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RATES OF CHANGE IN NORWEGIAN HOUSEHOLDS 1974-77

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ABSTRACT

The rates of transition between pairs of 18 types of households during the period 1974-77 are investigated for the women of the Norwegian Fertility Survey 1977. More than 80% of the women live in the 7 types of households called the main sequence of households because of its relation to a typical life course. The 7 types are single, cohabitation and married without children, and married with 1, 2, 3 or 4+ children. For these households number of children affects the rates more than age. The 11 types outside the main sequence are single parent households, cohabitation households with children and households with more than 2 adult persons. Multi-adult households recruit only from cohabitation households and seems to be a type of household on the increase. But the main thrust of the process of household formation going on between 1974 and 1977 supports the traditional family and the reproduction of the population to such a degree one has to question the impact of non-response in the data.

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Introduction.

The distinction between a family and a household is not always kept in mind while discussing changing life-styles and the future of the family. For most purposes, it does not matter. The majority of households will be a single family according to a commonsense definition of the word. And even by the producers of statistics, most of these will be counted as families. But there remains a few cases where the household consists of more than one family as counted by the Census.

And some say that these cases are not so few and that their number is increasing. In other words: the number of unwed couples living like "a family" is increasing. But is the number of unwed couples increasing as rapidly as the public debate seems to indicate? And how are such couples behaving compared to "ordinary" couples? From the ordinary statistics no definite answer is possible. Investigations have indicated that during the 70's the number of unwed couples living together seemed to be increasing rapidly (Brunborg 1979), and they seemed to be having fewer children and to be considerably less stable than ordinary marriages (Noack and Ostby 1981). But how rapidly were they increasing? And how much less stable were they?

From a methodological point of view maybe the easiest way to answer such questions is to study households instead of families.

By focusing on households and defining suitable categories of households we shall be able to compare the rates of change for different types of families as well as for different types of households.

Comparing for example the stability of households with unwed couples to households with married couples controlling for number of children, we find no large differences if stability is defined as no change in number of adult persons in the households. But unwed cohabitation clearly entails less children. Controlling also for age the picture is much the same for couples without children. But for each age group too few women were living in cohabitation households with children to make comparison possible.

If we instead look at instability defined as the probability of becoming a single parent, we see that for married couples the number of children seems to have no effect. But in cohabitation households the probability of becoming a single parent is perhaps ten times greater for those living in households with one or more children compared to those living without children. Women from cohabitation households without children have the same probability of becoming single parents as married women without children. This pattern is the same for all age groups.

The Data.

These conclusions are based on data from the Norwegian Fertility Survey of 1977 (Noack & Ostby 1981, Pedersen 1982) as made available to us by the Norwegian Social Science Data Services.¹⁾ In October-November 1977 information were collected from 4137 women aged 18-44 years on their life history as far as it might be relevant to their fertility. This included information on the state of their current household as well as a history of their births, marriages, cohabitations and deaths of children and husbands. From these data we reconstructed the state of the household they were living in three years earlier, in December 1974,

¹⁾ Neither the Norwegian Social Science Data Services nor the Central Bureau of Statistics bears any responsibility for the present analysis of these data and the conclusions presented.

and hence were able to make a table showing how many women had lived in each possible combination of type of household in 1974 and in 1977. The period 74-77 was chosen as a compromise between the need to have enough events of the more rare types and the ideal of a shortest possible period of observation.

Due to missing data on some questions, 20 women had to be excluded from the analysis. The 8 women reporting living with children-in-law in their household and the 14 women, living with grand-children may have got a wrong household type. But lacking an easy way to check it and considering they are very few, we decided to disregard any errors and keep them in the analysis. We then had 4117 observations.

The Typology of Households.

The typology of households was developed by Bugge (1984) in order to utilize census data to predict changes in household structure. It is based on number of adult persons, number of children and number of families. Family is defined as in the Family Statistics from The Central Bureau of Statistics. It means either a single person or a married couple with or without children. Having the number of adults vary from 1-5+, the number of children from 0-4+ and the number of families from 1-2+ and excluding impossible combinations, we get 3D types of households. Several of the cells were, however, close to empty. Combining types to increase the number of observations within each type to 30 or more, reduced the number of household types to 18. The complete distribution on different types of households in 1974 and 1977 is presented in table 1. We shall study this table closely.

But first a word on labels. In table 1 the types of households are labeled like 101 or 202 or 4+1+2+. The first digit tells the number of adult persons in the household, the next digit the number of children and the last digit the number of families. The label 202 therefore means 2 adult persons living together in a household without children and without being married. This, of course, is not quite the same as a paperless marriage. But most of them obviously are since 6.1% of the women are living in households with 2 adult persons and 2 families while 5.0% of them answer yes to a direct question of living in a paperless marriage. We shall throughout the paper call Households with 2 adults and 2 families cohabitation households and compare them with married households where 2 adults are living in 1 family. The plus sign added to some digits tells that there may for some households be more persons or children or families than the digit before the "+" indicates.

The diagonal of the table shows how many per cent of the women lived in exactly the same type of household in 1977 as in 1974. Most of the changes are due to the arrival of children. As number of children increases, the households are more and more stable. The main life pattern is for single women to marry and have one child. Most of them go on to the second child as well, but only about 12% go on to the third child and half of these go on to the fourth or beyond.

The households which in table 2 are called "other" types, consist of those having one adult with one or more children, those with three or more adults and cohabitation households with children. None of these 11 types of households has more than 3% of the observations.

The typology of households used in table 2 is in some respects also a typology of the life course of the majority of women or families. As women grow older they move from one household type to another. To illustrate the force of the main sequence and the close connection between the household typology and a typology of life courses one may reconstruct table 2 from age specific tables. Making a table similar to table 1 for all age groups except those 18-19 in 1977, and taking the largest age group for each type of household in 1974, we get table 3.

(The selected group is the largest in terms of number of observations as well as in terms of proportions of the age group; only for those married with 3 children is the age group 40-44, 0.3% larger than the one selected even though it has 20 observations less).

Table 3. Rates of transition between the major types of households for the major age group of each household type.

STATUS IN 1977	AGE IN 1977	1977							N
		NO CHILDREN			MARRIED				
		SINGLES	COHABI- TATION	MARRIED	1 CH	2 CH	3 CH	4+CH	
SINGLES NO CHILDREN	20-24	.32	.14	.27	.22	.02	.	.	346
COHABITATION NO CHILDREN	20-24	.04	.38	.13	.18	.01	.	.	85
MARRIED NO CHILDREN	25-29	.01	.	.32	.57	.10	.	.	144
MARRIED 1 CHILD	25-29	.	.	.	.42	.53	.04	.	251
MARRIED 2 CHILDREN	30-34	.	.	.	.	.79	.17	.	315
MARRIED 3 CHILDREN	35-39	.	.	.	.	.	.89	.06	129
MARRIED 4+ CHILDREN	40-44	.	.	.	.	.	.	.97	75

Source: The Norwegian Fertility Survey, 1977

Of the 3798 women with age 20 to 44, 1345 or 35% are included in the table above. The differences between this table and table 2 are rather small. The largest is actually not shown. It is the rate of outflow from cohabitation households without children to "other types" of households. For the age group 20-24 this rate is as high as 27%. But aging, obviously, must affect some of the probabilities of changing from one type of household to another. Age-dependent fertility rates usually are largest for ages between 23-26 (Berge 1981) and from about the age of 30 they start to drop rapidly. For the age groups utilized here one must expect the probability of having the first child or another child to be increasing for age groups up to 25-29 then decreasing.

Table 4. Probability of a first child or another child during a three years period according to household status and age of women.

	Age 1977				
	20-24	25-29	30-34	35-39	40-44
<u>First child</u>					
SINGLES NO CHILDREN	.27	.28	.05	.05 (21)	.08 (12)
COHABITATION NO CHILDREN	.34	.37	.31 (13)	.	.
MARRIED NO CHILDREN	.66	.67	.37	.26 (19)	.03
<u>Another child</u>					
MARRIED 1 CHILD	.38	.57	.52	.16	.04
MARRIED 2 CHILDREN	.03	.21	.17	.08	.02
MARRIED 3 CHILDREN	.	.16	.11	.06	.03

(xx) indicates number of observations if it is less than 30.

Source: The Norwegian Fertility Survey, 1977.

From table 4 it is seen that transitions between household-types caused by the arrival of children are affected by aging as expected.

It is also seen that parity is more important than age for decreasing the probability of having another child.

The force of the main sequence of households is thus largely a product of parity and aging. The interesting behavioural problems are represented by those not having children or those leaving the main sequence.

Unmarried cohabitation

It has been **concluded** that cohabitation without marriage has been increasing rapidly during the 70's replacing the early marriages of the 60's (Lian 1981, Bjaru og Skrede 1982). But what happens to those entering into this kind of household?

From table 2 it is seen that of those living in a household with two unmarried adult persons and no children in 1974, 8% were in single person households in 1977 and 32% were married. The fact making cohabitation different from marriage seems to be the fairly large rate of outflow from the main sequence, the 18% leaving for other types of households compared to the 1-3% leaving from the rest of the major types of households.

From table 4 it is seen that childless women in cohabitation households are slightly more likely to get children than single women up to the age of 30. But both are clearly much below the married women without children. From the age of 30 women in cohabitation households may be having children more like the married women without children, but too few observations makes a conclusion impossible.

To investigate more closely how age and type of household affects the behaviour of women without children we look at table 5.

Table 5. Rates of transition from types of households without children according to age.

1974	Age in 1977	1977							
		NO CHILDREN			MARRIED			OTHER	
		SINGLES	COHABI- TATION	MARRIED	1 CH	2 CH	3+ CH	N	
SINGLES NO CHILDREN	20-24	.32	.14	.27	.22	.02	.	.03	346
	25-29	.38	.09	.25	.24	.	.	.04	118
	30-34	.62	.11	.22	.05	.	.	.	57
	35-39	.90	.	.05	.05	.	.	.	21
	40-44	.92	.	.	.08	.	.	.	12
COHABITATION NO CHILDREN	20-24	.04	.38	.13	.18	.01	.	.27	85
	25-29	.08	.37	.15	.24	.03	.	.13	60
	30-34	.08	.38	.15	.23	.08	.	.08	13
	35-39	.50	.50	.	.	.	.	.	6
	40-44	1.00	.	.	.	.	.	.	2
MARRIED NO CHILDREN	20-24	.09	.02	.23	.45	.17	.	.04	47
	25-29	.01	.	.32	.57	.10	.	.	144
	30-34	.04	.	.59	.33	.02	.	.02	54
	35-39	.	.05	.69	.21	.05	.	.	19
	40-44	.03	.03	.91	.03	.	.	.	31

Source: The Norwegian Fertility Survey, 1977.

Table 5 seems to indicate that age has two kinds of impacts. The first is a biological one working through fertility and showing as a gradual increase in the probability of remaining childless. The second is a social and showing as a clear difference between those being above 30-34 years compared to those being below. At least for singles and married those being above 34 have a marked increase in the probability of remaining in the same type of household. There are too few cohabitation households with women above 34 to conclude anything. For those being below 34, age does not seem to have any impact on their behaviour except that the probability of leaving for the "other" types of households is larger the younger the woman is.

Multi-person Households.

In table 6 rates of transition among households with three or more adults are presented. All non-zero transition rates into or out of these households are included. The most interesting observation is perhaps that these households recruit only from cohabitation households (2 adults/2 family households) and those leaving multi-person households end up in cohabitation households.

If most of the 3+ adults households consist of an ordinary family with a closely related person added, like grand-parents, one would expect that upon the death or movement to an old age institution of the oldest member, the rest of the household would enter one of the married categories of households. However, these kinds of changes in households were not recorded. Only loss of husband and children were recorded for the women. The stability of the larger households which seems so spectacular, is therefore overestimated. This, on the other hand, suggests that the rates of change from two person cohabitation households to three or more adults and from three or more adults to two person cohabitation involves collectives of some kind. This is also supported by the larger rates of transition for the younger women of the cohabitation households (table 5).

Since the rate of transition into multi-person households are 2 or 3 times larger than the rates of transition out of them, collectives may be a kind of life-style on the increase.

The 18% of women living in cohabitation households without children and changing this to a household with more adults, may be entering upon a lifecourse different from the main sequence described above in having more adults and less children in the household.

Table 6. Rates of transition between different types of households with three or more adults and between these types and other types of households.

1974	1977									
	COHABITATION			3 ADULTS				4+ ADULTS		
	0 CH	1 CH	2+ CH	0 CH	1 CH	2 CH	3+ CH	0 CH	1+ CH	
COHABITATION NO CHILDREN				.07	.05					
COHABITATION 1 CHILD						.02				
COHABITATION 2+ CHILDREN										
3 ADULTS NO CHILDREN	.02			.35	.28	.04		.29	.02	
3 ADULTS 1 CHILD					.75	.25				
3 ADULTS 2 CHILDREN			.02			.91	.08			
3 ADULTS 3+ CHILDREN			.02				.98			
4+ ADULTS NO CHILDREN				.05				.51	.44	
4+ ADULTS 1+ CHILDREN					.01	.03			.96	

Source: Table 1.

Single Parent Households.

From 1974 to 1982 the number of single parent households with children under 20 increased from 65,904 to 98,934 (Family Statistics 1974, Statistical Yearbook 1983). Based on the number of families these years the number of single parent families increased from 4.1% to 5.7%. The proportion of single women with children increased from 3.4% to 5.0%.

Not all these families live in single family households, but a large proportion do. And figures presented elsewhere (Liar 1981) seem to suggest that the number of women choosing to live alone with their children is increasing. But how do they become single with children, and once single will they remain so? Investigations indicate the state of being single with children may not be a particularly stable status (Stang 1983). Table 7 presents rates of transition into and out of different types of single parent households.

Table 7. Rates of transition between households with single mothers and between these and other types of households.

1974	1977								
	SINGLE 1 CH	SINGLE 2 CH	SINGLE 3+CH	COHABIT 1 CH	MARRIED 1 CH	COHABIT 2+CH	MARRIED 2 CH	MARRIED 3+CH	
	SINGLE 1 CHILD	.66			.12	.13	.01	.08	
SINGLE 2 CHILDREN		.62	.03			.08	.21	.08	
SINGLE 3+ CHILDREN			.84			.13		.03	
SINGLE NO CHILDREN	.01								
COHABITATION NO CHILDREN	.02								
MARRIED NO CHILDREN	.01								
COHABITATION 1 CHILD	.15	.02							
MARRIED 1 CHILD	.02								
COHABITATION 2+ CHILDREN		.12	.07						
MARRIED 2 CHILDREN		.02							
MARRIED 3+ CHILDREN			.02						

Source: Table 1.

If we by stable mean being in the same type of household both in 1974 and in 1977, about two thirds of the single person households are stable. This is about 30% below the stability of married households with children. But of the 30% unstable single parent households two thirds go on to live in married households and the rest go into cohabitation households.

The recruitment into the state of living in a single parent household is more varied. For married women or women without children the chance of ending up in a single parent household is 2% or less. For women living in cohabitation households the chance is almost 20%. Cohabitation households with children are more likely to split up than married households with children. But number of children seems to have no effect. Neither seems the arrival of another child to be important as witnessed by the low transition rates into single parent households from households with one child less. It is the presence or absence of children which makes the difference in cohabitation households, and then perhaps it is the effect of the long term wear and tear in a situation where exit is an easy way of dodging the everyday problems of a household.

If this is the case one might expect rates of transition out of cohabitation households with children to increase rapidly with age. From table 8 we see that this seems to be the case. But the number of observations in each age group is rather small. In other ways age does not seem to have much impact on the probability of becoming single parent.

Table .8. Rates of transition into single parent households according to type of household at the start and age of woman.

1974	AGE 1377				
	20-24	25-29	30-34	35-39	40-44
SINGLE NO CHILDREN	.01	.01	.00	.00	.00
				(21)	
SINGLE 1+ CHILDREN	.63	.45	.59	.74	.95
			(27)		(19)
COHABITATION NO CHILDREN	.02	.02	.00	.00	.00
			(13)	(6)	(2)
MARRIED NO CHILDREN	.02	.00	.02	.00	.00
				(19)	
MARRIED 1 CHILD	.04	.01	.04	.00	.05
COHABITATION 1+CHILDREN	.06	.10	.29	.16	.33
	(16)	(21.)	(24")	(19)	(12)
MARRIED 2+ CHILDREN	.00	.02	.03	.03	.02

(xx) indicates number of observations if it is less than 30.
Source: The Norwegian Fertility Survey, 1977.

If we again look at table 7 it is seen that the rates of transition from single parent households to married households are much larger than the rates of transition from married households to single parent households. Without a fresh supply from those being single without children and those living in cohabitation households, the number of single persons living with children would start to decline.

The Process of Household Formation.

Table 1 presents rates of transition between types of households at two points in time. The longterm Implications of these rates are found by multiplying the transition matrix by itself for as many time periods as we want to consider. Taking the tenth power of the matrix gives the rates of transition between types of households in 1974 and 2004 if the rates of transition can be assumed to remain the same throughout this period. Of course they will be changing, but that is not the point. The question we want to ask is whether the process of household formation going on between 1974 and 1977 is such that If it were to go on it would mean the "death of the family" as some might want to put It. As table 9 shows the answer to that question is no. If anything may be concluded it is that the family will be strenghtened.

Table 9 presents the tenth power of the transition matrix of table 2. And the longterm implications are perhaps best seen by looking at the kind of households those being single or without children in 1974 will be living in thirty years later.

We see that the final distribution of those being without children In 1974 is more or less the same regardless of their household type at the outset. From 75 to 80% are married with children. The rest are in one of the "other types" of households.

Table 9. Rates of transition over a 30 year period.

	2004					OTHER		
	NO CHILDREN		MARRIED					
1974	SINGLES	COHABIT	MARRIED	1 CH	2 CH	3 CH	4+ CH	
SINGLES NO CHILDREN03	.36	.33	.09	.19
COHABITATION NO CHILDREN03	.34	.30	.09	.24
MARRIED NO CHILDREN02	.34	.37	.11	.17
MARRIED 1 CHILD01	.28	.39	.14	.17
MARRIED 2 CHILDREN01	.22	.40	.19	.17
MARRIED 3 CHILDREN01	.06	.38	.38	.17
MARRIED 4+ CHILDREN01	.06	.03	.73	.17
OTHER03	.26	.23	.12	.36

Source: Table 2.

From table 1 we find that the households categorized as "other" types in table 2 in 1977 were distributed according to number of children as follows:

No. of children	0	1	2	3+	SUM
No. of households	80	335	174	117	706
% of "other" households	11	47	25	17	100

And if the "other" types of households in 2004 may be assumed to be distributed according to number of children in the same way they were in 1977, we get something like the following distribution of households according to number of children in 2004:

No. of children	0	1	2	3	4+
% of households	2	12	41	26	9

This means that as much as 98% of the women being without children in 1974 may be expected to have had at least one child 30 years later. This is not quite believable. One cannot but wonder what effect the non-response in the data collection might have had.

The distribution of women over households according to number of children implies further a total fertility rate of 2.38.

In 1974 the period total fertility rate was approximately 2.1, falling to 1.8 in 1977. But the family building process going on between 1974 and 1977 would seem to indicate a total number of children well above replacement level.

Again the question of the effect of non-response comes to mind. More unmarried than married women refused to participate in the interview. And it seems likely that they would increase the number of childless women also in the long run.

But even so it may be concluded that the process of household formation as it is observed in the Norwegian Fertility Survey supports the mainstream family types and the reproduction of the population.

It may also be suggested that the Norwegian Fertility Survey is somewhat biased towards the mainstream middle-class family building process.

If future trends starts in small numbers and deviant behaviour, our ability to detect them would be better if more care went into the study of non-response in such surveys as the Norwegian Fertility Survey.

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