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# COMPARATIVE STUDIES

**ECE ANALYSES OF WFS SURVEYS IN EUROPE AND USA**

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JERZY BERENT

**Family Planning in Europe  
and USA in the 1970s**

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The World Fertility Survey (WFS) is an international research programme whose purpose is to assess the current state of human fertility throughout the world. This is being done principally through promoting and supporting nationally representative, internationally comparable, and scientifically designed and conducted sample surveys of fertility behaviour in as many countries as possible.

The WFS is being undertaken, with the collaboration of the United Nations, by the International Statistical Institute in co-operation with the International Union for the Scientific Study of Population. Financial support is provided principally by the United Nations Fund for Population Activities and the United States Agency for International Development. Substantial support is also provided by the UK Overseas Development Administration.

For information on Country Reports, WFS publications, and WFS depository libraries, write to the Publications Office, International Statistical Institute, 428 Prinses Beatrixlaan, PO Box 950, 2270 AZ Voorburg, Netherlands. For information on the WFS generally, write to the Information Office, World Fertility Survey, International Statistical Institute, 35-37 Grosvenor Gardens, London SW1W 0BS, UK.

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El proyecto está a cargo del Instituto Internacional de Estadística, contando con la colaboración de las Naciones Unidas y en cooperación con la Unión Internacional para el Estudio Científico de la Población. Es financiado principalmente por el Fondo de las Naciones Unidas para Actividades de Población y por la Agencia para el Desarrollo Internacional de los Estados Unidos. La Oficina Británica para el Desarrollo de Países Extranjeros proporciona también un gran apoyo financiero.

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# Preface

The World Fertility Survey itself is mainly concerned with the developing countries of the world. Nevertheless, around 1975 a number of developed countries undertook fertility surveys, broadly on the lines recommended by the World Fertility Survey. The main responsibility for the promotion of WFS-type surveys in Europe (and some developed countries outside Europe), and for comparative analyses of their findings, was entrusted to the Secretariat of the UN Economic Commission for Europe. This was due partly to the interest shown by the ECE Conference of European Statisticians in WFS and partly to the experience in comparative fertility studies gained by ECE's population experts in the course of preparing an earlier report which compared 12 national fertility surveys taken around 1970.<sup>1</sup>

The final report of the new comparative project, undertaken in the context of the World Fertility Survey, will focus on the causes of recent fertility decline in the ECE region, and will also use data derived from sources other than the WFS-type surveys in Europe and North America.<sup>2</sup> Since this report is not likely to appear in print before 1983, several short papers summarizing the main findings of the study will be published in the *WFS Comparative Studies* series as a separate subseries under the title 'ECE Analyses of WFS Surveys in Europe and USA'.

The preface to the WFS series of comparative cross-national summaries draws readers' attention to the difficulty of maintaining inter-country comparability of data collected for the developing countries. This difficulty is

even greater with regard to the developed countries, many of which had had fertility surveys before and were more inclined to ensure internal than external comparability. The final report devotes a whole chapter to exploration and explanation of inter-country comparability problems, but the preliminary papers can only draw attention to the more serious deviations from proposed standards. The papers are necessarily limited in scope, and their nature is somewhat less analytical than foreseen for the final report.

This preface would not be complete without acknowledgement of the contribution of various UN agencies to the ECE/WFS project. The Conference of European Statisticians devoted two meetings to WFS, and approved a model questionnaire and basic tabulation plan for the countries in the ECE region. The UN Working Group on Social Demography held several meetings of experts involved in the national fertility inquiries to assist the ECE Secretariat in the preparation of the comparative study, and its members played a crucial role in securing the supply of national data for the project. Altogether 16 national individual data tapes were received by ECE, and two countries prepared sets of tables listed in the preliminary tabulation plan for the comparative study.

Last but not least, UNFPA provided financial assistance to the project.

JANEZ STANOVNIK  
Executive Secretary  
UN Economic Commission for Europe

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<sup>1</sup> *Fertility and Family Planning in Europe around 1970: A Comparative Study of Twelve National Surveys*, UN Department of Economic and Social Affairs, New York, 1976 (Sales No. E.76.XIII.2).

<sup>2</sup> For a more detailed outline of this report see J. Berent, 'Directions and Methods of Analysis of World Fertility Survey Data in Low Fertility Countries', IUSSP International Population Conference, Mexico City, 1977 (1.2.2).

# 1 Introduction

The working outline of the final report on the ECE/WFS Comparative Fertility Study includes a chapter on family planning in Europe and the USA. This foresees inter-country analysis of the knowledge, ever-use and current use of the various means of contraception, and of attitudes to and the incidence of induced abortions. Comparisons are to be broken down by a variety of social, economic and cultural characteristics of respondents and their households, which are looked upon as 'explanatory' or 'background' variables. It is planned to make extensive use of the findings of previous family planning surveys in Europe for comparison of changes over the recent past. Multivariate correlation analysis should improve understanding of the determinants of such changes and their impact on the main dependent variable of the study, which is the recent decline of fertility in Europe.

By necessity the present paper is more modest in its scope. It focuses on comparisons of the prevalence of contraception and of specific contraceptive methods in the main countries of Europe and on the progress made in this field in the early 1970s. Special interest attaches to com-

parisons with the USA, where recent progress has been described as a 'contraceptive revolution'.<sup>1</sup>

In attempting to answer such questions the paper will present to the reader some basic data on 'current use' of contraception in 15 countries of Europe and in the USA, on their overall incidence, incidence by individual method and by a few socio-economic variables. For most countries 'current use' in the years 1967-72 will be compared with those recorded in the period 1975-8. Special attention will be given to the reasons for non-use among the respondents who were exposed to the risk of pregnancy and did not wish to have more children. Hitherto unavailable information will be provided on the incidence of unplanned and unwanted pregnancies, broken down by some socio-economic and demographic characteristics. Some data will also be quoted on the proportion of unplanned pregnancies ending in induced abortion.

These are preliminary and highly selected data, derived from the original country material, which has been subjected to a meticulous standardization process by ECE staff to improve its comparability between countries and over time.

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<sup>1</sup> Charles F. Westoff and Norman B. Ryder, *The Contraceptive Revolution*, Office of Population Research, Princeton University Press, 1977.

## 2 The Material

The paper is based exclusively on data derived from fertility and family planning surveys of a WFS type. For the most recent data, the surveys of the following countries have been used (years are shown in brackets): Belgium (1975), Bulgaria (1976), Czechoslovakia (1977), Denmark (1975), Finland (1977), France (1978), Great Britain (1976), Hungary (1977), Italy (1979), Netherlands (1975), Norway (1977), Poland (1977), Romania (1978), Spain (1977), USA (1976), and Yugoslavia (1976).<sup>2</sup>

The lack of inter-country comparability may, in the first instance, be due to differences in coverage, ie in the 'universe' of respondents selected for interviewing. In 12 out of 16 countries covered, the universe selected for the analysis consists of currently married, once-married women below age 45 at the time of the interview. There are the following departures from this rule: (1) the Hungarian sample excludes women aged 40-44; (2) the Dutch sample refers to women married in the years 1963 to 1973, irrespective of age; (3) the Danish and the Polish samples include women married more than once. Moreover, the Belgian data refer only to the Dutch-speaking population of the country. For several countries the overall data are therefore not exactly comparable, although the deviations are probably somewhat less harmful for family planning analysis than for other subject-matters.

The questionnaires used by the participating countries were far from homogeneous. The procedure of re-coding of the national data carried out by ECE has certainly improved their presentation and has facilitated inter-country comparisons, but it has not fully resolved the problem of comparability, and this needs to be borne in mind in the course of the analysis. A more detailed assessment of data comparability will appear in chapter III of the final report. Here, it is proposed only to qualify briefly the variables considered in the paper. Three types of variable are used: first, there are the characteristics of respondents which led to the selection of specific subsamples, or categories of women, in the present case those currently using birth control, those currently exposed to the risk of pregnancy, and those not wanting to have more children. Secondly, there are the dependent variables: the currently used methods of birth control, the unplanned and unwanted pregnancies and the induced abortions. Finally, there are a few background variables, either of a purely demographic nature (age of wife, marriage cohort and parity) or of socio-economic character (wife's current urban/rural residence and educational level). The demographic variables offer no problems of comparability (apart from those arising at the stage of sample selection already mentioned); the others do, and these problems are summarized below.

<sup>2</sup> For the main characteristics of these surveys, see the first paper published in this subseries of *WFS Comparative Studies* (Jerzy Berent, Elise F. Jones and M. Khalid Siddiqui 'Basic Characteristics, Sample Designs and Questionnaires').

### 2.1 CURRENT USERS AND CURRENT USES OF CONTRACEPTION

In 10 out of the 16 countries covered, the actual timing of the use was unambiguous, referring quite clearly to the situation at the time of the interview, as witnessed by such adjectives as 'current' or 'present'. The departure from uniformity was not serious for Hungary, where the question referred to use 'since the last menses'. In Norway, Denmark and Yugoslavia, longer periods of time were allowed for reference, encompassing four weeks, two months and six months respectively. More serious distortions, leading to somewhat overstated indicators of current use occur with respect to Czechoslovakia and, even more, to Italy. In the former country, the respondents were asked which method of contraception they used 'most often' and all those who answered positively were counted as current users. In Italy, the uses were in fact not at all current since they referred to the period since the last pregnancy or, if there were no pregnancy, to the period since the date of marriage.

### 2.2 RESPONDENTS EXPOSED TO THE RISK OF PREGNANCY

There is an advantage in measuring the incidence of family planning in relation to women exposed to the risk of pregnancy at the time of the interview rather than in relation to all respondents. A respondent is 'not exposed' if (1) she is pregnant, (2) she has declared herself or her husband non-fecund and (3) her husband does not live under the same roof at the time of the interview.<sup>3</sup>

The relative importance of these conditions varies: current pregnancy is normally a function of fertility level, non-fecundity depends very much on the incidence of sterilization for contraceptive purposes,<sup>4</sup> and the husband's absence is of particular significance in the countries of important external or internal labour migration. References are made in the text to the most serious departures from the definition of non-exposure. An incomplete count of respondents in any of the three categories of non-exposure will increase the denominator of the ratio of users to the number of exposed women and therefore understate the incidence of family planning.

### 2.3 METHODS OF CONTRACEPTION CURRENTLY USED

The following ten categories of contraception were distinguished for comparative purposes: pill, IUD, other

<sup>3</sup> A possible absence of sexual relations is not considered in WFS surveys, although 'abstinence' is listed as a method of contraception.

<sup>4</sup> Questions on fecundity were asked differently, with the result that the incidence of non-fecundity appears to be relatively understated in most east European countries. The same is also probably true of Spain, where about half of the respondents did not answer the question at all.

female methods, condom, safe period (rhythm), withdrawal, abstinence, sterilization of wife, sterilization of husband and 'other' methods. Standardization of country data into these categories raised only minor problems which should not affect broad conclusions,<sup>5</sup> except for contraceptive sterilization. Several east European countries (Bulgaria, Poland, Romania and Yugoslavia) did not treat sterilization as a method at all, probably without much harm to the analysis. However, the Danish survey collected no information on female sterilization (moreover they combined male sterilization and sterility in one category). Since sterilization is of significance in this country, the Danish figures understate the number of users and the incidence of family planning in comparison with other countries.

For some comparisons two subgroups of methods are referred to: 'modern' methods, which include sterilization, pill and IUD, and 'primitive' methods, which include safe period and withdrawal.<sup>6</sup>

## 2.4 UNPLANNED AND UNWANTED PREGNANCIES

The WFS core questionnaire for low-fertility countries recommended that the respondent be asked for each pregnancy whether she wanted it to occur and, if not, whether she did not want any pregnancy ever or just not at the time it occurred. The sum of never-wanted pregnancies and of pregnancies not wanted at the specific time they occurred may be referred to as 'unplanned' pregnancies. The planned pregnancies are then those which occurred intentionally.<sup>7</sup> Of the 16 countries covered by this paper, 13 have data on unplanned pregnancies but only 9 on unwanted (or never-wanted) pregnancies. The relevant questions varied somewhat between countries but the general sense remained homogeneous with the following exceptions: (1) for Denmark, Finland and Great Britain, the data refer to births rather than pregnancies; (2) for Finland, only the first four births and the last birth are covered; (3) for Belgium, Netherlands and Poland, the current pregnancy (if any) has been left out; (4) the data for Italy are not included in the comparative tables as they refer only to the first, second and last pregnancy.

## 2.5 THE BACKGROUND VARIABLES

Among the background variables, the purely demographic ones — *age of respondent*, *marriage cohort* and *parity* — offer only minor problems of comparability. By contrast,

both *current (urban/rural) residence* of the respondent and her *educational level* give rise to serious questions which cannot be summarized in a sentence or two. The definitions of 'urban' and 'rural' vary as much between fertility surveys in Europe as they do between population censuses, and cross-country analyses by this grouping of respondents should not be relied upon at all. This is somewhat less true for educational attainment, but inter-country differences in educational systems are such that the full value of this variable can only be attained in a study of intra-country associations (which can then be compared between countries), and not for direct comparisons between similarly described educational levels.

## 2.6 INDUCED ABORTIONS

No attempt is made in this paper to study the incidence of induced abortions in any detail, but it is of considerable interest in the context of its subject-matter to see what proportion of unplanned births is prevented by resort to abortion, for various categories of respondent.

Unfortunately, five countries (Denmark, Finland, France, Netherlands and Spain) did not ask about induced abortions at all or not in the required detail and in a few other countries the replies were much below the genuine level. This was the case in Belgium where only 19 abortions were recorded, Great Britain (132) and the USA (200). The under-reporting was probably smaller in Norway, Italy and Poland, and even less significant in other countries of eastern Europe where this form of family planning is quite common.

## 2.7 COMPARABILITY OVER TIME

As far as possible, the data derived from the latest fertility surveys (ie those undertaken in the context of the World Fertility Survey) are compared with those obtained by the preceding surveys and published in the earlier ECE study. The latest round is referred to as surveys undertaken 'around 1975' and the earlier as surveys undertaken 'around 1970', although in several instances the time-lag is much wider. To improve comparability over time, the respective samples were adjusted. Thus respondents living in Scotland were removed from the 1976 sample for Great Britain, so that the comparison refers in fact to England and Wales. Women aged 40–44 were sorted out from the 1966 Hungarian sample, and those aged 45–49 from the 1972 Polish sample. The Dutch samples are not really comparable, referring as they do to different marriage cohorts.

<sup>5</sup> For instance, six countries did not consider abstinence as a method of family planning, but the numbers involved seem negligible.

<sup>6</sup> Modern methods are sometimes contrasted with 'traditional' methods, the latter including all methods except sterilization, pill and IUD. The word 'primitive' is used here since it refers only to the two earliest and most backward methods: withdrawal and safe period.

<sup>7</sup> These definitions are suggested by Charles F. Westoff in *Family Planning Perspectives* 12 (3), May/June 1980.

### 3 The Layout

The following strategy has been adopted for the comparative analysis. First, statistics are shown on the incidence of the current use of contraception, country by country and for some demographic and socio-economic categories of respondents (number of living children, current urban/rural residence, wife's education and marriage cohort). Wherever possible, the data are compared with those presented in the previous ECE report referring to the years 1968–72.

The proportion of users, even when expressed in terms of women exposed to the risk of pregnancy rather than in terms of all women, is not a perfect measure of the relative extent of family planning in the populations under study. The ratios of current users per 100 exposed women may vary between countries solely because the shares of exposed women wanting a child at the time of the interviews are different. A better measure of the spread of contraception is therefore the ratio of non-users, expressed per 100 exposed women who did not want a child at the time of the interview. Among such women, the reasons for non-use are multiple: religious beliefs, ignorance of birth control, cost, availability, interference with intercourse, negligence or expected resort to abortion. Unfortunately, reasons for non-use are not well covered by the countries' questionnaires and cannot be studied here. However, the basic ratios of non-users are shown in the paper for a number of background variables (section 4).

The second question to be answered is whether there has

been any improvement in the methods of contraception used in Europe during the last decade or so. It was shown in the previous ECE report that, with a few exceptions, the methods of contraception used in Europe around 1970 were surprisingly primitive. It is of particular interest to see to what extent such methods as withdrawal or safe period have been replaced recently by the pill, IUD and sterilization (section 5).

No attempt is made here to test in any systematic way the relative effectiveness of the contraceptive techniques applied in individual countries. An overall view can, however, be obtained by examining the country data on the incidence of unplanned and unwanted pregnancies and their differentials (section 6).

A study of family planning should go beyond the problems of contraception. Some attention is therefore given to the incidence of induced abortions, by attempting to show to what extent they have prevented the occurrence of unplanned or unwanted births. This is of special interest for the countries of eastern Europe, where the difference between the number of unplanned and unwanted pregnancies and unplanned and unwanted births is enormous (section 7).

In spite of comparability problems, the statistical evidence brought in to support the various aspects of the analysis appears to go a long way towards answering the questions posed. The conclusions are summarized in section 8.

## 4 Current Users and Non-Users: Overall Incidence, Some Characteristics and Recent Trends

The incidence of 'current' contraceptive use has traditionally been measured by relating the number of users (women or couples) to the number of women (or couples) exposed to the risk of pregnancy. However, the growing incidence of sterilization for contraceptive purposes has introduced some measurement difficulties. A sterilized woman is normally not exposed to the risk of pregnancy, so that she is not in the denominator of the ratio. It does not seem, therefore, proper to include her in the numerator either. But sterilization is a means of contraception and must somewhere be treated as such. Consequently, it will appear necessary to examine simultaneously two different ratios: one in which sterilization and sterilized women appear in both the numerator and the denominator, and another in

which they are excluded from both. These two ratios are shown as percentages in table 1, which refers to surveys undertaken 'around 1970' and 'around 1975'. For convenience of presentation, the first ratio is referred to as the 'overall index of current use' and the second as the 'restricted index of current use'.

### 4.1 INCIDENCE OF CURRENT USE OF CONTRACEPTION

Let us see first how the incidence of current use varied between countries around 1975. At that time, the overall index was lowest in Spain and Romania, where it was below 60 per cent, and highest in Czechoslovakia where it

**Table 1** Incidence of current use of contraception around 1970 and around 1975 (currently married, once married women below 45)

Country	Year	Overall index of current use <sup>a</sup> (1)	Restricted index of current use <sup>b</sup> (2)
Belgium	1975	85	90
Bulgaria	1976	76	81
Czechoslovakia	1970	66	..
	1977	95	95
Denmark	1970	67	84
	1975 <sup>c</sup>	63	76
England and Wales	1967	69	84
	1976	77	82
Finland	1971	77	83
	1977	80	82
France	1972	64	77
	1977	71	87
Hungary <sup>d</sup>	1966	67	85
	1978	74	82
Italy	1979	78	91
Netherlands <sup>e</sup>	1969	59	..
	1975	75	81
Norway	1977	71	79
Poland <sup>e</sup>	1972	60	..
	1977	75	83
Romania	1978	58	64
Spain	1977	51	58
USA	1970	65 <sup>f</sup>	67
	1976	70	78
Yugoslavia	1970	59	62
	1976	55	68

<sup>a</sup> Number of users (including sterilized) per 100 respondents.

<sup>b</sup> Number of users (excluding sterilized) per 100 exposed respondents.

<sup>c</sup> Including women married more than once and excluding sterilization.

<sup>d</sup> Women below 40.

<sup>e</sup> Three marriage cohorts (1958, 1963 and 1968) for the 1969 data, and 10 marriage cohorts (1963-73) for the 1975 data.

<sup>f</sup> Westoff and Ryder, *op. cit.* table II.2, p 17.

NOTE: .. denotes data not available or not pertinent.

stood at 95 per cent; apart from this last country only Belgium and Finland had more than 80 per cent of users.

As expected, the restricted index, shown in column 2 of table 1, was systematically higher everywhere. Only in three countries – Spain, Romania and Yugoslavia – were less than three-quarters of women exposed to the risk of pregnancy not current users at that time. Had the sterilized women (couples) been included in the numerator of this index, it would no doubt exceed 90 per cent in several countries in addition to Belgium, Czechoslovakia and Italy, namely the USA, England and Wales, France, Norway and possibly Denmark.

In the countries for which comparisons over time can be made, both indices tended to rise. In at least one exceptional case, Denmark, lack of comparability was probably responsible. Particularly steep increases were noted in Czechoslovakia and Poland.

#### 4.2 SOME DIFFERENTIALS IN THE INCIDENCE OF CURRENT USE

Countries may differ with respect to the incidence of current use by women exposed to the risk of pregnancy for a number of reasons. Among them two are of major interest: (1) the desired family size and (2) the knowledge of, access to and willingness to use contraception. The former should vary with the number of children the woman had at the time of the survey; the second is conventionally expected to vary with the woman's educational level. Table 2 shows the incidence of current use for these two variables; in addition, it shows the impact of current urban/rural residence and of marriage duration.

Childless women's resort to contraception at the time of the survey appears to have been very small in Yugoslavia, Spain, Bulgaria and Romania, where less than one-third of such women were contraceptors. Generally, the proportion of users tends to rise with parity, but this is by no means systematic. One would perhaps expect a somewhat higher incidence of contraceptive use among women having three or more children, particularly in such countries as Romania, Spain and Yugoslavia, where, however, it does not exceed 60 per cent of respondents. At least part of the explanation lies in a high negative correlation between fertility and education in these countries, combined with a positive association between education and contraceptive use, shown in the other part of table 2. Table 3 shows that, for a given family size, the percentage of current users goes up quite steeply for higher educational levels almost everywhere, Belgium being a notable exception. Also, for a given educational level, current use increases with parity in most countries, although many figures in this table are subject to significant sampling fluctuations.

To come back to table 2, it is interesting to note rather small differences in current use between respondents living in urban and those in rural areas. Attained fertility is higher in the latter than in the former and this tends to offset the effect of education differences between the two types of residence in a number of countries. Finally, women married more recently are likely to want to have a child and are therefore distinguished by low incidence of current use, in spite of the widening spread of contraception over time.

#### 4.3 NON-USERS

From what has been said so far it appears that the net incidence of current use or non-use of contraception cannot be satisfactorily studied in relation to all respondents exposed to the risk of pregnancy, since one of the main factors affecting non-use is the couple's desire to have a child, and this varies between countries and over time. Analysis of the spread of contraception appears more meaningful when restricted to those exposed women who are not contraceptors even though they do not want a child. Tables 4 and 5 repeat the cross-tabulations of tables 2 and 3, taking as the dependent variable the percentage of 'current non-users' out of the exposed respondents who declared at the interview that they did not want a (or another) child.

Table 4 shows that there is considerable variation between countries in the current use of contraception so measured. In the west and north European countries (Belgium, France, Netherlands, Norway) the proportion of non-users is very small, varying between three and seven per cent. The ratio is somewhat higher in Finland and the USA, where it exceeds ten per cent. By far the highest incidence of non-use is registered in Spain (38 per cent), followed by Yugoslavia (23 per cent). Non-use of contraception is quite small in Czechoslovakia compared with the two other countries of eastern Europe, Hungary and Poland.

The data shown in table 4 give strong support to the thesis that the use of contraception is, to a large extent, a function of cultural level measured by educational attainment. Everywhere the incidence of non-use is considerably higher among women who have attained only an elementary educational level, and it declines rapidly for the better educated ones. Even so, among Spanish respondents with post-secondary education, non-use appears quite high at around 20 per cent; this can no doubt be largely attributed to religious causes.

The impact of education is even stronger when data are controlled by parity (see table 5), particularly for Poland, Spain, Hungary and Yugoslavia.

The urban/rural differential in non-use appears valid only in Spain, Yugoslavia and Poland, and may be attributed to lower levels of education and stronger influence of the church in the rural areas.

There appears to be little regularity among countries in the inter-relation between non-use of contraception and the number of children the respondents have had. A notable exception is a very high incidence of non-use among childless women. It will be noticed, however, that in eight out of eleven countries examined the absolute number of childless women was less than 50, so that the corresponding percentages are subject to a rather large standard error. It is also likely that at least some of the childless women were not sure whether they were fecund and took the risk.<sup>8</sup>

On the whole, differentials by wife's age are not very spectacular when three age groups of respondents are considered. In most countries, non-use is less frequent among women aged 25–34 than among the younger (less than 25) and the older (35–44) women.

<sup>8</sup> If the respondent said she did not know whether she was fecund, she was classified as exposed to the risk of pregnancy.

**Table 2** Current users<sup>a</sup> per 100 respondents exposed to the risk of pregnancy, by number of living children, current residence, wife's education and marriage cohort

Background variable	B	BG <sup>b</sup>	CS	DK	SF	F	GB	H	I	NL	N	PL	R <sup>b, c</sup>	E	USA	YU
Number of respondents	3384	5952	2676	2532	4593	1939	2784	3268	4583	3654	2307	8880	7985	4076	3675	5023
<i>Number of living children</i>																
0	77	25	75	39	57	60	..	41	55	67	48	51	30	23	70	15
1	90	77	93	70	82	83	..	79	87	73	72	83	66	54	75	68
2	94	87	96	82	88	95	..	89	86	90	86	88	74	61	86	78
3+	95	80	96	80	84	91	..	86	90	88	82	81	55	60	80	60
<i>Current residence</i>																
Rural	93	81	95	73	81	88	..	83	85	80	78	78	67	46	..	60
Urban	90	80	95	76	83	87	..	80	87	82	79	85	60	61	..	73
<i>Wife's education</i>																
Less than elementary	} 91	76	67*	} 72	79*	84	( )	74	83	} 76	} 65	70	65	54	36*	65
Elementary		82	95		81	88	77	77	82			78	61	56	67	68
Lower secondary	91	79	94	72	83	89	77	82	88	81	78	81	62	63	73	} 75
Higher secondary	88	81	95	83	83	86	78	83	90	85	81	88	68	68	78	
Post-secondary	83	79	97	80	84	88	76	83	92	86	84	91	74	74	81	79
<i>Marriage cohort<sup>c</sup></i>																
Before 1955	94	81	92	..	77	85	75	69*	79	..	65	82	56	42	72	68
1956–1960	94	81	95	..	80	92	85	85	85	..	76	86	58	49	76	77
1961–1965	94	84	98	..	85	90	84	83	87	87	82	85	60	56	81	74
1966–1970	89	85	95	..	86	91	78	85	88	81	83	84	51	62	79	70
1971 and later	83	74	93	..	79	81	68	76	83	78	76	80	72	60	77	55

<sup>a</sup> 'Use' does not include sterilization.

<sup>b</sup> Non-exposed women are those who are currently pregnant.

<sup>c</sup> For Romania marriage cohorts are: Before 1955 = before 1953; 1956–60 = 1953–7; 1961–5 = 1958–62; 1966–70 = 1963–7; 1971 and later = 1968 and later.

NOTE: Data for Belgium refer to the Dutch-speaking respondents only, those for Hungary only to women below the age of 40 and those for the Netherlands to women married in the years 1963 to 1973.

In this and the following tables, sign ( ) indicates that the number of respondents in the given cell is less than 10, and sign \* that it is between 10 and 49.

For reasons of space, names of countries have in some tables been replaced by letters appearing on car registration plates: B = Belgium, BG = Bulgaria, CS = Czechoslovakia, DK = Denmark, SF = Finland, GB = Great Britain, H = Hungary, I = Italy, NL = Netherlands, N = Norway, PL = Poland, R = Romania, E = Spain, YU = Yugoslavia.

.. denotes data not available or not pertinent.

– denotes data nil or negligible.

**Table 3** Current users<sup>a</sup> per 100 respondents exposed to the risk of pregnancy, by number of living children (control variable) and wife's education

Control variable	Background variable	B	CS	DK	SF	F	GB	H	I	NL	N	PL	E	USA	YU
0	<i>Wife's education</i>														
	Elementary or less	79	( )	32*	43	52	( )	( )	27	49*	( )	37	11	32*	12
	Lower secondary	78	71*	35	48	64*	56	25	68	62	33	47	25*	59	} 34
	Higher secondary	73	69*	45	65	54	66	53	74	79	45	57	38*	63	
Post-secondary	70*	83*	50*	67	78*	73	63*	71*	82	72	63	85	79	( )	
1	Elementary or less	91	88	63	82	80	71*	52*	81	67	50*	77	51	72*	64
	Lower secondary	93	91	63	81	86	66	78	91	74	70	80	60	69	} 72
	Higher secondary	88	94	77	82	86	62	82	91	74	73	88	62	77	
	Post-secondary	72	96	83	84	77	57	79	93	73*	79	91	64*	75	81
2	Elementary or less	93	95	76	84	95	85	84	84	88	67	83	59	66	76
	Lower secondary	95	96	83	90	95	89	89	87	90	83	87	71	79	} 83
	Higher secondary	94	97	89	89	93	93	89	92	93	91	93	71	87	
	Post-secondary	92	99	86	90	96	89	94	94	92	89	96	62*	91	92
3+	Elementary or less	96	95	75	81	89	77	68	88	78	68	77	58	62	59
	Lower secondary	95	95	83	88	94	83	89	94	90	84	86	65	80	} 87*
	Higher secondary	93	98	94	86	94	86	89*	98	93	83	93	77	83	
	Post-secondary	96*	96*	95*	87	100*	82*	83*	99*	95*	91*	96	92*	79	100*

<sup>a</sup>'Use' does not include sterilization.  
See NOTE in table 2.

**Table 4** Women not wanting more children: current non-users per 100 exposed respondents, by number of living children, residence, wife's education, marriage cohort and age

Background variable	B	CS	SF	F	H	NL	N	PL	E	USA	YU			
Number of respondents	1351	1961	2220	1226	2119	1946	1240	5707	2992	1666	3360			
Non-users per 100 exposed respondents not wanting more children (all)	3	4	11	6	12	7	6	13	38	16	23			
<i>Number of living children</i>														
0	6	18*	24*	22*	59*	11	53*	28*	55*	31	67*			
1	2	6	10	11	13	13	9	9	51	24	20			
2	3	3	10	3	10	6	5	10	36	10	18			
3+	3	4	13	7	14	8	5	18	37	16	35			
<i>Current residence</i>														
Rural	3	4	13	7	11	6	6	18	51	..	31			
Urban	3	4	10	6	13	8	6	10	33	..	18			
<i>Wife's education</i>														
Less than elementary	} 3	21*	27*	10	22	} 10	} 17	31	40	50*	27			
Elementary		5	15	7	18			17	40	32	21			
Lower secondary		2	4	9	5			12	8	7	10	26	19	} 15
Higher secondary		4	3	7	5			10	4	4	7	25	15	
Post-secondary		1	2	7	1			9	7	1	4	19*	14	10
<i>Marriage cohort</i>														
Before 1955	2	8	22	12	31*	..	14	18	50	23	32			
1956-1960	4	5	17	7	14	..	9	13	46	20	21			
1961-1965	2	2	8	7	12	8	7	12	38	15	21			
1966-1970	3	3	7	3	8	7	3	12	32	12	22			
1971 and later	5	3	9	7	14	7	4	11	33	12	25			
<i>Age</i>														
< 25	4	2	8	7	15	..	4	13	38	15	27			
25-34	2	2	6	4	10	..	4	12	31	11	22			
35 >	4	5	16	8	15	..	9	14	42	21	24			

See NOTE in table 2.

**Table 5** Women not wanting more children: current non-users per 100 exposed respondents, by number of living children (control) and wife's education

Control variable	Background variable	B	CS	SF	F	H	NL	N	PL	E	USA	YU
<i>Number of living children</i> 0	<i>Wife's education</i> Elementary or less	8*	( )	46*	31*	( )	( )	( )	55*	( )	( )	( )
	Lower secondary	4*	( )	( )	( )	( )	16	( )	( )	( )	( )	( )
	Higher secondary	( )	( )	17*	( )	( )	4*	( )	( )	( )	44*	( )
	Post-secondary	( )	( )	8*	( )	( )	14*	( )	( )	( )	18*	( )
1	Elementary or less	3	10*	12	15	33*	17*	( )	28	54	( )	21
	Lower secondary	1	7*	12	9	13	11	14*	8	48*	34*	15
	Higher secondary	2	4	7	7	10	11*	5*	7	25*	17	17*
	Post-secondary	-*	5*	7*	-*	12*	( )	( )	4	( )	27*	10*
2	Elementary or less	4	6	15	3	15	8	17*	15	38	28*	19
	Lower secondary	2	4	9	3	11	6	7	9	22	17*	20
	Higher secondary	5	3	5	5	10	4	3	6	28	10	15
	Post-secondary	-*	1	5	1	5	4	1	3	26*	7	9
3+	Elementary or less	3	5	16	9	19	11	15	22	39	33*	35
	Lower secondary	3	4	8	3	11	9	5	12	28	14	30
	Higher secondary	5	3	10	4	9*	3	3	6	19	15	7*
	Post-secondary	4*	-*	13*	-*	( )	5*	0*	4	2*	16	( )

See NOTE in table 2.

For most countries, non-use appears to decline somewhat over time, if marriage cohorts are compared for the purpose. However, the indicators of non-use for the most recent cohorts are not very different from those obtained for all respondents. Unfortunately, it is not possible to compare the 'around 1975' with the 'around 1970' data for the incidence of non-use among the exposed respondents not wanting more children.

One can conclude this section by saying that in the most industrialized countries of Europe non-use of contraception is now very rare even by American standards; it is considerably higher in most countries of eastern Europe, due no doubt to their reliance on induced abortions.<sup>9</sup> On the other hand, there are still many non-users in countries where the influence of the church is strong and educational levels relatively low; a typical example is Spain.

<sup>9</sup> See, however, footnote 2 on p 8.

## 5 Current Users, by Method Used

### 5.1 INCIDENCE OF AND DIFFERENTIALS IN USES OF SPECIFIC METHODS

Once the incidence of current use has been examined, the question to be answered concerns the efficiency of the methods used. However, the meaning of 'efficiency' is not unambiguous. Clinical experiments have proved that the probability of becoming pregnant is smaller when such methods as sterilization, pill or IUD are used compared with, say, *coitus interruptus* or safe period. Actual experience has shown, however, that even the methods identified as having relatively low efficiency may in fact be adequate to hold fertility down if applied persistently. The previous ECE study showed that many countries of Europe had very low fertility around 1970, corresponding rather close to parents' wishes, in spite of the prevalence of the most primitive methods of contraception (and only infrequent resort to induced abortion). It is perhaps more relevant, therefore, to distinguish between 'modern' and 'primitive' rather than between 'efficient' and 'non-efficient' methods. Much of the present section focuses on this distinction.

The basic data on the main methods of contraception used in Europe and in the USA around 1975 are given in table 6, which suggests the following main features:

- 1 Around 1975 there was considerable variation between countries concerning the methods of contraception used.
- 2 In several western and northern countries – Belgium, France, Great Britain, Netherlands – the pill was the most popular method. The same was true of Hungary, but in other socialist countries of Europe use of the pill was quite small, reaching some 10–15 per cent of all users in Czechoslovakia, Poland and Yugoslavia, and being close to zero in Bulgaria and Romania.
- 3 The IUD appears to be of considerable importance in northern Europe, involving nearly 40 per cent of all contraceptive users in Finland and Norway. In these two countries, as well as in Denmark, condoms are still very popular.
- 4 Resort to withdrawal as the main method of contraception was amazingly high in Bulgaria and Yugoslavia (80 and 65 per cent respectively) and was also quite high – some 40–50 per cent – in Italy, Spain and Romania. Equally surprising was the high incidence of withdrawal still found in such countries as Belgium and France, where it was indicated as the main method by nearly 30 per cent of users. The figure was similar in Czechoslovakia, where withdrawal led in popularity.
- 5 In most countries, *coitus interruptus* was more frequently relied upon than safe period; the exception was Poland where safe period involved 41 per cent of all users. The same figure was reported for Romania, where safe period about equalled the resort to withdrawal.
- 6 At the time the surveys were taken, male and female sterilization for contraceptive purposes was of little

overall importance in Europe except in Great Britain where some 20 per cent of couples were affected, approaching the overall USA figure. Some 10 per cent of users were sterilized in Norway, and the figure was probably still higher in Denmark, for which information on sterilization was not asked in the questionnaire.

Another way of comparing inter-country practices is to distinguish, rather arbitrarily, between two extreme groups of methods. The first would consist of the most modern methods such as sterilization, pill and IUD, and the second the most primitive methods, such as safe period and withdrawal. The two groups of users can then be compared between countries by relating them to the numbers of all current users. In table 7, countries are arranged according to the size of the difference between these two percentages.

The table shows very clearly the striking differences in contraceptive practices prevailing in Europe. The utilization of modern methods varies from 1 per cent in Romania to 78 per cent in the Netherlands, and that of primitive methods from 3 per cent in Denmark to 84 per cent in Bulgaria. The Netherlands, Great Britain, Norway and, to a lesser extent, Finland and Denmark, are at, or very close to, the USA's standards, both with respect to the popularity of modern methods and to the rejection of more ancient methods. Hungary, France, Belgium and, to a lesser extent, Czechoslovakia occupy an intermediary position on the scale, showing quite significant use of modern methods but also frequent resort to the primitive ones. In all the other countries listed, the primitive uses lead the modern practices, though relatively less so in Spain and Italy, where at least the pill has made an appearance, than in Poland and Yugoslavia. In the two remaining countries, Bulgaria and Romania, where the main method of birth control is still induced abortion, modern methods are virtually non-existent.

Tables 8–10 show uses of the modern methods by several demographic and socio-economic characteristics, also cross-tabulated both by type of current residence and by wife's age. Tables 11–13 repeat this presentation for use of the primitive methods.

Table 8 indicates that in most countries the incidence of modern methods is highest among young women, and that it declines with age. This is particularly true for Belgium, Great Britain, Hungary, Netherlands and Spain, and somewhat less so for Denmark and the USA. In other countries, the association is not so clear, and in some countries (Czechoslovakia, Finland, France), the middle age group of respondents appear to rely more heavily on modern methods than do other age groups. The explanation of such inconsistency is found in a tabulation of all individual methods by age, not shown in this paper for lack of space. It reveals that, whilst the pill is used predominantly by young women, the IUD is used mainly by those aged 25–34, and sterilization mostly by the older age group.

**Table 6** Current users by contraceptive method used, 'around 1975' data (figures show percentage of all current users)

Country	Pill	IUD	Other female method	Condom	Rhythm	Withdrawal	Abstinence	Female sterilization	Male sterilization	Other method	All users	
											Per cent	Number
Belgium	38	4	1	8	15	27	—	6	—	—	100	3366
Bulgaria	3	2	—	3	5	79	7	1	1	1	100	4797
Czechoslovakia	15	19	1	14	7	31	1	3	—	9	100	2770
Denmark	35	14	7	39	1	2	..	..	..	3	100	1948
Finland	14	36	1	40	1	3	—	5	1	..	100	4013
France	34	13	2	8	9	29	..	5	..	..	100	1765
Great Britain	36	9	3	23	1	6	—	10	11	..	100	2834
Hungary	49	13	2	5	5	23	—	2	..	1	100	2704
Italy	18	3	3	17	11	46	—	1	..	1	100	4146
Netherlands	66	6	1	14	4	3	—	3	3	1	100	3149
Norway	18	39	3	23	4	5	..	6	3	—	100	1995
Poland	10	2	4	19	41	25	..	..	..	—	100	7370
Romania	1	..	2	6	41	44	—	..	..	6	100	5083
Spain	26	1	2	10	12	44	3	—	..	2	100	2382
USA	34	9	10	11	5	3	..	12	13	2	100	3691
Yugoslavia	9	3	6	4	8	65	..	..	..	5	100	3697

See NOTE in table 2.

**Table 7** Current uses: extent of modernization of methods used (figures show percentages of all current users)

Country	Modern methods (sterilization, pill, IUD) (1)	Primitive methods (safe period, withdrawal) (2)
Netherlands	78	7
USA	68	8
Great Britain	66	7
Norway	66	9
Finland	56	4
Denmark	49	3
Hungary	65	28
France	52	38
Belgium	48	42
Czechoslovakia	40	38
Spain	27	56
Italy	22	57
Poland	12	66
Yugoslavia	12	73
Bulgaria	5	84
Romania	1	83

The differential by current residence appears perhaps smaller than expected, apart from Belgium and Spain where modern methods are relied on much more in towns than in villages; this is also true of some socialist countries of eastern Europe, such as Bulgaria, Czechoslovakia and Poland.

Surprisingly, the educational level of the wife appears to have little influence on the prevalence of modern methods in the USA, and this also applies to several countries of Europe, such as Denmark, Finland, Hungary, Netherlands and Yugoslavia. The reverse applies to Belgium, France, Italy, Poland and Spain. In the last country, the use of modern methods among the women with post-secondary education is among the highest in Europe (73 per cent).

In so far as modern methods are identified with higher efficiency, women who have already attained their desired family size would be expected to make more frequent appeal to modern methods than those who have not. Other things being equal, the incidence of modern use is expected to increase with the number of children alive at the time of the interview. The data shown in table 8 do not conform to this expectation at all. There are only two countries (the USA and the Netherlands) where such an association holds, but even there it is not very strong.

The expectations are nearer to fulfilment for associations involving marriage cohorts. In so far as shorter marriage durations are associated with a higher proportion of young couples, one would expect the use of modern methods to increase for the more recent cohorts. This effect should moreover be strengthened by an increase in the popularity of the pill, IUD and sterilization in Europe. Indeed, table 8 shows steep increases in the proportion of users of modern methods by the more recent cohorts in most countries of Europe (though less for the USA). In several countries (Bulgaria, Czechoslovakia, France, Poland, Spain and Yugoslavia) this proportion more than doubles between the two extreme cohorts (ie those married before

1955 and those married since 1971), and it increases by more than half in Belgium, Great Britain and Hungary.

The contrasts between European countries with respect to the prevalence of contraceptive techniques are even more spectacular when uses of the most primitive methods (such as safe period and withdrawal) are considered.

Examining first in table 9 the inter-relations with respondents' age, one notices that the combined use of these two methods rises steeply with age in Belgium, Finland, Hungary, Netherlands, Spain and USA. In the last country about 10 per cent of users aged 35-44 resort to the more primitive methods. The corresponding figure is somewhat lower in Denmark and Finland and slightly higher in Norway and in the Netherlands; but it is much higher in other countries, including even, as noted before, such industrially advanced countries as Belgium and France. The urban/rural differential is quite wide in Spain; in most other countries the differences amount to around 10 percentage points 'in favour' of rural areas. The association of the incidence of primitive methods with wife's education is negative everywhere, except the USA. It is worth noting that in the two least advanced countries - Bulgaria and Romania - even women with post-secondary education rely to a large extent on the primitive methods, which are used by more than 70 per cent of all current users. As was the case with modern methods, primitive use appears to be rather weakly correlated with the number of living children, except in Czechoslovakia and Spain. By contrast, primitive methods clearly prevail among the earlier marriage cohorts in comparison with the recent ones. In Bulgaria and Romania, however, as many as 80 per cent of users rely on the safe period and withdrawal even among the marriages concluded since 1971. A steep decline in such uses over time should be noted for Belgium and France.

## 5.2 DIFFERENTIALS WITH CONTROLS

The associations between each of the two dependent variables (incidence of the modern and the primitive methods of contraception) and a few explanatory variables (wife's age, current residence, education, number of living children and marriage duration) were examined one by one, on the basis of the data shown in tables 8 and 9, and they may therefore have been distorted by inter-correlations between the explanatory variables themselves. For instance, the high incidence of the use of primitive methods in villages may have been due to differences in age structure between towns and villages. Older women are more likely than young ones to resort to primitive methods, and if the rural population contains a higher proportion of older women than the urban population, this by itself becomes a contributory factor to the observed urban/rural differential.

The present paper also introduces a few three-way cross-tabulations of the two dependent variables (in turn), treating one of the explanatory variables as control, ie keeping it constant. Such cross-tabulations are shown in tables 10 and 11 for modern methods and in tables 12 and 13 for primitive methods of contraception.

The purpose of table 10 is to check on the impact of wife's age and of education (in turn) on the extent of use of modern methods when the effect of the urban/rural

**Table 8** Current uses of modern methods of contraception, by wife's age, current residence, education, number of living children and marriage cohort (figures show percentage of all current users in the given category)

Background variable	B	BG	CS	DK	SF	F	GB	H	I	NL	N	PL	R	E	USA	YU
<i>Wife's age</i>																
< 25	65	1	39	52	56	58	84	78	28	83	71	13	1	42	76	15
25–34	53	6	44	51	59	61	71	67	28	79	71	14	1	32	69	15
35–44	37	5	28	42	51	40	55	45	15	62	57	9	1	16	61	8
<i>Type of current residence</i>																
Rural	33	3	29	44	50	48	..	60	21	74	63	9	1	11	..	10
Urban	51	6	40	50	59	54	..	68	24	79	70	14	1	31	..	13
<i>Wife's education</i>																
Elementary or less	42	4	28	45	53	47	55	56	16	77	61	8	–	22	71	11
Lower secondary	49	7	35	53	56	52	67	63	27	78	68	13	1	34	78	} 17
Higher secondary	56	6	40	50	59	60	69	69	32	79	67	15	1	47	68	
Post-secondary	65	8	42	44	56	61	61	61	41	74	60	20	3	73	64	13
<i>Number of living children</i>																
0	50	16	47	48	51	49	..	63	37	79	55	15	2	67*	66	15*
1	48	5	33	48	51	48	..	65	21	75	65	14	1	33	68	13
2	47	5	38	48	56	54	..	64	22	79	67	13	1	27	68	11
3 or more	51	5	36	49	62	55	..	64	21	78	67	8	–	23	70	12
<i>Marriage cohort</i>																
Before 1955	37	3	20	..	53	25	52	48*	21	..	60	6	–	12	62	5
1956–1960	38	5	30	..	51	37	58	42	10	..	53	8	–	14	63	10
1961–1965	45	5	35	..	57	51	65	56	18	72	63	12	1	18	71	11
1966–1970	52	7	46	..	60	61	71	68	25	80	72	15	1	25	71	15
1971 or later	64	6	39	..	53	58	76	76	26	80	69	14	2	40	69	15

See NOTE in table 2.

**Table 9** Current uses of primitive methods of contraception, by wife's age, current residence, education, number of living children, and marriage cohort (figures show percentage of all current users in the given category)

Background variable	B	BG	CS	DK	SF	F	GB	H	I	NL	N	PL	R	E	USA	YU
<i>Wife's age</i>																
< 25	28	83	36	4	1	33	3	17	53	3	6	66	84	40	6	70
25–34	38	82	36	2	2	30	6	25	51	6	7	64	85	51	8	67
35–44	55	86	43	4	6	49	11	41	64	15	14	69	83	68	11	80
<i>Type of current residence</i>																
Rural	60	90	46	3	5	44	..	32	59	11	10	72	88	75	..	79
Urban	40	79	36	3	2	35	..	23	53	6	8	62	79	51	..	70
<i>Wife's education</i>																
Elementary or less	51	88	43	4	5	43	16	36	68	10	14	71	87	62	9	77
Lower secondary	43	79	41	3	3	39	9	29	47	7	10	66	81	44	8	} 59
Higher secondary	32	80	37	3	2	30	5	22	41	5	8	62	78	35	9	
Post-secondary	22	71	33	2	2	24	4	24	30	6	6	55	79	16	8	54
<i>Number of living children</i>																
0	43	65	19	—	2	42	..	27	43	3	8	63	81	23*	9	68*
1	45	81	39	4	3	40	..	27	56	8	8	63	81	49	8	71
2	43	84	39	3	3	37	..	27	57	6	8	65	84	58	8	73
3	41	88	42	3	4	35	..	29	59	10	10	71	89	59	9	76
<i>Marriage cohort</i>																
Before 1955	56	87	46	..	10	62	16	48*	62	..	18	73	90	67	9	84
1956–1960	54	85	43	..	5	52	11	42	73	..	15	69	84	69	12	78
1961–1965	45	86	37	..	4	37	7	33	60	11	12	68	84	67	7	73
1966–1970	37	81	35	..	2	30	4	25	55	6	6	62	85	58	8	68
1971 or later	28	80	38	..	1	33	5	18	52	4	6	64	82	42	7	68

See NOTE in table 2.

**Table 10** Current uses of modern methods of contraception, by current residence (control) and by age and education of wife (figures show percentage of all current users in the given category)

Control variable	Background variable	B	BG	CS	DK	SF	F	H	I	NL	N	PL	R	E	YU
<i>Rural residence</i>	<i>Wife's age</i>														
	< 25	41	2	24	60*	51	49	76	27	..	70	13	2	20*	12
	25–34	36	5	33	36	51	55	64	27	..	67	10	1	11	12
	35–44	27	3	26	39	50	40	36	13	..	54	7	–	9	7
<i>Urban residence</i>	<i>Wife's age</i>														
	< 25	69	7	45	51	59	61	80	31	..	72	12	1	47	17
	25–34	56	7	47	53	62	63	70	30	..	75	17	2	37	16
	35–44	39	5	28	44	53	40	53	18	..	59	10	1	17	9
<i>Rural residence</i>	<i>Wife's education</i>														
	Elementary or less	31	2	25	45	50	46	56	15	75	57	7	–	11	9
	Lower secondary	34	5	28	50	52	48	59	26	75	64	12	1	5*	} 15
	Higher secondary	39	4	31	39	50	55	68	30	74	64	12	1	35*	
	Post-secondary	41*	4	42	45*	50	53*	60	46	64*	56	17	7	..	–*
<i>Urban residence</i>	<i>Wife's education</i>														
	Elementary or less	44	4	30	45	55	48	55	17	77	70*	8	1	25	12
	Lower secondary	51	6	39	54	59	54	69	29	79	73	13	1	37	} 17
	Higher secondary	59	5	43	53	63	61	70	34	81	70	16	1	49	
	Post-secondary	67	7	41	44	58	62	61	34	77	62	21	2	73	15

See NOTE in table 2.

**Table 11** Current uses of modern methods of contraception, by age (control), and by current residence and education of wife (figures show percentage of all current users in the given category)

Control variable	Background variable	B	BG	CS	DK	SF	F	GB	H	I	N	PL	R	E	USA	YU	
<i>Wife's age</i> < 25	<i>Residence</i>																
	Rural	41	2	24	60*	51	49	..	76	27	70	13	2	20*	..	12	
	Urban	69	7	45	51	59	61	..	80	31	72	12	1	47	..	17	
	25-34	Rural	36	5	33	46	51	55	..	64	27	67	10	1	11	..	12
		Urban	56	7	47	53	62	63	..	70	30	75	17	2	37	..	16
	35-44	Rural	27	3	26	39	50	40	..	36	13	54	7	-	9	..	7
Urban		39	5	28	44	53	40	..	53	18	59	10	1	17	..	9	
<i>Wife's age</i> < 25	<i>Wife's education</i>																
	Elementary or less	59	4	42*	55*	55	56	(78)	80*	15	..	12	..	39	76	15	
	Lower secondary	66	8	40	60	55	63	87	76	35	74	12	..	44*	81	} 17	
	Higher secondary	73	6	36	38	59	56	84	82	37	70	13	..	46*	77		
	Post-secondary	65*	-	44*	63*	60*	68*	78*	62*	(81)	52*	17	..	(100)	71	(16)	
	25-34	Elementary or less	46	5	27	50	58	57	81	68	22	70	8	..	25	68	13
		Lower secondary	51	8	43	53	60	58	70	65	28	72	14	..	36	82	} 19
		Higher secondary	59	6	47	54	59	67	71	71	36	72	17	..	58	72	
		Post-secondary	72	11	46	42	57	71	65	64	45	61	24	..	84*	62	18
	35-44	Elementary or less	34	3	28	40	49	36	49	40	11	59	6	..	14	72	7
		Lower secondary	34	7	24	50	50	41	57	46	22	57	10	..	22	68	} 12
		Higher secondary	44	5	31	45	59	49	55	44	22	55	13	..	28	56	
Post-secondary		53	5	30	39*	53	42*	50	50*	26	59	15	..	31*	63	8	

See NOTE in table 2.

**Table 12** Current uses of primitive methods of contraception, by current residence (control), and by age and education of wife (figures show percentage of all current users in the given category)

Control variable	Background variable	B	BG	CS	DK	SF	F	H	I	NL	N	PL	R	E	YU
<i>Rural residence</i>	<i>Wife's age</i>														
	< 25	53	89	49	10*	1	40	19	56	..	5	68	87	73*	75
	25–34	56	90	47	2	3	37	29	53	..	9	71	89	72	74
	35–44	67	92	43	2	8	54	52	66	..	14	75	87	81	85
<i>Urban residence</i>	<i>Wife's age</i>														
	< 25	23	78	30	3	—	31	16	47	..	7	64	81	33	66
	25–34	34	78	33	2	2	27	21	46	..	4	60	80	46	64
	35–44	52	83	42	5	5	47	31	60	..	13	65	78	65	77
<i>Rural residence</i>	<i>Wife's education</i>														
	Elementary or less	64	92	46	4	6	48	36	69	15	17	75	90	76	80
	Lower secondary	59	86	48	1	5	43	34	50	10	10	68	87	90*	} 55
	Higher secondary	54	87	46	3	4	36	25	41	11	9	68	82	42*	
	Post-secondary	41*	95*	32	—*	3	33*	21	30	9*	5	67	78	..	71*
<i>Urban residence</i>	<i>Wife's education</i>														
	Elementary or less	48	84	41	4	4	41	38	66	8	7*	68	81	58	74
	Lower secondary	40	77	37	3	2	37	22	41	6	10	64	75	39	} 60
	Higher secondary	29	78	35	3	2	28	21	40	4	6	61	76	34	
	Post-secondary	21	70	33	2	2	22	26	29	5	7	52	80	16	52

See NOTE in table 2.

**Table 13** Current uses of primitive methods of contraception, by age (control), and by current residence and education of wife (figures show percentage of all current users in the given category)

Control variable	Background variable	B	BG	CS	DK	SF	F	GB	H	I	NL	N	PL	R	E	USA	YU	
<i>Wife's age</i> < 25	<i>Residence</i>																	
		Rural	53	89	49	10*	1	40	..	19	56	6	5	68	87	73*	..	75
		Urban	23	78	30	3	—	31	..	16	47	2	7	64	81	33	..	66
	25–34	Rural	56	90	47	2	3	37	..	29	53	9	9	71	89	72	..	74
		Urban	34	78	33	2	2	27	..	21	46	6	4	60	80	46	..	64
	35–44	Rural	67	92	43	2	8	54	..	52	66	24	14	75	87	81	..	85
Urban		52	83	42	5	5	47	..	31	60	12	13	65	78	65	..	77	
<i>Wife's age</i> < 25	<i>Wife's education</i>																	
		Elementary or less	34	86	38*	3*	—	35	(—)	15*	73	—	..	64	..	47	12	73
		Lower secondary	27	80	32	3	2	30	2	18	40	4	5	67	..	27*	5	} 55
		Higher secondary	19	80	41	4	—	33	4	15	42	1	5	67	..	27*	7	
		Post-secondary	26*	75*	23*	0*	—*	24*	5*	24*	(17)	—*	19*	59	..	(0)*	4	(49)
	25–34	Elementary or less	46	87	41	3	2	35	11	26	60	9	19	70	..	58	8	72
		Lower secondary	40	79	39	2	2	34	7	28	47	7	8	65	..	44	5	} 57
		Higher secondary	29	79	34	3	2	23	5	21	39	4	5	61	..	29	7	
		Post-secondary	15	69	33	1	2	16	1	26	28	7	6	53	..	7*	10	51
	35–44	Elementary or less	59	90	44	5	7	54	18	50	72	21	13	74	..	71	9	82
		Lower secondary	57	78	48	4	6	48	13	43	50	14	17	66	..	57	14	} 68
		Higher secondary	43	82	39	2	4	40	6	37	43	14	13	62	..	53	13	
Post-secondary		33	75	37	6*	4	37*	7	19*	35	8*	2	57	..	46*	8	58	

See NOTE in table 2.

**Table 14** Percentages of current users using modern and primitive methods of contraception for selected subsamples<sup>a</sup>

	B	CS	DK	SF	F	GB <sup>b</sup>	H	I	N	PL	R <sup>c</sup>	E	USA <sup>b</sup>	YU
<i>Percentage using modern methods</i>														
Subsample 1	77	42	48	64	66	84	82	33	65	14	2	64*	72	17
Subsample 2	29	26	40	49	37	49	38	11	55	6	—	8	72	7
<i>Percentage using primitive methods</i>														
Subsample 1	16	34	—	—	28	4	13	41	9	63	80	17*	6	55
Subsample 2	65	44	4	9	56	18	51	73	16	77	90	82	9	85

Unless otherwise stated:

<sup>a</sup> Subsample 1: Women aged < 25, living in urban area, with higher secondary or post-secondary education.

Subsample 2: Women aged 35–44, living in rural area, with elementary or less education.

<sup>b</sup> Subsample 1: Women aged < 25 with higher secondary or post-secondary education.

Subsample 2: Women aged 35–44 with elementary or less education.

<sup>c</sup> Subsample 1: Women living in urban areas with higher secondary or post-secondary education.

Subsample 2: Women living in rural areas with elementary or less education.

See NOTE in table 2.

differential is kept constant. This should be helpful in answering a possible argument that the observed differentials by age or education are caused by the association of those variables with current residence. Table 11 examines differentials by current residence and education when wife's age is controlled. The same procedure is then applied in tables 12 and 13 to the incidence of the primitive methods of contraception. Neither wife's age nor her education appear to be more strongly associated with the use of modern methods in towns than in villages. Use of primitive methods increases somewhat more steeply with age in urban than in rural areas but there are exceptions to this. The negative association between such uses and wife's education appear to hold for both types of current residence.

Another way of gauging the range of contraceptive options is to select a subsample of respondents consisting of women belonging to categories characterized by high incidence of modern methods (for instance, those of young age and good education in urban residence) and to compare their uses with a subgroup expected to rely on the primitive methods (older respondents of poor education in rural residence). This approach amounts, in fact, to selecting some figures from a three-way classification of current users (by method). Such data are shown in table 14, where one can see that the ranges vary greatly between countries. It is worth noting that there appears to be almost no variation between the two extreme groups in the USA (where only age and education are considered, in the absence of the current residence variable). For the use of modern methods, the ranges are quite small in Denmark and the Netherlands, but in several countries (Belgium, Hungary, Italy, Poland, Spain and Yugoslavia) there are more than twice as many users in subsample 1 than in subsample 2. The differences between the two subgroups are also considerable for the primitive uses, except in the countries of eastern Europe where such methods are still popular even among the women exposed to rapid modernization.

### 5.3 TRENDS OVER TIME

Subject to some qualifications, the data on current uses by method, derived from the recent WFS surveys in Europe

and the USA, can be compared for ten countries with those presented in the earlier ECE report on fertility and family planning in Europe around 1970.

As indicated in the introduction, several adjustments of national data have been made to improve comparability over time (see also footnotes to table 1). Nevertheless, the 1970 Danish data included sterilization among 'other methods', and the 1975 data excluded sterilization altogether.

Subject to these reservations, the data shown in table 15 do indicate the extent of the 'contraceptive revolution' in several countries of Europe during the 1970s. The most dramatic changes are those that took place in England and Wales and in Hungary over the years 1966/7–1976/7. In England and Wales the use of sterilization, IUD and the pill increased enormously (from 21 to 66 per cent), whereas withdrawal and the rhythm method virtually disappeared. In Hungary, the incidence of sterilization is still negligible, but the use of other modern methods rose from nil in 1966 to as much as 65 per cent in 1977, and the use of primitive methods (mostly withdrawal) declined from about two-thirds to about one-quarter of all users. Modernization of methods was also fast in France over the period 1972–7, when use of the IUD, pill and sterilization rose from 19 to 52 per cent of all users. Very little progress was made in Yugoslavia, where the 1976 pattern appears hardly different from that of 1970, and where primitive methods prevail now as they did before. Somewhat more advance was registered in Poland (especially with respect to the pill) and, even more so, in Czechoslovakia (also mostly with respect to the pill). In Finland, an interesting shift appears to have occurred away from the pill towards IUD. In the USA, use of sterilization rose considerably and that of the pill and the condom declined.

### 5.4 CONCLUSIONS

The patterns of current contraceptive use vary widely in Europe. The most modern methods, such as IUD, the pill and sterilization, taken together, prevail in several countries of western and northern Europe (Great Britain, Denmark,

**Table 15** Current users by method of contraception used, around 1970 and around 1975 (figures show percentage of all current users in the given year)

	Czecho-slovakia		Denmark		England and Wales		Finland		France		Hungary		Netherlands		Poland		USA		Yugoslavia	
	1970	1977	1970	1975	1967	1976	1971	1977	1972	1977	1966	1977	1969	1975	1972	1977	1970	1976	1970	1976
<i>All current users</i>	100	100	100	100 <sup>b</sup>	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
IUD	14	19	4	14	2	10	4	35	2	13	—	13	1	6	1	2	9	9	2	3
Pill	4	15	37	35	19	35	26	14	17	34	—	49	45	66	4	10	41	34	9	9
Condom	19	14	30	39	41	23	40	40	12	8	18	5	23	14	17	19	17	11	6	4
Withdrawal	52	31	7	2	25	6	21	3	52	27	64	23	9	3	38	25	3	3	73	65
Rhythm	3	7	2	1	5	1	1	1	14	9	4	5	19	4	33	41	8	5	3	8
Sterilization	—	3	..	..	..	20	—	5	—	5	—	2	..	6	..	..	16 <sup>c</sup>	25	..	..
Other	8	11	20 <sup>a</sup>	10 <sup>b</sup>	8	4	8	2	3	2	15	3	3	2	8	4	7	12	8	11

<sup>a</sup> Including sterilization.

<sup>b</sup> Excluding sterilization.

<sup>c</sup> Westoff and Ryder, *op. cit.* table II.3, p 19.

See footnotes in table 1.

Netherlands, Finland) to an extent now lower than that registered in the USA. There are still some countries in this part of Europe where resort to the most primitive methods (safe period and withdrawal) is quite considerable (Belgium, France). Even there, however, the younger and better educated women rely on IUD and the pill to an extent not smaller than that found among the American women. It is characteristic that within the USA there appears to be little variation between women by education and age with respect to the overall incidence of modern methods, even

though sterilization is much more popular among women above than below the age of 35.

In other words, it can be said that the contraceptive revolution has reached a few countries in western and northern Europe, and also some selected subgroups of women in many other countries of the region. However, with the notable exception of Hungary, this is not at all true of the eastern and southern regions of Europe. Here, the departure from primitive methods of contraception has been rather slow, and these still prevail even among the young and the better educated women living in towns.

## 6 The Incidence of Unplanned and Unwanted Pregnancies

As already indicated in the introduction, the WFS surveys in Europe have provided some information on unplanned and unwanted pregnancies which can be compared between countries, subject to some qualifications (see p 9). It can be argued that the incidence of such pregnancies could be indicative of the extent and effectiveness of contraceptive uses in the given country. To test this proposition, tables 16 and 17 have been prepared showing, in turn, the percentages of unplanned and unwanted pregnancies of all pregnancies, according to such variables as the number of past pregnancies, wife's education, marriage cohorts, methods of contraception currently used (modern *versus* primitive) and wife's age. Some two-way cross-tabulations have also been prepared, introducing current uses of contraception as the explanatory variable and, in turn, the age and the desired family size as controls. The latter tables are not printed here for reasons of space.

Looking first at the overall figures on unplanned pregnancies shown in the second row of table 16, one can see at once that the incidence of such pregnancies does not appear to be related to the use and effectiveness of family planning across countries. The most striking case is Spain, a country with relatively low use of contraception and high incidence of inefficient methods, but only nine per cent of pregnancies unplanned, by far the smallest figure among the countries covered. Comparisons between other countries are affected by comparability problems (see footnotes a, b and c), but it is quite clear that the expected association does not hold on a cross-country basis.

The results conform somewhat more to expectations for some of the selected explanatory variables. Thus the incidence of unplanned pregnancies increases with parity almost everywhere, the USA and Belgium being the only exceptions; and the increases are particularly steep in the east European countries. Similarly, better education reduces the incidence of unplanned pregnancies everywhere except France and Poland, but perhaps to a smaller extent than expected.

With the increasing prevalence of contraceptive use and improvement in methods over time, one would expect unplanned pregnancies to diminish for the more recent marriage cohorts. This appears to be the case for most countries, but there are exceptions, the notable one again being the USA. No doubt the most unexpected results are obtained for the breakdowns of the dependent variable by modern and primitive methods of contraception. For this distinction the inter-country differences are not very large, but in all countries they go in the opposite direction to that foreseen. Women using modern methods of contraception

had everywhere more unplanned pregnancies than those using primitive methods. This conclusion is not influenced by cross-tabulation of data by age and desired family size as controls. Age by itself does not seem to be systematically related to unplanned pregnancies.

For most countries the incidence of unwanted pregnancies is between one-half and one-third of that of all unplanned pregnancies, varying from only 2 per cent of all pregnancies in the Netherlands and Spain to about 15 per cent in Czechoslovakia and France (see table 17). This indicates that, when really needed, couples' control over pregnancies is quite tight in Europe.

Table 17 shows also that the incidence of unwanted pregnancies is much more clearly associated with the set of explanatory variables chosen than that of unplanned pregnancies.

It will be noticed first that very few unwanted pregnancies occur among couples with less than three children. For the highest (3+) pregnancy parity, however, the percentage of unwanted pregnancies can in some countries be as much as 20–22 per cent (Czechoslovakia, France, Hungary). A strong negative association appears to exist with wife's educational level and with marriage cohort. However, women using modern contraceptive methods have had somewhat more unwanted pregnancies than those relying on primitive methods, and this pattern does not change when age and desired family size are introduced as controls. In contrast with the unplanned pregnancies, the unwanted pregnancies increase for older women for all the countries shown in table 17. Clearly, the explanatory variables shown in this table are inter-correlated, and some kind of a multivariate analysis needs to be applied to isolate the effect of explanatory variables.

To sum up this section, it can be said that neither the percentage of unplanned pregnancies nor that of unwanted pregnancies appears to be a valid indicator of the prevalence and efficiency of pregnancy planning in Europe. It further appears that the incidence of unplanned pregnancies is still quite high in most countries of Europe, though not necessarily higher than in the USA. Unplanned pregnancies are particularly frequent among couples with three or more children and among less educated women. For the countries for which information is available, the incidence of unwanted pregnancies does not exceed about 16 per cent and is considerably lower in a number of countries. However, this incidence increases quite strongly for larger families and older women, and it is negatively correlated with education of wife and with marriage cohort.

## 7 Unplanned and Unwanted Births

The preceding section described the incidence of unplanned and unwanted pregnancies in the context of contraceptive control or pregnancy planning. A study of family planning should be concerned with birth control, ie it should also examine the extent to which the incidence of unplanned and unwanted births is prevented by resort to induced abortions.

Legally induced abortions occur on a massive scale only in some socialist countries of eastern Europe. There was some relaxation in restrictions on abortions in several countries of western, northern and southern parts of Europe during the 1970s,<sup>10</sup> but this does not seem to have resulted in anything resembling the east European pattern. As indicated above (section 2), the WFS data confirm this pattern, although it is likely that the survey figures underestimate the real state of affairs.

What is most relevant in the context of the present paper is the extent to which the respondents extend their control over family size by preventing unplanned and unwanted pregnancies from turning into unplanned and unwanted births.

It should be noted that the data for Finland and Great Britain shown in table 16 refer to births rather than pregnancies. For the few countries not included in table 17, the share of induced abortions was minimal.

Table 18 shows the induced abortions per 100 unplanned pregnancies for four countries (Czechoslovakia, Hungary, Poland and Romania) and per 100 unwanted pregnancies for two countries (Czechoslovakia and Hungary). These are arranged by the numbers of unplanned and unwanted pregnancies the respondents had had.

Looking at the overall percentages first, one notices that in Romania more than 90 per cent of unplanned pregnancies were terminated by abortion. The corresponding percentages were about 60 in Hungary and 40 in Czechoslovakia. Even more striking are the figures for unwanted pregnancies, more than 80 per cent of which were eliminated in Hungary and nearly 70 per cent in Czechoslovakia.

It follows that in the east European countries only a small proportion of pregnancies result in unplanned births and a minimal proportion in unwanted births. One should bear in mind, however, that the percentages in table 18 are derived from data which may be subject to considerable error both in the numerator and denominator. There has been too little experience in collecting data on unplanned and unwanted pregnancies to pass judgement on their validity. It is well known that information on induced abortion is unlikely to be complete. Our conclusions should therefore be treated with due caution.

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<sup>10</sup> See *Post-War Demographic Trends in Europe and the Outlook until the Year 2000*, Economic Survey of Europe in 1974, Part II, ECE, 1975, pp 124-6.

**Table 16** Percentage of unplanned pregnancies, by number of past pregnancies, wife's education, marriage cohort, current use of contraception and age (figures show percentage of all pregnancies in the given category)

Background variable	B <sup>a</sup>	BG <sup>c</sup>	CS	DK	SF <sup>b</sup>	F	GB <sup>b</sup>	H	NL <sup>a</sup>	PL <sup>a</sup>	R	E	USA
Number of respondents with at least one pregnancy	3144	2521	2844	2674	4597	2050	3061	3474	3632	9167	8339	4479	4433
All	32	65	29	25	37	39	22	34	20	14	38	9	32
<i>Number of past pregnancies</i>													
1	33	56	8	..	31	28	18	12	18	4	7	6	34
2	27	70	15	..	31	32	14	21	18	7	15	8	27
3 +	34	67	37	..	42	44	27	42	23	19	45	10	34
<i>Wife's education</i>													
Elementary or less	34	..	31	26	41	40	27	41	23	15	..	10	34
Lower secondary	33	..	28	27	38	42	25	34	20	12	..	7	38
Higher secondary	29	..	29	21	33	30	17	32	19	13	..	9	32
Post-secondary	18	..	29	20	25	39	13	31	18	14	..	7	28
<i>Marriage cohort</i>													
Before 1960	34	..	33	..	46	44	25	42	..	16	47	10	34
1961–1970	27	..	30	..	33	39	19	35	20	14	33	9	29
1971 and later	43	..	21	..	30	34	21	26	21	11	19	10	38
<i>Current use of contraception</i>													
Modern	38		38	26	39	45	26	37	23	18	..	14	37
Primitive	26		24	20	35	34	19	32	22	14	..	6	25
<i>Age of wife</i>													
< 25	47		21	33	36	37	25	25	28	10	..	10	39
25–34	29		28	25	31	37	19	34	20	14	..	10	29
35–44	32		32	23	42	42	24	40	19	15	..	9	34

<sup>a</sup> Excluding the current pregnancy.

<sup>b</sup> The percentages refer to births rather than pregnancies.

<sup>c</sup> Unplanned pregnancies are those which ended in induced abortion.

See NOTE in table 2.

**Table 17** Percentage of unwanted pregnancies, by number of past pregnancies, wife's education, marriage cohort, current use of contraception and age (figures show percentage of all pregnancies in the given category)

Background variable	B <sup>a</sup>	CS	DK <sup>b</sup>	SF <sup>b</sup>	F	H	NL <sup>a</sup>	E	USA
All	9	16	9	10	16	14	2	2	11
<i>Number of past pregnancies</i>									
1	2	2	..	7	2	—	1	—	3
2	4	7	..	7	6	4	1	—	4
3+	13	22	..	14	22	19	4	3	14
<i>Wife's education</i>									
Elementary or less	11	18	10	13	18	23	3	2	19
Lower secondary	8	16	10	10	15	14	2	1	14
Higher secondary	6	15	6	7	14	10	1	1	10
Post-secondary	4	15	6	5	12	8	1	2	7
<i>Marriage cohort</i>									
Before 1960	13	19	..	16	22	26	..	4	14
1961–1970	6	17	..	8	15	14	3	3	8
1971 and later	3	10	..	7	10	4	1	1	6
<i>Current use of contraception</i>									
Modern	11	23	9	11	18	14	3	3	12
Primitive	6	12	7	12	13	13	1	2	8
<i>Age of wife</i>									
< 25	3	11	6	8	8	4	..	1	7
25–34	6	15	8	7	13	12	..	2	8
35–44	12	19	10	13	21	23	..	3	15

<sup>a</sup> Excluding the current pregnancy.

<sup>b</sup> The percentages refer to births rather than pregnancies.

See NOTE in table 2.

**Table 18** Induced abortions per 100 unplanned and unwanted pregnancies by number of unplanned and unwanted pregnancies, in Czechoslovakia, Hungary, Poland and Romania (percentages)

Number of pregnancies (unplanned or unwanted)	Per hundred unplanned pregnancies				Per hundred unwanted pregnancies	
	Czechoslovakia	Hungary	Poland	Romania	Czechoslovakia	Hungary
1	48	55	29	47	75	97
2	41	56	35	68	69	88
3 or more	39	58	35	94	60	73
All	41	57	33	92	69	86
Total number of pregnancies	1081	1703	1870	11 006	840	742

## 8 Summary

The main purpose of this paper was to show the extent of family planning attained in the mid-1970s by the main countries of Europe and by some population subgroups in these countries, and to compare these data with the high levels obtained in the USA and referred to as a contraceptive revolution.

The dependent variables considered for the purpose included the overall indices of current use of contraception (both in relation to all respondents and in relation to couples exposed to the risk of pregnancy), current uses of specific methods of contraception, the incidence of non-use among exposed women not wanting to have a (another) child, the numbers of unplanned and unwanted pregnancies and the extent to which unplanned and unwanted pregnancies were prevented by induced abortion. The few background variables, selected somewhat arbitrarily, included such demographic determinants as wife's age, the number of living children and date of marriage (marriage cohort), whereas the socio-economic explanatory variables were restricted to the present type of residence (urban/rural) and wife's education.

As a rule, the population universe referred to was that of women below the age of 45, currently married in their first marriage. For comparisons over time references were made to the previous ECE study on fertility and family planning in Europe around 1970.

It is customary to measure the prevalence of contraception by reference to the percentage of current users in relation either to all women or to those exposed to the risk of pregnancy. Such indices were shown to vary greatly between the countries of Europe, in some cases being below and in others above the USA's figures. However, the influence of such measures is limited by the fact that many women are non-users because they want to have a child, and the incidence of this desire may vary between countries. This disturbing effect can be removed by considering the numbers of non-users among the exposed women who declared at the time of the interview that they did not want to have a child. Measured by this standard, the incidence of non-use was in several countries smaller than in the USA, falling below 10 per cent (against 16 per cent in the USA); only Spain and Yugoslavia lagged markedly. In almost all the countries covered, including the USA, non-use appears to be particularly highly correlated (negative) with the educational level of wife; its incidence declines also for the more recent marriage cohorts.

Europe provides a very mixed picture of current uses by method. The USA pattern, characterized by widespread use of the pill and sterilization and, to a much lesser extent, of IUD, appears to be followed only in Great Britain, although the Danish data would probably come close to it had sterilization been treated in the Danish questionnaire as a current contraceptive method. There are several other countries of Europe (including Hungary in eastern Europe)

where the proportion of modern methods outside sterilization is overwhelming. An especially interesting pattern, however, is that of Belgium and France, where resort to modern methods (especially the pill), is quite considerable but appears to co-exist with a surprisingly high percentage of users (around 40 per cent) still relying on such primitive methods as withdrawal or safe period. At the other extreme, one finds Bulgaria, Romania and Yugoslavia, where three-quarters or more of current users treat withdrawal or rhythm as the main method of contraception.

Among the modern methods, the pill is used predominantly by young women, IUD by those aged 25–34 and sterilization mostly by women above 35. If the three modern methods are considered jointly, the USA data show surprisingly little variation by such background variables as wife's education or marriage cohort. The opposite appears to be true of most countries of Europe, where modern use increases for better educated women and for the more recent cohorts. Comparisons with the 'around 1970' data show a considerable advance in most countries of Europe in the 1970s with respect to modernization of means of contraception. There are, however, exceptions such as Yugoslavia, and probably Bulgaria and Romania (for which the 1970 data are not available). Moreover, there are still countries where primitive methods predominate, especially in such categories as less-educated older women living in rural areas.

It was hoped to use information on unplanned and unwanted pregnancies to throw some light on the relative extent and effectiveness of contraceptive uses in the various countries of Europe. The results were disappointing, probably because the mother's attitude to the desirability of the given pregnancy varies both between countries and between various categories of respondents distinguished, especially by age and education. It appears, nevertheless, that the incidence of unplanned pregnancies is quite high in Europe, though not necessarily higher than in the USA. In most countries (including the USA) the percentage of unwanted pregnancies among all pregnancies oscillates between 10 and 15 per cent.

The survey data made it possible to calculate, for a few east European countries, the incidence of induced abortions per 100 unplanned and unwanted pregnancies. Although probably subject to quite considerable error, our figures indicate that abortion eliminates between one-third (in Poland) and as many as 90 per cent (in Romania) of unplanned births, and reduces the incidence of unwanted births by some 70–80 per cent in Czechoslovakia and Hungary. Given the still very high use of primitive methods of contraception in most east European countries, there is no doubt that abortion plays a crucial role in reducing their fertility levels.