

# CONTEMPORARY JEWISH FERTILITY: AN OVERVIEW

Sergio DellaPergola

## Introduction

While in a recent past, scholars lamented the absence or the poor quality of information concerning levels, trends, and correlates of fertility among Diaspora Jews, over the last fifteen years a genuine "data revolution" has occurred in this particular area of Jewish population studies (Glikson, in print). On the one hand, several retrospective country monographs have created new openings as to the unfolding of Jewish fertility in European countries over the past one hundred and fifty years (Coale, Anderson and Harm, 1979; Knodel, 1974; Livi Bacci, 1977). The picture emerging from such cross-cultural observation of Jewish fertility transition is one of wide variation in the timing of initial fertility reduction and in the tempo of the subsequent stages of change. Such variation reflects to some extent the variety of cultural and socio-economic environments to which Jewish communities were exposed in different regions of the world. The Jews, however, generally displayed an earlier and speedier transition from the higher fertility levels of the past - possibly also connected with the implementation of traditional social and religious norms - to the low levels typical of an efficiently contracepting group (Bachi, 1976, 1981).

On the other hand, recent large scale countrywide population surveys undertaken in a few Western countries have provided a rather detailed picture of the levels of cumulative Jewish fertility close to the date of such investigations, and of the retrospective dynamics over several decades. These major Jewish surveys, together with a number of official population censuses, a few other official data sources, and several other more sporadic data or indirect estimates for various Jewish communities, not to speak of major work carried out on Israel's Jewish population, form an unprecedentedly rich data base toward assessing and interpreting Jewish fertility at a global level (DellaPergola, 1980a; Bensimon and DellaPergola, forthcoming; Goldstein, 1981a; Bonham, 1977; Watts, 1980; Canada, Statistics Canada, 1974; Westoff and Ryder, 1977; Dubb, 1980; Altshuler, 1979; Friedlander and Goldscheider, 1978).

A remarkable convergence has characterized the recent fertility experience of Jews in European, American, and other transoceanic countries, in spite of their quite different exposure to the effects of Jewish international migration, and of their position in rather different geopolitical contexts. During the late 1960s and 1970s, almost all Jewish Diaspora populations displayed much lower birth rates than the general population in the respective countries (see Table 1), whose natality was rapidly declining as well. This differential had already been firmly established for several past decades. The fact that Jewish Diaspora

Table 1. Crude Birth Rates Among Jewish and Total Population - Selected Countries, 1890-1975

Country	1890-95		1910-15		1930-35		1950-55		1970-75	
	Jew.	Tot.	Jew.	Tot.	Jew.	Tot.	Jew.	Tot.	Jew.	Tot.
<u>Europe</u>										
Austria (a)	22	32	13	19	4	6	5	8	7	10
Belgium (b)							( 8)	13		
Bulgaria	38	38	31	41	17	29				
Czechoslovakia					18	22	13	21		
Bohemia	24	35	13	28	6	19				
Moravia-Silesia	32		15	30	7	20				
Slovakia					17	27				
Carpatho Russia					33	38				
Denmark									13	17
Finland									10	17
France									( 9)	15
Germany	23	37	15	27	6	15	11	16	5	11
Great Britain									10	15
Greece									( 7)	18
Hungary	36	42	25	33	11	22				
Italy	16	35	15	31	12	23	10	18	10	16
Luxembourg									5	12
Netherlands			20	24					(10)	(i) 21 (i)
Norway									8	14
Poland	42	43	27	37	19	29				
Rumania	43	41	27	43	15	32				
Sweden									5	14
Switzerland							11	17	12	14
<u>USSR</u>	36	50			24 (c)	43 (c)				
Moldavia									17	19
RSFSR	34 (d)	49 (d)	18 (e)	28 (e)					( 6)	18
Ukraina							10	21		
Uzbekistan							23	37		
<u>Overseas countries</u>										
Canada					14	24	15	28	7	12
United States									(10)	17
Argentina			(38)	42	(23)	29	(16)	26		
Brazil									(10)	(f)
South Africa									16	23
Australia							14	23		
<u>Africa, Asia</u>										
Algeria	47	38 (g)								
Tunisia					33	35	33	39		
Turkey									13	30
<u>Israel</u>					30		30		24	
By origin group (h)										
Europe-America									21	
Africa-Asia									29	

Note: Crude Birth Rates may refer to years slightly different than indicated time periods. Figures in parentheses indicate indirect estimates, based on population age-distribution.

(a) Vienna; (b) Brussels; (c) 1926; (d) European Russia, 1900-1904; (e) Petrograd; (f) Sao Paulo, 1963-67; (g) 1901-05; (h) Born abroad and Israel-born by birthplace of father; (i) 1961-65.

had achieved, or was bound to achieve, nearly universal sub-replacement fertility levels had recently stimulated a growing body of concerned literature about the overall Jewish demographic picture and its implications for Jewish survival in the longer run (Goldstein, 1981b; Schmelz, 1981).

The study of contemporary Jewish fertility involves a large number of analytic issues. Some are of general interest in the investigation of family processes in post-transitional societies characterised by low, efficiently controlled fertility, or in the comparison of the demographic behaviour of the same ethnic groups in different countries; some other issues are related to the interpretation and projection of population trends in a broad Jewish national context. A general question, cutting across these different analytic perspectives, is whether characteristic patterns of family growth can be detected among the Jewish population. More specifically, starting from the well documented fact of efficient contraception by Jews (see, e.g. Goldscheider, 1981), can we point to one key factor - whether related to social class, or to culture, or multivariate - in determining temporal and geographical variation in observed Jewish fertility patterns? Can we assume that a broad socioeconomic and cultural convergence of industrial societies - where nearly all of Diaspora Jews live - is at work, which would determine a blurring off of local particular trends? Can we assume that Jewish Diaspora communities quite uniformly tend to respond to their exposure to the social-structural and psycho-social constraints of minority status? What is the relative weight, or rather inherent ordering of ideological-normative, as contrasted to demographic and socioeconomic factors in determining Jewish family size preference and behaviour? And how do we explain the difference between fertility levels of Diaspora Jews - in absolute terms, among the lowest in the world - and those of comparable Jewish groups in Israel - among the highest in developed, industrial societies?

Clearly, we cannot comprehensively deal here with all these issues within the given space limitations. Our more circumscribed goal is to push one step forward the analytic description of comparative Jewish fertility by presenting several excerpts from recent research findings. Rather than attempting to find a general explanation of Jewish fertility patterns in the Diaspora and in Israel, we aim at unveiling some of their recent dynamics and differentials. We shall focus particularly on various *time mechanisms* that operate within a general pattern of relatively low fertility, and tend to produce significant differentiation in the family formation behaviour of Jews as compared to non-Jews in the same countries, and of different Jewish sub-populations. Our general question, then, becomes: what counts more and what counts less in the contemporary fertility experience of the Jews? Hence, one might also obtain some hints at what might count more or less in the foreseeable future.

Table 2. Children Ever-Born to Jewish Women<sup>(a)</sup> With Virtually Completed Fertility (Aged 35-39 and Over at Enumeration), by Women's Year of Birth - Selected Countries, 1960s and 1970s.

Country	Year	Year of Birth of Women									
		Up to 1895	1895-1900	1900-1905	1905-1910	1910-1915	1915-1920	1920-1925	1925-1930	1930-1935	1935-1940
Canada	1961	3.3	2.3	2.0	1.8	1.9	2.0	2.2			
Canada	1971		3.0	1.9	1.8	1.9	2.0	2.3	2.4	2.4	
United States	1971		2.2	1.4	1.6	1.8	2.1	2.4	2.2	2.4	
Argentina	1960	3.2	2.4	2.2	2.0	2.0	2.0	1.9			
Australia	1966	1.8	1.4	1.4	1.4	1.6	1.7	1.9	2.1		
South Africa	1974		2.6	1.9	1.7	1.9	2.1	2.4	2.6	2.6	2.8
Italy	1965	1.9	1.7	1.6	1.8	1.3	2.0	1.9	1.6		
Netherlands	1966						1.8	1.7	1.8		
Switzerland	1970 <sup>(b)</sup>		1.7	1.6	1.6	1.6	1.7	1.9	1.9	1.9	
France	1972-76		2.7		2.8	2.6	2.6	2.3	2.5	2.6	1.9
Thereof, by birthplace:											
Europe <sup>(c)</sup>	1972-76		2.2		1.6	1.8	1.7	1.6	1.9	2.0	1.8
Africa-Asia	1972-76		4.4		4.9	3.8	3.8	3.1	3.0	3.1	2.1
Israel <sup>(d)</sup>	1961	3.8	3.4	3.0	3.0	3.0	3.2	3.1			
Thereof, by birthplace:											
Europe-											
America	1961	3.0	2.3	2.0	2.0	2.2	2.2	2.2			
Africa-Asia	1961	6.0	6.3	6.1	6.2	6.1	5.9	5.1			
Israel <sup>(d)</sup>	1972						3.2	3.3	3.5	3.4	
Thereof, by birthplace:											
Europe-											
America	1972						2.1	2.1	2.3	2.3	
Africa-Asia	1972					5.8	5.8	5.4	4.9	4.5	

(a) All marital statuses.

(c) Composite of fertility data by duration of marriage, and proportion ever-married by age. Assuming marriage cohort 1966-70 corresponds to age-group 20-24 (birth cohort 1945-50), marriage cohort 1951-55 corresponds to age-group 35-39 (birth cohort 1930-35); etc.

(c) Including France.

(d) Including Israel-born.

Sources: DellaPergola (1980a, 1980b); Dubb (1980); Mayer (1977); Schmelz (1981); Schmelz and DellaPergola (1974); Israel, Central Bureau of Statistics (1965; 1976).

## Temporal and Geographical Variation

### *Cross-sectional Perspective*

Table 2 presents the cumulative fertility rates of Jewish women with completed fertility, by birth cohort, for several countries. Reported fertility relates to all women, regardless of marital status. The main stages of interwar fertility decline, postwar increase, and more recent renewed decline appear among most of Diaspora communities. Yet, there are important geographical variations in the intensity of these major trends. Among the major differentials:

a) Jews in European countries generally display a lower fertility among cohorts which were at the peak of reproduction before and during World War II. Moreover, the postwar fertility increase was generally less prominent and shorter lived than in North America.

b) Fertility behaviour of North African immigrants to Western Europe rapidly converged to the lower levels of the more veteran Jews in that continent.

c) Depression effects were very sharp in the United States. A somewhat lower Jewish fertility in the United States as compared to Canada, seems to reflect similar differentials in the general population of those countries.

d) Other Western Jewries, e.g. in Australia and Argentina, displayed a far weaker, or none, postwar fertility increase. Interwar depression was relatively minor in some of these countries.

e) It should be noted that where immigrants constitute a substantial proportion of total Jewish population, fertility processes may have occurred in the countries of origin. Trends of the immigrants, as contrasted to local-born sections of Jewish population need to be inspected separately (see below).

f) Cumulative fertility rates of Jewish women in Israel, besides the past high fertility levels of Jews in Asia and Africa, reflect the recent stabilization or slight increase of fertility among European immigrants. These changes are better appreciated in the perspective of period fertility measures.

### *Period Perspective*

As expected, if we superimpose period fertility measures (Table 3) over the corresponding cumulative fertility rates of cohorts with completed fertility, time patterns are similar but the range of variation is greater. Jews followed a quite parallel course to that of general populations in each of the respective countries of residence (Figure 1). Thus, the more extended unfolding of postwar fertility increase in the United States, as compared to a European country such as France, is well reflected in Jewish period fertility levels. Jewish total fertility rates in the United States, Canada, South Africa, and France consistently reached a level of between 50% and 90% of general TFR. These ratios were lower during periods of lower fertility and higher

Table 3. Period Fertility Measures Among Jewish and General Populations - Selected Countries, 1930-1980

Population	Five years period around year (approx.)										
	1930	1935	1940	1945	1950	1955	1960	1965	1970	1975	1980
<b>Part 1. Total Fertility Rates</b>											
<u>United States</u>											
Jewish	1.7	1.3	1.5	2.4	2.5	2.8	2.5	1.9	1.5	1.3	
Total whites	2.4	2.1	2.3	2.7	3.1	3.5	3.5	2.8	2.2	1.8	
<u>Canada</u>											
Jewish	1.5		1.4					2.1	(a)		
Total whites	3.2	2.8	2.8	3.2	3.5	3.8	3.9	3.1	2.3	1.9	
<u>South Africa</u>											
Jewish			2.1	2.7	3.0	3.1	3.0	2.7	2.7		
Total whites					3.4	3.4	3.5	3.5	3.2		
<u>France</u>											
Jewish		1.5	2.0	1.4	2.5	2.0	2.2	2.2	1.4		
Thereof by birthplace:											
Europe (b)		1.5	2.0	1.4	2.5	2.0	2.2	1.7	1.2		
Africa-Asia		4.6	4.5	4.5	4.0	3.7	3.5	2.6	1.7		
Total	2.3	2.2	2.1	2.1	3.0	2.7	2.7	2.8	2.6	2.2	
<u>Israel</u>											
Jewish(c)		2.6	2.3	3.2	3.6	3.7	3.5	3.4	3.4	3.3	2.8
Thereof, by birthplace:											
Europe-America			1.8	2.9	3.2	2.8	2.4	2.5	2.7	2.8	2.7
Africa-Asia			4.6	4.8	5.5	4.9	4.1	4.6	4.2	3.8	3.1
<b>Part 2. % Ratios: Jewish/Total</b>											
United States		69	59	68	87	82	81	71	68	66	
Canada		47		49					68		
South Africa						88	91	86	77	84	
France			68	95	67	83	74	81	79	54	
<b>Part 3. % Ratios: Jews in France/in Israel, by birthplace</b>											
Europe-America				111	48	78	71	92	68	44	
Africa-Asia				98	94	73	63	69	57	40	

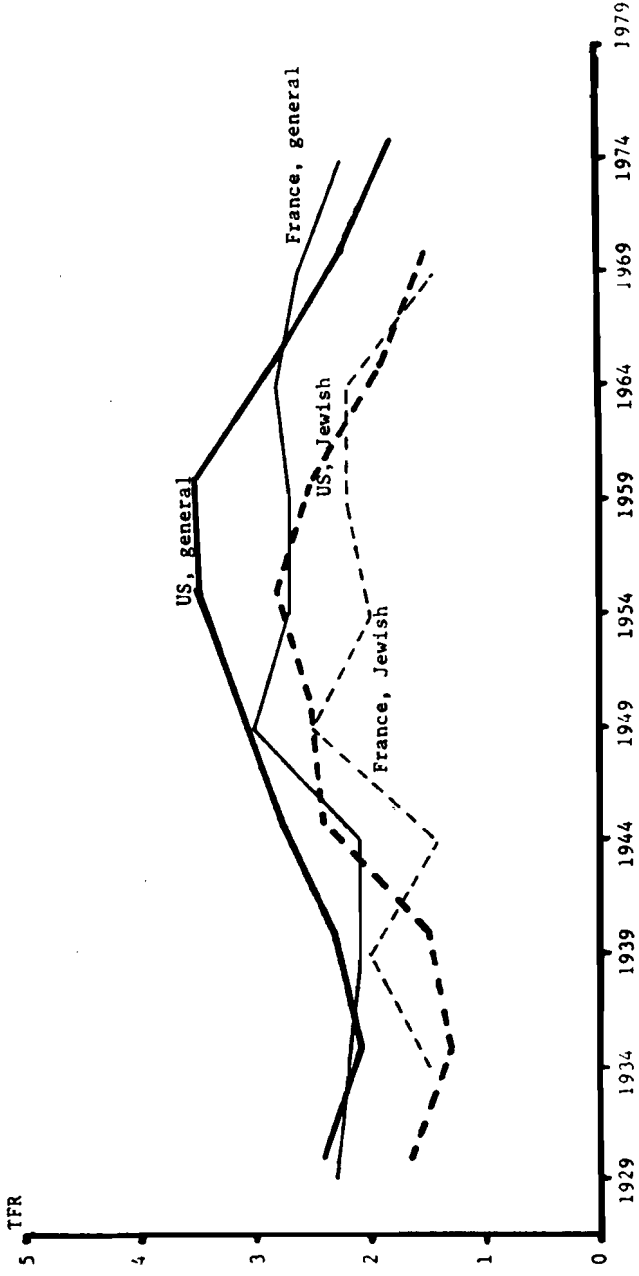
(a) Based on intercensal change of cumulative fertility rates within relevant age groups, 1961-1971.

(b) Including France.

(c) Including Israel-born.

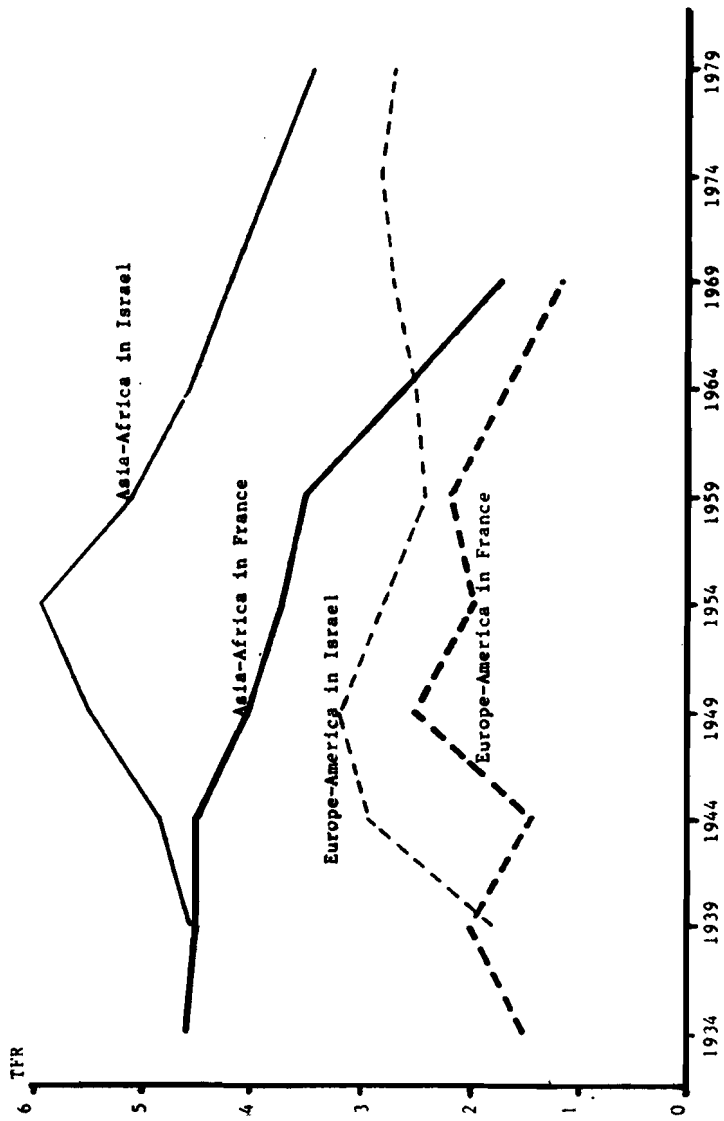
Sources: DellaPergola(1980a, 1980b); Dubb (1980); Spiegelman (1950); Festy (1979); Israel Central Bureau of Statistics (various issues).

Figure 1. Total Fertility Rates Among Jewish and General Populations in the United States and in France - Five-Year Averages Around Selected Years, 1929-1974



Source: Table 3.

Figure 2. Total Fertility Rates Among Jews of European-American and of Asian-African Origins in France and in Israel - Five-Year Averages Around Selected Years, 1934-1979



Source: Table 3



during periods of relatively higher fertility, which indicates greater responsiveness of the Jews to societal changes affecting fertility trends. Usually the Jews anticipated by a few years the rest of population in such periodical swings, which also generally occurred among the better educated (in the United States: Rindfuss and Sweet, 1977). The most recent available data point to a rapid convergence of Jewish Diaspora fertility toward the minimum levels of the interwar period.

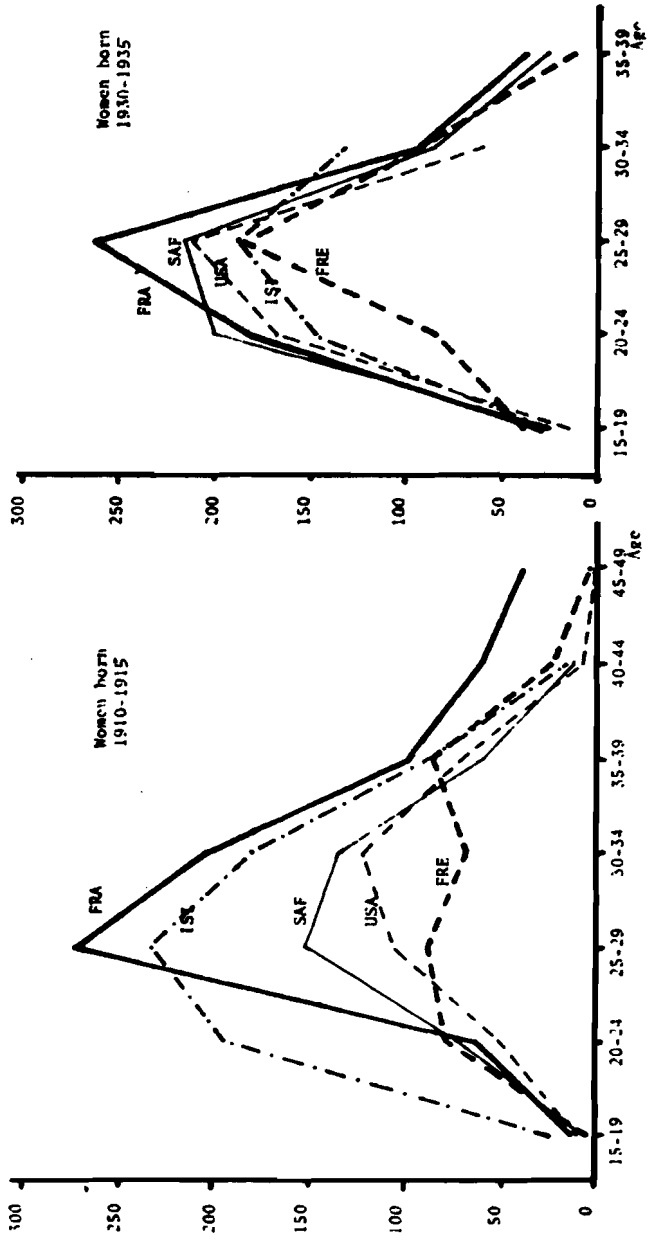
Since the late 1960s, on the other hand, Israeli Jewish fertility has reached a relatively stable and high *plateau* (as compared to other developed countries: Festy, 1979). This is underlined by a comparison of the two major geographical origin groups in Israel and in France: the European, and the African-Asian born. In both countries Jewish fertility is rapidly converging to a common countrywide standard, which, however, is quite different in each country (Figure 2). The Israel-Diaspora differential has widened in recent years. It should be noted, however, that at least until 1970, Israel's European total fertility was lower than among the Jews of South Africa - a community of predominantly European stock. This might well reflect the peculiar patterns of occupational structure, income, housing, and availability of household personnel that have prevailed until recently among South Africa's white population (Dubb, DellaPergola, et.al., 1978).

#### *Cohort Perspective*

Deeper insights into the dynamics of Jewish fertility are obtained from Table 4 and Figure 3, in which the age-specific schedules of similar birth cohorts are compared in different environments. Jewish women are relatively "slow starters" in their family growth process, and tend to reach the peak of reproduction at age 25-29, five years later than usually found among comparable non-Jewish populations (Festy, 1979) - possibly in connection with higher ages at marriage and rare pre-marital pregnancies among Jewish women. Younger cohorts tend to compress reproduction within fewer years, and to peak at younger ages. Effects of the postwar fertility increase are substantially similar in the different Jewish populations reported, though they affected more cohorts in overseas countries than in Europe. On the other hand, differences in the experience of older cohorts (such as women born in 1910-15) are striking. In each country, interwar depression and World War II caused reduction and postponing of births, only partially compensated for by more frequent late births during the early phases of postwar recovering. These depressing effects appear to be far more pronounced among French Jews of European stock who were exposed to German occupation and persecution. French Jews of Afro-Asian stock display more traditional fertility schedules, though some of them suffered German occupation - either in North Africa or in France. Economic depression effects in the United States appear to have been far heavier than in South Africa. Jewish Diaspora cohort fertility is thus dominated by local effects,

Figure 3. Age-Specific Birth Rates per 1,000 Jewish Women - Selected Countries, Cohorts Born 1910-15 and 1930-35

FRA = France, born in Africa-Asia  
 FRE = France, born in Europe-America  
 ISI = Israel, born in Israel  
 SAF = South Africa.  
 USA = United States



Source: Table 4.

Table 4. Age Specific Birth Rates per 1,000 Jewish Women<sup>(a)</sup> - Selected Cohorts and Countries, 1970s.

Country and approximate year of birth	Age at survey	Age interval						
		15-19	20-24	25-29	30-34	35-39	40-44	45-49
<b>United States, 1971</b>								
1941-45	25-29	9	109					
1931-35	35-39	16	172	211	64			
1921-25	45-49	27	111	185	100	31	4	
1911-15	55-59	9	50	106	122	70	7	0
1901-05	65-69	14	68	99	52	22	11	2
<b>South Africa, 1974</b>								
1945-49	25-29	6	232					
1940-44	30-34	22	218	214				
1930-34	40-44	20	200	216	84	26		
1920-24	50-54	12	122	200	124	36	2	0
1910-14	60-64	4	72	152	134	60	12	0
1900-04	70-74	16	100	162	98	42	10	6
<b>France, born in Europe, 1972-6</b>								
1945-49	25-29	0	58					
1940-44	30-24	17	66	95				
1930-34	40-44	37	84	184	94	14		
1920-24	50-54	13	76	126	79	28	6	0
1910-14	60-64	3	78	88	68	86	22	2
1900-04	70-74	6	103	99	57	102	6	0
<b>France, born in Africa-Asia, 1972-6</b>								
1945-49	25-29	9	40					
1940-44	30-34	30	177	150				
1930-34	40-44	29	181	267	96	38		
1920-24	50-54	18	126	238	160	60	20	0
1910-14	60-64	12	63	273	209	98	60	38
1900-04	70-74	27 <sup>(b)</sup>	91	346	171	94	64	15
<b>Israel, born in Israel<sup>(c)</sup></b>								
About 1945		16	156					
About 1935		26	148	188	132			
About 1925		24	178	202	118	54	12	
About 1915		24	194	232	180	86	16	

(a) All marital statuses.

(b) Adjusted.

(c) Based on vital statistics

Sources: DellaPergola (1980a, 1980b); Dubb (1980); Friedlander (1974).

which, however, to some extent operate simultaneously in different countries and are shared by the respective Jewish populations. Yet, certain typically Jewish fertility patterns tend to appear now and again in different places, in connection with the substantial structural similarity of Jewish Diaspora communities.

Comparable cohorts of Israel-born women in Israel show, again, different behaviours than those prevailing in the Diaspora. Among women born in 1910-15, relatively unaffected by the lowering factors just mentioned, an early take-off in fertility schedules is largely connected with younger ages at marriage. The interesting feature among the younger women (born 1930-35) lies in the far less drastic stoppage of reproduction after age 30. Because of the rapid fertility decline in the Diaspora in more recent years, the schedules of more recent Israeli cohorts are expected to show up at the top of the range of experiences investigated here.

### Factors of Change and Differentiation

We turn now to a brief review of a few demographic, socioeconomic, and ideological-normative factors that have played, and may be expected to play, a significant role in Jewish fertility change and differentiation.

#### *International Migration and Immigrants Absorption*

The substantial role of international migration in Jewish population dynamics raises the question of environmental influences on immigrants' fertility experiences. The importance of these exposure effects has been shown in analyses of fertility change in Israel (Friedlander, Eisenbach, and Goldscheider, 1980). Similar effects can be shown for Jewish immigrants in France (Table 5), by comparing the number of children born to women married in France or abroad. The similar geographical composition of Jewish migrants to France and to Israel (by continents of origin) adds to the comparison of immigrants absorption in the two countries the flavor of a nearly ideal experimental design (Bensimon and DellaPer-gola, forthcoming). In France, as in Israel, greater exposure to the absorbing society had a significant impact in lowering fertility levels of North African Jewish immigrants. Besides, environmental conditions for the Jews in France were very exacting during World War II. Migrant selectivity must also be taken into account: North African migrants to France, rather than to Israel, were substantially more modernized and already featured more widespread family-size limitation before migration. The record of European immigrants to France is a mixed one: no clear trend emerges as contrasted with some fertility increase among European immigrants to Israel.

Table 5. Children Ever-Born to Ever-Married Jewish Women Who Migrated to France, by Birthplace, Place of Marriage, Year of Marriage, and Age of Women - France, 1972-6

Year of marriage age	Born in Europe			Born in Africa-Asia		
	Married abroad	Married in France	Difference France-abroad	Married abroad	Married in France	Difference France-abroad
<u>Year of marriage</u>						
1966-1975	1.0	2.0	+1.0	(a)	1.2	(+)
1956-65	(a)	2.3	(=)	2.0	2.8	+0.8
1946-55	3.3	1.9	-1.4	3.5	3.1	-0.4
1946-45	1.4	2.7	+1.3	3.8	3.0	-0.8
Up to 1935	2.5	2.0	-0.5	5.4	(a)	(-)
<u>Age</u>						
20-29	1.0	(a)	(-)	(a)	1.1	(-)
30-39	(a)	2.5	(+)	2.0	2.4	+0.4
40-49	2.0	2.0	0.0	3.6	2.6	-1.0
50-64	1.9	2.0	+1.0	3.7	2.2	-1.5
65+	2.4	1.9	-0.5	5.3	4.6	-0.7

(a) Not enough cases. Trends emerging from these data are shown in parentheses in the "difference" column.

Source: DellaPergola (1980b).

Table 6. Percent Never Married Jewish Women, by Age - Selected Countries, 1960s and 1970s

Country	Year	Age							
		20-24	25-29	30-34	35-44	45-54	55-64	65-74	75+
Argentina	1960	65	28	16	9	5	3	3	3
Thereof: local born	1960	66	29	17	12	8	9	14	28
Canada	1961	38	8		5	7	6		3
Canada	1971	55	13		4	4	7		6
United States	1971	57	15	5	2	3	6	7	13
Thereof: local born	1971	62	18	5	2	3	7	8	8
South Africa	1970	51	13	6	5	5	5	7	9
Italy	1965	76	25	18	11	18	17	18	16
Netherlands	1966	55	25	16	11	8	10	10	12
Switzerland	1970	61	25	8	11	8	11	12	9
France	1972-6	84	48	10	8	5	3	5	2
Thereof by birthplace:									
Europe (a)	1972-76	84	57	8	9	5	4	9	2
Africa-Asia	1972-76	85	40	11	7	4	1	0	2
Israel	1961	33	8	4	2	2	3	2	
Israel	1972	47	16	6	3	2	2	3	.3
Thereof by birthplace:									
Local born	1972	53	19	8	4	4	5	6	5
Europe-America	1972	38	16	6	3	2	2	3	3
Africa-Asia	1972	42	14	5	3	2	2	2	1

(a) Including France.

Table 7. Additional Children Born to Ever-Married Jewish Women<sup>(a)</sup>, by Age Interval and Age at First Marriage - Selected Cohorts, United States, 1971.

Age at first marriage	Age interval						Total children
	15-19	20-24	25-29	30-34	35-39	40+	
Cohort born 1926-1935 (Aged 35-44)							
-18	(0.40)	1.24	0.54	0.21	(0.03)	(0.00)	2.42
19-21	(0.02)	(0.99)	1.06	0.35	(0.03)	(0.00)	2.45
22-24		(0.47)	1.22	0.40	(0.04)	(0.00)	2.13
25-29			(1.07)	1.15	(0.16)	(0.00)	2.38
30-34				(1.48)	(0.54)	(0.03)	2.05
35+					(0.79)	(0.00)	0.79
Cohort born 1906-1915 (Aged 55-64)							
-18	(0.70)	0.66	0.58	0.24	0.13	0.08	2.39
19-21	(0.02)	(0.77)	0.66	0.49	0.12	0.01	2.07
22-24		(0.22)	0.85	0.51	0.19	0.02	1.79
25-29			(0.52)	0.80	0.34	0.04	1.70
30-34				(0.88)	1.08	0.04	2.00
35+					(0.50)	0.18	0.68

(a) Age-specific marital fertility rates can be obtained by dividing figures by number of years in age interval. Figures in parentheses refer to truncated age intervals.

Source: National Jewish Population Study, our processing.

### *Marriage Propensity and Age at Marriage*

The study of fertility trends cannot be severed from an examination of marriage patterns. Table 6 reports percentages of Jewish female singlehood in a variety of communities, and points to the existence of three basic types, by increasing marriage propensity: Jewish communities in Europe; in other non-European Western countries; and in Israel. The effects of disrupting events, such as World War II, on family formation are highly visible among European Jews. More recently, a basic difference in marriage propensity appears between younger adults in Israel and in the Diaspora. Yet, an intergenerational trend toward higher celibacy at younger ages characterizes the local-born, both in Israel and in other countries. The most recent data (such as those for France) point to a massive recent increase in celibacy among the younger cohorts whose impact on fertility may be significant - provided it does not only reflect a temporary trend to postpone marriage. In fact, Table 7 shows that age at marriage does not have a very significant effect on completed fertility - when families are small, and carefully planned. Within single age intervals, the relationship between age at marriage and fertility is strongly positive. Women marrying between ages 19 and 34 - therefore with substantially longer or shorter marital experiences - may well end up with similar family sizes (DellaPergola, 1980a).

### *Educational Attainment*

Table 8, referring to Jews in the United States, suggests that the relationship between educational attainment and fertility should be interpreted more in terms of the different life cycle strategies of family formation of each educational group, and their interference with general societal change affecting period fertility levels, than in terms of the number of total children born. Sign of the relationship shifts twice, from a strongly negative one at younger reproductive ages, to a positive one over later portions of reproductive span, again to a negative one among the rare births at terminal fecund ages. Comprehensive fertility trends over successive calendar years appear to dominate over the differentials related to educational attainments. However, education is a prominent factor in determining the pace of response to a swinging general trend. The more educated were prompter to climb up the upward trend after World War II, and to sink down the downward trend in more recent years (DellaPergola, 1981c).

### *Female Labor Force Participation*

The effect of female labor force participation can only be discussed here in the perspective of a few years close to observation date (Table 9). Within these limits, it is a strongly negative relationship, which also appears to dominate over the net effects of educational attainment on fertility - by flattening them. Although movements

Table 8. Additional Children Born to Ever-Married Jewish Women<sup>(a)</sup>, by Age Interval and Educational Attainment - Selected Cohorts, United States, 1971

Years of schooling	Age interval <sup>(b)</sup>						Total children
	15-19	20-24	25-29	30-34	35-39	40+	
Cohort born 1926-1935 (Aged 35-44)							
0-11	0.42	1.32	0.59	0.39	(0.14)	(0.04)	3.01
12	0.06	0.61	1.11	0.33	(0.12)	(0.00)	2.35
13-15	0.05	0.83	1.06	0.54	(0.04)	(0.00)	2.56
16+	0.03	0.56	1.15	0.47	(0.08)	(0.00)	2.34
Cohort born 1906-1915 (Aged 55-64)							
0-11	0.20	0.37	0.57	0.46	0.37	0.03	2.02
12	0.03	0.26	0.48	0.54	0.28	0.04	1.69
13-15	0.00	0.30	0.51	0.42	0.29	0.06	1.59
16+	0.07	0.16	0.40	0.79	0.84	0.00	2.29

(a) Age-specific marital fertility rates can be obtained by dividing figures by number of years in age interval. Figures in parentheses refer to truncated age intervals.

(b) Data reported in this table reproduce a series of Multiple Classification Analyses, separately run for each column in each panel. MCA is a multivariate regression procedure. Fertility-education relationships appear in this table after controlling for: marriage duration, generational status, region of residence in the United States, total family income in 1969/70.

Source: see Table 7.

Table 9. Adjusted Total Marital Fertility Rates<sup>(a)</sup> Among Jewish Women, by Educational Attainment and Labor Force Status<sup>(b)</sup> - United States, 5-Years Period Around 1970<sup>(c)</sup>

Women's years of schooling	Total	Not in labor force	In labor force
Total	2.06	2.20	0.61
0-11	2.96	3.16	(d)
12	1.40	2.30	0.52
13-15	1.32	1.99	0.49
16+	1.12	1.54	0.74

(a) Sum of age-specific marital fertility rates, adjusted through Multiple Classification Analysis. See note (b) to Table 8.

(b) In week preceding survey.

(c) Affected by cohort truncation.

(d) Not enough cases.

Source: see Table 7.



of women into and out of the labor force may have a decisive effect on our correct understanding of this relationship, it can be suggested that conflicts between female careers and motherhood may generate very powerful constraints on short term fertility levels. More widespread and more permanent female labor force participation might be conceivably related to lower fertility levels in the longer run, *other things being equal*. Further study of the relationship requires detailed birth-and-work histories, not available at present for substantial samples of Diaspora Jews.

### *Jewish Identity*

Finally, the relationship between selected indicators of Jewish identity, and fertility is examined in Table 10, again in the broad time perspective suggested by different marriage cohorts of American Jewish women. An overall positive relationship between each of three (behavioural, ideological, and attitudinal) measures of Jewishness and fertility emerges for each of the marriage cohorts considered. This holds true for the youngest one, both in terms of actual (incomplete) and expected (final) family size. However, the major cyclical trends of American fertility in the interwar period and since World War II had a far greater impact on the number of children across each category, by intensity of Jewishness. Further data, not reported here, from NJPS and other sources (see, e.g., Cohen and Ritterband, 1981) indicate that fertility differentials related to Jewish identity often are larger than those associated with most other socio-demographic variables - within each marriage cohort. But, however important these differentials may be, they are subordinate to the macro socioeconomic determinants of fertility, as shown by the sub-replacement fertility levels of the more strongly identified women who married during the economic depression years.

### Conclusions

Summing up, we seem to be now in a better position toward presenting the first building blocks of a more comprehensive and theoretical approach to Jewish fertility, based on the comparative experiences of the last several decades.

There is, first, a methodological consideration. Fertility patterns really constitute a flow process. A reasonable grasp of the structure of such a process can only be obtained through a dynamic observation of it, especially when fertility levels are generally low, differentials are relatively small, and probably more evident in the provisional perspective of the *timing and tempo of family formation* than in the more definitive one of *completed family size*. Therefore, a combined use of different time-related fertility measures, such as those offered by cross-sectional, period, and cohort - and possibly longitudinal - data, tends to be a necessary prerequisite for the analysis of fertility among the Jews, and of contemporary low-fertility populations in general.

Table 10. Children Ever-Born to Ever-Married Jewish Women, by Selected Jewishness Characteristics and Periods of Marriage - United States, 1971

Jewish characteristics	Up to 1924	1925-34	1945-54	1965-71	
				Actual <sup>(a)</sup>	Expected
<u>Behavioral: synagogue attendance</u>					
Weekly	2.5	1.9	3.0	0.9	2.6
Several Shabbaths a year	3.0	1.5	2.3	0.6	2.3
Holidays and some Shabbaths	2.2	1.8	2.3	0.4	3.2
Main holidays only	2.3	1.7	2.1	0.5	2.2
Never	2.4	1.7	2.2	0.9	2.0
<u>Ideological: preferred denomination</u>					
Orthodox	2.5	1.9	2.2	1.2	3.1
Conservative	2.8	1.7	2.3	0.5	2.7
Reform	1.9	1.6	2.3	0.5	2.1
Other	2.3	1.5	2.0	0.9	2.0
<u>Attitudinal: belief in Jewish religion<sup>(b)</sup></u>					
Strongly	2.7	1.7	2.3	0.6	2.9
Somewhat	2.2	1.8	2.4	0.6	2.1
A little	1.4	1.6	1.7	0.6	2.1
Not at all	1.4(c)	2.0(c)	2.3	0.1	2.1

(a) Highly incomplete fertility.

(b) Information not available for 34% of weighted sample.

(c) Less than 50 weighted cases. Average sample weight = 2.1

Source: see Table 7.

As to the substance of observed trends, in the Diaspora communities investigated at least three different layers of determining factors can be distinguished, in decreasing order of importance.

a) First and most important are the macro socioeconomic determinants of fertility levels and cyclical change in the general, countrywide societal context. The dominant factor in contemporary Jewish Diaspora fertility is this very pervasive, long term societal standard whose unfolding over time has been explained by some demographers and economists, first in terms of the historical secularization and rationalization of fertility norms, and, second, in terms of the interrelationships between changing demographic structural factors, and labor force and income opportunities and constraints (Caldwell, 1981; Coale, 1975; Freedman, 1979; Easterlin, 1978). Jewish subpopulations in each country closely follow general, countrywide fertility trends, though at a lower level. Following international migration, there appears to be rapid adaptation to the patterns of the country of destination.

b) Second, within these broad macro socioeconomic determinants, micro socioeconomic characteristics, i.e. the particular social structure of Jewish minorities, tends to produce periodical twists of Jewish fertility levels around the general trend. Since time patterns of adaptation within a changing general trend are specific to each socioeconomic group, the Jews tend to reflect more the life-cycle strategies of family formation of the population categories in which they are more concentrated. This also largely explains the overall lower than average level of Jewish Diaspora fertility.

c) Third, and subordinate to the two former factors, Jewish identity differentials - no matter how defined - are a determinant of internal variation in Jewish fertility. This variation is consistent over time, and significant, yet quantitatively minor as compared to the general, non-Jewish macro and micro determinants of Jewish fertility levels and fluctuations.

In the latter context, great attention should be paid to a number of psycho-social factors specifically relevant to Jewish subpopulations. We do not deal with the consistently lowering effects of mixed marriage on Jewish fertility and natality, both due to fewer children among mixed couples, and to non-identification with Jewry of a majority of such children. Assuming mixed couples should have the same number of children as homogamous couples, and 50% of the children of mixed couples should be Jewish, mixed marriage has caused a reduction of between 4 per cent and 14 per cent in the total natality levels of Jews in the United States, France, Italy, and the Netherlands, and much higher percentages in smaller local European communities (DellaPergola, 1981a). Another most central aspect of contemporary Jewish fertility - and one of the least studied so far - is the reasons for the significantly increasing effects of migration to Israel on European-American Jewish fertility. The latter has been related to personal selectivity of immigrants with regards to socioeconomic characteristics and fertility targets; to upwardly revision of fertility targets among Western immi-

grants after *aliya*, connected with interacting with African and Asian immigrants (whose fertility was originally higher); to the transition from minority to majority status; and to normative dualism as to ideal family size for Jews in the Diaspora and in Israel - where the existence of a child "insurance" or "hoarding" concern, related to the flow of war casualties and other Israel security problems, has been hypothesized (Bachi, 1977; Friedlander and Goldscheider, 1978; Goldscheider and Friedlander, 1980; Goldscheider and Friedlander, 1981; Jaffe, 1977; Della Pergola, 1981b). A central point in assessing the dynamics of Jewish fertility - and of fertility at all - is the recent changes in the status of the nuclear family as a universal or predominant behaviour in developed societies. Future fertility trends appear to be somewhat dependent on mutations affecting the social institution within which legitimate fertility unfolds.

Analysis of the recently expanded data resources on Jewish population allows now more than in the past for an assessment of the degree of "exceptionality" or "normalcy" of Jewish fertility patterns. It can be hoped that continuing research progress will make the same effort possible in the 1980s as well.

#### Acknowledgements

This paper was written during academic year 1980/81 while I was a Research Fellow at the Institute for Advanced Studies of the Hebrew University of Jerusalem. The Institute's staff kindly and efficiently provided secretarial services. Portions of computer programming were executed by Lena Brodsky. Research on topics related to this paper was initiated in 1978/79 during my stay as Visiting Research Associate at Population Studies and Training Center, Department of Sociology, Brown University, Providence, R.I., U.S.A., whose computer facilities I was given liberal access. Thanks are extended to Prof. Fred Massarik, University of California, Los Angeles, and to Prof. Bernard D. Lazerwitz, Bar Ilan University, Ramat Gan, for providing the original NJPS data upon which we created our American Jewish fertility file. Among those who have commented on findings from this research, I wish to thank particularly Sidney Goldstein, Calvin Goldscheider, Frances E. Kobrin, Roberto Bachi, and Usiel O. Schmelz, but the responsibility for the contents of this paper is solely mine.

## References

- ALTSHULER, M., *Soviet Jewry Today: A Socio-Demographic Analysis*, Jérusalem: Magnes Press, 1979 (in Hebrew ).
- BACHI, R., *Population Trends of World Jewry*, Jerusalem: The Hebrew University, 1976 (Jewish Population Studies).
- BACHI, R., *The Population of Israel*, Jerusalem: CICRED Series, 1974 World Population Year and The Hebrew University, 1977.
- BACHI, R., *Marriage and Fertility in Jewish Traditional Societies: Similarities and Dissimilarities*, Paper presented at Symposium on Demography of the Jews: Historical and Comparative Perspectives, Jerusalem: The Israel Academy of Sciences and Humanities, and The Hebrew University, Institute of Advanced Studies, March 1981.
- BENSIMON, D. and S. DELLAPERGOLA, *La Population Juive en France: Démographie et Identité*, Jerusalem: The Hebrew University and Centre National de la Recherche Scientifique Paris, forthcoming (Jewish Population Studies).
- BONHAM, G., "Expected Size of Completed Family Among Currently Married Women 15-44 Years of Age: United States 1973!" in: *Advance Data from Vital and Health Statistics of the National Center for Health Statistics*, 10, Rockville, Md.: U.S. Department of Health, Education and Welfare, 1977.
- CALDWELL, J.C., "The Mechanisms of Demographic Change in Historical Perspective," *Population Studies*, Vol. 35, no. 1, 1981, pp. 5-27.
- CANADA, STATISTICS CANADA, *Census of Population and Housing*, Vol. 1, Part 5 (Bulletin 1.5-11), Ottawa: Statistics Canada, 1974.
- COHEN, S.M. and P. RITTERBAND, "Why Contemporary American Jews want Small Families," in: P. Ritterband (ed.), *Modern Jewish Fertility*, Leiden: Brill, 1981, pp. 209-231.
- COALE, A.J., "The Demographic Transition," in: *The Population Debate: Dimensions and Perspectives*, New York: United Nations, Division of Social and Economic Affairs, Vol. 1, 1975, pp. 347-355.
- COALE, A.J.; B.A. ANDERSON and E. HARM, *Human Fertility in Russia Since the Nineteenth Century*, Princeton: Princeton University Press, 1979.
- DELLAPERGOLA, S., "Patterns of American Jewish Fertility," *Demography*, Vol. 17, no. 3, 1980a, pp. 261-273.

DELLAPERGOLA, S., *Recent Marriage and Fertility Trends Among the Jews of France*. Paper presented at Seminar on Demography of the Jews, Jerusalem: The Hebrew University, Institute for Advanced Studies, 1980b.

DELLAPERGOLA, S., "L'effet des mariages mixtes sur la natalité dans une sous-population; quelques problèmes et résultats concernant la diaspora juive." Colloque *Démographie et destin des sous-populations*, Liège: Association Internationale des Démographes de Langue Française, 21-23 Septembre, 1981a.

DELLAPERGOLA, S., *The Modern Demographic Transition of Jewish Populations: Similarities and Dissimilarities*. Paper presented at Symposium on Demography of the Jews: Historical and Comparative Perspectives, Jerusalem: The Israel Academy of Sciences and Humanities, and The Hebrew University, Institute for Advanced Studies, March 1981b.

DELLAPERGOLA, S., *Some Socioeconomic Correlates of Low Fertility: Cohort and Period*, Jerusalem: The Hebrew University, Institute of Contemporary Jewry, 1981c (unpublished paper).

DUBB, A., *Patterns of Fertility and Family Formation Among South African Jewish Women*, Jerusalem: The Hebrew University, Institute of Contemporary Jewry, 1980 (unpublished paper).

DUBB, A., S. DELLAPERGOLA, et al., *South African Jewish Population Study*, Jerusalem: The Hebrew University, Institute of Contemporary Jewry, 1978.

EASTERLIN, R.A., "The Economics and Sociology of Fertility: A Synthesis," in: C. Tilly (ed.), *Historical Studies of Changing Fertility*, Princeton: Princeton University Press, 1978, pp. 57-133.

FESTY, P., *La fécondité des pays occidentaux de 1870 à 1970*, Paris: Presses Universitaires de France (Institut national d'études démographiques, Travaux et Documents, Cahier no. 85), 1979.

FREEDMAN, R., "Theories of Fertility Decline: A Reappraisal," *Social Forces*, Vol. 58, no. 1, 1979, pp. 1-17.

FRIEDLANDER, D., "Israel," in: B. Berelson (ed.), *Population Policy in Developed Countries*, New York: McGraw-Hill, 1974, pp. 42-97.

FRIEDLANDER, D., Z. EISENBACH and C. GOLDSCHIEDER, "Family-size Limitation, and Birth Spacing: The Fertility Transition of African and Asian Immigrants in Israel," *Population and Development Review*, Vol. 6, no. 4, 1980, pp. 581-593.

GLIKSON, P., "Selected Bibliography, 1972-1980," in: U.O. Schmelz, P. Glikson and S.J. Gould (eds.), *Studies in Jewish Demography, 1972-1980*, Jerusalem: The Hebrew University, and London: Institute of Jewish Affairs, in print (Jewish Population Studies).

GOLDSCHIEDER, C., *Contraceptive Use Among American Jewish Families*. Paper presented at Eighth World Congress of Jewish Studies, Jerusalem, August, 1981.

GOLDSCHIEDER, C. and D. FRIEDLANDER, "Fertility Expectations, Desires and Ideals Among Jewish Women in Israel," in: U.O. Schmelz, P. Glikson and S. DellaPergola (eds.), *Papers in Jewish Demography 1977*, Jerusalem: The Hebrew University, 1980, pp. 301-314 (Jewish Population Studies).

GOLDSCHIEDER, C. and D. FRIEDLANDER, "Patterns of Jewish Fertility in Israel: A Review and Some Hypotheses," in: P. Ritterband (ed.), *Modern Jewish Fertility*, Leiden: Brill, 1981, pp. 232-254.

GOLDSTEIN, S., "Jewish Fertility in Contemporary America," in: P. Ritterband (ed.), *Modern Jewish Fertility*, Leiden: Brill, 1981a, pp. 160-208.

GOLDSTEIN, S., "The Jews in the United States: Perspectives from Demography," *American Jewish Year Book*, Vol. 81, 1981b, pp. 3-59.

ISRAEL, CENTRAL BUREAU OF STATISTICS, *Population and Housing Census 1967*, Vol. 26, *Marriage and Fertility*, Part I, 1965.

ISRAEL, CENTRAL BUREAU OF STATISTICS, "Survey of Fertility of Jewish Women, 1973," *Monthly Bulletin of Statistics*, Supplement, no. 3, March, 1976, pp. 13-18, 1976 (in Hebrew).

ISRAEL, CENTRAL BUREAU OF STATISTICS, *Statistical Abstract of Israel*, Various issues.

JAFFE, N., "Jewish Fertility in Israel: The Transition to Majority Status," in: U.O. Schmelz, P. Glikson, S. DellaPergola (eds.), *Papers in Jewish Demography 1973*, Jerusalem: The Hebrew University, 1977, pp. 405-414 (Jewish Population Studies).

KNODEL, J.E., *The Decline of Fertility in Germany, 1871-1939*, Princeton: Princeton University Press, 1974.

LIVI-BACCI, M., *A History of Italian Fertility During the Last Two Centuries*, Princeton: Princeton University Press, 1977.

MAYER, K.B., "The Evolution of the Jewish Population of Switzerland in the Light of the 1970 Census," in: U.O. Schmelz, P. Glikson and S. Della-Pergola (eds.), *Papers in Jewish Demography 1973*, Jerusalem: The Hebrew University, 1977, pp. 309-322 (Jewish Population Studies).

RINDFUSS, R. and J.A. SWEET, *Postwar Fertility Trends and Differentials in the United States*, New York: Academic Press, 1977.

SCHMELZ, U.O., "Jewish Survival: The Demographic Factors," *American Jewish Year Book*, Vol. 81, 1981, pp. 61-117.

SCHMELZ, U.O. and S. DELLAPERGOLA, *Demography of the Jews in Argentina and in Other Latin American Countries*, Tel Aviv: Tel Aviv University, David Horowitz Institute, 1974 (in Hebrew).

SPIEGELMAN, M., "The Reproductivity of Jews in Canada, 1940-1942," *Population Studies*, Vol. 4, no. 3, 1950, pp. 299-313.

WATTS, R., "Jewish Fertility Trends and Differentials: An Examination of the Evidence from the Census of 1970," *Jewish Social Studies*, Vol. 42, no. 3-4, 1980, pp. 293-312.

WESTOFF, F. and N.B. RYDER, *The Contraceptive Revolution*, Princeton: Princeton University Press, 1977.