However, on the full-time employment level, Ontario farm women surpassed those from PEI considerably (16% vs. 10%).

It is interesting to note that more farm women in PEI worked as farm labourers than in the Ontario sample (3.6% vs. 0.6%). However, the largest employment category comprised professional jobs, such as teaching and nursing (CFW = 18.4%; PEI/S = 14.3%). Other work categories such as service and clerical, were of lesser importance (see Table 13).

Among the reasons given by farm women for taking on off-farm employment, income and economic considerations predominated (CFW = 78%; PEI/S = 70%). The majority of farm women thus, are not engaged in off-farm work for self-actualization or other social purposes, but out of concerns for the well-being of their family and survival of the farm. That economic realities of the farm family and family farm encourage farm women to take off-farm employment can be

gathered from the fact that in the CFW sample the full-time off-farm employment of farm women increased 50% and part-time work 60% in the last three years prior to mid-1982.¹⁸ These years coincide with the high interest rate years, which created enormous stress in the Canadian farming community, particularly among Ontario red meat producers.

Farm Women's Work Intensity, by Work Area

In the preceding section we described the incidence of farm women's involvement in various work activities and presented the results of their factor analytic reduction. In this section we attempt to establish levels of farm women's "work intensity" in each of the work areas (or dimensions), as suggested by the factor analysis results. The "work intensity" index by work area, and the "overall work intensity" (OWI) which will be presented later, are measures which take both the variety and the frequency of tasks performed into account.¹⁹

We shall initiate our discussion, as in the preceding sections, with "housework" which remains, on the whole, the constant and almost exclusive responsibility of farm women (see Table 11).

Family Care and Housework (1a-c)

Of the three work areas in this category, only one (FHW) can be compared across the provinces. Comparisons of FHW show that the main responsibilities of farm women lie in the traditional family-household production roles: 96% in PEI and 94% in Ontario fall into the maximum work involvement level alone. In other work areas, we find 78% of Ontario farm women engaged in "family and child care/supervision" (MF) and about one-fifth (19%) involved in the care of the elderly and ill family members (CEF). In PEI farm women's involvement in HFW is 98% and in GRFSHP 100%.

In all, women's "work intensity" in these "work areas" range between moderate and maximum, for both samples, except for work areas such as MF and CEF in Ontario, where the aged or the ill are normally no longer part of the average farm household.

Farm Support Services Work (2a-d)

In the FSEW (2-a) work areas in Ontario and PEI no differences were found. In both provinces almost two-thirds of the farm women were involved from "moderate to maximum" levels of intensity in this work dimension (63% - Ontario and 60% - PEI).

In the FSUW (2-b) work area a considerably larger number of PEI than Ontario farm women were engaged moderately and more intensively in this work area (72% - Ontario and 97% - PEI).

In the routine farm bookkeeping-accounting areas BKKB (2-c) only between one-fourth (CFW) and one-third (PEI) farm women fell in the "no or low" involvement levels. Larger differences appeared in the "high to maximum" levels:

almost one-half of the CFW sample (46%) did between 70% and 100% of this work, while only one-third (32%) of the PEI farm women were involved in these activities to the same extent.

In the FBDM (2-d) work area, few observable differences emerged. Only about one-fifth of all farm women were involved from moderate to maximum in this activity (15.5% - Ontario and 22% - PEI). When only the "high to maximum" intensity levels are considered, a dismal 1.5 - 2.0% of participation was found. Thus, once again, it can be seen that farm business decision-making is not a work area of high female involvement and that this crucial activity is almost exclusively under male control.

Farm Work Proper (3-c)

Three dimensions of farming are examined here for work intensity levels. In the MCHFW "work area" Ontario farm women show a much higher involvement than those in PEI; 44% are involved to a moderate level as compared to 10% in PEI. On the "high to maximum" levels there was only 1% of PEI farm women as compared to

TABLE 10
Dependent Variables = Means and SD

	CFW			PEI	
	\bar{X}	SD		\bar{X}	SD
FHW	96.74	15.60		98.03	8.72
MF	42.37	29.42	HFW	84.94	18.96
CEF	10.06	26.94	GRFSHP	97.27	11.38
MCHFW	31.04	29.86		9.29	17.30
FERT	6.41	21.00	HDFW	28.78	26.37
FSEW	33.43	23.15		29.49	23.54
ACCH	37.64	29.81		40.90	20.96
BKKP	55.18	29.19		47.81	27.72
FBDM	13.66	17.94		17.12	17.91
FSUW	36.29	24.64		47.57	26.08
OWI	38.32	14.45		45.36	13.23
OFW	26.82	40.76		20.30	33.08

a full 11% in Ontario. Twelve percent of Ontario farm women had moderate to maximum involvement in the FERT work area, while 49% of the PEI women were engaged in HDFW to the same extent. These differences might be due partly to the different types of farm operations in the two provinces and partly to the more traditionally "rural" culture of PEI.

The Ontario women in our sample also showed a slightly larger involvement in the ACCH work area than the farm women in PEI (73% vs. 67%). When the high involvement categories were compared, it became evident that the differences really lay here (23% vs. 10%). It is probably possible to explain the greater involvement of Ontario farm women in animal care related activities because of the larger proportion of livestock operation in the Ontario sample. On a different level of explanation, one ought not to discard the hypothesis that farm women become more involved in activities which are in the "male" domain when their contribution to the farm can be maximized there.²⁰

On the whole, data in this section demonstrate that women, whether on farms in PEI or in Ontario, are involved to a considerable extent in directly economic farm production work. It is obvious that their labour makes a significant, albeit invisible, contribution to the efficiency, productivity and survival of the family farm in Canada.

Overall Work Intensity (OWI)

This measure was developed in order to obtain a single, overall work intensity index of farm women's involvement in various work dimensions, taken jointly. The index, like the previous one, combines both the variety of tasks performed and the intensity with which this work is carried out. This measure thus, gives us a better appreciation of the combined workload carried by farm women in our samples and allows us to establish the overall degree in workload varia-

tion. According to this measure, farm women involved in homemaking alone fall below the cut-off point of the "low" intensity category, i.e., of 17% in Ontario and of 25% in PEI, because the "regular" performance of all household activities could only reach these percentages on the OWI scale.²¹ Thus, only 5% of the Ontario sample and 7% of that of PEI are *solely* housewives, that is, over 90% of these farm women contribute actively to their farm enterprises in some way (see Table 12).

Thus, it could be argued that any farm women whose score lies between the "moderate" and "high" category (33.3% - 69.9%) of this measure could be seen as performing between one and two full-time jobs and those who score higher work even more. If we accept the above analysis, then it does not seem at all far fetched that farm women work between 80 and 100 hours per week, if all their activities are taken into consideration, particularly in high intensity seasons, as some recent studies seem to suggest (Koski, 1983; CRDC, 1979; Shaver, 1985). In addition, close to one-third of these women hold off-farm jobs.

Off-Farm Employment Held by Farm Women

Over one-third of farm women in both of our samples held off-farm jobs (see Table 13). Most of these jobs were in the professional area of teaching or nursing (18.4% and 14.3%); the second largest group worked in clerical and service jobs (between 7.0 and 11.0% in each province respectively). Surprisingly, a few farm women even worked as farm labourers, particularly in PEI.

In both provinces, the overwhelming reason for taking an off-farm job for these women was economic necessity (78.0% and 70.0%). Career consideration was the second most frequently expressed reason (in Ontario 8.4% and 5.5% in PEI), while in PEI a larger number of farm women (16.4% as compared to 5.0%) were seeking off-farm work for the sake of self-fulfillment.

TABLE 11
Work Intensity Measures, By Work Area*
(Ontario: CFW and PEI/S)

Family/Household Work (1)							
%	1-a		1-b		1-c		
	CFW	PEI/S	CFW	PEI/S	CFW	PEI/S	
None = 0.0	2%	0%	15%	0%	81%	0%	
Low = 1.0 - 33.3	0%	0%	7%	0%	0%	0%	
Med = 33.3 - 69.9	2%	1%	58%	21%	10%	0%	
High = 69.9 - 89.9	2%	3%	16%	24%	0%	6%	
Max = 89.9 - 100.0	94%	96%	4%	53%	9%	94%	

Farm Support Work (2)									
%	2-a		2-b		2-c		2-d		
	CFW	PEI/S	CFW	PEI/S	CFW	PEI/S	CFW	PEI/S	
None = 0.0	10%	22%	8%	2%	4%	7%	45%	30%	
Low = 1.0 - 33.3	27%	18%	20%	1%	22%	28%	40%	48%	
Med = 33.3 - 69.9	57%	56%	52%	64%	28%	24%	14%	20%	
High = 69.9 - 89.9	4%	2%	10%	19%	29%	26%	1%	1%	
Max = 89.9 - 100.0	2%	2%	10%	14%	17%	6%	.5%	1%	

Farm Work (3)						
%	3-a		3-b		3-c	
	CFW	PEI/S	CFW	PEI/S	CFW	PEI/S
None = 0.0	31%	66%	88%	31%	17%	6%
Low = 1.0 - 33.3	14%	23%	0%	20%	10%	27%
Med = 33.3 - 69.9	44%	10%	8%	41%	50%	57%
High = 69.9 - 89.9	5%	1%	0%	4%	14%	7%
Max = 89.9 - 100.0	6%	0%	4%	4%	9%	3%

4		
%	CFW	PEI/S
None = 0.0	65%	69%
Low = 1.0 - 33.3	0%	0%
Med = 33.3 - 69.9	18%	21%
High = 69.9 - 89.9	0%	0%
Max = 89.9 - 100.0	16%	10%

1-a = Family/house work (FHW)
 1-b = Care of family & children (MF - Ont.)
 Home food production work (HFW - PEI)
 1-c = Care of elderly/ill family (CEF - Ont.)
 Grocery/Family shopping (GRFSHP - PEI)
 2-a = Farm Service Work (FSEW)
 2-b = Farm Support Work (FSUW)
 2-c = Bookkeeping/financial management (BKBP)
 2-d = Business decision-making (FBDM)

3-a = Machine farm work (MCHFW)
 3-b = Fert-Herbi-Insecticide (FERT - Ont.)
 Hand field work (HDFW - PEI)
 3-c = Animal care/chores (ACCH)
 4 = Off-farm work (OFW)
 moderate = < 35 hrs./week = part-time
 maximum = > 35 hrs./week = full-time
 * Adjusted frequencies - nonapplicable deleted.

TABLE 12
Overall Work Intensity

	CFW %	PEI/S %
1 - 17% *	5.1%	.6%
17 - 25% *	11.7%	6.7%
25 - 33.3%	19.5%	11.5%
33.3 - 69.9%	61.5%	78.2%
69.9 - 89.9%	2.5%	3.0%
89.9 - 100.0%	0.0%	0.0%

* The maximum of family household work represents 17% of OWI in Ontario and 25% of OWI in PEI.

TABLE 13
Types of Off-Farm Employment
Held By Farm Women

	CFW	PEI/S
Farm labour	0.6%	3.6%
Professional	18.4%	14.3%
Service	7.9%	7.0%
Clerical	7.0%	11.4%
Manufacturing	1.5%	0.0%
Primary industry	0.6%	0.0%
Other	1.2%	4.0%**
NA	62.2%	60.2%
	N = 127	N = 51

** Refers to independent income earning activities, not necessarily employment.

The question of how farm women's off-farm work related to their overall work intensity was explored by means of regression analyses. We hypothesized that the two work dimension would be inversely related, i.e., the higher the level of the farm women's OWI, the lower her involvement in OFW (or vice-versa). The results, however, indicated differently. Although the sign of the regression coefficients were in the expected direction, the values were so small (CFW - .008; PEI/S - .006) and not statistically significant that the two dimensions appear to be almost independent of each other.

In order to discover the relationship between the direct integration of the farm into the economy - via off-farm employment - and farm women's OWI, we classified our cases following the Coughenour-Swanson (1983:26) typology. This typology shows the degree to which a farm family or household labour organization deviates from the classical/traditional family farm structure, in terms of off-farm employment status of the spouses and assumes labour complementarity between them.²²

TABLE 14
Reasons for Obtaining Off Farm Work***

	CFW	PEI/S
Income, financial	78.0%	70.0%
Career	8.4%	5.5%
Sparetime, change	4.3%	2.6%
Self fulfillment, enjoyment	5.0%	16.4%
Escape from home/family	1.9%	5.5%
	N = 127	N = 51

*** Calculated only from those holding an off-farm job.

In our analysis, we found that a full 47% in Ontario and 55% of the farms in PEI still fell into the traditional family farm class, in which neither of the spouses held off-farm employment. Sixteen percent of the Ontario cases and 23% of the PEI reported the wife only holding an off-farm job, while 19% and 12% respectively had only the husband holding such a job. Almost one-fifth (19%) of the Ontario farm households and one-tenth (10%) in PEI had both spouses working off the farm. If one takes the engagement in off-farm work by members of the farm family as an indicator of deviation from the traditional family farm labour allocation structure, then it can be concluded that farming in PEI is slightly more traditional than in Ontario where

farm family labour organization is more diversified (see Table 15).

It is interesting to note that off-farm employment for self and for spouse is not negatively associated with farm women's OWI. In both our samples an above average proportion of farm women fall into the moderate-to-high (34%-69%) OWI intensity category and an average proportion appear in the high (70%-plus) category, although one has to interpret these findings with caution because of their small numbers. The largest proportion of farm women in the 34%-69% category, however, appears in the "husband holds off-farm job" class, suggesting that farm women step in to take men's places when their husbands are not there to do it (Table 15).

Thus, once again, our findings show that farm women take on as much work as they possibly can handle, when the family or the farm requires additional income or help.

Conclusions

The findings of this study lend support to the conclusions of other studies, which show that farm women's work plays an important role in the effective performance of modern farm operations, just as much in the more "modern" province of Ontario, as in the more traditionally rural one of PEI.

The findings suggest, however, that women's work in the *indirect* economic activities out-

TABLE 15
Farm Women's OWI By Farm Type

OWI	Concerned Farm Women				Prince Edward Island					
	No OFW N=157	Self OFW N=52	Spouse OFW N=63	Both OFW N=58	Totals N=330	No OFW N=88	Self OFW N=36	Spouse OFW N=19	Both OFW N=16	Totals N=159
0-17%	6%	7%	3%	2%	5%					
N	(10)	(4)	(2)	(1)	(17)					
18-25%	8%	15%	5%	15%	10%	7%	8%	5%	6%	7%
N	(13)	(8)	(3)	(9)	(33)	(6)	(3)	(1)	(1)	(11)
26-33%	21%	13%	16%	26%	20%	12.5%	11%	10%	6%	11%
N	(34)	(7)	(10)	(15)	(66)	(11)	(4)	(2)	(1)	(18)
34-69%	62%	65%	72%	55%	63%	77%	78%	85%	81%	78%
N	(97)	(33)	(47)	(32)	(209)	(68)	(28)	(16)	(13)	(125)
70 plus	2%	0	2%	2%	2%	3.5%	3%	0	6%	3%
N	(3)	0	(1)	(1)	(5)	(3)	(1)	0	(1)	(5)

Categories:

	CFW	PEI
Traditional i.e. no off farm work	47%	55%
Wife holds off farm job	16%	23%
Husband holds off farm job	19%	12%
Both hold off farm jobs	19%	10%
Total Women holding off farm jobs	35%	33%

NOTE: OWI = overall work intensity scale
OFW = off-farm work

weighs the *direct* economic ones in terms of amount. However, it would not be an exaggeration to say that well above one-half of all farm women in our samples are involved in *direct* economic work, in addition to the other, *indirect* economic activities they carry out for the smooth running of the family and the operation of the farm.²³

The findings also seem to support the hypothesis that more modern, productive farming requires an increase in support and service activities, in order to perform effectively, and that in times of economic hardship, many of these support services are taken over by farm women.

The factor analytic technique has helped us to reduce women's multifaceted activities to a much smaller number of much more meaningful clusters. These clusters can be useful for those who wish to impute a monetary value to farm women's work. For example, what does it cost to hire an accountant to do the farm bookkeeping? Or, how much would it cost to get a telephone answering service? Or, how much would a farmer have to pay to do animal care and "doctoring" jobs? (Never mind the cost of loving family care.)

Indirectly, the findings also suggest that farm women are motivated both by "substantive" and "formal" rationality in their labour behaviour. How else could one explain the willingness of farm women to labour long, long hours, many of which do not receive formal recognition, as well as take off-farm jobs simultaneously? There must be not only the desire to contribute to the farm business, but also a commitment to help to preserve a "way of life" (see Ireland, 1983; Dion, 1983; Cebotarev, 1985).

NOTES

1. See for example Hefferan, C. (ed.), *The Household as Producer*, the work by Hawrylyshyn in Canada, the work by K. Walther and others in the U.S.A., to cite only a few.
2. One of the few early studies on this topic in Canada is Helen Abel's 1956 Alberta research on the economic contribution of farm women on small farms.

3. The research designs of both of these studies were carried out with the active participation of farm women, although in Ontario, the "Concerned Farm Women" group were more involved and played a key role in all phases of the research.
4. The "invisibility" of farm women's work has been aptly documented (see for example Sacks, 1983; Beneria, 1983; or Bock and Duden, 1984). In this section, I draw heavily on the points made in my paper presented at the University of the West Indies, in Trinidad, in May 1984.
5. For example, the peace-making, conflict-mediating roles of women in the family and community are not considered work, while "human" and "public relations" occupations are.
6. See for example, the theoretical work in the "New Home Economics," and its application to international rural situations, Schultz (1975), Evenson (1981), Folbre (1983); and in North America, commentary by Armstrong and Armstrong (1985: 167-77).
7. A good example of these ideological "blinders" is the Agricultural Census of Canada. Because of the way information has been collected in the last decades, it is impossible to discover the extent of farm women's labour inputs into Canadian agriculture.
8. It is sometimes argued that playing with or reading a story to a child, as part of one's child care work cannot be considered as "real" work because it provides psychological gratification to the mother. However, other types of work can also be a source of satisfaction (see Berk and Berk, 1982).
9. In this area of "indeterminacy" each family constructs its own internal, particular working arrangement, within the broader socioeconomic and cultural frame. This area of indeterminacy can be seen as a potential arena or mechanism for social change.
10. The following townships have been included in the CFW study: Albermail, Amahel, Arcan, Brant, Bruce, Carrick, Cubroso, Eastnor, Elderlie, Grenock, Huron, Kincardine, Kinlos, Lindsay, Sauguen and St. Edmunds' in Bruce Co. and Bentenk, Derby, Egremont, Glenelg, Keppel, Normanby, Proton, Sarawack and Sullivan in Grey Co.
11. The list consists of farm families having applied under phase I, II or III of the Comprehensive Development Plan - approximately 3,000 names/farms.
12. Although many of the questions were "standard" questions used in other farm women's role studies - included to allow comparability with these studies - they were submitted to the scrutiny and critique of farm women.
13. I suspect that the difference is due to the way the data were coded. In PEI all women with professional occupations (such as nursing for example) were assigned university education attainment.
14. Anyone who has visited the Third World knows how crucial and indispensable these farm services are for the smooth operation of a farm - equipment in disrepair is worse than its absolute lack.
15. See for example, Kohl (1976), Ireland (1983), Cebotarev (1985), and Dion (1983), also show that farm women's concerns transcend the purely economic concerns of agriculture but include considerations of the quality of rural family and community life.
16. We used the same procedure as Fassinger (1981) and Ross (1983), not only because it made a lot of methodological sense, but also to be able to compare our findings with theirs. The responses to activity questions were recorded in the following way: never = 0, sometimes = 1, and regularly = 2. Other categorical variables were converted into "dummy" variables with values of 0 and 1. SPSSX factor analysis was employed to

transform the given set of variables into a new set of composite variables. These were orthogonally rotated to produce the best linear combination of variables which would account for more of the variance in the data as a whole than any other linear combination of variables. PA2 extraction, varimax rotation, and mean substitution to replace missing data were used, all conservative methods (Nie, Norman H., et al., 1975: 480-489).

17. The following equation was used to construct the index scores:

$$I_{ij} = 100 \left(\frac{\sum_k X_{ik}}{NX_{ik} (2)} \right)$$

where I_{ij} = an index score from respondent i

X_{ik} = each respondent's reported value for items with available data

k = items included in the j th index

NX_{ik} = number of items in the j th index with available data (Ross, 1980: 11)

18. This was calculated from the original data.
19. The same equation (as in note 17) was used in the construction of Work Intensity Measure and the Overall Work Intensity index score, only that *all* items in the activity questions were included in the calculations (31 in the CFW and 39 in the PEI surveys).
20. Farm families seek to maximize their returns for labour, and allocate family labour in such ways as to insure this goal.
21. To separate out farm women who are exclusively housewives from those engaged in other activities, we added two cutoff points to the OWI scale: 17% for the Ontario and 25% for the PEI samples.
22. Coughenour and Swanson's farm typology is based on farm husbands and wives of farm employment status, (and labour complementarity) and yields four farm classes:
1. Full-time operation (both the husband and wife work on the farm).
 2. Part-time operation where only the wife works off the farm.
 3. Part-time operation where both wife and husband work off the farm.
 4. Part-time operation where the wife and the husband work off the farm (1983: 27)
23. We have arrived at this conclusion by adding the high-to-maximum percentages of women's work in the direct farm work categories to women's off-farm work.

Bibliography

- Abel, Helen C. *Rural Families and Their Homes*. Toronto: O.M.A.F. 1972.
- Abel, Helen C. *Special Study of Ontario Farm Homes and Homemakers*. Ottawa: Canada Dept. of Agriculture/Economics Division, Progress Reports 1-9. 1958.
- Abel, Helen C. "Women's Contribution to the Small Family Farm." *The Annalist*, 11, Ottawa. 1956.
- Acton, J., P. Goldschmidt and B. Shepard. *Women at Work: Ontario 1850-1930*. Toronto: Canadian Women's Educational Press. 1974.
- Armstrong, P. and H. Armstrong. "Household and Capital," *Studies in Political Economy*, 17 (Summer): 167-77. 1985.
- Berch, Bettina. *The Endless Day: the Political Economy of Women and Work*. N.Y.: Harcourt, Brace and Janovich, 1982.
- Berk, R.A. and S.F. Berk. *Labour and Leisure at Home*. Beverley Hills, Ca.: Sage, 1979.
- Berkowitz, A.D. "Role Conflicts in Farm Women, 1980's." Paper presented at the R.S.S. annual meeting. Ithica, N.Y.: Cornell University, 1980.
- Bock, G. and B. Duden. "Labour of Love - Love as Labour: On the Genesis of Household Work in the West." *Development: Women Protagonists of Change*, #4 (S.I.D.): 6-13, 1984.
- Boserup, E. *Women's Roles in Economic Development* N.Y.: St. Martin's Press, 1970.
- Boulding, E. "The Labour of Farm Women in the U.S.: A Knowledge Gap." Paper presented at the ASA annual meeting in Boston, Mass., 1979.
- Burns, Scott. *Home Inc*. N.Y.: McMillan, 1975.
- Buttel, F. and M. Newby. *The Rural Sociology of Advanced Societies: Critical Perspectives*. N.J.: Allanheld, Osmun and Co., 1980.
- CRCD *Rural Women's Study: Their Work, Their Needs and Their Role in Rural Development*. Ottawa (USRP&D, U. of G.), 1979.
- Cebotarev, E.A. "Women Preserving the Ontario Farm Community" in Fuller AM, *An Introduction to Rural Ontario*. 1985 (forthcoming).
- Cebotarev, E.A. "Women and Work" paper prepared for the Workshop Seminar for Agr. Ext. Agents, U.W.I., Trinidad, May 20, 1984.
- Coughenour, C.M. and L. Swanson "Work Statures and Occupations of Men and Women in Farm Families and the Structure of Farms." *Rural Sociology*, 48 (1): 23-43, 1983.
- Craig R., V. Lambert and K.M. Moore "Domestic Labour on Family Farms: The Sexual Division of Labour and Reproduction." Paper presented at the RSS annual meeting, Lexington, Ky. August, 1983.
- Dion, S., *Les Femmes dans l'Agriculture au Québec*, Les Editions la Terre Chez Nous, Louiseville, Quebec, 1983.
- Ember, Carol "The Relative Decline in Women's Contribution to Agriculture, with Intensification." *American Anthropologist*, (85): 285-304, 1983.
- Equity Policy Centre (EPOC), "Women's Roles on North American Farms," Washington, D.C.: Project Notes, 1982.
- Etienne, M. and E. Leacock, *Women and Colonization*. N.Y.: Praeger, 1980.
- Evenson, R.E., "Food Policy and the New Home Economics." *Food Policy*. August, 1981.
- Fassinger, P. and H. Schwarzweiler, "Exploring Women's Work Roles on Family Farms: A Michigan Case Study." Paper presented at the R.S.S. annual meeting, Cornell University, Ithica, New York, 1980.
- Ferguson, M.L., *The Role Participation and Life Satisfaction of Married Women in a Rural Ontario Community*. Unpublished M.Sc. Thesis, University of Guelph, 1981.
- Flora, C.B., "Farm Women, Farming Systems and Agriculture Structure: Suggestings for Scholarship." *The Rural Sociologist*, 1 November: 383-86, 1981.
- Flora, C.B. and Stitz, J.W. "Association for Women in Development". Paper Presented at the A.W.I.D. Conference, Washington, D.C.: April 27-29, 1985.
- Folbre, Nancy. "Exploitation comes home: a Critique of the Marxian Theory of Family Labour." *Cambridge Journal of Economics* (6): 317-329, 1982.
- Gladwin, Christina. "Changes in Women's Role on the Farm: A response to the Intensification of Capitalization of Agriculture." Paper presented at the A.W.I.D. Conference, Washington, D.C., April 25-29/85, 1985.
- Goldschmidt-Clermont, Lucilla. *Unpaid Work in the Household: A Review of Economic Evaluations Methods*. Geneva: I.L.O., 1982.

- Graff, Linda. "Industrialization of Agriculture: Implications for the Position of Farm Women." *RFR DRF*, Vol II (March) 10-11, 1982.
- Hale, Sylvia. "Women as Change Agents: A Neglected Research Area," *RFR DRF* Vol. II, No. 1, (March); 42-46, 1982.
- Hedley, M.J. "Normal Expectations: Rural Women Without Property." *RFR DRF*, Vol. II, (March) 13-15, 1982.
- Huffman, W.E. "The Value of Productive Time of Farm Wives: In North Carolina and Oklahoma." *Am. Journal of Ag. Economics*, 58: 836-41, 1976.
- ILO *Mujer y el Desarrollo Rural en LA*, N.Y.: ILO, 1982.
- Ireland, Giselle. *The Farmer Takes and Wife*. Chesley, Ont.: CFW, 1983.
- Jones, C. and R.A. Rosenfeld. *American Farm Women: Findings from a National Survey*. NORC, No. 130, Chicago, Ill. 1981.
- Kahn-Hunt, R., A. Kaplan-Daniels and R. Cloward (eds.) *Women and Work*, N.Y.: Oxford University Press 1982.
- Kohl, Seena. *Working Together: Women and Family in Southwestern Saskatchewan*. Toronto: Holt, Rinehart and Winston, 1976.
- Koski, S.E. *The Employment Practices of Farm Women*. National Farmer's Union of Canada. 1976.
- Lodwick, D.G. and P.A. Fassinger. "Variation in Agriculture Production Activities of Women of Family Farms." Paper presented at the R.S.S. annual meeting in Burlington, Vermont. 1979.
- Murphy, Martin. "Measurement and Valuation of Non-Market Economic Activity," in Hefferan C. (ed.), *The Household as Producer*, Washington, D.C.: American Home Economics Association, pp. 139-94. 1979.
- Nie, Norman H., et al. *Statistical Package for Social Science*. (second edition). New York: McGraw-Hill Inc. 1975.
- Papaneck, Hanna. "Family Status Production: The Work and Non-Work of Women," *Signs*, Vol 4 (4): 775-781. 1979.
- Pfeifer, J.E. *The Emergence of Humankind*, N.Y.: Harper and Row. 1978.
- Rasmussen L., and Rasmussen C. Savage and A. Wheeler. *A Harvest Yet to Reap: A History of Prairie Women*. Toronto: Women's Press. 1976.
- Reimer, Bill. "Women as Farm Labour." A paper prepared for the project "Etude Comparative de Politique Agro-alimentaire et de leurs consequences sur les collectivites rurales." Paris, 5/83, 1983.
- Rodefeld, R.D. "Who will operate America's Farms" in Dillman, D. and D.J. Hobbs (eds.), *Rural Society: Issues of the 1980's*. Boulder, Colo: Westview Press. 1982.
- Rosenfeld, R.A. "Off-farm Employment of Farm Wives and Husbands." Paper presented at the Wingspread Conference on "Women's Roles on North American Farms." Racine, Wisconsin. 1982.
- Ross, Peggy. "Farm Structure and Variation in U.S. Farm Women Participation in Four Dimensions of Farm Labour." Washington, D.C.: ERS-USDA (mimeo, p. 19). 1983.
- Sachs, Carolyn. *The Displacement of Women from Agricultural Production: The Case of the U.S.* Unpublished Ph.D. dissertation, University of Kentucky. 1981.
- Schultz, T.W. *The Economics of the Family*, Chicago: Chicago University Press. 1974.
- Shaver, Fran. "The Invisible Farmer." Paper presented at Cornell University Agronomy Graduate Students Association. Cornell Women's Centre, N.W.A.G., May 2, 1985.
- Shaver, Fran. "Social Sciences Research on Farm Women: The State of the Art" in *RFR DRF*, 2 (1): 3-4. 1982.
- Shaver, Fran. "Farm and Non Farm Women in Rural Quebec: A Preliminary Analysis," Paper presented at the CSAA annual meeting, Montreal, P.Q. 1980.
- Smith, P. and R.M. Stirling. "Who's Farming in Saskatchewan? Saskatchewan's Farm Labour: Historical Trends and the Importance of Women: 1951 - 1971." Paper presented at the CSAA annual meeting June 6-9, Ottawa. 1982.
- Szalai, A. "Women's Time - Women in the Light of Contemporary Time Budget Research." *Futures*, 7:5 (Oct.): 355-399. 1975.
- Vanek, J. "Time Spent in Housework," *Scientific American* (23)5: 116-20. 1974
- Vanek, J. "Work, Leisure and Family Roles: Farm Households in the U.S., 1920-55," *Journal of Family History* (Winter): 422-31. 1980.
- (de) Vries, P.J. and G. McNab. "Subsistence Agriculture, Wage Labour and the Definition of Women's Roles: A Cape Breton Example," *RFR/DRF*, Vol. 11, No. 1: 8-9. 1982.
- Whyte, D.R. "Farm Production and Capital Integration in Canadian Agriculture." Paper presented at the C.S.A.A. annual meeting. Saskatoon, Saskatchewan. 1979.
- Wilkening, E.A. "Farm Husbands and Wives in Wisconsin: Work Roles, Decision Making and Satisfaction 1962 and 1979." College of Life Sciences Res. Division, publication R. 3147. Univ. of Wisconsin-Madison. 1981.