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couples in Norway: Associations and explanations of
(un)employment homogamy**

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**Labour force status of married/cohabiting
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Associations and explanations of
(un)employment homogamy**

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The focus of this paper is on the working status of the spouse of an unemployed. Does it systematically differ from the working status of the spouse of an employed person? If so, are there any causal- or non-causal mechanisms behind such an interrelationship, and in that case what are they? So far, there has not been any study in Norway focusing on unemployment at the household level. This paper examines the interrelationship between unemployed of a married/cohabiting person and the working situation of the spouse by using a cross-sectional data set of the Gallup-type from 1995. The starting point is theoretical explanations for (un) employment homogamy, namely spouse selection and shared restrictions, mutual influencing, the discouraged worker effect, additional worker effect (additional job seeker effect) and unobserved heterogeneity. The data demonstrate a substantial gap in labour force participation rate (employment shortfall) of spouse between employed and unemployed males as well as females. Multivariate analyses demonstrate that even when controlling for all relevant independent variables, the observed unemployment homogamy found in bivariate analyses still remains. These findings confirm what has been found for other countries, namely that there is a social polarisation between dual-earner households and households where both spouses periodically are unemployed and/or outside labour force. Shortcomings in the available data set make it difficult to identify the main mechanisms behind unemployment homogamy. Yet, the additional job seeker effect seems to be of significance, and being the only factor, which we with confidence could call a causal one. This means that the wife or husband of an unemployed register with the unemployment office for financial reasons as a consequence of the spouse being unemployed.

Introduction

The focus of this article is the possible association between the labour force status of couples. Does the working status of the spouse of an employed person differ significantly from that of an unemployed person? If so, are there any causal or non-causal mechanisms behind such intra-marriage (un) employment homogamy (see Ultee et al. 1988), and in that case what are they?

A study of an association between the labour market status of partners is sociologically interesting from various viewpoints. It is relevant if one wants to study poverty and poverty traps, marginalisation, social polarisation between households and social exclusion, social stratification and mobility or strategies of coping with unemployment. So far, there has not been any study in Norway focusing on unemployment at the household level with the aim to

analyse (un)employment homogamy. In the international economic literature the point of departure is the unemployment of the husband in the household and its effect on the wife's labour participation (Dex et al. 1995). One seems to neglect that unemployment of the female in a household could also affect the labour force participation of the husband. It is implied that a woman's labour force participation can be appropriately understood in relation to her husbands' employment status (Irwin & Morris 1993). Yet, the male is not always the *primary* wage earner. With the high, female labour force participation in Norway, it should be of particular interest also to study the impact of employment situation of females on their husbands' employment situation. In this paper we focus therefore on both the association between the employment status of the husbands to employed/unemployed women and the employment status of wives to employed/unemployed men, in the following called (un)employment homogamy (see Ultee et al. 1988).

If (s)he is working, (s)he could try to get more work in order to compensate for the income loss due to the unemployment of the spouse (additional worker effect), or if (s)he is unemployed, try to increase her(his) effort to get a job. If the spouse of an unemployed person is outside the labour force (for example studying), he or she could interrupt studies and enter the labour force by registering with the employment office and seeking paid work i.e. an *additional job seeker effect*. The additional job seeker effect may explain unemployment homogamy, while the additional worker effect means successful job search, resulting in employment for the spouse of an unemployed.

Although there have been recent studies of (un)employment homogamy based on household data in the U.K. and the Netherlands (Henkens et al. 1993, Irwin & Morris 1993, Davis, Elias & Penn 1994), the data that were collected are now close to ten years old, and in the case of U.K., the studies was restricted to one and six localities. Besides, one cannot take for granted that findings from one country are representative for another country with a different labour market structure, female labour force participation rates, levels of unemployment and benefit systems. Since the unemployment benefit system in Norway does not represent a serious disincentive for wives of unemployed men to get a job, one would expect unemployment homogamy to be less pronounced in this country than in countries where benefit systems represent constraints on married female labour force participation.

The survey of which this study is based was conducted at the end of 1995¹. It was conducted at a time when the overall unemployment level had gone somewhat down, after it peaked in 1993.

In the first descriptive part of the article we distinguish between employed, unemployed and outside the labour force, but later we concentrate the description and analyses of the dependent variable to employed versus unemployed.

The next section deals with theoretical explanations of (un)employment homogamy. We define employment and unemployment homogamy. We then try to ascertain whether there exist such homogamies in Norway and variations of unemployment homogamy across occupations. Then data and models specifications are outlined before the empirical findings are presented. In the final section we sum up, discuss the findings and suggest directions for further research.

Theoretical explanations for (un)employment homogamy

The question to be answered is: why do women and men whose partners are unemployed tend to have such low employment rates? Internationally, there has been an extensive literature about the causes of (un)employment homogamy. The theories can be divided into two main categories, namely *non-causal* explanations and *causal* explanations (also called the influence hypothesis, see Henkens et al. 1993). The causal explanations are *direct* influences which would not exist if the husband were not unemployed (Bradbury 1995).

Non- casual explanations

The non-causal explanations are a) *spouse* selection and b) *shared restrictions*. The selection theory pays attention to the role of selection processes when choosing a spouse (Henkens et al. 1993, Gallie & Marsh 1994). Shared restrictions are for example the local demand for labour.

Further, both partners could have other personal characteristics, which make them more or less unemployable (Dilnot & Kell 1987, which are observed or unobserved *heterogenities* in the personal characteristics of employed and unemployed.

Spouse selection

One speaks about homogamy, which is people choosing each other on the basis of a number of mutual characteristics. Education levels and ages being the most important factors (Henkens et al. 1993). As a result one could get an accumulation of (un)favourable personal characteristics within one household. Since unemployment is unevenly distributed across age,

occupational and education levels (Halvorsen 1994), one could hypothesise that age, occupational and educational homogamy can explain unemployment homogamy. Unemployment homogamy is thus a by-product of age, occupational and educational homogamy, assuming that individuals do not select a spouse on the basis of his or her employment status (Ultee et al. 1988, Henkens et al. 1993). This spouse selection hypothesis indicates also that individuals select each other because they have certain characteristics in common, such as disability or for example alcohol problems. Occupational homogamy could be a product of assortative mating ('like chooses like') and reciprocal influence after marriage (Ultee et al. 1988).

Shared restrictions

The theory of shared restrictions (labour demand effects, see Cooke 1987, or shared disadvantages, see Irwin & Morris 1993) is a structural explanation of unemployment homogamy. If a person lives in a locality or region with high unemployment, then there is a higher probability that the spouse is also unemployed. Regional data for Norway demonstrate that unemployment levels are higher in some counties than in others, ranging from 3.8 percent to 6.5 percent of the labour force in 1995 (Kommunal- og arbeidsdepartementet 1995). At the municipal level the average unemployment level for males (number of unemployed males as a percentage of male population 16-66 years) in 1994 was 4 percent, ranging from 1 percent to 12 percent, with a standard deviation of 2 percent. For females the local unemployment level was even lower: on average 3 percent, ranging from 1 to 9 percent, with a standard deviation of 1 percent (NSD municipality database).

Apart from the shared disadvantage stemming from common labour market circumstances, a disadvantage can be a consequence of other household constraints, in particular childcare obligations (Irwin & Morris 1993).

Causal explanations

Mutual influencing

The theory of *mutual influencing* states that individual characteristics of the spouse have a direct or indirect influence on the labour market behaviour of the spouse. Education is not only beneficial to the person concerned, but a person can benefit from a spouse with a higher level of education for example by getting access to a wider social network which could be beneficial for the job search (Henkens et al. 1993).

But it could also be a (indirect) causal link between for example a husband's unemployment and that of a spouse, as a result of the economical problems due to unemployment: These problems could create tensions among family members and even anxiety and nervousness in the spouse, which in turn could result in sickness, loss of job and difficulties in getting a new one. Finally, low work motivation could spill over from one (unemployed) spouse to the other, and a culture of unemployment could develop (Gallie et al. 1994). The result could be reduced job search efforts and an increased risk of staying unemployed. When there is a causal link between the unemployment of the husband and that of his wife one speaks about *cross-couple state dependency* (Davies et al. 1994). But it could also be that the social isolation of unemployed households reduces the job opportunities open to them due to loss of informal contacts with employers and other workers (Millar 1994).

The discouraged worker effect

If the husband's unemployment causes the female to stop working, it is called the *discouraged worker effect* (Davies et al. 1994). In Britain wives are *discouraged* from working if their husband is unemployed due to income testing of the unemployment benefit (Income Support), which reduces the benefit pound for pound above a certain threshold of family income (White 1991, Irwin & Morris 1993). This explanation is referred to as the *social security model*, because it is alleged that means-tested benefits present a disincentive for wives to take paid work (Kell & Wright 1990, Irwin & Morris 1993), or the *price effect of the income support system* (Bradbury 1995, see also Förster 1994). In countries where unemployment benefit is given on an individual basis (as in Norway), it is not likely that a discouraged worker effect is in force (Dex et al. 1995). There is no financial disincentive to work for the spouse of an unemployed unless the family is on social assistance or has housing support. Neither does the system of taxation discourage a spouse of an unemployed to take on paid work, unless jointly taxation (for example when husband supports a wife) is substituted by individual taxation. But apparently cross-sectional data cannot tell us if the results are a consequence of for example «a women gives up her job when her husband loses his» (Davies et al. 1994, p.160), that is the discouraged worker effect. This theory will therefore not be tested in the multivariate analysis.

A variant of the discouraged worker effect is that a non-working women will be less likely to search for work if her husband is unemployed, because she perceives that the probability of getting a job is so small (Davies et al. 1994).

Finally a discouraged worker effect could be the result of a *macho-effect*, that is the wife does not take up paid work when the husband is unemployed in order not to challenge the male breadwinner role (Cooke 1987, Irwin & Morris 1993).

The additional worker effect

There is also an opposite tendency to those described above, which is called the *additional worker effect*. The point of departure for this effect (and for the discouraged worker effect for that matter) is a household model which is based on the assumption that a family is a utility maximising unit (Colbjørnsen 1982, see also Dex et al. 1995). An important economical coping strategy if a person in a household is unemployed, is for the spouse to attempt to take paid work if not in work, or to increase the work load if in work already in an attempt to maintain household living standards. Whether this coping mechanism is used depends on how large the economical problems are, alternative coping strategies at hand, work involvement, actual job opportunities or possibilities to increase the work load. If the spouse is female, constraints could be poor health, lack of child care or that her husband refuses her to take up paid work because he resents the idea of not being the «breadwinner» anymore; he cannot accept the loss of the economic provider role (bruised *machismo-effect*) (Barrère-Maurisson et al. 1985, McKee & Bell 1986). A small survey with the partners of unemployed men concludes that there is little evidence of a «bruised machismo» effect (King et al. 1995).

According to Becker (1991), introduction of unemployment compensation has eroded the traditional role of the family in protecting members against hazards, so that unemployed do not get support from other family members for example through increased labour force participation of wives when husbands are becoming unemployed. But even unemployed on unemployment benefits experience great financial distress, especially when long-term unemployed, since the level of compensation in Norway only is about 70 per cent of previous after tax earnings. We cannot therefore a priori exclude a possible additional worker effect. In fact, based on data of long-term unemployed it has been found to be a very important factor in coping with the income loss due to unemployment (Halvorsen 1994). A study from the U.S. found that the wife increased her labour supply at a rate of six hours annually for each week of her husband's unemployment (Dex et al. 1995).

In a Norwegian study from 1986 the respondents were asked if they were or had been unemployed, whether the spouse took up paid work in order to avoid the financial hardship

due to unemployment. Those who already had a working spouse were asked whether he or she had increased the work load because of the unemployment of the spouse. One must keep in mind that the labour market conditions in 1986 were favourable as compared to the situation after 1988.

We nevertheless found a strong additional worker effect both for males and females, 17 per cent of the unemployed respondents reported that their spouse had started to work and 23 per cent that their spouse had increased his or her workload (Halvorsen 1995).

These two coping strategies can only be used if there are job opportunities available. This was the case in 1986, but not to the same extent early 1990s. Yet, the panel study from 1991/92 among long-term unemployed indicates that the additional worker effect also takes place during recessions: 16 per cent reported that their spouse had taken paid work during the respondent's unemployment and in households where the spouse already had paid work, 20 per cent increased their workload (Halvorsen 1995). But even if job opportunities are unavailable a spouse could nevertheless register with the employment office for example to be eligible to unemployment benefits or being offered participation in a labour market program, so it is more appropriate to call this the additional job *seeker* effect (Scherer 1978). This means an increased likelihood of both partners being unemployed, while the additional worker effect means an increased likelihood of an *employed* spouse if the other spouse is unemployed.

Earlier studies indicate that the 'discouraged worker' effect outweighs the 'additional worker' effect (Davies et al. 1994). But, no doubt, this varies with country and over time (Dex et al. 1995). It has also recently been demonstrated that the discouraged worker effect is smaller than previously expected (Irwin & Morris 1993). In contrast to earlier studies, we are able to estimate the impact of the additional job seeker effect, since our data set includes questions of whether the spouse of the respondent had registered with the unemployment office as a consequence of the respondent becoming/staying unemployed.

Unobserved heterogeneity

Refers to unmeasured and measured variables that differ among individuals and that may differ over time for the same individual, although the term is usually reserved for unobservables as perceived by the data analyst (Heckam and Borjas 1980). Davies et al.

(1994) suggest that the fact that certain households experience a disproportionate share of unemployment could result from residual heterogeneity: differences between households in terms of their likelihood of experiencing unemployment arising from unobserved factors such as motivations and work preferences. In our model unobserved heterogeneity is tested indirectly. It represents the (un)employment homogamy which still may exist when controlling for all relevant explanatory factors.

Empirical findings

Several studies have shown that there is a tendency for unemployment to be concentrated in households (Payne 1987, Cooke 1987, Pahl 1988, Ultee et al. 1988, Daniel 1990, Layard et al. 1980, Irwin & Morris 1993, Henkens et al. 1993, Davies et al. 1994, Förster 1994, King et al. 1995, Dex et al. 1995, see also OECD Employment Outlook 1995:34-38 and OECD Employment Outlook 1998). A Norwegian survey from 1993 found similar tendencies (Halvorsen 1995). In table 1 we have compared employment status of respondent with that of spouse. Because of the small number of respondents (and spouse) who are presently unemployed, we have instead differentiated between those who presently are unemployed and/or who have been unemployed during the last two years. We thus compare those with unemployment experiences with those who do not have such experiences (the securely employed and those outside the labour force).

Table 1

Employment status of spouse 1) by employment status of respondent. 20-66 years. Males and females. 1995 (percentages)

Employment status spouse _	Employment status respondent					
	Securely Employed male female	Unemployed 2) male female		Outside labour force male female		
Securely employed	69 85	46	64	41	76	
Unemployed 2)	11 7	29	24	4	10	

Outside labour force	20	25	55
	8	12	14

(Number)

(561)

(451)

(97)

(99)

(73)

(157)

χ^2 , $p < 0.001$, males and females

- 1) Includes only spouses who have been partners since 1993 or earlier.
- 2) Includes both those presently unemployed and/or those who have been unemployed during the last two years

These associations hold for both male and female respondents. Table 1 demonstrates that there is a strong relationship between the employment status of spouses. The incidence of wives' employment was particularly low in households where husbands are long-term unemployed (presently unemployed and have been so during the last two years) (results now shown).

In table 2 the association between employed/unemployed (leaving those outside the labour force behind), is described. We are here treating the employment status of the female spouse as a dependent variable, which makes the finding more comparable with international studies.

Table 2

Employment 1) status of wife by employment status of husbands 2) 20-66 years. Percentages

Husband		
Spouse _	Employed	Unemployed
Employed	86	59
Unemployed	14	41

(number) (898) (128)

_ = 27

χ², p < 0.0001

1) Those who presently are employed and who do not have any experience of unemployment during the last two years are here classified as employed, while those who are presently unemployed and/or who have experienced unemployment during the last two years are classified as unemployed

2) Only spouses who had been partners since 1993 or earlier were included

The likelihood of the wife having experienced unemployment for the last two years is significantly greater for the unemployed than for the employed, with an employment «shortfall» (gap in participation rate) of 27 percentage points. In comparison, in 1986 for Great Britain, 60 percent of the employed men had a working spouse while only 33 per cent of unemployed men had a working spouse (Irwin and Morris 1993, Davies et al. 1994). Yet, of this difference only 8 per cent is a direct consequence of husbands' unemployment (Davies et al. 1994). Similar figures were found for Australia in 1993 (King et al. 1995).

The main reason for the high «shortfall» in Norway is, however, a methodological one: In contrast to the studies referred to, also presently employed who have been unemployed during the last two years are in our study included among the unemployed. This means that only the stable employed is regarded as employed in table 2.

Education homogeneity is present in our sample: Among males with higher education 57 percent of the wives also had high education, while the percentage was only 11 percent among wives of those with lower/medium level education. Occupational homogeneity is also found:

Among males in unskilled manual work 28 percent had a wife in unskilled manual work, while this was the case for only 8 percent among males in other occupations.

Table 3 shows a great variation in unemployment experienced by couples where the husband is an unskilled manual worker as compared with all other occupations:

Table 3 *Employment status of couples in the labour force by occupation of husband. 1995.*

Percentages

Males

Employment status	Unskilled manual worker	Otherwise ¹
Both working	62	78
Husband unemployed	5	8
Wife unemployed	24	11
Both unemployed	9	3
(number)	(139)	(893)

², p<0.001

¹ Those who did not state any of the occupational categories offered are excluded.

It is especially in households where the male is unskilled blue-collar worker that there is a high proportion of both spouses being unemployed. The findings clearly are an indication of class differences in vulnerability to unemployment disadvantage and therefore concentration of unemployment to households in low status occupations. Yet, highest proportion of both partners unemployed was found in households where the respondent did not belong to any of the stated occupation categories or did not state any main occupation at all (n=200), with 16 per cent (results not shown). These two categories most likely consist of newcomers to the labour market.

Data and model specifications: dependent and independent variables

The data used in this analysis are obtained through a survey conducted by Norsk Gallup in november 1995 for INAS (Institute for Applied Social Research). It is representative of the whole population. We have for obvious reasons restricted our analysis to respondents between 20 and 66 years and who had been married or de-facto married with the same partner since

1993. Information about the spouse was given by the respondent, not by interviewing the spouse.

The dependent variable in the multivariate analysis is the employment status of spouse, entered as a dummy variable, where unemployed now, and/or during the last two years was coded 1, while presently employed, and who neither had been unemployed during the last two years were assigned code 0. Since the dependent variable is a dummy, we have used logistic regression (Menard 1995). This was done, as mentioned earlier because the number of presently unemployed was too small to conduct meaningful multivariate analyses on such a basis. We estimate two separate models, in which both male and female employment status is regarded as an independent variable.

The independent variables are selected in order to test a) «genuine» (un)employment homogamy b) shared restrictions c) spouse selection and c) other mutual influencing factors. The additional job seeker effect is hypothesised to be the most important mutual influencing factors, that is a possible *mechanism*, which could explain the incidence of «genuine» (un) employment homogamy, when all the other factors are controlled for.

(Un)employment homogamy is measured by including employment status of respondent, coded 1 if the respondent was outside the labour force, coded 2 if the respondent is registered as unemployed now and/or has been so for the last two years, and coded 3 if the respondent was employed and had not been unemployed during the last two years (reference category).

Spouse selection occurs because people of same age, educational and occupational levels tend to marry. Since unemployment is highest among the young, those with low education and among unskilled blue-collar workers, we have controlled for this effect by entering three variables:

To test employment homogamy we have controlled for education level of respondent and education level of spouse. Lowest and medium education levels were collapsed into one value and coded 1, while highest education was coded 0.

Occupational homogamy was also tested by using two dummy variables. Partners in blue-collar work were coded 1, and all other occupations coded 0. The same was the case for the occupation of respondent.

A possible age homogamy cannot be explored, because we have no information of the age of spouse, only of the respondent. The age of the respondent is here thus used as a proxy. We have collapsed the age variable into four categories: 20-29 years, 30-39 years, 40-49 years and 50-66 years. We assume that partners would belong to the same age group.

Shared restrictions should ideally be controlled for by a measure of local labour market demand such as unemployment levels. The regional differences in unemployment levels are in Norway, however, small for both males and females. Since neither local, municipality, county or regional level is identical with a «natural labour market», that is a region defined by «feasible commuting distances» (DEET 1993 quoted after Bradbury 1995), we have used a subjective indicator. The respondents were asked how common unemployment is in their local community. It was entered as dummy variable, where responses: very common, common with seasonal unemployment, common now, but not before and common before, but not now, were coded 1, while uncommon was coded 0. Alternatively we used the 1994 average municipal unemployment level for males. The average unemployment rate for males were 4 per cent (standard deviation 2 per cent), with a minimum of 1 and a maximum of 12 per cent in the municipalities included in the survey

Having children under school age (0-6 years) could influence on attitudes of women working full time. It could also impact on the additional worker effect and increase the likelihood of females staying unemployed, because of lack of child care (Dex et al. 1995), or usability to take on certain jobs for example because of unsuitable work time arrangements. We have therefore entered as a dummy variable whether the household had children under school age, children 7-15 years, or children 16-19 years. These variables are also indicators of stage in the life course.

Mutual influencing factors (apart from the additional job seeker effect) are controlled for by the employment commitment of respondent. We assume that a low employment commitment could indicate a «household culture of unemployment» (Gallie et al. 1994), so that the spouse is less inclined to keep a job or to actively seeking work if unemployed or if the partner is becoming unemployed. It has been shown that low employment commitment makes it easier to cope with unemployment and therefore people put less effort into the job search, which could increase the likelihood of staying unemployed (Halvorsen 1997a). The indicator is measuring «work as a central life interest». Agreeing totally or partly to the statement that «Work is the most important activity in life» was coded 1, else 0 (disagreed wholly or partly or did not know).

A possible negative attitude towards wives working full time is controlled for by entering a variable, which reflects the social expectations towards females. The respondents were asked to agree full or partly, neither agree or disagree, or disagree partly or fully to this statement: «It is after all the family life which has to suffer if women are having full time work». We hypothesise that a negative attitude among (especially) male respondents could depress the job search efforts of the spouse.

Socio-economic status, for example measured by gross household income, has not been entered as a control variable in order to avoid multicollinearity. This variable is strongly correlated with education levels of husband and wife, occupation level and employment status of husband. Further, the implied causal direction could be questioned, since employment status of spouse impact on household income level.

Multivariate analyses

The purpose of the multivariate analysis is to explore whether there is a «genuine» unemployment homogamy by controlling for other factors than employment status of husband (alternatively wife) which could influence on the unemployment of the spouse. The odds of an *unemployed* male respondent of having an unemployed wife against the odds of an employed male of having an unemployed wife was close to 4:1 (oddsratio 3.48), whereas the odds of an *unemployed* female respondent of having an unemployed husband against the odds of an employed female having an unemployed husband was close to 5:1 (oddsratio 4.37) (results not presented). If these odds-ratios are reduced or are not significant in multivariate analyses, it can be interpreted as an indication of a spurious bivariate association and that the unemployment homogamy reported in section one is not a «genuine» one, but for example a by-product of education or occupational homogamy. With «genuine» unemployment homogamy we refer to the outcome of what goes on between husband and wife in terms of decision making which influences on the employment situation of both. The results are presented in two separate models. In model 1 unit for analysis is male and in model 2 it is female respondents.

Table 4 Likelihood of spouse being unemployed. Persons in the labour force 20-66 years. 1995. Parameter estimates by logistic regression. Male and female respondents. Dependent variable employment status of spouse (1=unemployed, 0=employed)

	Model 1			Model 2		
	Males (n=731)			Females (n=694)		
	B	(S.E.)	Exp(B)	B	(S.E.)	Exp(B)
Employment status respondent						
Outside labour force						
2.08*						
Unemployed	-0.37(.67)		0.69 ns	0.73 (.37)		
4.57***						
Unemployed	0.94(.30)		2.55**	1.52 (.36)		
4.57***						
Stable employed (ref.category)						
Age of respondent						
20-29 years	1.88 (.66)		6.58**	2.81 (.86)		16.50**
30-39 years	1.60 (.65)		4.96*	2.62 (.85)		13.80**
40-49 years	1.18 (.64)		3.25ns	2.12 (.82)		8.38**
50-59 years	.91 (.63)		2.48ns	.77 (.88)		
2.16ns						
60-66 years (ref.category)						
Education level spouse						
low level	1.87 (.56)		6.46***	0.71 (.48)		2.03ns
middle level	1.47 (.51)		4.39**	0.22 (.41)		1.25ns
higher level (ref. cat.)						
Education level respondent						
low level	-0.24(.24)		0.78ns	.41(.52)		1.51ns
middle level	0.20 (.33)		1.22ns	.29 (.41)		1.09ns
higher level (ref.cat.)						
Spouse's occupation						
(.34)	.23 (.30)		1.26ns			-.64
(1=unskilled blue collar, 0=otherwise)						

Respondent's occupation .15 (.27) 1.16ns - .59 (.46)
0.56ns

(1=unskilled blue collar, 0=otherwise)

Respondent's Employment
commitment

(1=low, 0=high) - .09 (.28) 0.91ns .91 (.33)
2.49**

Respondent's Attitude towards
married women having full-time
work

- .14 (.29) .87ns
- .51 (.25) .60ns

(1=negative, 0=positive)

Children in household

0-6 years .08 (.28) 1.09ns -0.43(.34) .65ns
7-15 years -.21(.29) .80ns -.84 (.35) .43*
16-19 years -.24(.39) .79ns -.00 (.49) 1.00ns

(ref.cat. no children)

Respondent

main breadwinner .39(.37) 1.47ns 1.18(.32) 3.36***
(1=yes, 0=no)

Local unemployment -0.58 (.33) .56ns .35 (.32)
1.42ns

(1=common, 0=uncommon)

Constant -4.73 -5.52

-2LL 482.433 380.559

df 702 675

p <0.0001 p<0.001

*=significant at 0.05 level, **=significant at 0.01 level, ***=significant at 0.001 level

Even when entering all control variables simultaneously, the observed unemployment homogamy from the bivariate analyses still remains. This turns out especially to be the case for female respondents, where, apart from age only the variables employment commitment and main breadwinner variables have positive coefficients and were significant at 0.05 level. As for male respondents, only education level of spouse was significant at 0.05 level, apart from employment status and age of respondent.

We alternatively substituted the subjective measure of local unemployment with the actual unemployment level in 1994, but neither were these coefficients significant at 0.05 level.

For female respondents we were much less successful in explaining away the initial unemployment homogamy (odds-ratio in fact increased from 4.37 in bivariate analysis to 4.57 in the full model), while it was reduced somewhat (from 3.48 to 2.55) for male respondents, and which occurred when the age variable was entered to the model. Separate calculations (not shown) of the impact of the additional job seeker effect indicate that the initial unemployment homogamy without such an effect would have reduced the odds-ratio from 3.48 to 2.92 for male respondents and from 4.47 to 3.72 for female respondents.

In the above multivariate analyses spouses outside labour force are excluded. We alternatively included them and dichotomised the dependent variable so unemployed/outside labour market was coded 1, while securely employed was coded 0. The odds-ratios for male respondents unemployed respectively outside labour force, using employed as reference category were then 4.50 and 3.07, while for females the odds-ratios were 1.63 (not significant) and 4.59. So there is a strong positive association not only between spouses being unemployed, but also between those unemployed and outside the labour force. As for the association between both being outside labour force, it was not significant for male respondents (oddsratio 1.10), but indeed for female respondents (oddsratio 2.59). Yet, the highest positive association was found between unemployed male respondents and their wives outside labour force (oddsratio 6.08 when using employed males as reference category), while no such association was found between female respondents and their husbands (results not shown). Because the husband is unemployed the wife can regard it as pointless to seek work since no work seems to be available. Therefore we find her instead outside labour force as homemaker, or a student.

Discussion and conclusion

Our findings confirm what has been found for other countries, namely that there is a social polarisation between dual-earner households and households where both spouses periodically are unemployed and/or outside labour force.

We have demonstrated that there is some «genuine» unemployment homogamy among spouses, but also that such homogamy only to a limited extent can explain the employment status of a spouse. Also Davies et al. (1994) found for the U.K. that the overall consequence of husbands' unemployment for employment status on wife (cross-couple state dependence) was moderate, when other factors were controlled for.

The additional job seeker effect could not be estimated directly, since for obvious reasons it is strongly related to the employment status of respondent. But without doubt, such an effect seems to at least partly to account for some of the employment shortfall or the «genuine» unemployment homogamy. The respondents were asked: «Did your spouse register as a job-seeker at the local employment office in order to get paid work or to get unemployment benefits as a consequence of your unemployment?» We would suggest that the decision to register as unemployed is a joint decision. Our data indicate that the additional job seeker effect by far outweighs the additional worker effect, since only a small proportion of those who registered at the employment office were actually employed when the interview took place.

We were unable to take into consideration a possible *inflexibility*, which could make one or both partners unprepared to relocate, commute, to accept low-paid work or work requiring irregular work-time arrangements. It has for example been suggested that the wives' lack of work make it more difficult for the husband to find a job, because when she is unemployed he will need to earn a wage that covers both their needs (McLaughlin et al. 1989). Such inflexibility could also be due to household obligations such as caring for small children or sick/elderly siblings.

The analyses have also met problems because of sample size, which has forced us to collapse categories into one in order to avoid empty cells. We thus have for example only compared unskilled blue collar workers with all other occupations including no occupation stated, and for education level: low/medium with high education.

Despite these shortcomings, it seems that for male respondents some of the unemployment homogamy cannot be explained by occupational or educational homogamy. Neither, do we find support for the hypothesis that a spouse could benefit from her husband's high education level (Henkens et al. 1993), when other factors were controlled for.

For female respondents, shared restrictions, such as an unfavourable local labour market, could explain a minor part of the observed unemployment homogamy, but the coefficient was not statistically significant at 0.05 level. The findings, at least for male respondents and husbands contrast the one by Ultee et al. (1988) from the U.S., where the percentage of unemployed in the residence seems to influence on the couples' employment status, but a high percentage of missing values on the residence variable makes it necessary to replicate such studies with better data on local unemployment levels. Another comparative study found evidence that labour market conditions play a part in some countries (Dex et al. 1995).

Neither for male or female respondents is the presence of children positively associated with the employment status of spouse. One reason could be the availability of public or private child-care facilities in most municipalities in Norway. If we had the age of the youngest child and number of children, it could have given us a more precise impact on labour force participation of children in the household.

The attitudinal variables do not seem to be of importance in explaining employment status of wife of the respondent, but that of husband to the respondent. The positive association between low employment commitment of female respondent and unemployment of husband supports the hypothesis that a «culture of dependency» could explain unemployment homogamy. But data about employment commitment of spouse is needed to confirm such a contention.

The main mechanism behind unemployment homogamy seems to be the additional job seeker effect. The additional worker effect is a dominant financial coping strategy in households where one of its family members had become unemployed (Halvorsen 1997b). We find strong evidence in our data of an additional job seeker effect. This explanatory factor is the only one which we with confidence could call a causal one, since the variable is based on a question of whether the spouse had registered as unemployed with the employment office *as a consequence* of the unemployment of respondent. It turns out that very few of those who had registered because of the unemployment of the spouse, actually had got paid work. Close to 15% of the increased average probability of the wife being unemployed in households with husbands unemployed as compared with households where husband is employed, can be explained by the additional job seeker effect. This finding also supports the idea that an appropriate unit for analyses of labour supply is the family or household.

Even when controlling for the additional job seeker effect (results not shown), it still seems that some of the unemployment homogamy must be explained by unobserved factors, which is the residual heterogeneity.

A possible mutual influencing factor could occur because of the fact that unemployment not only threatens the mental health of the unemployed but also their children and spouses (Winefield and Fryer 1996). The mental health of the wife to an unemployed person could deteriorate because she lacks the social support which is normal with couples who are met with stressful life-events (Mastekaasa 1991), resulting in higher risk for the wife of staying unemployed.

Some unemployment homogamy could of course also be coincidental, other non-causal explanations could for example be that both partners had been retrenched as a result of a company close-down in which both worked. Further, unobserved (residual) heterogeneity could explain some unemployment homogamy (Davies et al. 1994). Both unemployed partners could lack marketable skills or have in common some unobserved characteristics such as ill health, handicaps, drugs or alcohol problems, language problems, an unattractive personality, all of which personal characteristics are such that no-one would want to employ them (Dilnot & Kell 1987), or a poor social network. These are all factors, which increase the likelihood of both becoming and/or staying unemployed.

We have been unable to take into consideration an indirect discouraged worker effect: When one of the partners has been unemployed for a while, the other partner can regard it as an indication that there are no jobs available and therefore is less active in his or her job search which could result in prolonged unemployment. A related explanation could be the tendency to network segregation, which means that unemployed people are more likely to socialise with other unemployed people than with those in paid work (Gallie 1998), and which could restrict the chances of an unemployed to get back into paid work.

Since our data are cross-sectional, for obvious reasons these analyses are mainly based on the *outcome* of labour market decisions within the household, and only to a very limited extent are we able to shed light on the *processes* behind this outcome. A shortcoming is also that only one person in each household was interviewed. The validity and reliability of relationship data obtained from a single informant can be questioned, since couples can be regarded as dyads (Thomson & Walker 1982). And it is not obvious that married couples in all situations behave as «one (Ellingsæter 1993). Neither have we available data to fully take into consideration *demand factors* in the local labour market. A subjective assessment of common or uncommon unemployment in the locality is a poor proxy for local unemployment levels for both sexes. A main problem with our data set is that we are unable to analyse the effect of interaction between labour demand and supply. We have only to a very limited extent been able to analyse the dynamics of the relationship between the labour force participation of spouses, for which we need information of the interplay between labour supply and labour demand. For

both couples there could be a mismatch between their qualifications and those required in jobs that are available to them.

Shortcomings of cross-sectional data are obvious if one want to analyse the dynamics of the labour force participation of married women and its relationship to unemployment among their husbands and visa versa. The problem of mutual causation cannot be handled by using separate regressions for each spouse. Even if we have found a «genuine» unemployment homogamy, we cannot be certain about the causal direction. We have for example disregarded an explanation with the opposite causal direction of the one hypothesised: unemployment of both partners occurred before they were married/cohabiting. DeGraaf and Ultee (1991) found for Holland, however, by using event history data that having an employed spouse reduces the chance of becoming unemployed and staying unemployed. This supports the contention that there is a causal association between the labour market status of spouses. Our definition of unemployment (presently unemployed and/or being unemployed for the last two years) also create problems and makes the direction of causation uncertain since most of our independent variables refer to the situation by the end of a two-year period

A weakness with other studies conducted is that they assume that the direction of causality runs from the husband's employment status to that of the wife. The male is implicitly taken to be the main breadwinner. Our data suggest that the female respondent being the breadwinner is positively associated with the likelihood of having an unemployed husband. The reason why the wife regards herself as the breadwinner, however, could simply be because the husband is unemployed, while she is not. But, nevertheless it seems justified also to test the opposite direction of causality of what is usually assumed.

Another limitation arises from the fact that we in the multivariate analyses excluded those outside the labour force by dichotomising the dependent variable. In order to secure a stable income, an older unemployed with some disability could try to get a disability pension or early retirement pension. Thus, instead of unemployment homogamy we get a household situation where one spouse is unemployed and the other outside the labour force as homemaker, sick/disabled or early retired (discouraged workers). In the age group 50-66 years 53 percent of unemployed male respondents had a wife outside labour force (probably mostly homemakers or sick/disabled), as against only 8 percent in the age group 40-49 years. Since we in table 5 did not test the impact of such a discouraged worker effect, we could thus underestimate the magnitude of unemployment homogamy, as shown for male respondents. As mentioned earlier non-working women will be less likely to search for work if her husband is unemployed, because she perceives that the probability of getting a job is so small, which is a variant of a discouraged worker effect. But, non-causal explanations are as likely as this

causal one, such as both partners for example have in common ill- health or handicaps (health homogeneity).

An underestimation could also occur because unemployed seem to have a significantly higher risk of marital dissolution than employed (Lampard 1994). Had therefore newly divorced/separated couples also been included in our sample, the employment shortfall may have been even higher than reported in this paper.

To understand in more detail a possible concentration of unemployment in particular households and to unfold causal explanations of unemployment homogeneity of couples we need longitudinal data at the household level, based on interviews with both partners, including for example questions about changes in employment status over time, income sources, family obligations, child care opportunities and financial circumstances, as well as structural variables such as local labour market indicators (job vacancies at occupational level and unemployment rates for males and females). We also need larger samples in order to analyse the association between employment, unemployment and outside labour force by for example polychotomous logistic regression. The distinction between employed and unemployed may also be too crude. Instead we shall have to focus on marginal or fragmented employment histories.

No doubt, unemployment homogeneity varies over time, and is most likely at its highest when unemployment levels and the proportion of long -term unemployed are highest. It would therefore be necessary to replicate longitudinal research at different time periods, when the unemployment is high and as well as when it is low.

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ⁱ This is a cluster-sample survey done by Gallup. It is representative for type of dwelling and thus to a certain extent for all households. Since there is no universe to draw the sample from, we are unable to analyse any attrition. 105 of 435 municipalities are represented in our sample. The average unemployment level among men in 1994 was 4.4% for these 105 municipalities, which is not significantly different from the figure of

4.2% for all 435 municipalities (own calculations done from NSD's municipality data base).