

FERTILITY PROSPECTS IN ISRAEL: EVER BELOW REPLACEMENT LEVEL?

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A. INTRODUCTION

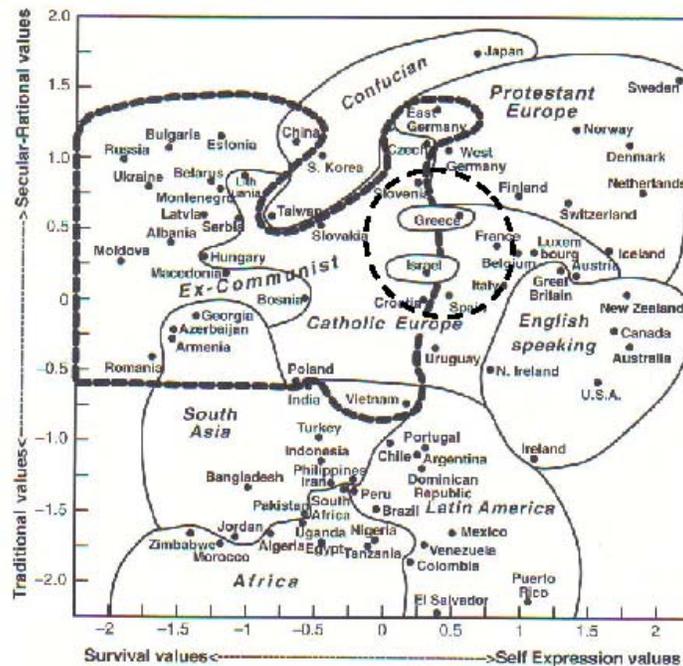
Israel's Total Fertility Rate (TFR) of 3.03 in 2010 was the highest among more developed countries. According to the most recent Human Development Index (HDI) of the United Nations Development Programme, Israel ranked 27th out of 182 countries in 2007 (United Nations, 2009). In the same report, Israel's TFR was projected at 2.8 for 2005-2010, less than the actual latest TFR and significantly the highest among the 38 countries with high human development rankings. The next country with a projected TFR higher than Israel was Oman, ranked 56th on the HDI. A higher TFR obtained in only five additional countries ranked up to the 100th place on the HDI: Belize, Jordan, Samoa, Saudi Arabia and Tonga. These facts give a measure of the distinctiveness of Israeli fertility patterns in comparative perspective and motivate the question: Will Israel's total fertility ever fall below replacement level?

This paper discusses recent fertility trends in Israel and some possible future prospects and implications. One of the crucial analytic issues is whether relatively high levels of fertility essentially reflect the failure to curb the birth rate or rather stem from wanted fertility (Pritchett, 1994). By implication, are relatively high fertility rates a transitional stage toward the unavoidable decline toward or even below replacement level fertility, or are they a social feature bound to persist in the long run? The present paper, by reviewing a variety of micro- and macro-social evidence, attempts to introduce some additional insights in this ongoing debate. Fertility patterns in the past are examined in light of socio-economic, demographic and cultural determinants that operated both at the individual and at the broader societal level. Fertility goals are examined through different measures of attainment, intention and normative appropriateness, and public attitudes towards possible policy interventions aimed at affecting fertility in the future are described. The paper also addresses whether country population projections relying on a single set of demographic assumptions are appropriate for societies like Israel, which encompass several sub-populations with significantly different demographic patterns.

B. WHERE IS ISRAEL?

Population-wise, with a mid-2009 estimated 7.6 million inhabitants, Israel ranked 93rd in size out of 209 countries and territories listed by the Population Reference Bureau (Haub and Kent, 2009). Not a big country, Israel has however a very diverse, culturally complex and politically segmented society, including 5.6 million Jews, 1.35 million Muslims, 200,000 Christians (mostly Greek Orthodox), 150,000 Druzes and others, and over 300,000 persons with undetermined religious origin (Israel Central Bureau of Statistics [CBS], 2009). A further 200,000 temporary resident foreign-workers (documented or undocumented) may be added as well to the resident population. Because of its multifaceted history and sociology, the country's geo-cultural location may not seem easy to determine. Physically on the Eastern edge of the Mediterranean and on the Western edge of Asia, Israel was significantly affected in the course of its history by large-scale international migrations that shaped the size and characteristics of its human capital. In their analysis of World Values Survey (WVS) data, Inglehart and Welzel (2005) found that Israel is culturally positioned at the dividing edge between European Catholic and ex-Communist countries (see figure 1). This insight is intriguing because Israel has a dominant Jewish majority, a large Muslim minority and only a very tiny Catholic presence of several thousands. The finding possibly reflects a diffuse role of religious norms in society that will be discussed later. Moreover, Israel's economy at least until the late 1960s was largely shaped by a dominant influence of state and trade union investment and therefore could be plausibly compared to countries with centrally planned economies.

Figure 1. Cultural map of the world around 2000



Source: Inglehart and Welzel, 2005, p. 63.

More attentive inspection of the map also shows Israel's cultural proximity to several other European Mediterranean countries, such as Spain, Italy, France, Croatia and Slovenia. This is an important key to the reading of the nature of Israel's society. Involved since its independence in a still unresolved regional political and military conflict, Israel tends to be perceived through the media and other observatories as a case of exceptional and permanent instability, dominated by security concerns and tensions. Yet the comparative assessment of popular values and norms, as shown by the WVS, culturally positions Israel if not in the Middle East, where it pertains geographically, at least in its other possible referential region, the Mediterranean. This is a symptom of cultural rootedness and normalcy, not of being out of context, although the conflict-ridden situation of the Middle East should thoughtfully be considered when examining demography.

Israel's human geography is also pertinently assessed by looking at the origins of its population. According to population updates for mid-2008 (Israel CBS, 2009), out of a total population of 7,308,800, 1,468,800 Arabs were (or at least were usually inferred to be) local born.¹ Out of 5,523,700 Jews, 3,884,600 were local born; 200,900 were born in other Asian countries, 306,000 in Africa, and 1,132,100 in Europe or America.² The additional 316,300 persons with non-classified religion were largely born in Eastern Europe. Summing these numbers, 5,870,600 (or 80 per cent) of Israeli residents were either born and fully socialized in the country or in another regional-continental context influenced by Islamic culture and religion, therefore germane to Israel's Middle Eastern location, while 1,448,400 (or 20 per cent) were born in countries with a Christian or Western background.

The purpose of these simple calculations is to convey the sense of a society deeply and genuinely

rooted in the territory and cultural context of the region. While on many accounts Israel was the outcome of international migration, it would be a mistake to perceive it as a country of foreigners. Of course, had it not been for the Arab-Israeli conflict, and in particular the flight of possibly 650,000 to 750,000 Arabs from Jewish controlled areas in 1948-1949 (Bachi, 1977; Palestinian Central Bureau of Statistics [PCBS]), the resident population of that territory might have had an entirely different demographic and cultural blend and would have been even more rooted in long-term Middle Eastern mores and customs. But it is in any case from the place-rootedness of its extant population, with all of its idiosyncrasies, that the analysis of fertility should start. At the same time, one cannot ignore the fact that this rootedness goes along with tens of years of conflict that marked in indelible ways the national, social and cultural identities and perceptions of its actors.

C. SOURCES OF DATA AND LITERATURE

Fertility levels in Israel have been documented in detail through different and complementary data sources. National population censuses periodically provide retrospective data on the number of children born and family size attained. A national system of vital statistical records provides information on current childbirth patterns and family growth. Further information on public attitudes about services related to family growth was obtained in recent years through the Israel Social Survey (Israel CBS, 2009) and other sources.

Independent large-scale surveys of fertility trends and expectations were repeatedly conducted in Israel. In 1974-1975, a study involved 3,000 urban Jewish women and 3,000 rural Arab women in their first marriages and below the age of 55 (Goldscheider and Friedlander, 1986). In 1988, with the support of the United Nations Fund for Population Activities and a team of senior researchers, a survey covered 1,750 Israeli Jewish women married and aged 23 to 39, as well as about 500 Muslim women of reproductive age (Peritz and Baras, 1992). Another survey conducted by Gallup in 2005 and 2006 provided information on attitudes to childbearing among Jews and Arabs in Israel and among the population of the **Occupied Palestinian Territory**³ (Saad, 2006). Some additional data on family attitudes could be derived from the International Social Survey Programme, coordinated by the Zentralarchiv für Empirische Sozialforschung at the University of Cologne, Germany (Kalushka, 2006).

The analysis in this paper significantly relies on a survey of Jewish married couples carried out at the end of 2004 and in January 2005 that covered attitudes to fertility, childbearing and the feasibility of policies regarding family and reproduction. The focus on the Jewish part (79 per cent) of Israel's total population mostly reflected logistical constraints. However, in view of this group being a dominant societal referent and the possible target for societal convergence, as will be argued later in this paper, the limitation of data coverage does not detract from the relevance of these data. The demography of the Jews is especially relevant when the focus is on low fertility given the greater structural similarity of Israel's Jews with Western societies (DellaPergola, 1983). The survey included a representative national sample of about 1,000 women aged 25 to 45 and 500 men aged 25 to 50, all married or in stable unions (Machon Dahaf, 2005; DellaPergola, Tzemach, Wiesel, Neuman, 2005).⁴ The survey covered demographic, socioeconomic and Jewish identity background variables. The inclusion of male respondents provided innovative insights on gender preferences facing family size and growth, and related topics. Several questions investigated norms about personal socioeconomic fulfillment and aspirations, gender roles, the family, in addition to intended, most normatively appropriate and ideal family size.

Based on these and other sources, a large amount of scientific literature has turned its attention to fertility levels and variation in Israel with primary reference to the Jewish population (Friedlander and Goldscheider, 1978; Friedlander, Eisenbach and Goldscheider, 1980; DellaPergola, 1988; Schmelz, 1989; Friedlander and Feldmann, 1993; Schmelz and Yaffe, 1994; Ziegler, 1995; Okun, 1997; Okun, 2000;

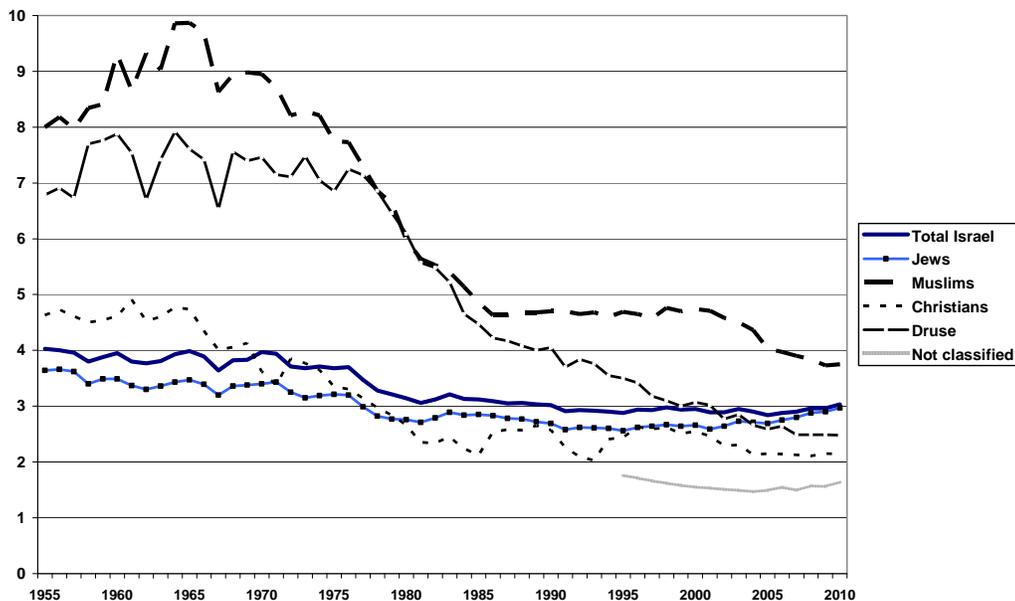
Nahmias, 2004; Schellekens and Ophir, 2006; DellaPergola, 2007; Cohen, Rajeev and Romanov, 2007; DellaPergola, 2009; Hleihel, 2011); on Israel's Arabs (Eisenbach, 1996; Friedlander, Eisenbach and Goldscheider, 1979; Hill, 1983; Schellekens and Eisenbach, 2002); on the whole of Israel's population (Bachi, 1977; Peritz and Baras, 1992; Fargues, 2000; Friedlander, 2002); and on the whole extension of Israel and the Occupied Palestinian Territory (Abu Libdeh, Ovenson and Brunborg, 1993; Palestinian Central Bureau of Statistics, 1997; Courbage, 1999; DellaPergola, 2003; Harvard, 2006).

Much of this literature relates to fertility levels and changes in the context of immigration, absorption, acculturation, modernization, religion and secularization, among the foundational pillars in the analysis of Israeli society. Several studies deal with various aspects of birth control, certainly an important intervening variable but not an explanatory variable as such in fertility research in more developed countries with diffuse and fairly efficient family planning. Still other works deal with the political context of demographic trends in relation to the mutual interactions between the conflict and population patterns. A further strand touches upon policies that in the past have been concerned with different aspects of childbearing and family size (allegedly on the fertility support side). In spite of this remarkable body of knowledge about Israel fertility, there are still a number of unsubstantiated hypotheses and remaining questions about fertility levels and variance.

D. MAIN FERTILITY TRENDS

Israel's unusually high fertility level does not stem from a homogeneous population but rather from the weighted average fertility of its various sub-populations. Each of these sub-populations should be examined separately. At today's low mortality levels, Israel's fertility levels continue to generate substantial rates of population growth. Reviewing recent demographic trends of Israelis and Palestinians, one is struck by two factors: (a) the persistence of high to moderately high fertility levels over time; and (b) an apparent lack of consistency between measures of fertility and other key social and demographic indicators. Figure 2 reports TFRs of the main religion groups between 1955 and 2010.

Figure 2. Total fertility rates, by religion groups – Israel, 1955-2010



Source: Israel Central Bureau of Statistics.

By the mid-1990s, the TFR among Israeli Jews was 2.6 children per woman, only moderately down from its highest level of four in 1951, and higher than among the total population of any other more developed country. Overall Jewish fertility levels in Israel coalesced from the convergence of a significant lowering of the fertility of immigrants from Asia and Africa, on the one hand, and measurable increases among immigrants from Europe and America, on the other. During the 1990s and the first half of the first decade of the 2000s, the Jewish TFR was quite stable, and after 2005 it tended to increase again, reaching 2.97 in 2010.

The TFR among Israel's Christians, mostly ethnic Arabs, was initially similar to that of Jewish immigrants from Asia and Africa, but ended at 2.14 children per woman in 2010, quite significantly lower than among Jews. Israel's Druzes started their fertility transition later, in the second half of the 1970s, but converged to and slightly below the Jewish fertility mainstream at 2.48 children per woman in 2010. Israel's Muslims were the main exception to this pattern of convergence toward the Jewish fertility model. In this case TFR was above 10 children per woman during the 1960s, declined to 4.6-4.7 by the mid-1980s, and remained steady at that level thereafter until past the year 2000, declining from 4.74 in 2000, to 4.03 in 2005 and 3.75 in 2010. Before one can judge whether this later trends points to convergence toward the fertility patterns of the majority, further evidence is needed.

Interestingly, during the 1980s and 1990s Israel's Jews maintained a stable TFR notwithstanding declining propensities to marry, masking rising marital fertility. Israeli Muslims also maintained a stable TFR in spite of rising marriage propensities and thus masking declining marital fertility (DellaPergola, 1993). Divorce slowly increased, too, creating an ever-growing pool of unmarried people in a society in which births outside of marriage still constituted a tiny fraction of all births (from 2 per cent in the 1990s to 4 per cent in 2010).

A remarkable case of stability, probably unique in a global comparative perspective, was provided by the subpopulation of Israel-born Jewish women who constituted the emerging second and higher-order generation in a country of significantly heterogeneous immigration. The TFR for this group remained virtually flat for 50 years at 2.5 to 3 children, in spite of tremendous cultural and socioeconomic transformations in Israeli society under the impact of repeated wars, other security problems, millions of new immigrants, speedy technological advances and a rapidly rising standard of living. Another important indicator that remained nearly flat over the years was the Jewish population distribution by major levels of religiousness (Levy, Levinsohn and Katz, 2002). This stable religiousness stratification might have been one of the causes of stable Jewish fertility levels, although the latter also might have been produced by conservative family patterns rooted in national culture besides religion.

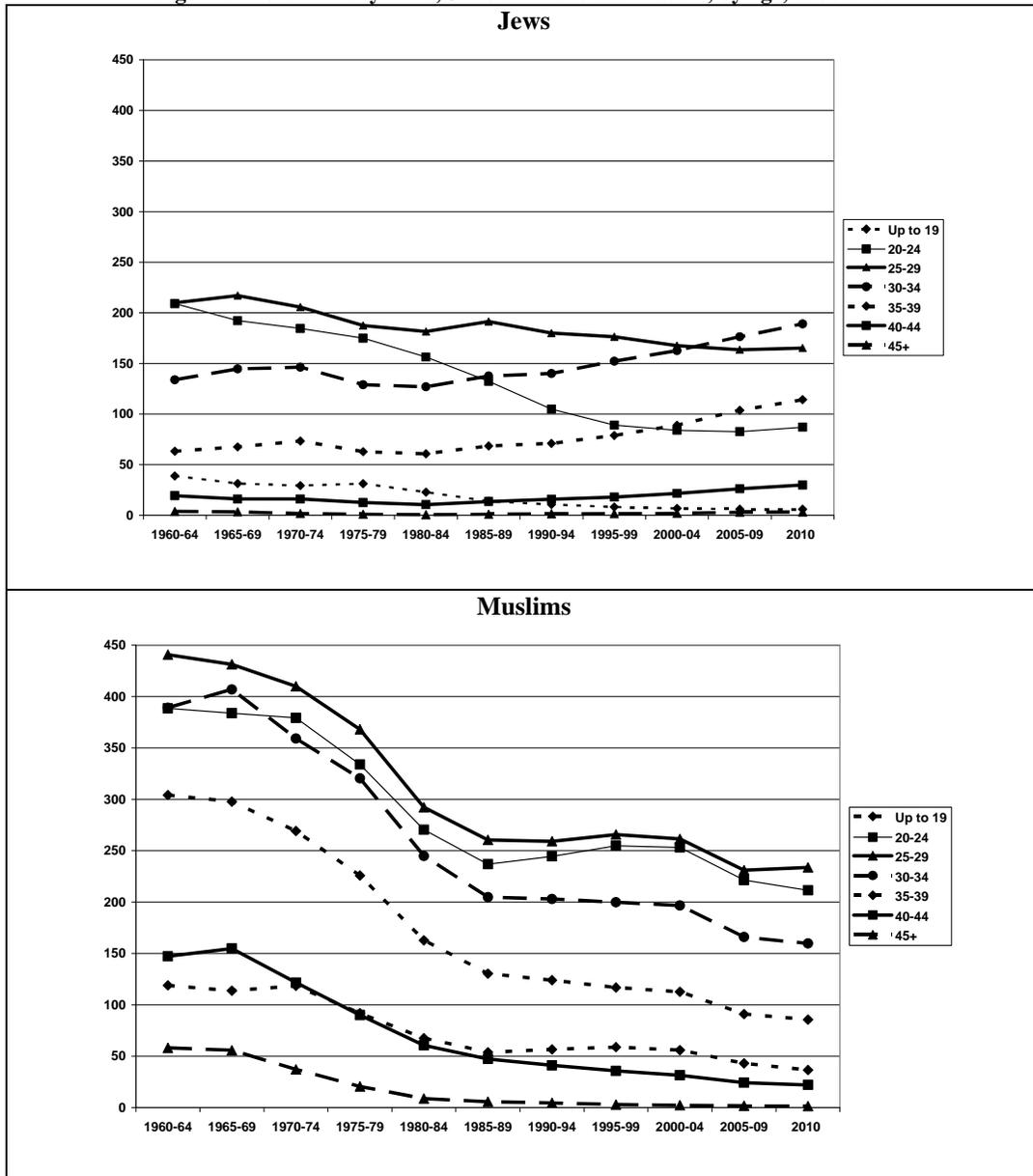
E. DISAGGREGATING TFR PATTERNS

National data, even when separately examined for the major religion groups, mask considerable cultural differences that can contribute to generating rather different family formation strategies. By representing TFR at a more detailed level, important patterns emerge that help to understand the broader underlying mechanisms of fertility change. The time schedule of family growth by age of mothers, the underlying structure of TFR, is first considered followed by the territorial variation inside Israel of total fertility levels. The two largest religion groups are compared: Jews, a dominant referent group in the Israeli mainstream convergence pattern of fertility and its correlates, and Muslims, the most resilient population group that does not follow, or experiences substantial delay in the convergence pattern of fertility and its correlates.

1. *Age*

The primary key to understanding the changing dynamics of family formation is by disaggregating the TFR into its age-specific components (figure 3). Data are examined separately for the two main religion groups, Jews and Muslims, between 1960 and 2009. On the one hand, among Jews, age-specific fertility rates markedly diminished over time among women aged less than 20, in the 20-24 year age group, and also, though less sharply, at 25-29 years. On the other hand, fertility rates increased significantly in the 30-34 year age group, and to some extent at 35-39, remained flat at ages 40-44, and displayed a very low frequency U curve among women aged 45 or over. From an earlier pattern where fertility rates peaked for the age group 20-24 years followed by those aged 25-29 years, since the 1960s reproduction among Jewish women shifted to a peak at ages 25-29 years closely followed by the 30-34 year age group. Since around 2000 Jewish women had more children at ages 35-39 years than at 20-24 years. By 2005, 30-34 became their prime age for reproduction.

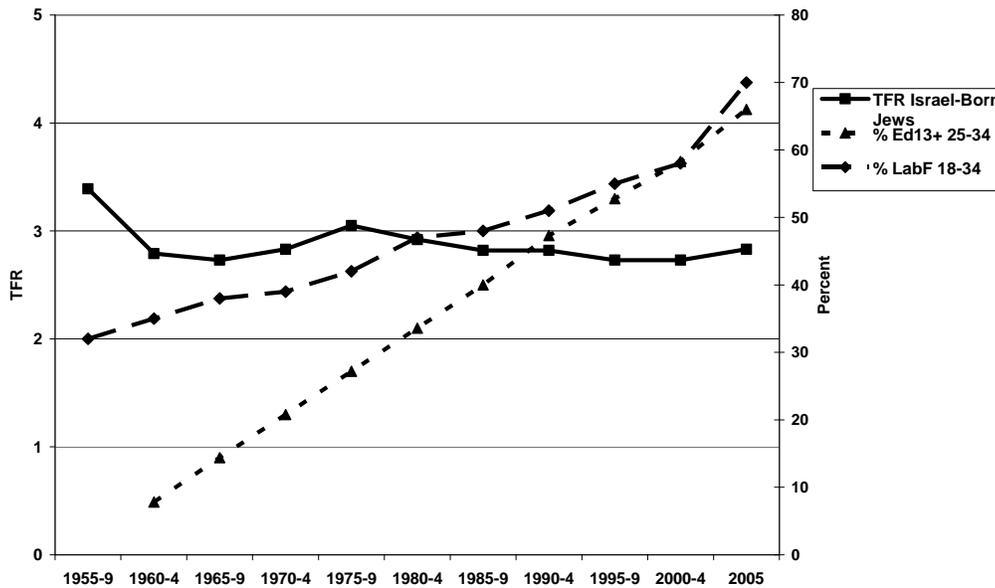
Figure 3. Total fertility rates, Jews and Muslims – Israel, by age, 1960-2010



Source: Israel Central Bureau of Statistics.

This tendency to postpone childbearing was related to a continuously rising level of education and a decrease in labor force participation below age 20. However, the overall labor force participation of Jewish women sharply increased during prime reproductive ages. The result was that in a population with rapidly increasing levels of post-secondary – namely academic – education and much higher rates of employment, the TFR remained remarkably stable through a significant adjustment of the childbearing time schedule. Figure 4 shows no evidence of significant interference between education, work and childbearing over a period of 50 years. The sharply rising involvement of young women in higher education and work singularly contrasts with the flat TFR profile of Israel-born Jewish women who constituted the dominant segment of those mobile young adults. Between the 1950s and 2005 a sharp surge occurred in the percentage of women aged 25-34 with post-secondary education (13 or more years of schooling) from less than 10 per cent in the 1950s to more than 60 per cent in 2005. Women’s labor force participation sharply diminished at ages 14-17, consistent with extended years of schooling, while it significantly increased among those aged 18-34, from 30 per cent in the 1950s to 70 per cent in 2005. Changes in the timing of childbearing apparently allowed accommodating competing family and career needs and aspirations among Jewish women in Israel.

Figure 4. TFR, percentage with post-secondary education and percentage in labor force among Israel born Jewish women, Israel, 1955-2005



Source: Israel Central Bureau of Statistics.

Among Muslim women fertility age-patterns were characterized by a general decline over time, but with different stages (bottom part of figure 3). Up to the second half of the 1980s, fertility declined consistently across all age groups. During the years 1960-1964, with a fertility rate of nearly 450 births per 1000 women aged 25-29, women in this age group had the virtual certitude to bear one child on average. This rate was reduced by nearly one half by the second half of the 1980s. During the following fifteen years until 2000-2004, two diverging behavioral profiles can be observed: a moderate fertility increase among women under age 30, and a moderate fertility decline among women aged 30 or over. Most recently, from 2005-2009, again fertility decline prevailed across all age groups. With nearly no change over about fifty years, the ranking of fertility rates by age remained the same, with those aged 25-29 on top, followed by 20-24 and 30-34. Yet over the years childbearing became much more concentrated within these three age groups than it had been at the beginning, indicating a tendency towards an earlier stoppage of births. While among Muslim women in Israel education levels greatly increased over time, labor force

participation rates remained quite low, hence reproduction and work paths remained quite separated. Age at marriage remained consistently lower than among the Jewish population. In this case, mediated by cultural determinants, it is perhaps possible to speak of interference between the competing alternatives of family and work.

Comparing emerging configurations of age-specific fertility schedules of Jews and Muslims, toward the end of the first decade of the 21st century Muslim women had significantly higher fertility rates under age 30, and Jewish women had higher rates at age 30 or over. This pattern indicates widespread intervention to control fertility levels among both populations. That the group with the higher educational attainment, the Jews, should have a higher fertility rate among women aged 30 over is compelling evidence of voluntary parenthood at later ages, while the lower fertility rate of the group with less education, the Muslims, hints at more effective efforts to limit family growth up to a certain wanted size. Further evidence on wanted and achieved family size is discussed later.

2. District

Another important analytic key in fertility analysis is the disaggregation of Israel's territory into different districts. Such districts, apart from their different geographic or climatic peculiarities, differ because of the patterns of concentration of specific population groups in certain areas, cities or types of settlement. In fact, a high degree of segregation prevails in the country between members of the main religion groups, and between members of specific sub-groups within each. This frequently appears in the form of separate settlements, or of separate neighbourhoods within the same locality. Israel has six administrative districts – Jerusalem, Northern, Haifa, Central, Tel Aviv, and Southern – and a seventh covering the Jewish population in the West Bank under Israeli administration (officially named Judea and Samaria), and until August 2005 in the Gaza area. Figure 5 shows TFRs for Jews and Muslims by district over the last 15 years that, as noted, witnessed a significant combination of stability and change. Each major religion group displayed shared patterns across most districts, along with some significant variance.

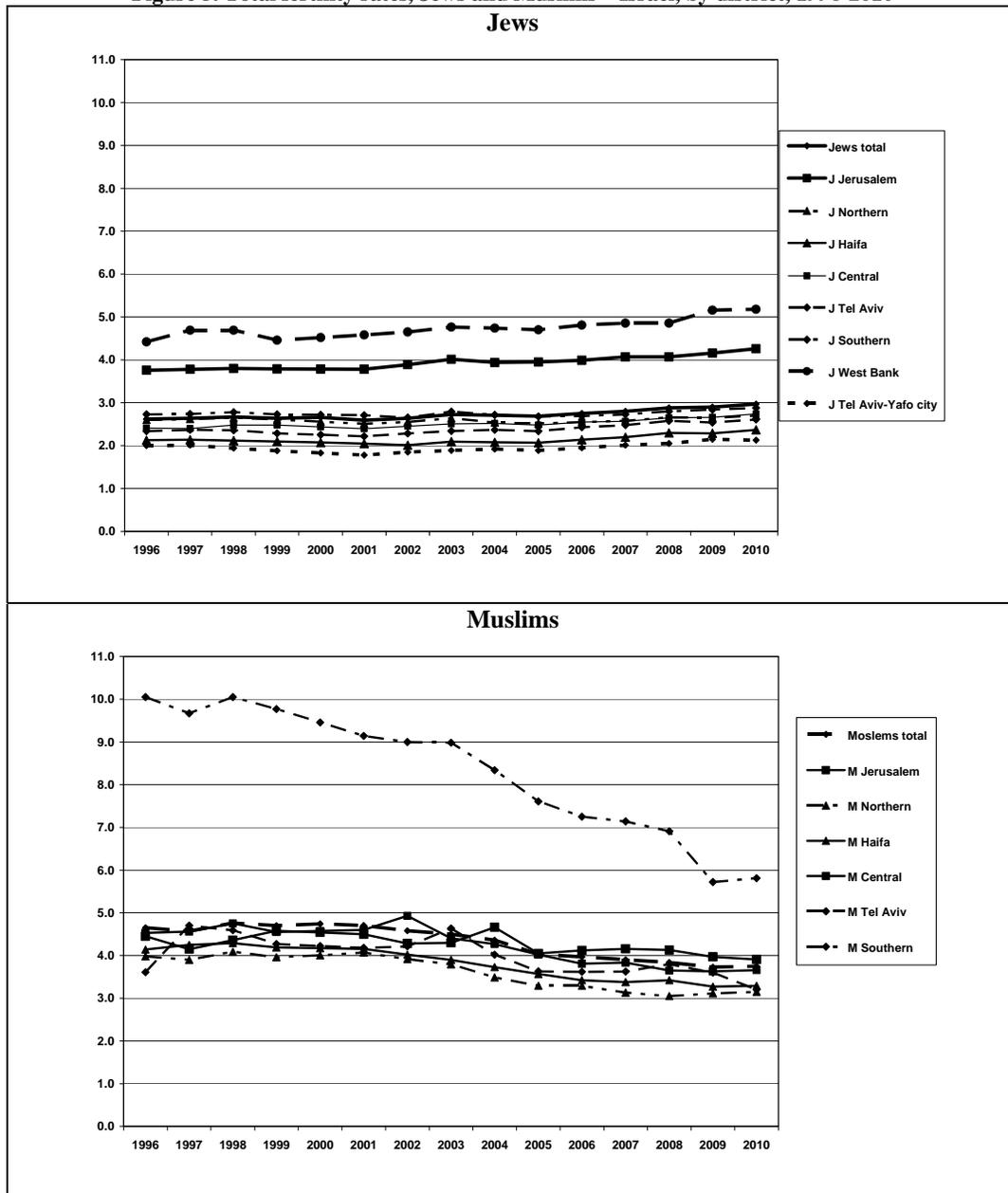
Among Jews, remarkable co-variation characterized the different districts, although at somewhat different levels. In nearly every district, fertility declined between 1999 and 2002 followed by visible recovery in subsequent years. Chronologically, those years included exposure to the second Palestinian uprising (*intifada*) but also a significant economic recession induced by global market circumstances. Since 2004 TFRs increased moderately. No effect is apparent from the 2006 Lebanon war, nor from the economic recession in 2009-2009. TFRs of 2.5 to 3 apply to the Southern, Central, Northern and Tel Aviv Districts, the former being the highest of this group. Haifa District was definitely lower. What is perhaps the more remarkable is that the City of Tel Aviv (part of the Tel Aviv District), considered by some as the capital of Israeli hedonism and sometimes also indicated as the gay capital of the Middle East, followed exactly the same patterns and after several years at below replacement fertility, the TFR re-emerged above replacement level in 2008.

Two districts stand at the higher end of the fertility range. One is Jerusalem with a TFR above 4 in 2010, heavily influenced by a very religious population estimated at about 30 per cent of the total Jewish population (DellaPergola, 2001). The other area with a high fertility level is the settlers' population in the West Bank with a TFR above 5 in 2010. It would be easy to explain higher fertility with the ideological militancy of these groups: In the Jerusalem area in terms of highly intensive religion and in the West Bank in terms of territorial nationalism. However, two important caveats should be added. The first is that the manifest co-variation of all geographical divisions, no matter how accentuated in the outliers with their ideational peculiarities, points to a shared undercurrent that not only cannot be ignored but, if correctly interpreted, may provide one of the main explanatory mechanisms of Israel's fertility trends among the Jewish population. While particular religious or nationalist ideologies may surely affect family size, other important determinants must be at work generating the peculiar co-variations in fertility patterns among

the Jewish population in Israel.

The second caveat is that under the existing circumstances, the Jewish settlers in the West Bank constitute a highly subsidized population that – at parity of cost – enjoys a much higher standard of living in terms of housing space and environment quality than their peers within the main territorial body of the State of Israel inside the Green Line.⁵ The very religious, too, while mostly characterized by a low standard of living because of low labor force participation, enjoy numerous forms of direct (state) and indirect (community-related) subsidies. These subsidies being variable over time, they make the target sub-population sensitive to economic change, while significantly reducing the cost of children. These circumstances reveal an intriguing package of ideological and socioeconomic incentives for further consideration.

Figure 5. Total fertility rates, Jews and Muslims – Israel, by district, 1996-2010



Source: Israel Central Bureau of Statistics.

Looking at Muslim total fertility according to the same Israeli territorial divisions, the picture is again one of basic co-variation with outliers. Data for the Palestinian West Bank and Gaza will be considered later. The Tel Aviv, Central, Haifa and Northern Districts all show stability during the 1990s and the beginning of visible decline between 2002 and 2004, a decline however that seems to stabilize at a TFR of 3 to 3.80, or one half to one child more than among the homologous Jewish population of the same district. Total fertility in the Jerusalem District, here mostly constituted by East Jerusalem neighbourhoods, is visibly higher and in 2010 was surpassed by the Jewish TFR. All in all, most districts provide a clear pattern of adjustment from a range of four to five children per woman until the beginning of the 2000s, to a range of three to four children per woman since then. Such a downward one-child decline does not seem to be part of a significant trend of continuing and steady fertility reduction over time. The case is entirely different in the Southern District, which is mostly composed of Bedouins, partly urbanized and partly semi-nomadic. In this district substantial change started in 2003 after a long period of TFR around 10 (and according to some CBS unpublished reports, well above 12 in previous years). In 2008 the TFR fell for the first time below seven, where it had been for Israel's total Muslim population 30 years back in the second half of the 1970s, just before a precipitous decline of three children per woman in the following 10 years. In 2010 the Southern Muslim TFR was well under six. This remarkable trend towards lower fertility seems bound to continue among the Southern District population because of the growing impact of welfare, medical and educational institutions on the role and performing of women in the Bedouin community, among other factors.

These differentials once again suggest the interplay of ideological and socioeconomic factors in a fertility transition that has proceeded for most of Israel's Muslim population and might follow in future years among the more traditional sectors. Interestingly, the lowest Muslim TFR appeared in the Northern District which is also the one with the highest percentage of Muslims among the total population. This variation suggests the existence of a possible relationship between perceptions of and reactions to minority status, and the unfolding of higher or lower than average fertility levels (Goldscheider, 1971).

F. CROSS-NATIONAL COMPARISONS

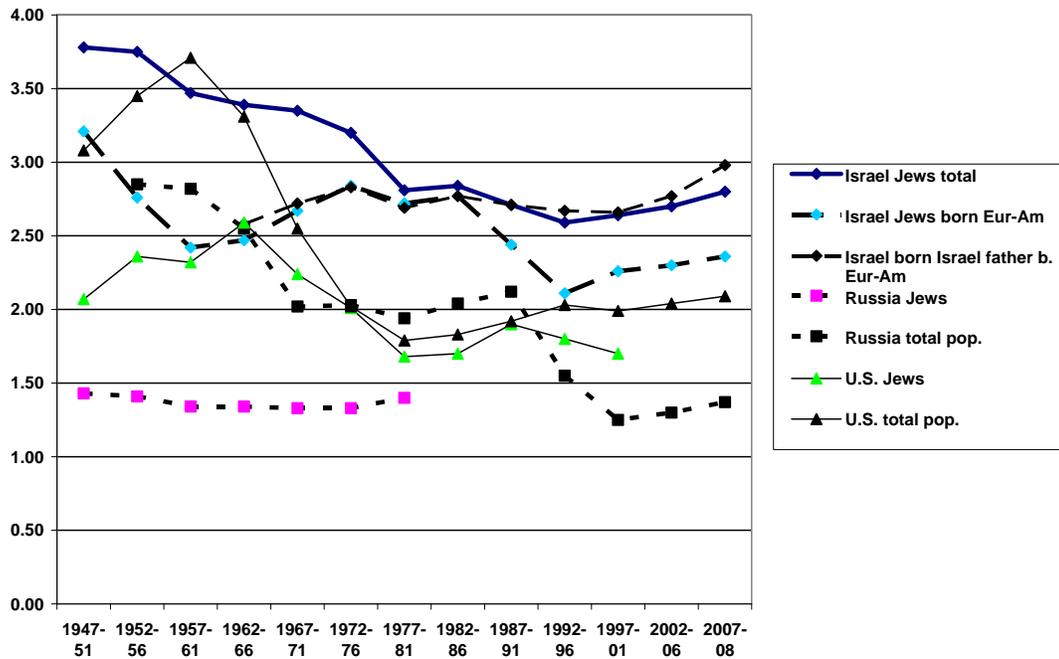
One relevant way to examine the extent of exceptionalism and change in the fertility patterns of major Israeli sub-populations is to compare them with other populations that share with them important cultural backgrounds and characteristics but are located in different countries or regional contexts. Comparing the same religious or national reference groups across different countries may provide such a useful comparative framework.

1. *Jews*

Fertility variations across different Jewish populations are shown in figure 6. Israeli society was constructed since the outset by large immigration waves that accumulated over smaller pre-existing layers of veterans, the so-called pre-State *yishuv* (in Hebrew: community). Thus it is important to compare TFRs for Israel's total Jewish population, Jews in Israel that were born in Europe or America (including North and Latin America), Jews born in Israel from a parent born in Europe or America, as well as Jews in the United States (the largest community in the world) and in the Russian Republic (long the second largest community and at the origin of one of the largest waves of Jewish international migration of the last decades). The rationale for such comparisons is that the histories, family ties and socioeconomic and cultural backgrounds of those Jews who migrated to Israel were not distinct from those who lived or remained in the main countries of origin. It is true that international migration usually involved a measure of selectivity (DellaPergola, 2009b), and in this case it might be assumed that there was a larger component of the more religiously involved among the migrants than among stayers. But the more religious segment among the many immigrants from the Former Soviet Union (FSU) was extremely tiny,

and in the case of the United States, it was the overall volume of migration to Israel that was tiny. Israeli society developed since the beginning a cultural blend that covered all possible shades of religious commitment, with a clear predominance of seculars or the moderately traditionalist (Levy, Levinsohn, Katz, 2002).

Figure 6. Total fertility rates among Jews in Israel, Russia and the United States, 1947-2008



Source: Central Bureau of Statistics; United Nations, Population Division (2008); DellaPergola, 2009; Tolts, 2008.

Cultural absorption in Israel occurred at fertility levels that were becoming increasingly homogeneous and indeed represented coalescence of the higher fertility abroad and initially in Israel of immigrants from Asia and Africa, and the lower fertility abroad of immigrants from Europe and America. During the 1950s Israeli Jewish women born in Europe and America had about three children less than their peers born in Asia and Africa, but by the mid-1980s convergence to a common pattern had been nearly completed. With the arrival since the end of the 1980s of the massive immigration wave from the FSU, fertility of European-born women diminished and then later gradually recovered, and always remained above replacement. Until the mid-1980s the Israel-born children of European-American origin had fertility patterns quite identical to those of their parents, but since then their TFR remained stable and even increased during the last decade, thus becoming significantly higher than that of their foreign-born contemporaries.

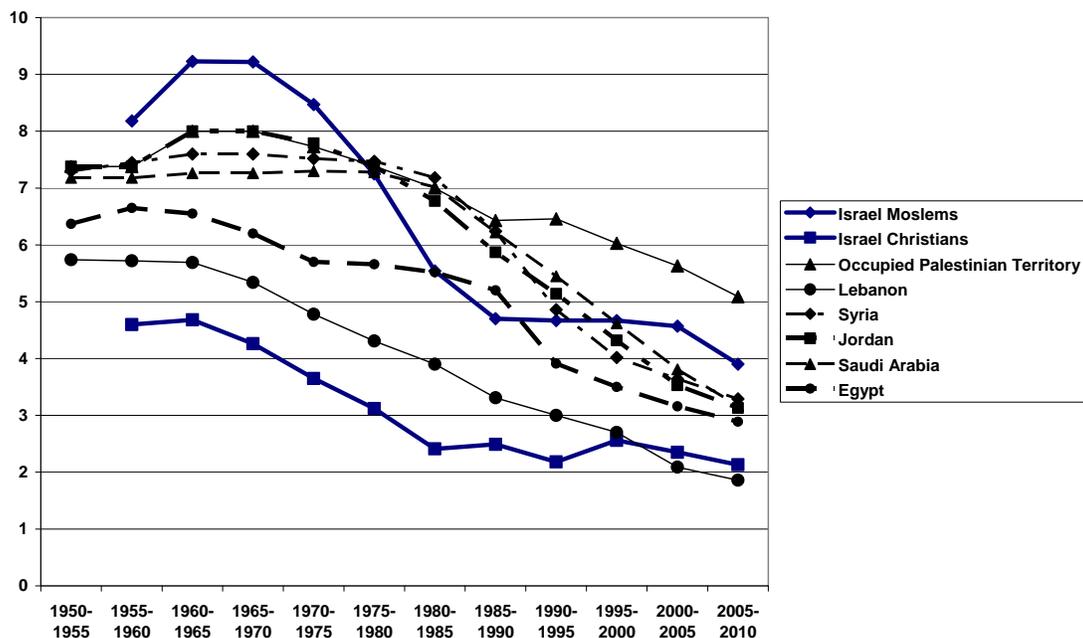
The contrast with Jews living outside of Israel, in the United States and in Russia, was significant. At its highest point during the baby boom years, total fertility of Jews living in the United States did not reach the lowest point ever recorded among the total Jewish population in Israel. It also was systematically lower than the fertility level of the general population of the United States, although it followed similar temporal patterns (DellaPergola, 1980; Kotler-Berkowitz, Cohen, Ament, Klaff, Mott and Peckermen-Neuman, 2003).⁶ In the Russian Republic, and overall in the FSU, Jewish fertility was low and did not display any sign of a post-war baby-boom (Tolts, 1997). The post-war TFR among the total population of Russia was lower than that of Israel and the United States, and in the 1990s would rejoin the very low level long before anticipated by Jews. Among FSU immigrants to Israel, fertility would grow among those who were Jewish, but would remain low among non-Jewish members of Jewish households (Tolts, 2009).

In sum, the fertility of Jewish immigrants from Europe-America in Israel was significantly higher than in the countries of origin, where Jews had a longstanding record of low or very low fertility, and it became higher among the second generation in Israel than among the first generation of immigrants.

2. Christians

Regarding Israel's Arab population, relevant comparisons can be attempted with a number of neighbouring countries which share a mostly Islamic context, in some cases along with visible Christian minorities. Figure 7 shows TFRs of Israel's Christians and Muslims, in comparison with Lebanon, Syria, Jordan, Saudi Arabia,⁷ Egypt as well as the Occupied Palestinian Territory (United Nations, 2008). Here again the Israeli case emerged as being quite exceptional.

Figure 7. Total fertility rates among Muslims and Christians in Israel, Occupied Palestinian Territory and neighbouring countries – 1955-2010



Source: Israel Central Bureau of Statistics; United Nations, Population Division (2008).

Looking first at the Christian component which is strongest in Lebanon (although Lebanon does not have a Christian majority), the steady Christian fertility decline in Israel is evident, in part explained by much lower marriage propensities than among the Jewish and Muslim subgroups, partly reflecting diffused processes of urbanization, socio-economic mobility, and perhaps also some psycho-social insecurity of being a small subgroup faced by two much larger population groups, Jews and Muslims. In Israel, however, the TFR among Christians (who as noted are mostly Arabs by ethnicity and Greek Orthodox by religious denomination) stabilized since the 1990s at slightly above replacement, while in Lebanon fertility continued to diminish to well below replacement. Remarkably, today there is not a single country with a Christian background in Western Europe, Eastern Europe or the Balkans, namely in Eastern Orthodox Christian societies, where fertility stands above the replacement level. Christians in Israel are the exception.

3. Muslims

Nearly all other predominantly Muslim societies featured rising or at least stable and very high TFRs at some point between the late 1950s and the late 1970s, in what can be defined a pre-decline fertility increase (Schellekens and Eisenbach, 2002). Later, all countries featured steady fertility declines at different levels and with different speeds. No country, however, reached as high a TFR as Israeli Muslims initially did. Moreover, the fertility transition among Israeli Muslims stopped in the mid-1980s only to resume after 2005. Something similar happened in Egypt between 1970 and 1990 at a far lower TFR level, and something similar but for a shorter duration occurred in the Occupied Palestinian Territory between 1990 and 1995 and at a far higher TFR level. The final result was a significantly higher TFR among Muslims in Israel than among most neighbouring countries, with the highest on record in the Occupied Palestinian Territory.

No simple correlation with human development would explain these intriguing differences. Egypt with the lower TFR also was the country with the lowest HDI. Palestine with an HDI slightly behind Syria ended up with a far higher fertility. Israel's Muslims with allegedly by far the highest HDI vis-à-vis the neighbouring countries had initially the highest, and eventually the second highest TFR.⁸ The conclusion of these comparisons is the consolidation over time of fertility levels in Israel that are not only generally high with respect to international comparisons, but also significantly higher than those observed among cognate populations of similar religious background as well as of similar levels of socioeconomic development (DellaPergola, 2003).

G. MACRO-SOCIAL CORRELATES OF FERTILITY LEVELS

1. *Public motives for childbearing*

The first association that conventionally comes to mind when trying to explain high fertility levels in Israel relates to the possible direct influence of the conflict with the Palestinians and the broader Arab socio-political context. One well-known hypothesis is the so-called *insurance effect* (Goldscheider and Friedlander, 1986). Knowing in advance that some of their children might be the victim of deadly accidents, adults would plan the sizes of their families so as to accommodate beforehand such unwanted events. If this were true, then if asked about the likely effect of a prolonged situation of security tensions, potential parents would answer that it would generate larger families. One effective empirical test of this tenet came from a 2005 national Jewish family survey in which the question was explicitly asked. The survey, as already noted, included women and men married or in permanent unions and aged 25 to 50. Asked about the possible effects of negative security conditions on their family size plans, 7 per cent of women and 9 per cent of men answered security problems would cause them to wish more children, 27 per cent of women and 15 per cent of men answered fewer children, and 66 per cent of women and 76 per cent of men reported no influence (DellaPergola, 2007). On the face of these findings, the insurance hypothesis is not supported, although it cannot be excluded that sub-consciously, or perhaps consciously but without being ready to concede it openly, people do act keeping in mind the imponderables of security.

Doubts about the existence of a clear relation between war and family size desires strengthen given findings of a Gallup poll in 2006 (Saad, 2006). A question was asked about the ideal number of children according to the preferred approach to achieving national goals, including self-determination and security for their people. Among Israelis, those who preferred "non-violent forms of resistance and negotiation" opted for 3.7 children and those who preferred "armed struggle and military solutions" opted for 3.6; among Palestinians the preferences were 4.7 and 4.8, respectively. These differences are too small to be considered significant.

Further evidence comes from another question in the 2005 Jewish family survey: "If intending to have another child, what would be the main reason for having that additional child?" The question was

pre-coded with several private and public options and was followed by a request to freely indicate any further answer. The response rate, masking a possibly favorable attitude to further children, was 60 per cent among women and 46 per cent among men. After collapsing several similar answers together, the overwhelming majority of respondents, 72 per cent of women and 66 per cent of men, reported family and child-related motives, such as strengthening the couple; personal and couple gratification; child gratification; good to already existing brothers and sisters; and that the home should not be empty, among other answers. However, 17 per cent of women and 21 per cent of men reported religious, ideological or broader societal reasons, such as God commandment, religious motive, strengthening the Jewish people, country's security, and the like. The latter types of responses were more visible only among families planning family sizes significantly above the average. Finally, 11 per cent of women and 14 per cent of men gave a variety of other answers, including social acceptance. The private, individual, household-oriented character of family size decisions clearly emerged from these data over the possible alternative of decisions significantly motivated by public sphere considerations in a context of persisting conflict.

2. Life satisfaction

Having thus ascertained the widespread prevalence in Israel of childbearing norms rooted in quite conventional perceptions of the nuclear family as a central goal and institution in the human lifecycle (Kalushka, 2006), one further important clue to understanding Israel fertility patterns comes from the national Social Survey undertaken yearly by the CBS since 2002. The study routinely asks about feelings of satisfaction with life and optimism about the near future. Figure 8 summarizes the findings between 2002 and 2009 by selected population characteristics.

The first aspect to be noted is the high general level of satisfaction with life in Israeli society among survey respondents. During the survey period, the percentage satisfied with life was 82.9 per cent in 2002, 81.8 per cent in 2004 and, since then, has increased steadily to 86.2 per cent in 2009. The slight initial decline is associated with years of economic recession and rising unemployment, and the subsequent increase is associated with the recovery and growth of the Israeli economy. What may seem surprising is that the data do not hint at the security crisis of the summer of 2006, when thousands of rockets were fired over the northern regions of Israel, killing over 100 persons. Warfare was followed by extensive investigations and accusations against the military and top political echelons and ended up with a significant reshuffling of leading personnel through fierce public criticism and discontent. All of this seems totally bypassed by the survey data on life satisfaction.

Differentials in personal satisfaction among population sub-groups provide important clues as to the underlying mechanisms of personal gratification. There is a higher level of satisfaction in Israel among Jews versus Arabs, yet there is a high level of and increasing trend over time in life satisfaction among Arabs and a diminishing gap between Jews and Arabs in life satisfaction (in 2009 81.9 per cent, among Arabs versus 87.6 per cent among Jews). The least satisfied among major population groups were the more recent immigrants, most of whom are from the FSU (77.1 per cent in 2009). Satisfaction was higher among men than among women; it was clearly and inversely related to age, with high levels above 90 per cent among young adults below 25; it varied by marital status, with the highest level among those currently married, and the lowest among those whose marriage had ended through separation or death of partner. Satisfaction was also significantly and positively related to educational attainment, the least educated being the only group with a notable temporary fall in 2006. Satisfaction was also positively related to income. The most impressive relationship, however, was with the degree of religiosity. Among Jews, the most religious group steadily expressed satisfaction with life around or above 95 per cent, with gradually lower levels among the more secular Jews. Among Arabs the relationship between religiosity and life satisfaction was quite similar, although somewhat less stable over time.

These analyses are highly suggestive of a steadily positive mood in the country, shared across the

population but with significant variance by strata. Satisfaction was perhaps surprisingly indifferent to the periodical ups and downs in the realms of security, the economy, and the administration's performance and transparency. If one reflects again on fertility and relates the expected future birth of children to a sense of confidence that those children will find a better environment or at least one worthy of living in (Ziegler, 1995), the trends in public mood just described plausibly correlate with the observed fertility increase among the Jewish sector, and with fertility stabilization after decline among the Arab sector (with the prominent exception of the least modernized and most economically vulnerable strata). The spread and variation of such optimistic attitudes across sub-populations holding different characteristics also anticipates the attitudinal contexts in which different individuals form their predominant social interactions, exchange information with peers, form their evaluative opinions and develop the normative background of their social behaviors. In turn, attitudinal variations within the broader collective and within more selective social network levels may help to predict what might be expected when turning to an examination of fertility patterns at the micro-social level.

Figure 8. Percentage satisfied with life, by selected population characteristics – Israel, 2002-2009

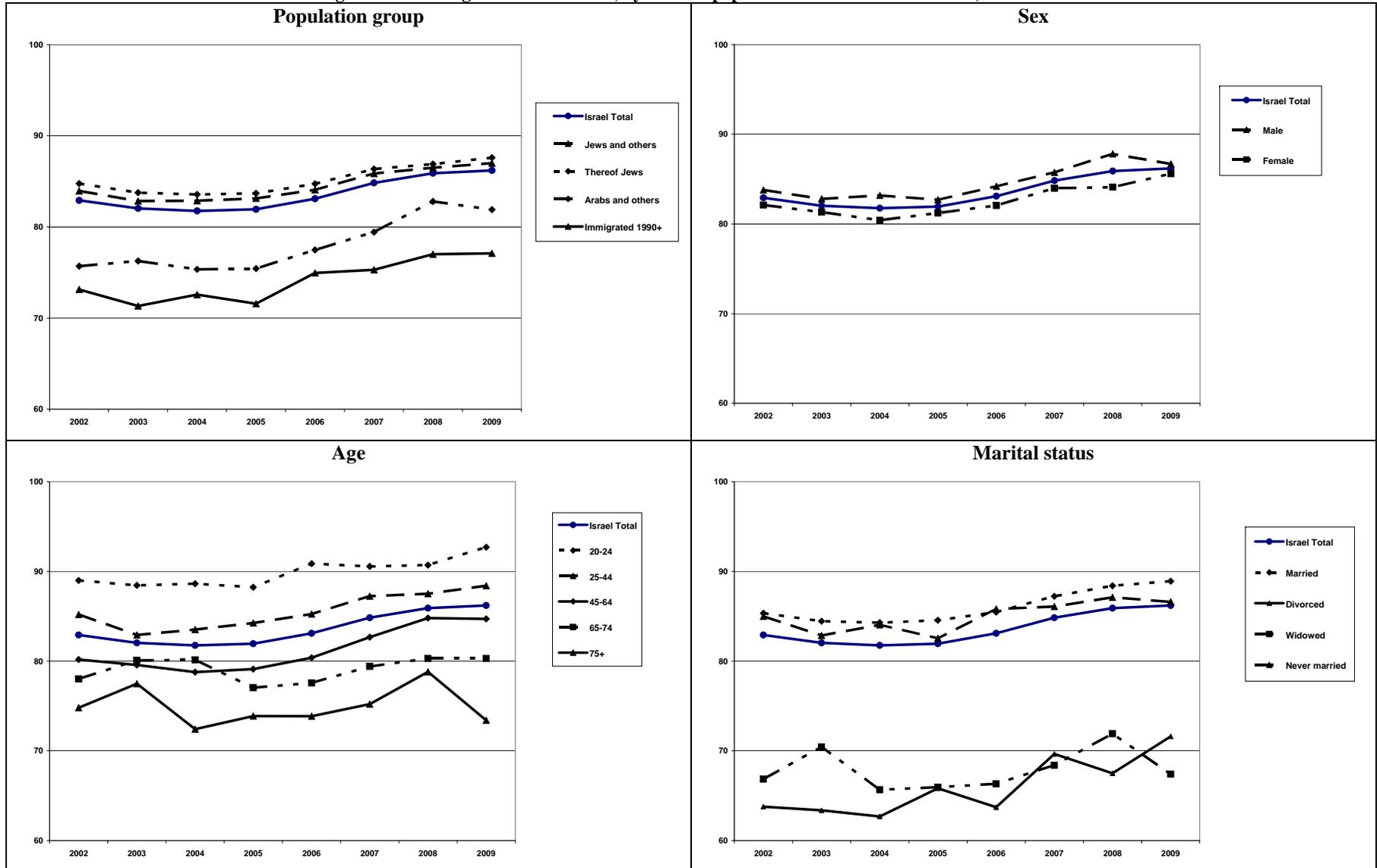
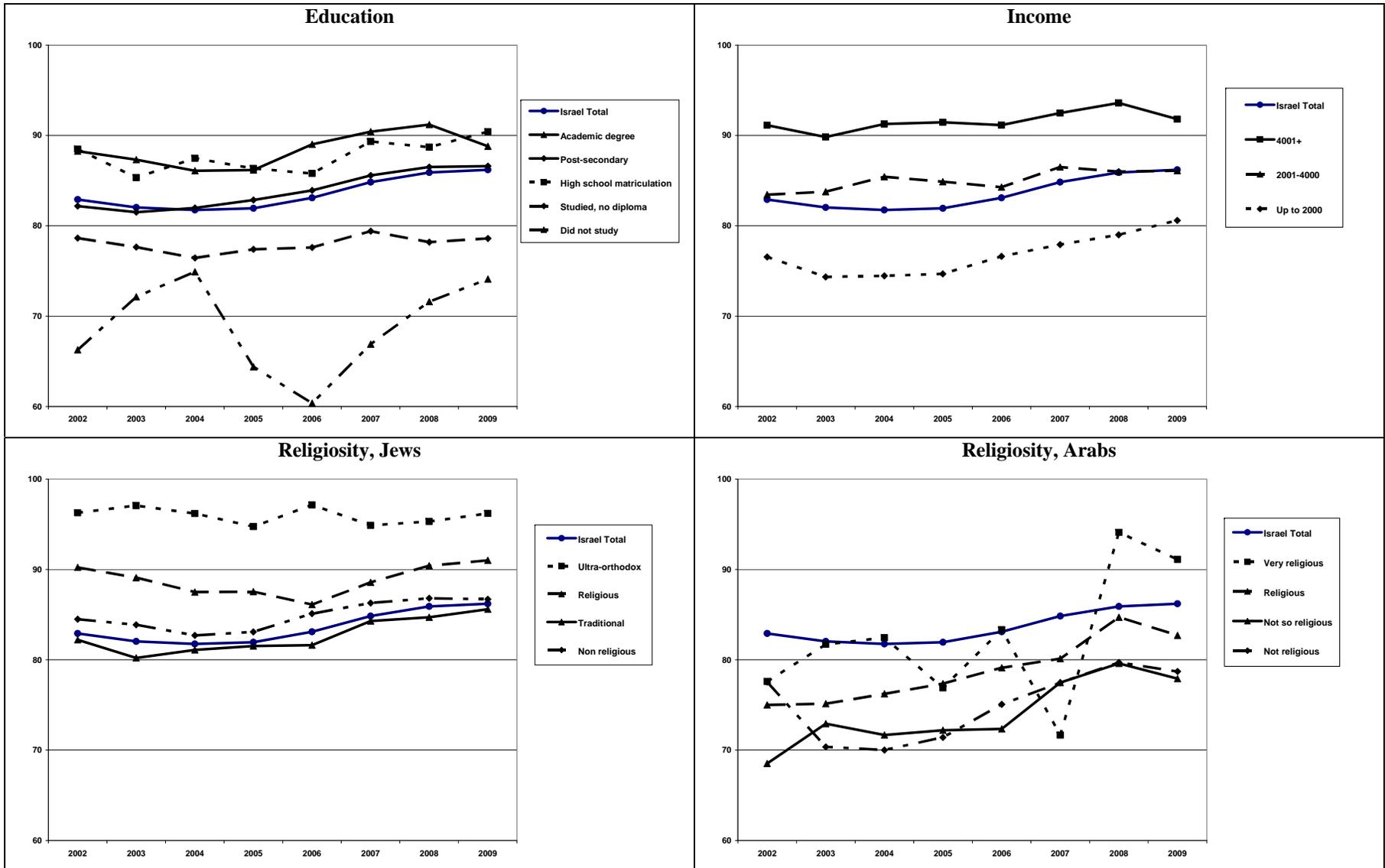


Figure 8 (cont.). Percentage satisfied with life, by selected population characteristics – Israel, 2002-2009



Source: Israel Central Bureau of Statistics.

H. MICRO-SOCIAL CORRELATES: FERTILITY PROJECTS AND ACHIEVING THEM

1. Fertility attitudes and intentions

Turning now to an examination of individual relationships to past and future fertility, this section mostly, though not exclusively, refers to Jewish adults of reproductive age who are married or in permanent unions. The 2005 fertility survey addressed personal demographic and socioeconomic variables, religiosity, norms about self-fulfillment and optimism, gender roles, and intended, most normatively appropriate and ideal family sizes. The desirability and feasibility of policies about family and reproduction are also discussed (DellaPergola, 2007; 2009).

In 2005 the average number of children ever born among families with still several years available for further potential growth was about 2.5 (table 1). Married women above 40 had 3.7 children. Levels of intended, normatively appropriate and ideal fertility in 2005 were quite similar to those found in two previous surveys in 1974-1975 and in 1988. Intended family size was 3.8 in 1975, declined to 3.5 in 1988 and rose again to 4.1 in 2005. The most normatively appropriate family size for a family of the respondent's same socioeconomic status increased from 3.4 in 1988 to 4.0 in 2005. Excluding the more intensely religious sector – the *Haredim* (from the Hebrew *hared*, fearful) – the most normatively appropriate family size still was 3.8 in 2005. Therefore, there are gaps between ideal perceptions (three to four children) and actual children borne (two to three children).

TABLE 1. FAMILY SIZE PREFERENCES OF MARRIED JEWISH WOMEN AT REPRODUCTIVE AGES - ISRAEL, 1974-2005

Number of children	1974-75 ^a	1988 ^b	2005 ^c	
	Total	Total	Total	Without Haredim ^d
Ever born		2.5	2.5	2.3
Personally intended	3.8	3.5	4.1	3.5
Most appropriate for an Israeli family of social status same as respondent's		3.4	4.0	3.8
Ideal for an Israeli family	4.3	3.7	4.1	3.6

a Source: Goldscheider and Friedlander (1986).

b Source: Kupinsky (1992b).

c Source: Survey of Attitudes and Behaviors Concerning Family Size among Israel's Jewish Population, 2005.

d Very religious, residentially concentrated.

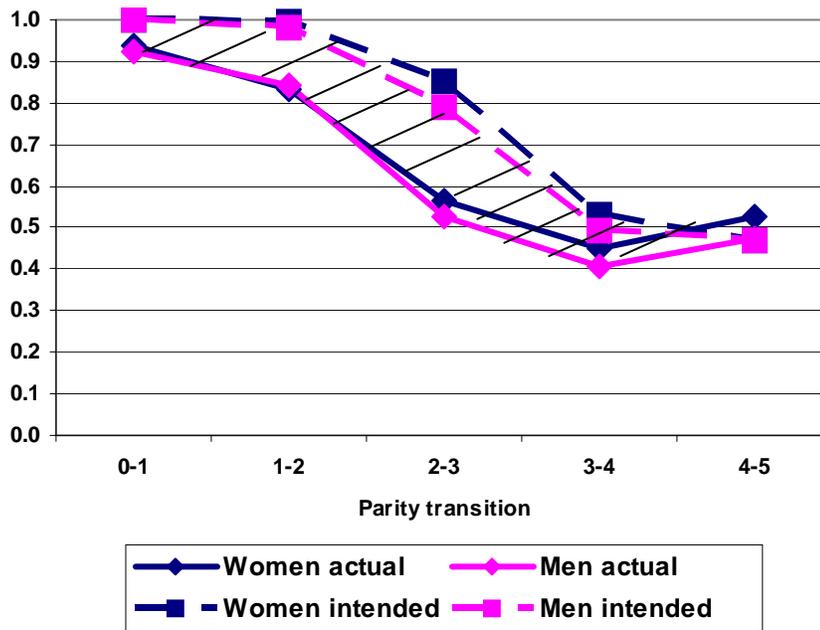
The 2006 Gallup survey asked somewhat similar questions (though with different question wording and sample coverage, the findings might have been quite different as well). The survey indicated a wanted family size of 3.7 for both Jews and Arabs in Israel and 4.7 for Palestinians in the West Bank and Gaza (Saad, 2006). This would point to continuing convergence in fertility expectations in Israel, the difference being that the Jewish TFR would be lower by one child versus perceptions of wanted children, while the Israeli Arab TFR would be quite on target. Even if one refrains from attributing excessive importance to these comparisons, they nevertheless systematically point to sustained demand for children in the foreseeable future. The same survey indicated that Palestinians in refugee camps in the West Bank and Gaza expressed significantly higher desires for children, 5.6 on the average, confirming previous observations about the larger family size wanted and actually achieved among Palestinians in refugee camps in different locations (Khawaja, Assaf and Jarallah, 2009).

The several successive surveys of preferred family size among the Jewish population showed that, inasmuch as married people were concerned, those predictions were quite accurate when verified against

the actual childbearing patterns several years later. The 2006 Gallup data were instructive, too, because they clearly outlined a widespread element of personal choice in having children and found strong evidence that people's preferred family size had a strong bearing on actual fertility rates. The tendency timelines for preferred number of children and the actual TFR were quite parallel (though obviously non identical) within each major religion group.

The 2005 survey data show that among Israeli Jewish couples the first two children were nearly universally attained, while transitions from the second to the third child, and from the third to the fourth child crucially shaped the current patterns and were likely to determine those of the future. A comparison of actual and intended parity progression ratios shows that both were overall quite high, slightly more so for women than for men (figure 9). Most notably, additional evidence not reported here indicates that these actual and intended parity transition ratios were quite indifferent to current parity, pointing to a **strongly pre-determined family size design** quite early in the reproduction cycle. The gap between actual and intended parity transition ratios (outlined by thin lines) provided an important analytic tool of the overall family formation strategy and of the pace of its actual implementation, to be further investigated.

Figure 9. Actual and intended parity transition ratios – currently married^a Jews, Israel, 2005



a. Including non-married persons in stable couple relations.

Source: Survey of Attitudes and Behaviors Concerning Family Size among Israel's Jewish Population, 2005

Comparing intended versus normatively appropriate family size, 63 per cent of respondents indicated the same preference (table 2). The most preferred was three children, followed by five or more for women, and by two or less for men. The latter group was largely dominated by parity two. Among inconsistent answers about intended and normatively appropriate family size, 28 per cent of women and 22 per cent of men intended to have more children than they deemed appropriate, while 8 per cent of women and 15 per cent of men intended to have fewer children than they deemed appropriate. Women reported inconsistent preferences more than any consistently specified parity. Men more clearly preferred three children, followed by those intending to have more children than they deemed appropriate. It should be noted, however, that multivariate analysis (see Appendix below) hinted at some propensity for higher parities among men than among women.

TABLE 2. NUMBER OF INTENDED^a VS. NORMATIVELY APPROPRIATE^b CHILDREN – CURRENTLY MARRIED^c JEWS, ISRAEL, 2005

Gender and age	<i>Number of intended vs. normatively appropriate children</i>						Total	N
	<i>Same</i>				<i>Different</i>			
	0-2 children ^d	3 children ^d	4 children ^d	5+ children ^d	I<A ^e	I>A ^f		
Women, 25-45 years	12	25	11	16	8	28	100	975
Men, 25-50 years	14	26	11	11	15	22	100	481
Women % difference	-14	-4	=	+45	-47	+27	=	

- a. Sum of total number of children born so far plus total additional children expected.
- b. Number of children most appropriate for family with standard of living same as respondent's.
- c. Including non-married persons in stable couple relations.
- d. Same number of children Intended and Appropriate.
- e. Number of children Appropriate 3, 4, or 5, and fewer children Intended.
- f. Number of children Appropriate 2, 3, or 4, and more children Intended.

Source: Survey of Attitudes and Behaviors Concerning Family Size among Israel's Jewish Population, 2005

2. Determinants of intended and normatively appropriate family size

Historically, as noted, a central feature of fertility in Israel concerned the convergence in fertility patterns across subpopulations initially displaying different socio-demographic characteristics. In a society deeply affected by immigration, significant convergence of fertility patterns occurred among Jewish women who immigrated from Asia and Africa and from Europe and America. Jewish women born in Israel, themselves the product of growing levels of intermarriage of immigrants from different continents (Okun, 2004), went on to have family sizes that were between those of immigrants of the main origin groups. The geography of origin thus lost much of its predictive power regarding family size.

In the relationship of fertility to socioeconomic status (observed in terms of the mothers' level of education attained and labor force participation), as already described, significant accommodations occurred in fertility levels and schedules in reaction to changing patterns of education and training, timing of labor force participation and employment. However, overall total fertility levels did not change markedly. Prima facie, a combination of rapid and deep modernization expressed by more complex social and economic roles for women seemed to go hand in hand with more conservative and stable family norms and fertility behaviours. Stable time patterns in fertility levels in turn imply scarce variation in completed fertility across successive cohorts. A Gallup poll, too, found no difference in the preferred number of children by age in Israel, but did find differences among Palestinians, where those aged 50 or over preferred more than five children per family compared with about 4.5 children preferred by those under 50.

As against the diminishing relevance of age, geographical origin, educational attainment and labor force participation as covariates of fertility levels, patterns of religiosity continued to be associated with family size. Table 3 reports current and intended number of children among Jewish married women and men based on a scale of self-assessed religiosity (the scale was derived from two questions, each rated on a scale of four intensity degrees: (a) How do you assess the intensity of your Jewish religiosity? (b) How intensely you observe Jewish traditional practices? (Levy, Levinson and Katz, 2002)). The resulting cross-classification was reorganized into a seven-point scale covering the continuum between a most religious and a most secular end.

Family size is strongly related to self-assessed religiosity. Among women who as noted were still in the midst of their reproductive course, the number of children already born (i.e. the number of **current children**) in 2005 increased from 1.7 among women at the most secular end of the distribution to 4.7 among women at the most religious end. Men at the most religious end reported slightly fewer children on

average (4.2), but this was more compared to men at all other levels of religiosity. Women at the highest religiosity end had 2.7 times as many children than women at the lowest religiosity end. Among men, those at the highest religiosity end had 2.1 times the number of children as men at the lowest religiosity end. As against actual children born, intended family size ranged from 8.8 children at the most religious end to 2.8 at the most secular end among women, and between 8.8 and 2.7, respectively, among men. The sub-set of most religious Jewish women, self-defining as *Haredi*, expressed a preference for 9.8 children on average. The very high actual and intended family sizes among the most religious respondents (9 per cent of women and 5 per cent of men) were quite unique in an international perspective. Yet family norms among respondents at the secular end (13 per cent of women and 17 per cent of men) were no less unique and perhaps more surprising since this group might be thought to be far less family oriented. An actual family size of about two children and a preference for 2.7-2.8 children among the most secular respondents appear unusually high compared to prevailing childbearing patterns among the very secular in other societies.

TABLE 3. MEASURES OF FERTILITY BY SELF-ASSESSED RELIGIOSITY – CURRENTLY MARRIED JEWS, ISRAEL, 2005

<i>Religiosity self-assessment^a</i>	<i>Current number of children</i>		<i>Intended number of children</i>	
	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>
Total	2.54	2.45	4.11	3.74
Religious end	4.69	4.24	8.76	8.77
Religious	3.78	(3.05) ^b	7.08	6.94
Religious orientation	3.21	3.74	5.37	5.04
Intermediate	2.77	2.94	3.99	4.23
Secular orientation	2.27	2.36	3.53	3.64
Secular	1.98	2.05	3.07	3.04
Secular end	1.72	2.00	2.82	2.66

a. Cross-classification of normative and behavioral self assessments (reduction of 4 x 4 table).

b. Less than 20 cases.

Source: Survey of Attitudes and Behaviors Concerning Family Size among Israel's Jewish Population, 2005.

In the following multivariate analysis, individuals who preferred different final parities are assumed to constitute distinct subpopulations (as opposed to measuring parity preferences as a continuum). Binary logistic regressions were run on the 2005 survey data with odds ratios for each of the main consistently intended and normatively appropriate parities: 0-2, 3, 4 and 5+ (DellaPergola, 2007). A summary of the main findings is reported in Appendix 1. Respondents indicating each specific parity or type of inconsistency between intended and normatively appropriate parity were contrasted to the rest of the sample. Pseudo R squares (R^2), as expected, varied according to parity preferences and were highest at both ends of the parity range. The lowest R^2 was obtained for parity 4. Odds ratios from separate logistic regressions on specified parities are jointly displayed as if coming from cross-tabs of odds ratios by the stated parities (figure 10).

The relationship of age and parity was quite flat, correctly reflecting the long-term lack of variation in period fertility measures, and also foreshadowing intended continuity of such stability. If anything, all age groups older than the reference group (25-29) had lower odds for parities 3-5, meaning there were higher fertility propensities among the younger age groups. The only exception obtained at the lowest parity group where there appeared a powerful effect of older age on preferring (or being constrained to) that parity.

Quite importantly, an overall positive relationship emerged between years of education and preferred parity (reference group: less than 12 years of education). The relationship with higher education (17 or more years of education) was negative at lower parities (0-2), and became positive at higher parities

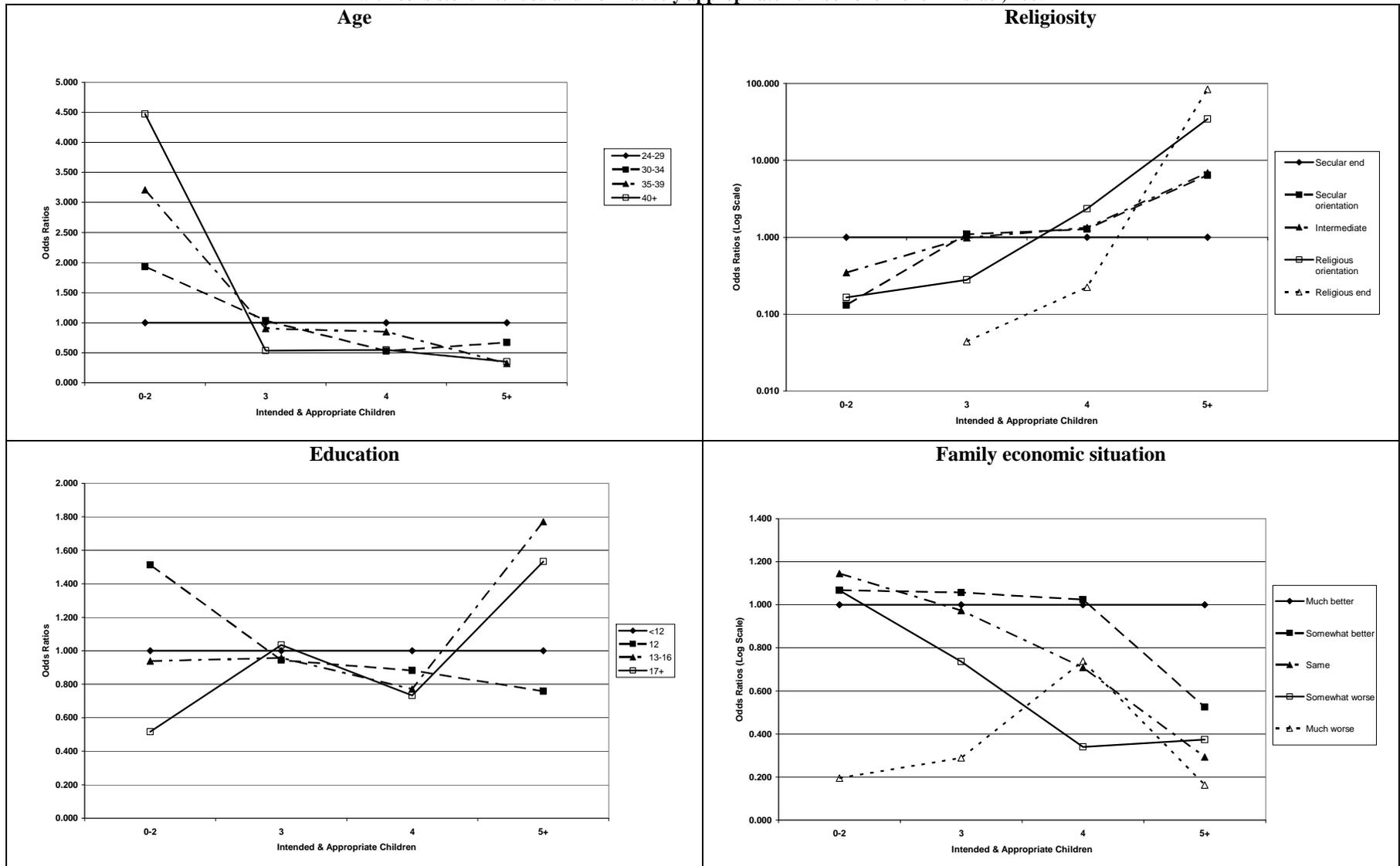
(5+).

Perceptions of the relative economic situation of the household were directly related to preferred parity (reference group: household economic situation perceived much better than average). The evidence was of a deterrent effect on fertility of a perceived scarcity of resources, and a positive relationship of household economic resources with parity.

The relationship of self-assessed religiosity to preferred parity was expectedly positive (reference group: secular end of a five-point scale). The visible effect on the more religious end of the distribution appeared only at parity 5 and above.

The gist of this brief overview is that there is a reversal of the classic negative relationship between socioeconomic status (namely education) and fertility into a positive one. This occurred under the impact of the youngest cohorts that were the better educated and the most satisfied with their lives. In turn, the better educated were the more satisfied. Motivational factors related to religiosity contributed to attitudes to childbearing; and as already noted, the more religious were found to be the more satisfied with their lives.

Figure 10. Logistic regression odd ratios for selected characteristics of Jewish couples with consistent intended and normatively appropriate number of children – Israel, 2005



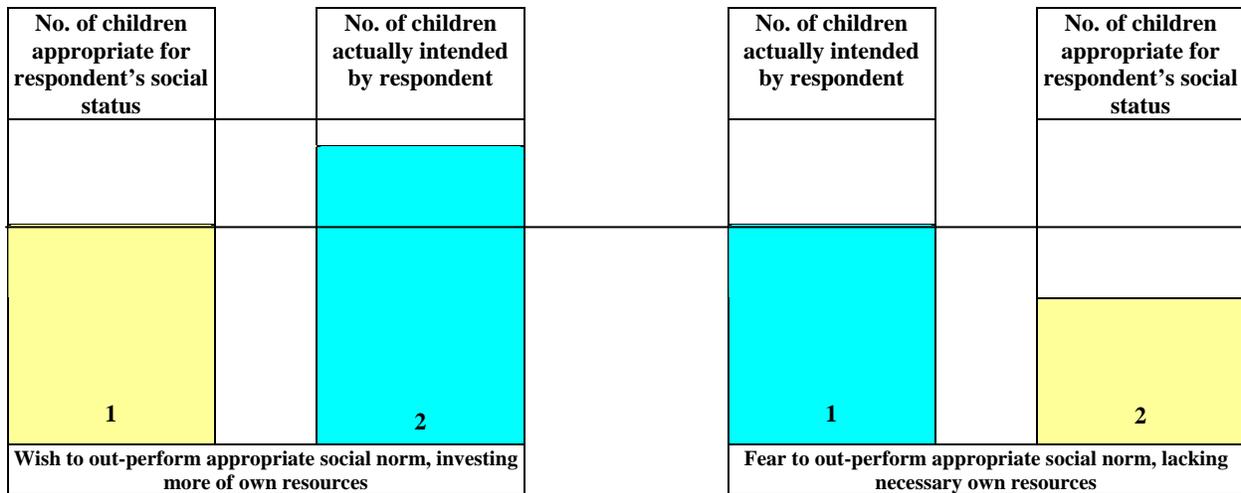
Source: Survey of Attitudes and Behaviors Concerning Family Size among Israel's Jewish Population, 2005

3. Discrepancies between intended and normatively appropriate family size

A significant finding for cognitive, projection and policy purposes was the presence of a large share of respondents whose preferred intended family size differed from their perceived most appropriate family size. How can these inconsistencies be reconciled?

When the intention was expressed to have a family size smaller than what was perceived as appropriate, this was often related to a respondent's relatively older age, to health motives and to women's socioeconomic motives. When fertility intentions were for more children than what was perceived as normatively appropriate, explanations were more complex and ambivalent (figure 11). A first explanation could be that people would first determine a family size most appropriate to their own social and economic environment, and at a later stage they would choose to out-perform that norm. This would imply investing more personal resources than usual compared to their peers to achieve that ideal parity goal. A reverse explanation could be that people would first determine their expected final parity, and subsequently would find their reproductive performance to exceed the normatively appropriate family size given the resources available to them. Two opposing explanations, therefore, may apply to the same inconsistent parity situations.

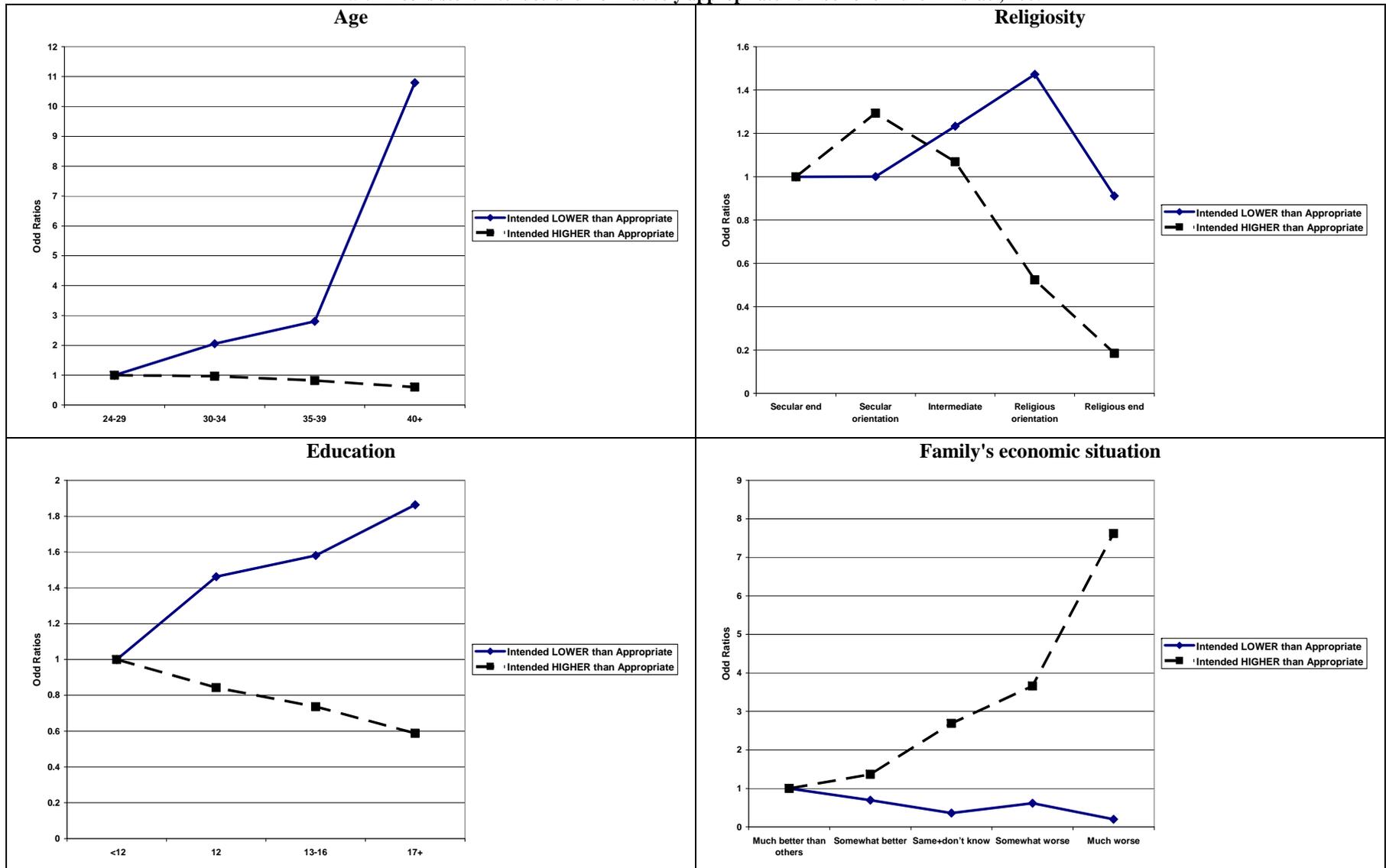
Figure 11. Alternative explanations of inconsistent intended and appropriate numbers of children



Returning to the results of the 2005 survey of Jewish families, the odds ratios from separate full-scale binary logistic regressions for the two types of inconsistent intended and normatively appropriate parity situations – lower and higher – are shown (figure 12). Age was strongly related to planning fewer children than perceived as normatively appropriate. It had a very weak negative association with planning more children than normatively appropriate, meaning that the concern would be greater among the younger cohorts.

Education had a positive association with intending to have fewer children than normatively appropriate, and a negative association with intending to have more children than normatively appropriate. In other words, among those giving inconsistent answers on intended and normatively appropriate family size, those with higher education had views that smaller families were more normatively appropriate and those with less education had views that larger families were more normatively appropriate.

Figure 12. Logistic regression odd ratios for selected characteristics of Jewish couples with inconsistent intended and normatively appropriate number of children – Israel, 2005



Source: Survey of Attitudes and Behaviors Concerning Family Size among Israel's Jewish Population, 2005

Similarly, the family's perceived economic situation relative to others was clearly and directly related to intending to have fewer children than normatively appropriate, and produced a reverse relation to intending to have more children than normatively appropriate. Again, persons with a lower relative economic status were more likely to report an intention to have larger families than perceived as appropriate. The association of religiosity with intending to have more children than normatively appropriate was negative, and supports the notion that among the more religious there can never be "too many" children as this would be tantamount to imposing an upper boundary to Divine Providence.

In sum, conflicting evidence emerged between those who consistently perceived the number of children they intended to have and deemed most appropriate socially, regardless of parity, and those who inconsistently perceived their intended and most appropriate final parity. Among those with consistent views, higher socioeconomic status measured through both education and family resources was associated with more intended children. Among those with inconsistent views, a lack of socioeconomic security and a perception of insufficient family resources were associated with more intended children.

I. POLICY DEMAND AND SUPPLY

Demographic trends have significantly influenced Israel's regional and global political relations and have long constituted a topic for policy planning debate (Friedlander, 1974; Bachi, 1977; DellaPergola and Cohen, 1992; Jewish People Policy Planning Institute, 2005; DellaPergola, 2011). In particular, the differential rate of growth among different sub-populations involved on opposite sides of the ongoing Middle-Eastern conflict was allegedly bound to alter the demographic balance among those groups with significant implications for the balance of power and governance in the region (DellaPergola, 2003).

In this debate, important issues for policy consideration concerned the translation of fertility norms and ideals into practice, the predictive value of declared fertility intentions, and the matching up of normatively desirable with economically feasible family size targets. Questions for policy discourse in Israel included the following:

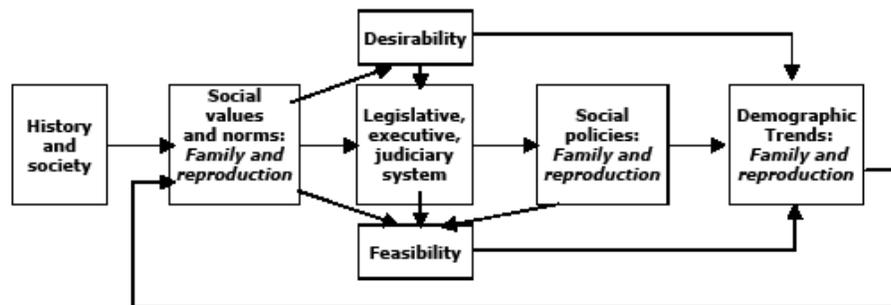
1. Can actual fertility be increased to match intended fertility, if the former is lower than the latter?
2. Can intended fertility be changed to match what is perceived as normatively appropriate fertility?
3. Can fertility preferences be changed?
4. How do large-scale immigration and ethnic diversity affect fertility?
5. How does the majority-minority dialectic affect fertility, especially under tense political circumstances?

While research on population policies often stresses the micro-social level, in the Israeli context macro-social identities and projects played important roles (figure 13). Institutional decisions and processes unavoidably reflected social norms about family and reproduction often stemming from cultural history. Reproduction significantly reflected norms and values prevailing in society about child desirability, but at the same time cultural norms also naturally affected the thinking of those public officials that were involved in legislative, executive and judiciary decision-making. In turn, reproductive patterns also tended to react to some extent to policies enacted by national legislative, executive and judiciary systems that aimed at influencing the cost of childrearing.

Population policies in Israel tended to reflect the negotiations and compromises inherent in a much fragmented, proportionally representative parliamentary system that produced coalition governments in which small parties garnered a substantial share of power. Since these parties tended to represent specific

population groups in terms of religiosity, ethnic origin and socioeconomic status, their effect on policies could significantly promote the interests of the respective constituencies. However the alternating government coalitions conspicuously detracted from the continuity and coherence of policy planning. Thus, typically in the area of family allowances, the Israeli Treasury has moved back and forth between more generous and less generous provisions, without ever developing a clear doctrine about the actual effects of such monetary transfers on the birth rate (Schellekens and Ophir, 2006). Particularistic political interests usually prevailed over a general understanding of the relationship between demography and society.

Figure 13. Direct and indirect societal effects of values and norms affecting family and reproduction in Israel



Public perceptions of incentives, constraints and negotiations about family size provided the cognitive background for potential policy options, and provided important clues about the direction of future fertility trends. As already noted, the survey data indicated that personal and household needs prevailed over public motives as key factors associated with family size preferences. Moreover, about 60 per cent of couples expressed support for public interventions that might encourage larger families, with another 27 per cent in favor of letting families do what they wish, and only 4 per cent in favor of policies that would encourage smaller families.

Interestingly, nearly 80 per cent of women and 70 per cent of men were ready to reconsider their final family size targets by adding one child if the appropriate circumstances emerged (table 4). According to respondents, reaching an expanded family size would depend more on enhanced quality of childrearing, equitable and more flexible conditions for working women and access to more suitable housing rather than money transfers or tax benefits.

The prime factor likely to bring a mother to reconsider previous family size desires was provisions for early childhood care (28 per cent of currently married Jewish women (table 4)). This implies strengthening an infrastructure that to some extent exists in the State of Israel but in the minds of the respondents should be further developed and in any case is too costly. The cost of education beyond early childhood also constituted a child-related concern (10 per cent) and was more commonly mentioned among those intending to have more children than normatively appropriate. The next most significant concern related to women’s employment (18 per cent of currently married Jewish women cited this reason) such as more flexible working hours, having a longer interval between having a child and returning to work, and not being discriminated against in career development because of time devoted to the family. Housing was another common reason (14 per cent), more so among married women with four children and among those intending to have more children than deemed appropriate. Very little emphasis was placed by respondents on money transfers (5 per cent), namely child allowances, or tax exemptions (5

per cent). Child allowances have constituted the paramount tool in the Israeli Government's family policies and are contentious issues in public debate. Only families envisaging five or more children stressed the importance of money transfers, which is significant in view of the stronger ideological background to decision-making among this larger family-size group. Fertility treatment was a further factor for having more children than intended (3 per cent), evidently not only confined to those desiring a first or second child, but particularly stressed among larger families and again showing the normative side of such a choice.

Finally, a significant minority (17 per cent) provided explanations rooted in family norms by declaring that "more children are good to children", and this reason was more common among married Jewish women who intended to have five or more children. It is intriguing to find that one in six women, after resolutely establishing their family size targets, were ready to consider having one more child on purely normative grounds.

Separate data for men, not shown here, showed attention to the monetary aspects (money transfers and tax exemptions) were more commonly cited than among women. Child education and early child care were reasons less commonly cited among men than among women, a finding that evokes the need for a deeper educational effort on gender equity in Israeli society.

TABLE 4. MAIN FACTOR LIKELY TO AFFECT HAVING ONE ADDITIONAL CHILD ABOVE NUMBER INTENDED – CURRENTLY MARRIED JEWISH WOMEN, ISRAEL, 2005

Factors	Number of intended vs. normatively appropriate children						Total
	Same				Different		
	0-2	3	4	5+	I<A	I>A	
Response rate, %	47	82	80	70	70	83	78
Total	100	100	100	100	100	100	100
Early childhood care	44	27	24	11	33	31	28
Child education	10	9	8	7	10	14	10
Women's employment	17	22	16	14	19	15	18
Housing	10	13	19	11	10	18	14
Money transfers	2	3	2	16	2	6	5
Tax exemptions	7	6	7	5	0	4	5
Fertility treatment	1	1	4	6	4	2	3
Good to children	8	19	20	30	23	10	17

Source: Survey of Attitudes and Behaviors Concerning Family Size among Israel's Jewish Population, 2005

Taken together, these findings are likely to affect public discourse on population trends in Israel and carry broader implications for expectations regarding future fertility patterns. The dilemma also emerges of a possible conflict of interests between universal and selective policy provisions. People who are more likely to respond to fertility-supporting policy incentives – shown by their inconsistent stance on intended and normatively appropriate family size – often belonged to lower socioeconomic strata. Additional births that might result from such policy interventions would thus primarily occur among households already in need of economic support. Yet trying to enhance wanted fertility among families in higher socioeconomic strata would risk infringing on rules of equal opportunity and social justice. All in all, this study showed a continuing demand for children in Israel and a widespread expectation that public policies would supply the support needed to achieve them.

J. DISCUSSION: SOME LESSONS AND PROSPECTS

In the general context of demographic transitions, levels of mortality, fertility and socioeconomic development tend to form one coherent cluster, yet this was not necessarily the case for Israel's population

– either as a whole or for Jewish, Christian and Muslim subpopulations. Israeli society displayed social and demographic patterns unlike other populations that roughly shared the same fertility levels. If one views fertility levels as a product or at least a correlate of several other variables, such as health patterns and socioeconomic development, recent total fertility levels in Israel among both Jews and Arabs were out of the range observed among other populations with similar characteristics. Such intriguing differences can be described as “bonus fertility” over the average fertility level of countries with other demographic characteristics comparable to Israel’s. Countries with similar total fertility usually had a much higher infant mortality rate, a much less educated population, and a much lower GNP per capita.

The apparently anomalous fertility patterns of Israelis can be explained by an unusual combination of factors that counteracted the trends toward smaller family size characteristic of many modernizing societies (van de Kaa, 1996). First, fertility-supporting attitudes are rooted in, or derived from, religious and cultural traditions shared by the vast majority of the population, within either the Jewish or the Arab sector (DellaPergola, 1988; Haydar, 2006). Traditional moral imperatives, widespread conventions and extended family networks encouraged families to have more children. Under the influence of these traditionalist tenets, some of the more traditional sectors of the Jewish population were discouraged from seeking employment and career rewards and pushed toward early marriage and childbearing (Berman and Klinov, 1997). This was true also among the more traditionalist Muslims. At the same time, in spite of some high profile declarations such as Arafat’s “war of the cradles” (Steinberg, 1999), and in the light of our own evidence, the actual impact of security awareness and nationalist militancy on fertility was inconclusive.

Israel’s relatively strong economic growth and improved standards of living provided the means for both Jews and Arabs to afford more children, and national policies in part encouraged this through adding public incentives and reducing some constraints (Israel Ministry of Labour and Social Affairs, 1992; DellaPergola, 2011). Israeli households’ comparatively favorable economic situation enabled accumulation of income, real estate, other durable goods and other resources, thus allowing Israelis to afford to have and support larger families. Among Arabs, the already noted stoppage for twenty years of the process of fertility decline that had begun in the 1960s probably reflected as well a situation of relative prosperity (though still at much lower income levels than among Jews). This happened at a time when the respective social structure was radically transforming from rural to urbanized, and from agriculture to industry, construction and services; occupational tertiarization was slowly emerging; possibly a favorable conjuncture prevailed in the marriage market; and changes in breastfeeding practices were occurring (Nahmias and Stecklov, 2007). At the same time, there is at least anecdotal evidence of some efforts by the religious and political leadership to mobilize the Palestinian street against modernization. Extended family networks played a deterrent role in this context. In broader terms, the Israeli-Arab conflict played a catalyst role enhancing ethnic identity, local community and family norms.

Furthermore, Israel’s policies included a package of mother-child allowances, extensive public-educational facilities (including tax-supported preschool) and provisions to ease the situation of working women. This was part of a broader system of transfer payments appropriate to a modern welfare state that was neither usually available to comparable populations in neighbouring countries nor in some more developed western countries. The objective of such policies was much more explicitly to ease poverty than to act as fertility incentives or as general regulators of demographic trends and population structure. Concern with ageing was often part of public discourse, but the connection between the birth rate and long term age structure changes was not made explicit, nor perhaps well understood by those in charge with economic policies.

Israel also developed a well-articulated and universally accessible public health system. Other things being equal, good healthcare for adults and children allowed for longer and more fecund reproductive spans, translating into the potential to have more children. The health system also took care of the demand

for children through voluntary fertility treatment, one characteristic symptom of which was the uniquely high frequency in Israel of multiple births (Zach, Pramanik and Ford, 2007).

The Israeli national commitment, at least nominally, to support larger families operated across the board, devoid of ethno-religious bias that might promote differential growth of specific population groups. For example, under the pressure of Jewish religious political parties legislation was enacted in Israel in 2000 substantially increasing child allowances for the fifth child and above. By that provision, about 40 per cent of child-allowance benefits went to the families of Israeli Arab newborns at a time when Israeli Arabs constituted only about 20 per cent of the Israeli population (not including the Occupied Palestinian Territory) (DellaPergola, 2009). A package of economic reforms approved by the Israeli Knesset (parliament) in May 2003 included a significant cut in child allowances and a provision for gradual downward equalization of the amounts paid to each successive child (Zarhiah, 2003). Another mechanism indirectly affecting fertility was a system of public subsidies for education and housing channeled through particular ethno-religious communities rather than directly to individuals. By lowering the cost of childrearing for designated subpopulations, these provisions tended to support higher fertility among these groups.

The combined impact of these fertility-supportive factors apparently outweighed the effects of the considerable improvement in educational attainment of both Jewish and Arab women, a trend that in the first place might expectedly have exerted a rationalizing influence toward smaller families. One can also argue that prolonged years of religious education for many men and women in Israel and Palestine reinforced the religio-cultural influences supportive of larger families among the more educated. However, even secular education, by providing women with better opportunities for employment and careers and thus better income and empowerment, promoted fertility by creating the conditions that made larger families more affordable. This was part of a transformative change in the relationship between socioeconomic status and family size (from a negative to a positive relationship). Achievement and upward social mobility generated optimism, which in turn provided the basis for wishing and actually attaining the number of children that would more than ensure generational continuity. If this is true, the Israeli case, for all of its exceptionalism, seemed to be part of a broader trend now emerging in other developed societies (Goldstein, Sobotka and Jasilioniene, 2009).

K. IMPLICATIONS FOR POPULATION PROJECTIONS AND CONCLUSIONS

Two main conclusions emerge from this assessment of fertility trends in Israel, one of method and one of substance. From the point of view of method, one of the peculiar traits of Israeli society was the constantly active presence on the front of family formation of population groups that did not seem prone to social change, whose fertility tended to be high, and whose share of total population consequently tended to grow. These groups have growing influence on the overall weighted average of national fertility levels, and when a tendency to fertility decline started developing, their behaviours would retard or offset it. Israeli society cannot be considered as one demographic bloc but rather as a conglomerate of quite different sub-populations. With respect to population projections, separate paths of change need to be considered after disaggregating society into its various sub-populations. This requires developing separate schedules for the different sub-populations and reconstituting the total from these at a second stage. Indeed, population projections carried out with such an approach for a highly heterogeneous city like Jerusalem produced quite highly accurate results that hold steady against the real data as time goes by (DellaPergola, 2001; 2008).

In this respect, one intriguing question concerns the possible extent of changes from one sub-population to another that might significantly affect the final outcome. In the Israeli case, passages between religion and ethnicity groups and categories were extremely rare and unlikely. Such changes

would occur more often from a status of non-classified to a more definite group status. Within each major religion group, changes across the behavioral spectrum more or less tied to traditional ideational models are possible, did occur with some frequency, and constitute one of the factors to be analyzed in professional population projections.

From the point of view of substance, the diverse evidence reviewed here points to a very conservative pattern of fertility change in spite of substantial societal change at both the micro- and macro-levels. To observers from the outside, the Israeli societal system often looked quite unstable under stress. While this was sometimes the perception of the local population as well, society overall and its major sub-populations displayed significant resilience. Under extreme circumstances, though, the somewhat fragile equilibrium that prevailed in the past might be profoundly disrupted. Threats of nuclear interventions, often raised in recent public discourse, are a reminder of an eventuality that would produce catastrophic consequences for the whole societal fabric, of which fertility levels are but a sensitive barometer. One can indeed hope not only that no major disruption is bound to occur, but also that the process will make progress of mutual recognition between the rival parties in the Middle Eastern conflict leading to political normalization in the region. Under these assumptions and caveats, the unique interplay of ideational and social structural options and constraints in Israeli society seems likely to lead to resilience of the present relatively high and stable fertility levels into the foreseeable future.

APPENDIX 1. LOGISTIC REGRESSIONS FOR NUMBER OF INTENDED/NORMATIVELY APPROPRIATE CHILDREN:
 FULL MODEL ODDS RATIOS
 (TOTAL N = 1454) – ISRAEL, 2005

Explanatory variables	Number of intended vs. normatively appropriate children					
	Same				Different	
	0-2	3	4	5+	I<A	I>A
1. Background variables: a. Basic						
V1. Sex: ref. Female						
Male	.741	1.196	1.237	1.177	.861	.806
V3. Age: ref. 24-29						
30-34	1.932**	1.036	.528**	.670	2.054*	.968
35-39	3.210***	.902	.851	.322***	2.802**	.823
40+	4.473***	.536**	.545	.351**	10.780***	.599*
V126. Country of birth: ref. Israel						
FSU	3.596***	.705*	.421**	.190**	1.189	.682*
Other	1.247	1.049	1.015	.741	1.351	1.062
V137A. Education: ref. <12						
12	1.513	.944	.882	.758	1.462	.843
13-16	.938	.958	.771	1.771	1.580	.736
17+	.517	1.035	.733	1.553	1.863	.588
V113. Employment status: ref. No work, does not seek						
Does not work, seek	1.187	1.496	.617	.703	2.120	1.333
Work part time	1.220	1.139	.771	.760	2.120	1.299
Work fulltime	1.188	1.278	.733	.591	1.810	1.256
b. Socioeconomic						
V123. Family's relative economic situation: ref. Much better than others						
Somewhat better	1.068	1.057	1.024	.525	.697	1.368
Same + don't know	1.145	.973	.708	.293**	.359***	2.689***
Somewhat worse	1.067	.736	.340*	.374	.616	3.660***
Much worse	.195	.289	.738	.163**	.202	7.624***
V122. Sources of economic help: ref. Parents						
Others	.787	.997	.768	.804	1.187	1.189
None	1.065	.953	.677*	1.061	1.116	1.179
V120. Family economic status next year: ref. Much better						
Somewhat better	1.627	.721	1.354	.588	1.219	.977
Same	1.610	.821	1.293	.457**	.924	.942
Somewhat worse	1.811	.653	1.239	.114***	1.639	1.093
Much worse	2.004	.725	.300	.181**	.535	1.499
c. Social norms						
V80. Attitudes about children: ref. Most important thing in life completely agree						
Moderately agree	.708	1.388**	.867	.721	1.128	.991
Moderately disagree	.934	.946	.798	.507	1.050	1.351
Completely disagree	1.278	.720	.536	1.398	1.678	.907
V124. Career orientation: ref. Not at all						
Moderately	.942	1.788***	1.436	.993	1.017	.615**
Somewhat	1.015	1.178	1.512	1.072	1.330	.967
Very much	.657	1.310	1.787*	.794	1.073	1.023
d. Religiosity						
ZEHUT. Religiosity: ref. Secular end						
Secular orientation	.131***	1.092	1.274	6.403***	1.001	1.293
Intermediate	.346***	.982	1.332	6.899***	1.233	1.069
Religious orientation	.165**	.278***	2.345***	34.580***	1.472	.524**
Religious end	-	.044***	.222***	83.610***	.911	.185***
2. V84A. Current children: ref. 0						
1	.944	.579**	.987	1.610	1.440	1.557
2	.389	.517**	1.432	1.273	1.881	1.875**
3	-	1.532	1.680	3.732*	1.171	1.662
4	-	-	7.051***	6.621***	.743	2.750***
5+	-	-	-	41.770***	-	1.439
3. V59B. Preferred policy options: Factors supporting having one additional child above currently intended ref: None						
Early childhood care	.816	.850	1.092	.726	1.020	1.432*
Child education	.720	.794	1.510	1.858	.932	1.592*
Woman employment	.711	.1356	1.128	1.163	.770	1.215
Housing	.453**	.705	1.800*	1.057	.656	2.060***
Money transfers	.663	.878	.810	1.246	.612	1.558
Tax exemptions	.656	1.263	1.195	1.226	.281**	1.687
Fertility treatment	.084**	.545	1.886	4.557**	1.602	2.319*
Good to children	.313***	1.156	1.430	1.595	1.414	.985
Constant	.235	.570	.125***	.039***	.013***	.110***
Pseudo R²	.456	.279	.189	.679	.216	.169
N	187	371	161	209	145	381

*** p < 0.01** p < 0.05 * p < 0.1

Source: Survey of Attitudes and Behaviors Concerning Family Size among Israel's Jewish Population, 2

REFERENCES

- Abu Libdeh, Hasan, Ovensen, Geir and Brunborg, Helge (1993). Population Characteristics and Trends. In *Palestinian Society in Gaza, West Bank and Arab Jerusalem: A Survey of Living Conditions*, M. Heiberg and G. Ovensen, eds. Oslo, pp. 35-97.
- Bachi, Roberto (1977). *The Population of Israel*. Paris, CICRED, and Jerusalem, the Hebrew University, Jewish Population Studies.
- Berman, Eli and Klinov, Ruth (1997). Human Capital Investment and Nonparticipation: Evidence from a Sample with Infinite Horizons (Or: Jewish Father Stops Going to Work), The Maurice Falk Institute for Economic Research in Israel, Research paper 97.05, Jerusalem.
- Cohen, Alma, Dehejia, Rajeev and Romanov, Dmitri (2007). Do Financial Incentives Affect Fertility? NBER 13700, <http://www.nber.org/papers/w13700>.
- Courbage, Youssef (1999). Reshuffling the Demographic Cards in Israel/Palestine. *Journal of Palestine Studies*, vol. 28, pp. 21-39.
- DellaPergola, Sergio (1980). Patterns of American Jewish Fertility. *Demography*, vol. 17, No. 3, pp. 261-273.
- DellaPergola, Sergio (1983). Contemporary Jewish Fertility: An Overview. In *Papers in Jewish Demography 1981*, U.O. Schmelz et al. (eds.). Jerusalem, The Hebrew University, pp. 215-238.
- DellaPergola, Sergio (1988). Some Effects of Religion on Population Trends. *Pro Mundi Vita Studies*, vol. 5, pp. 40-48.
- DellaPergola, Sergio (1993). Demographic Changes in Israel in the Early 1990s, in Y. Kop (ed.) *Israel Social Services, 1992-93*. Jerusalem, The Center for Social Policy Studies in Israel, pp. 57-115.
- DellaPergola, Sergio (2001). Jerusalem's Population, 1995–2020: Demography, Multiculturalism and Urban Policies. *European Journal of Population*, vol. 17, pp. 165-199.
- DellaPergola, Sergio (2003). Demographic Trends in Israel and Palestine: Prospects and Policy Implications. *American Jewish Year Book*, vol. 103, pp. 3-68.
- DellaPergola, Sergio (2007). Actual, Intended, and Appropriate Family Size in Israel: Trends, Attitudes and Policy Implications – A Preliminary Report. Paper presented at Population Association of America, Session 60 – Mismatches between Fertility Intentions and Behavior: Causes and Consequences, 63 pp.
- DellaPergola, Sergio (2008). Demography, Planning and Policy, 2000-2020. In *40 Years in Jerusalem*, O. Achimeir, Y. BarSimantov (eds.). Jerusalem, Jerusalem Institute of Israel Studies, pp. 39-59 (Hebrew).
- DellaPergola, Sergio (2009). Actual, Intended, and Appropriate Family Size Among Jews in Israel. *Contemporary Jewry*, vol. 29, No. 2, pp. 127-152.
- DellaPergola, Sergio (2009b). International migration of Jews, in E. Ben-Rafael and Y. Sternberg (eds.) *Transnationalism: Diasporas and the advent of a new (dis)order*. Leiden and Boston, Brill, pp. 213-236.
- DellaPergola, Sergio (2011). *Jewish Demographic Policies: Population Trends and Options in Israel and in the Diaspora*. Jerusalem, The Jewish People Policy Institute, 324 pp.
- DellaPergola, Sergio and Cohen, Leah (eds.) (1992). *World Jewish Population: Trends and Policies*. Jerusalem, The Hebrew University, Jewish Population Studies.
- DellaPergola, Sergio, Tzemach, Mina, Wiesel, Rimona, Neuman, Moran (2005). Fertility Trends and Attitudes among Jews in Israel – 2005, *14th World Congress of Jewish Studies*, Jerusalem.
- Eisenbach, Zvi (1986). Family Planning among the Muslim Population of Israel. In *Studies in the Population of Israel in Honor of Roberto Bachi*. *Scripta Hierosolymitana*, U.O. Schmelz, G. Nathan (eds), vol. 30, Jerusalem, Magnes Press, pp. 1-14.
- Fargues, Philippe (2000). Protracted National Conflict and Fertility Change: Palestinians and Israelis in the Twentieth Century. *Population and Development Review*, vol. 26, pp. 441-482.
- Friedlander, Dov (1974). Israel. In *Population Policy in Developed Countries*, Bernard Berelson (ed.). New York, McGraw-Hill, pp. 42-97.
- Friedlander, Dov (2002). Fertility in Israel: Is the Transition to Replacement Level in Sight? In Expert Group Meeting on Completing the Fertility Transition, United Nations Secretariat, Division of Economic and Social Affairs, Population Division, New York.

- Friedlander, Dov, Eisenbach, Zvi and Goldscheider, Calvin (1979). Modernization Patterns and Fertility Change: The Arab Populations of Israel and the Israel-Administered Territories. *Population Studies*, vol. 33, No. 2, pp. 239-254.
- Friedlander, Dov, Eisenbach, Zvi and Goldscheider, Calvin (1980). Family-Size Limitation and Birth Spacing: The Fertility Transition of African and Asian Immigrants in Israel. *Population and Development Review*, vol. 6, No. 4, pp. 581-593.
- Friedlander, Dov and Feldmann, Carol (1993). The Modern Shift to Below-Replacement Fertility: Has Israel's Population Joined the Process? *Population Studies*, vol. 47, No. 2, pp. 295-306.
- Friedlander, Dov and Goldscheider, Calvin (1978). Immigration, Social Change and Cohort Fertility on Israel. *Population Studies*, vol. 32, No. 2, pp. 299-317.
- Goldscheider, Calvin (1971). *Population, Modernization and Social Structure*, Boston, Little Brown.
- Goldscheider, Calvin and Friedlander, Dov (1986). Reproductive Norms in Israel. In *Studies in the Population of Israel in Honor of Roberto Bachi, Scripta Hierosolymitana*, U.O. Schmelz, G. Nathan (eds.), Jerusalem, vol 30, pp. 15-35.
- Goldstein, Joshua R., Sobotka, Tomás and Jasilioniene, Aiva (2009). The End of 'Lowest-Low' fertility?, MPIDR Working Paper, WP 2009-029, Rostock, Max Planck Institute for Demographic Research, pp. 1-58.
- Harvard University Program on Humanitarian Policy and Conflict Research (2006). Population Projections for Socioeconomic Development in the Gaza Strip, Working Paper 1, Cambridge, Mass.
- Haub, Carl and Kent, Mary Mederios (ed.) (2009). *2009 World Population Data Sheet*, Washington DC, Population Reference Bureau.
- Haydar, Aziz (2006). *The Book of Arab Society: Population, Society, Economy*. Jerusalem Van Leer Institute and Hakibbutz Hameuchad.
- Hill, Alan G. (1983). The Palestinian Population of the Middle East. *Population and Development Review*, vol. 9, pp. 293-316.
- Hleihel, Ahmad (2011). Fertility among Jewish and Muslim Women in Israel, by Level of Religiosity, 1979-2009, Jerusalem, Israel Central Bureau of Statistics, Working Paper Series, No. 60.
- Inglehart, Ronald and Welzel, Christian (2005). *Modernization, Cultural Change, and Democracy: The Human Development Sequence*, New York, Cambridge University Press.
- Israel Central Bureau of Statistics (annual). *Statistical Abstract of Israel*, Jerusalem.
- Israel Ministry of Labour and Social Affairs, The Demographic Center (1992). Population Trends and Policies in Israel, in *World Jewish Population: Trends and Policies*, S. DellaPergola and L. Cohen (eds.), Jerusalem, pp. 253-267.
- Jewish People Policy Planning Institute (2005). *Annual Assessment 2005*. Jerusalem.
- Kalushka Yulia (2006). Change in position toward the marriage institution, 1994-2002, Jerusalem, The Hebrew University, unpublished paper (Hebrew).
- Khawaja, Marwan, Assaf, Shireen, Jarallah, Yara (2009). The transition to lower fertility in the West Bank and Gaza Strip: evidence from recent surveys, *Journal of Population Research*, vol. 26, pp. 153-174.
- Kotler-Berkowitz, Laurence, Cohen, Steven M., Ament, Jonathon, Klaff, Vivian, Mott, Frank, and Peckermen-Neuman, Danielle (2003). *The National Jewish Population Survey 2000-01: Strength, Challenge and Diversity in the American Jewish Community*. New York: United Jewish Communities.
- Kupinsky, Shlomo (1992). Results of the Fertility Study Relevant to a Population Policy in Israel. In *World Jewish Population: Trends and Policies*, S. DellaPergola and L. Cohen (eds.), Jerusalem, pp. 301-318.
- Levy, Shlomit, Levinson, Hanna, and Katz, Elihu (2002). *A Portrait of Israeli Jewry: Beliefs, Observances and Values among Israeli Jews 2000*, Jerusalem.
- Machon Dahaf (2005). *Attitudes and Behaviors of the Jewish Population in Israel on Questions Concerning Family Size (Summary of Research Undertaken by the Demographic Initiative of the Jewish Agency)*. Tel Aviv (Hebrew).
- Nahmias, Petra (2004). Fertility Behaviour of Recent Immigrants to Israel: A Comparative Analysis of Immigrants from Ethiopia and the Former Soviet Union. *Demographic Research*, vol. 10, No. 4, pp. 83-120.
- Nahmias, Petra and Stecklov, Gay (2007). Muslim Fertility Stagnation in Israel from 1980–2000. *European Journal of Population*, vol. 23, No. 1, pp. 71-99.
- Okun, Barbara S. (1997). Innovation and adaptation in fertility transition; Jewish immigrants to Israel from Muslim North Africa and the Middle East. *Population Studies*, vol. 51, No. 3, pp. 315-335.

- Okun, Barbara S. (2000). Religiosity and Contraceptive Method Choice: The Jewish Population of Israel. *European Journal of Population*, vol. 16, No. 2, pp. 109-132.
- Palestinian Central Bureau of Statistics, <http://www.pcbs.org>
- Palestinian Central Bureau of Statistics (1997) *The Demographic Survey in the West Bank and Gaza*, Ramallah.
- Peritz, Eric and Baras, Mario (1992). *Studies in the Fertility of Israel*. Jerusalem, The Hebrew University, Jewish Population Studies series, Vol. 24.
- Pritchett, L.H. (1994). Desired Fertility and the Impact of Population Policies. *Population and Development Review*, vol. 20, No. 1, pp. 1-55.
- Saad, Lydia (2006). Attitudes toward Family Size Among Palestinians and Israelis. Tel Aviv, Gallup News Service.
- Schellekens, Jona, and Eisenbach, Zvi (2002). The predecline rise of Israeli Moslem fertility. *Economic Development and Cultural Change*, vol. 50, No. 3, pp. 541-555.
- Schellekens, Jona, and Ophir, Moshe (2006). *Influence of family allowances and marriage on births* (in Hebrew), Jerusalem, The Hebrew University.
- Schmelz, U.O. (1989). Religiosity and fertility among the Jews of Jerusalem. *Papers in Jewish Demography 1985*, Jerusalem, The Hebrew University, 157-185.
- Schmelz, U.O., and Yaffe, Nurit (1994). *Fertility of Married Women according to the Population and Housing Censuses of 1961, 1972 and 1983 – Statistical Tables*, 1983 Census of Population and Housing Publications, 25, Jerusalem, State of Israel, Central Bureau of Statistics, and The Hebrew University of Jerusalem, The Institute of Contemporary Jewry.
- Steinberg, Mati (1989). The demographic dimension of the struggle with Israel as seen by the PLO. *The Jerusalem Journal of International Relations*, vol. 11, No. 4, pp. 27-51.
- Tolts, Mark (1997). The Interrelationship between Emigration and the Socio-Demographic Profile of Russian Jewry. In *Russian Jews on Three Continents*, Noah Lewin Epstein, Yaacov Ro'i and Paul Ritterband, eds. London, pp. 147-176.
- Tolts, Mark (2009). Post-Soviet Aliyah and Jewish Demographic Transformation, *15th World Congress of Jewish Studies*, Jerusalem, pp. 1-36.
- United Nations, Population Division, Department of Economic and Social Affairs (2008). *World Population Prospects: The 2008 Revision*, New York.
- United Nations, Human Development Programme (UNDP) (2009). *Human Development Report 2009; Overcoming barrier: Human mobility and development*, New York.
- van de Kaa, D.J. (1996). Anchored Narratives: The Story and Findings of Half a Century of Research into the Determinants of Fertility. *Population Studies*, vol. 50, No.3, pp. 389-432.
- Zach, T., Pramanik, A.K., Ford, S.P. (2007). Multiple Births. <http://emedicine.medscape.com/article/977234-overview>
- Zarhiah, Zvi (2003). Gam vikuhim bakoalitzia 'ikvu et hahatzba'ah [Also discussions within the coalition postponed the vote], *Haaretz*, May 29 (Hebrew).
- Ziegler, Ilana (1995). Family Growth in Israel and the "Critical Child", Unpublished Ph.D. dissertation, Jerusalem, The Hebrew University (Hebrew).

NOTES

¹It has been customary at CBS not to collect information on the country of birth of Israeli Arabs.

²Throughout this paper, unless differently specified, the category "America" is referred to meaning: the United States, Canada, Central and Southern America – also including Australia and New Zealand.

³We comply here with the practice of the United Nations to refer to the "Occupied Palestinian Territories". The Palestinian Central Bureau of Statistics (PCBS) adopts the definition "Palestinian Territory". Israel's Central Bureau of Statistics, during the years when it carried responsibility for collecting and publishing the relevant data (until 1994) adopted the definition of "Judea and Samaria (for the West Bank) and Gaza".

⁴The study was made possible thanks to the support of the Jewish Agency for Israel (JAFI), an Israel-based NGO mainly concerned with welfare and public advocacy among Jewish communities worldwide and

among the Jewish constituency within Israel's society. The survey was part of JAFI's Demographic Initiative, a research programme aimed at Jewish populations globally. Singles and single parent households were not included. In 2007 the latter accounted for 15 per cent of all single family households of all ages with children at home (Israel, CBS, 2008, table 5.3). Sample stratification reflected actual population composition estimates by Israel's Central Bureau of Statistics on age, geographical region, type of locality and population sector, namely immigrants from the FSU, residents in very religious (*Haredi*) neighbourhoods, and others. Women and men were separately interviewed by telephone based on nearly identical questionnaires. Recent immigrants from the FSU were interviewed in Russian. Reflecting great public interest on the topic investigated, a 95 per cent response rate obtained among the target population actually reached. Although independently drawn, the female and male samples provided highly consistent answers inasmuch as characteristics of respondents and the respective spouses could be matched, such as labor force characteristics or religiosity. When the answer to questions on number of children was "as pleases Providence" and similar, a number was coded equivalent to the average for the self-defined very religious group in the given question.

⁵The appellative reflects the fact that the 1949 armistice lines, superseded by the 1967 war, were printed in green on many standard geographical maps.

⁶The data series for U.S. Jews was created using for earlier years TFRs retrospectively estimated from surveys, and for later years cross-sectional data on completed fertility assuming an average age at motherhood of 30.

⁷Unlike the other countries mentioned, Saudi Arabia does not have a common border with Israel, but is visible without need of binoculars from Israel's southern shore on the Red Sea.

⁸A separate HDI can be roughly estimated for Israel's Arab population following a number of assumptions. With a life expectancy of 75.9 for males and 79.7 for females, and an average of 77.8 in 2008, Israel Arabs fell in between Slovenia (78.2) and Kuwait (77.5), obtaining a partial index of .880. With a school enrollment rate of 99.1 per cent, Israel Arabs equaled Israel's total, obtaining a partial index of .947. Income distribution data allow for a rough estimate of the Arab sector's income at 60 per cent of Israel's total average income (\$26,000), equivalent to \$15,600. Israel Arabs hence fell between Poland (\$16,000 with a partial index of .847) and Russia (\$14,700 with a partial index of .833), obtaining an estimated partial index of .840. Based on these data and assumptions, the Israeli Arabs' HDI would be estimated at .889, in between those of Bahrain (.895) and Estonia (.883), and would thus rank between 39th and 40th in the world as against 27th for Israel (including its Arab component). It would thus rank far higher than each of the countries here compared on fertility: Saudi Arabia (59), Lebanon (83), Jordan (96), Syria (107), Occupied Palestinian Territory (110), and Egypt (123) (United Nations Development Programme, 2009).