

Strictly Orthodox rising:

What the demography of British Jews
tells us about the future of the community

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The **Institute for Jewish Policy Research (JPR)** is a London-based independent research organisation, consultancy and think-tank. It aims to advance the prospects of Jewish communities in Britain and across Europe by conducting research and developing policy in partnership with those best placed to influence Jewish life.

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1 Introduction

The British Jewish population is on the verge of significant demographic change. At present, the majority of British Jews are either secular or moderately religious, with a considerable proportion of the latter leaning toward non-halachic or ethnic forms of Jewish expression. Synagogue membership data analysis, conducted by JPR in partnership with the Board of Deputies of British Jews, shows that in 2010 about 60% of British Jewish households were affiliated to a central Orthodox or a Progressive synagogue, and close to one third were not affiliated to any type of synagogue. The remaining share of the households, less than 10%, were strictly Orthodox. However, this situation is expected to change in the not-too-distant future.

It would appear that the end of the twentieth century closes a long era of Jewish population decline in the United Kingdom. Trends in synagogue membership indicate that, collectively, the total number of households which are affiliated to synagogues declined between 1990 and 2010. The central Orthodox stream lost about one third of its membership, while the Reform and Liberal denominations declined by 4.2% and 7.6%, respectively.¹ While some of this decline was caused simply by mortality, it was also affected by ‘denominational switching’ from more halachically observant to less halachically observant forms of Judaism. This picture stands in stark contrast to the trend displayed by the strictly Orthodox, the most observant of Britain’s Jewish sub-groups, where membership grew by more than 100% over the same period. Yet, in this instance, the cause has little to do with denominational switching; the growth is rather fuelled predominantly by demographic factors – high birth rates combined with low mortality.

The extraordinary demographic growth of the strictly Orthodox sub-population has attracted much commentary, both concerned and celebratory. Observers on the concerned side of the spectrum typically focus on the differences between the strictly Orthodox and the mainstream

(i.e. non-strictly Orthodox); they express unease about the extent to which the former are integrated into British society, and apprehension about a potentially unwelcome change in the religious, educational, economic and occupational profile of British Jewry. Positively inclined observers, on the other hand, tend to focus on the renewed population growth and vigorous Jewish religious life that the expansion of the strictly Orthodox population seems to have generated. Irrespective of which position one leans towards, the future numerical developments in the mainstream and the strictly Orthodox sub-populations will have important repercussions for the overall nature of Jewish life in the UK.

In socio-cultural terms, the strictly Orthodox and the non-strictly Orthodox differ with regard to the character and intensity of their religious lives, their lifestyles, their appearance, and, often, their economic circumstances. Most Jewish marriages do not cross the sub-populations’ borders. Demographically, too, these sub-populations are rather distinct. Patterns of fertility differ, with much higher fertility among the strictly Orthodox, and these differences result, in turn, in different age structures, with the strictly Orthodox population being significantly younger and growing at a faster rate than the non-strictly Orthodox. Geographically, there is also a degree of separation between the two sub-populations, as strictly Orthodox families tend to form homogeneous residential clusters: all strictly Orthodox Jews live in selected geographies – and almost exclusively in these geographies – and very few non-strictly Orthodox Jews live there. strictly Orthodox Judaism also appears to be more ‘sticky’ than other forms of Judaism: JPR’s National Jewish Community Survey (NJCS) has shown that about three-quarters of people raised in a strictly Orthodox family remain strictly Orthodox in adulthood, whereas only about half of people raised in a central Orthodox or Progressive Jewish family remain central Orthodox or Progressive in adulthood.²

1 Graham, D. and Vulkan, D. (2010). *Synagogue Membership in the United Kingdom in 2010*. London: Institute for Jewish Policy Research and The Board of Deputies of British Jews.

2 Graham, D., Staetsky, L. D. and Boyd, J. (2014). *Jews in the United Kingdom in 2013: Preliminary findings from the National Jewish Community Survey*. London: Institute for Jewish Policy Research.

This paper focuses on two key issues: first, the current and possible future numerical relationships between the strictly Orthodox and non-strictly Orthodox populations, and second, the selected characteristics of these two sub-populations. Where possible, we compare both populations to other religious groups inside the UK and to the national populations of different countries in order to provide a more general point of reference. Our primary objective is to present some empirical data on these two Jewish sub-populations in the UK in order to generate a view of the probable future, both in demographic and in social terms, and to inform Jewish communal policy and planning in the UK.

Specifically, we focus on three questions:

1. How many strictly Orthodox and non-strictly Orthodox Jews live in the UK in the early twenty-first century?
2. What do the age and sex distributions of these two sub-populations look like, and what does this tell us about the demographic, social and cultural dynamics within each group?
3. What is the projected numerical relationship between the two sub-populations over the course of the coming decades?

While the size of the strictly Orthodox Jewish population and its numerical development over time have been addressed in the past to some extent,³ the analysis of population pyramids as windows into social life represents a new means of exploring what is going on demographically and socially, and what we might expect to occur over the coming decades.

Why population pyramids? Population pyramids provide a graphical representation of the age and sex structure of a given population. They are a

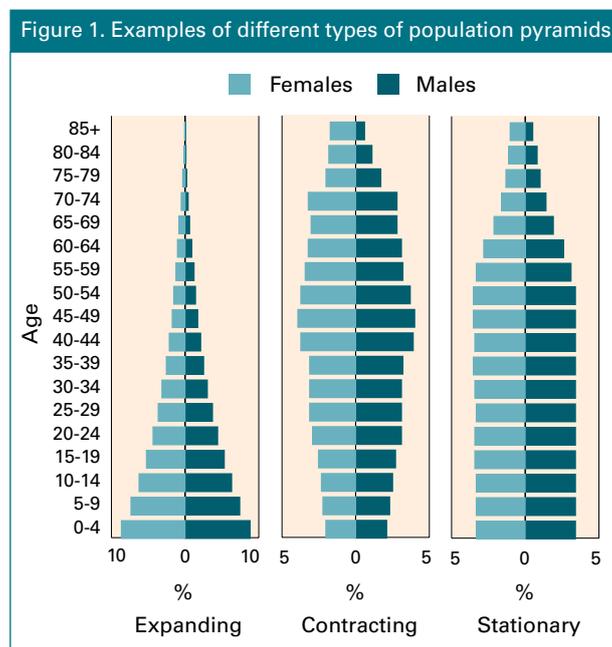
3 See, for examples: Vulkan, D. and Graham, D. (2008). "Population Trends Among Britain's Strictly Orthodox Jews." Report of the Community Policy Research Group, Board of Deputies of British Jews; Graham, D. (2011). "Enumerating Britain's Jewish population: Reassessing the 2001 Census in the context of one hundred years of indirect estimates." *Jewish Journal of Sociology* 53: 7-28; Graham, D. (2013). 2011 Census results (England and Wales): a tale of two Jewish populations. Institute for Jewish Policy Research.

summary of age and sex distribution which is efficient, visually appealing and clear. In Figure 1, three typical population pyramid shapes are set out, and their meanings described.

The expanding pyramid has larger numbers/percentages of the population in the younger age groups. This pyramid shape is often found both in historical populations and in contemporary populations of less developed countries, such as in sub-Saharan Africa. The pyramidal appearance with a broad base and 'staircase' sides is indicative of high fertility and high mortality. The expanding pyramid is a sign of a growing population. However, the scope of growth in populations possessing such a structure varies (i.e. the growth can be more or less vigorous), depending on the exact balance of fertility and mortality.

The contracting pyramid possesses smaller numbers/percentages of the population in the younger age groups. This shape is found in the contemporary populations of some Western European countries, e.g. Germany and Austria. Its key feature is its narrow base, which is indicative of low fertility. Such populations also typically possess low mortality. Nevertheless, a contracting pyramid is a sign of population decline: the younger age groups do not constitute sufficient numerical replacement for the older age groups.

The stationary (or near-stationary) pyramid possesses nearly equal numbers/percentages of



the population in the younger and middle-aged age groups. The stationary pyramid is found in some contemporary populations: for example, the population pyramids of the United States and some Scandinavian countries approximate this shape. It results from low fertility and low mortality, just like the contracting pyramid. However, in contrast to the contracting pyramid, here the forces of fertility and mortality balance each other and result in an absence both of population growth and population decline.

Population pyramids are particularly valuable tools for several reasons. First, the age and sex structure data that underlie them are the most simple and easily available type of population

statistics. They are collected in censuses, surveys and administrative files. Second, in contrast to other types of population statistics, such as life expectancy or the total fertility rate, the age and sex structure can be read intuitively by most people once they have been introduced to the logic of the tool. Third, advanced demographic and socio-economic insights can be derived from a population pyramid using quite simple computational techniques. Thus, by shining a light on the pyramid, we are able to gain multiple insights into the social and cultural realities of populations, in a way that requires no significant investment in the gathering of new data, and that can be relatively easily understood by the non-specialist reader.

2 How many strictly Orthodox and non-strictly Orthodox Jews live in the United Kingdom?

As is the case with the definition of any social group, any definition of the strictly Orthodox (also known as ‘*haredi*’) is imperfect. Membership of a strictly Orthodox synagogue is a helpful indicator of group belonging, but it is an approximate, not a precise measure. Indeed, JPR’s National Jewish Community Survey (NJCS), conducted in 2013, indicated that only 76% of self-identified *haredi* respondents were members of a strictly Orthodox synagogue. On the other hand, only 36% of members of a strictly Orthodox synagogue (e.g. the Union of Orthodox Hebrew Congregations) identified themselves explicitly as *haredi*.⁴ The ‘mainstream’ Jewish population is also difficult to define. It includes self-defining Jews who are members of a wide range of synagogues and of none at all. Because of this, for the purposes of this report, it is more accurate to label them by what they are not, rather than what they are, so the terms ‘non-strictly Orthodox’ and ‘mainstream’ will be used interchangeably.

However, our assessment of the numerical relationship between the strictly Orthodox and the mainstream Jewish populations in England and Wales is not greatly impeded by this lack of definitional precision. Due to the residential patterns of strictly Orthodox Jews in the UK, namely, their tendency to form particularly homogeneous residential clusters, one can reasonably approximate their number using geographical tools. In Table 1 we present the 2011 UK Census’s original (enumerated) numbers of Jews by religion in the United Kingdom as a whole and by constituent country, in order to provide the basic frame of reference. In Table 2, the number of residents of electoral wards/local authorities in England and Wales known to be major centres of the strictly Orthodox Jewish population is shown for the year 2011.⁵ All of these

numbers have been obtained from the publicly available data on the geographical distribution of the Jewish population in 2011, generated by the Office for National Statistics, National Records of Scotland and the Northern Ireland Statistics and Research Authority.

Table 1. Jewish population of the United Kingdom, by country, enumerated Census 2011 figures⁶

Country	Number
Total Jews by religion, United Kingdom	271,259
England and Wales	265,037
Scotland	5,887
Northern Ireland	335

Table 2 presents two versions of Census-based counts of the strictly Orthodox population. The first (*strictly Orthodox Jews – broad definition*) is the sum of people self-identifying as Jewish by religion in ‘strictly Orthodox’ localities – 2011 Census wards where strictly Orthodox Jews are known to form an absolute majority among Jews, plus two particular wards within the London Borough of Barnet that contain large strictly Orthodox populations but not strictly Orthodox majorities. Such an exercise renders almost 44,000 (16% of the total Jewish population) in 2011. The second version (*strictly Orthodox Jews – narrow definition*) excludes the Jews living in the two

4 Graham, D., Staetsky, L. D. and Boyd, J. (2014). *Jews in the United Kingdom in 2013*, op cit.

5 It is worth noting that Graham’s (2011) work, cited in footnote 3, adopted a broadly similar methodological approach.

6 The Jewish population of England and Wales as a whole amounts to 265,037 persons, as originally enumerated. This is a higher figure than the one previously used. The reason for the discrepancy is an upward correction of population counts by religion, issued by the Office of National Statistics on 26 February 2015, which has been incorporated into JPR estimates of Jewish population. See <http://www.ons.gov.uk/ons/guide-method/census/2011/census-data/census-products--issues-and-corrections/index.html> for further details. Given that the ONS correction is based on a multiplier (a factor), the resulting numbers are affected by rounding. This accounts for possible small discrepancies in the total number of Jews in England and Wales across different JPR publications.

wards of the London Borough of Barnet, thereby resulting in a more narrow estimate of the number of strictly Orthodox (just under 31,000, or 12% of the total in 2011). Within the UK, nearly all strictly Orthodox Jews reside in England.

Table 2. Jewish population of England and Wales, by subgroup, enumerated Census 2011 figures

Strictly Orthodox Jews – broad definition (1)	43,571
Thereof, key wards in	
Hackney	13,534
Haringey	2,883
Bury	4,386
Salford	7,164
Gateshead	3,004
Barnet (Golders Green ward)	6,975
Barnet (Hendon ward)	5,805
Strictly Orthodox Jews – narrow definition (2)	30,971
Non-strictly Orthodox Jews – England and Wales (3)	234,066
Non-strictly Orthodox Jews – United Kingdom (3)	240,288

Notes:

(1) This estimate includes all Jews enumerated in the London boroughs of Barnet (wards of Golders Green and Hendon only), Hackney (wards of Brownswood, Cazenove, Lordship, New River, and Springfield only), and Haringey (ward of Seven Sisters), as well as three local authorities outside of London: Bury (ward of Sedgely) and Salford (wards of Broughton and Kersal), both of which are in Greater Manchester, and Gateshead.

(2) This estimate excludes all Jews enumerated in the London Borough of Barnet (wards of Golders Green and Hendon); the remaining geographies are identical to the broad definition.

(3) These figures have been calculated as the difference between the total Jewish population and the narrow estimate of the strictly Orthodox.

It is important to note that these enumerated figures are based entirely on the number of people who self-identified as Jewish by religion on the census form. However, these figures do not constitute the entire Jewish population, as the question asked in the census was voluntary – unlike all other questions on the census form, respondents were not obliged to answer it. Furthermore, they do not include Jews who self-identified as Jewish by ethnicity and not by religion. Various methods can be employed to adjust the enumerated figures in order to generate more accurate estimates of the total Jewish population, but at this point in time, we do not possess a full picture of the scale of the

undercount. Previous research suggested that the undercount may be particularly severe among the strictly Orthodox.⁷ In view of this, it is prudent to re-assess the numerical picture of strictly Orthodox Jews using alternative methods, relying on communal sources completely unrelated to the census.

In the past, Jewish community researchers used the telephone directories of the strictly Orthodox community in order to estimate the number of strictly Orthodox households, alongside estimates of strictly Orthodox household size from various sources. Implementing this method (Table 3) produces an estimate of just below 8,000 strictly Orthodox households in 2011 (of which 71% are in London, 24% are in North Manchester and 5% are in Gateshead).

Table 3. Strictly Orthodox Jewish households in the United Kingdom: counts from strictly Orthodox telephone directories

Geography	Counts circa 2013	Estimates in 2011
London	6,041	5,577
North Manchester	2,055	1,897
Gateshead	458	423
Total	8,554	7,896

Notes:

(1) These counts rely on three sources: (a) The London Shomer Shabbos Telephone and Business Directory, 2014; (b) North Manchester Connections Residential and Business Telephone Directory, 2013–14; (c) The Gateshead Directory.

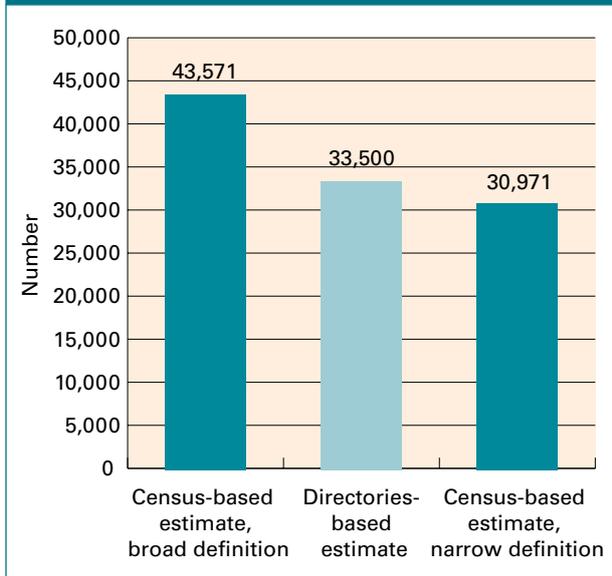
(2) These are estimates resulting from rolling back the counts pertaining to 2013, assuming 4% exponential annual growth rate. The rate of growth has been derived from the multi-annual series of households' counts on the basis of the strictly Orthodox telephone and business directories. See: Vulkan, D, and Graham, D. (2008). 'Population trends among Britain's strictly Orthodox Jews,' op.cit., p.16.

The average size of strictly Orthodox Jewish households is around four individuals per household.⁸ Applying this metric to the estimated

7 This argument has been elaborated by Graham, D. and Waterman, S. (2005). 'Underenumeration of the Jewish population in the UK 2001 Census,' *Population, Space and Place* 11: 89–102; and a subsequent response to that article in a later edition of the same journal by Voas, D. 2007. *Population, Space and Place* 13: 401–407.

8 The average household size was estimated on the basis of ONS Census tables LC4417 and LC4024. Average household size in the haredi population is considerably higher than in the total Jewish population where it is 2.2 individuals per household.

Figure 2. Alternative estimates of the strictly Orthodox Jewish population in the United Kingdom around 2011: Census-based versus directories-based estimates



number of strictly Orthodox households in 2011 produces a count of 32,375 strictly Orthodox Jews living in households across the UK. Adding to this number the 1,115 Jews who live in communal establishments in strictly Orthodox Jewish neighbourhoods increases this to just

under 33,500 strictly Orthodox Jews. As Figure 2 demonstrates, the estimates of the size of the strictly Orthodox Jewish population based on their own communal telephone directories come in between the Census-based broad and narrow estimates.

The apparent compatibility of the Census-based estimates and the estimates derived from the communal directories is very good. The directories-based estimate and the Census-based estimate derived using the narrow definition are especially well aligned. This suggests that the suspected census undercount of the strictly Orthodox Jewish population in 2011 is rather modest, and, in any case, not at a level that compromises the overarching picture. Thus, the original Census counts of this population in 2011 are useful for many policy purposes.

That said, it is important to emphasise that the fast growth of the strictly Orthodox population means that its size changes quite quickly. Thus, some policy uses may require more up-to-date figures rather than figures for the last Census year (2011). The directories-based estimate of the strictly Orthodox population in 2015 is close to 40,000.

3 The general shape of the population pyramid and the lessons learned

Having established, with reasonable certainty, the size of the strictly Orthodox Jewish population in the UK, it is now important to locate it in the context of the wider Jewish population of the country, and to explore some of the aspects of Jewish social and cultural life that emerge through a detailed analysis of the strictly Orthodox population pyramid (Figure 3).

Due to its very close alignment with the directories-based estimate of the size of the strictly Orthodox population, we will employ the Census-based narrow definition for all analyses presented from this point onwards. The non-strictly Orthodox (or ‘mainstream’) Jewish population is defined as the remainder calculated by deducting the strictly Orthodox population from the total population of Jews enumerated in the 2011 Census. All figures henceforth relate to England and Wales but exclude Scotland and Northern Ireland which contain no significant strictly Orthodox populations.⁹ All data for England and Wales used in the remainder of this report are census data produced by the Office for National Statistics and made available through ‘Nomis-Official Labour Market Statistics’ portal, unless stated otherwise.¹⁰

The general shape of the population pyramid is by far its most commonly commented upon feature. The strictly Orthodox Jewish population in England and Wales possesses an expanding population pyramid. Note, however, that it is not triangular in the strict sense of the word. Instead, it presents a very broad base topped with three cylinder-like structures. The middle and the top of the pyramid do not possess the ‘staircase’ appearance, that is often seen in population pyramids of populations in developing countries.

9 The UK Census is conducted by three separate agencies in England and Wales, Scotland and Northern Ireland. The publicly available Census data on religion released by these agencies differ in their amount of detail. For this reason, and because England and Wales are home for 98% of Jews in the UK, the analyses in this and all subsequent sections are limited to England and Wales.

10 <https://www.nomisweb.co.uk/census/2011>.

This feature of the strictly Orthodox pyramid indicates low mortality levels among strictly Orthodox Jews, especially among the young and the middle-aged. This is highly significant. The staircase appearance of population pyramids in the developing world illustrates populations with very high birth rates that are somewhat offset by quite high levels of mortality. However, the strictly Orthodox have very high birth rates combined with low rates of mortality, thus resulting in significant population growth, as will be shown below. Indeed, to cite an example, the strictly Orthodox Jewish population in Israel is similarly known to possess low mortality: life expectancy at birth in Bnei Brak, an Israeli city with a strictly Orthodox majority, was 80.2 years in the beginning of the 2000s,¹¹ i.e. close to the level of the Jewish population of Israel as a whole.

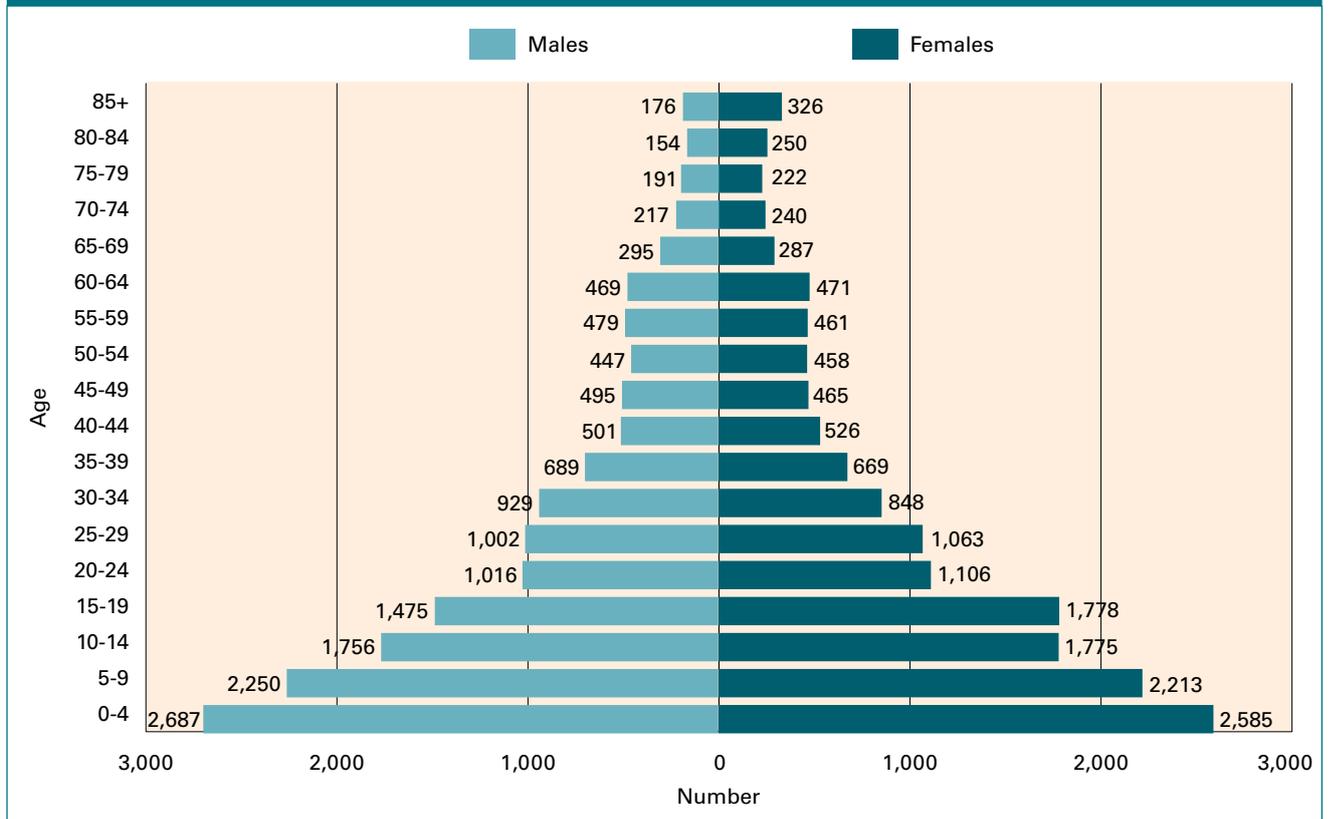
Typically, a broad base of a pyramid is indicative of high growth and high fertility, while a narrow base is indicative of a declining or stagnating population and low fertility. The broad base we can see in the haredi pyramid is no exception to this rule. However, it is worthwhile to go one step beyond this, and understand the precise reasons behind these readings.

What makes one think that the population is growing or declining? How exactly does the pyramid show that? And how might one imagine the future population size on the basis of the current one? Consider the number of people at the very base of the pyramid, i.e. the number of people aged 0–4 years. The strictly Orthodox pyramid contains a minimum of 5,272 people in this group.¹² Assuming low mortality, minimal out-

11 This figure originates from the joint publication of Israel’s Central Bureau of Statistics and Ministry of Health, in 2006, entitled ‘Health and Social Profile of Localities in Israel, 1998–2002.’ Available at http://www1.cbs.gov.il/www/publications/profil_ishuvim02/profil_ishuvim_h.htm (Hebrew).

12 It is possible that the actual number of children aged 0–4 years is higher than the stated number. Announcements of celebrations of male births by the haredi (the *shalom zachar* ceremonies) are made weekly in the haredi publication *Kol Mevasser*. Data on *shalom zachar* ceremonies in the haredi community, collected

Figure 3. Population pyramid of strictly Orthodox Jews in England and Wales in 2011



migration and insignificant religious switching to less observant religious lifestyles, this number is not expected to decline dramatically as time goes on. At the time of the 2011 Census the combined size of the cohorts in key reproductive age groups (20–39 years) was less than 6,000. Indeed, each of the five-year cohorts within this 20–39 age group numbered 1,000–2,000 people. However, over time, these cohorts will be replaced by much larger cohorts which will, in turn, be engaged in reproduction. Specifically, around the year 2031, one can reasonably expect the number of strictly Orthodox Jews aged 20–24 years to be 5,000–6,000, compared to 2,000 in 2011.

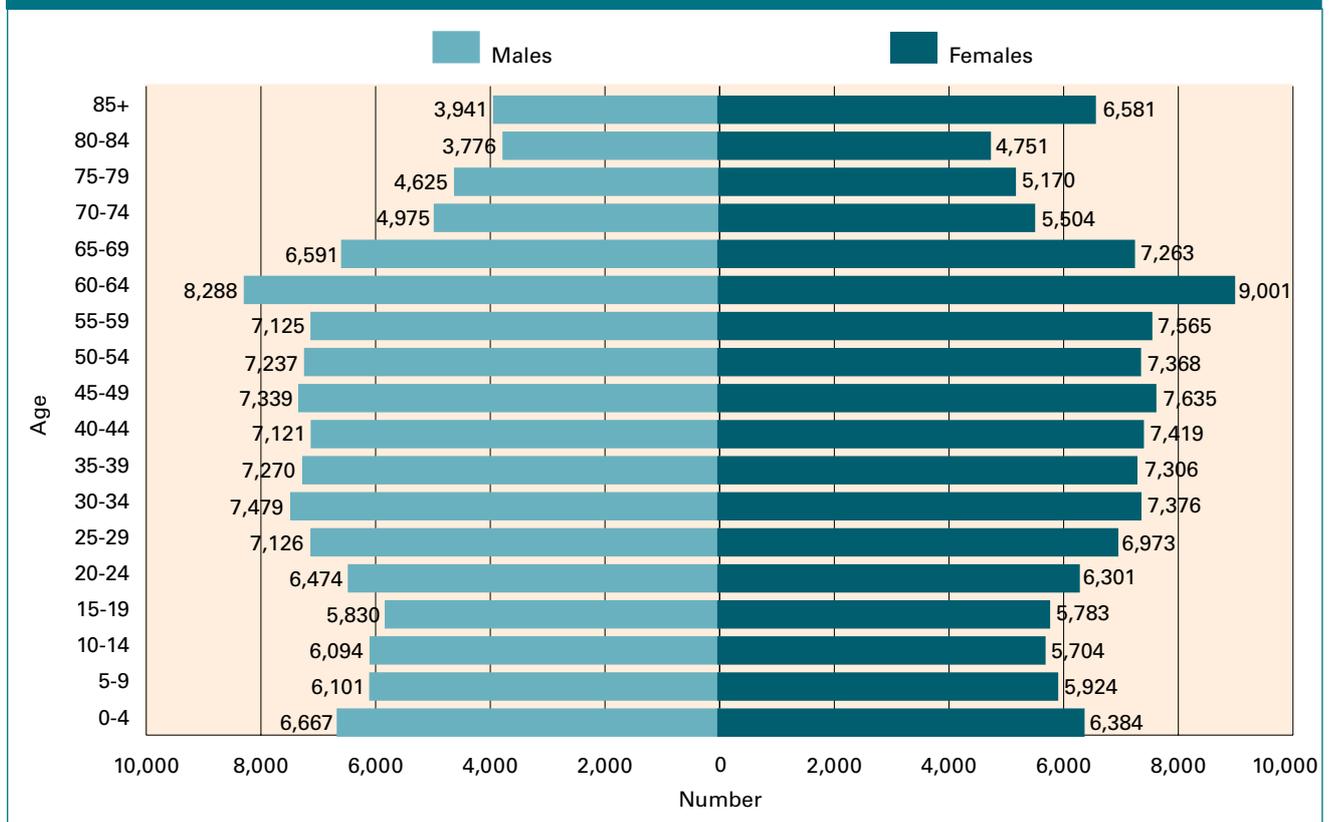
In stark contrast, the population pyramid of mainstream Jews presents a completely different reality (Figure 4). It is *contracting*. The number of 0–4 years olds at the very base of the pyramid

is around 13,000. Nearly all key reproductive cohorts at the time of the 2011 Census are somewhat larger than that number. Therefore, around the year 2031, the number of people in key reproductive cohorts is likely to be lower than it is today. As a result, the numerical decline of this population looks inevitable, unless its fertility increases or it is affected by migration of Jews from outside the UK.

There is an important point that is often overlooked when discussing future population sizes, and that is population momentum. Population sizes today are as important as levels of fertility for determining the population sizes of tomorrow. Hypothetically, the fertility of the strictly Orthodox population may fall in the course of time. However, the size of this population may continue to grow simply due to the fact that future cohorts of mothers (and fathers) are much larger in absolute terms than the reproducing cohorts of today. The expression ‘demography is destiny’ relates to this seemingly inevitable scenario, where the future is predetermined by the fact that future adult members of society – who will study, work,

by the Board of Deputies of British Jews, allow us to estimate that during 2006–2010, the average annual number of births among the haredim in Stamford Hill, North Manchester and Gateshead combined is 1,222. It follows that the expected number of children aged 0–4 years in these communities should approach 6,110 people (1,222 x 5).

Figure 4. Population pyramid of non-strictly Orthodox Jews in England and Wales in 2011



consume goods and reproduce—are already alive and their numbers and characteristics are known.

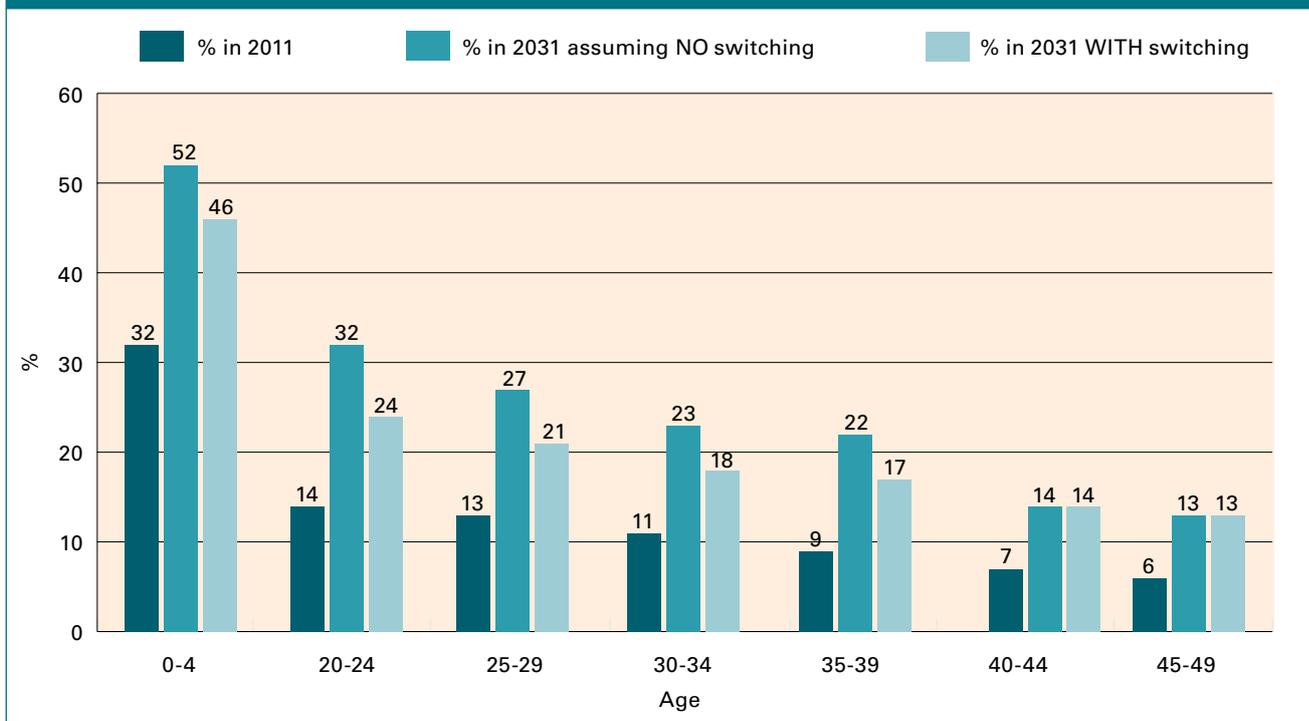
In the two figures that follow, we illustrate this point further. The first of these looks at the projected numerical relationship between the mainstream and the strictly Orthodox Jewish populations around the year 2031. The projection for ages 20–49 years is obtained simply by progressing the age-specific numbers of mainstream and strictly Orthodox Jews found in 2011, assuming no significant change in current levels of mortality and migration, and no differences in mortality between strictly Orthodox and mainstream Jews. The projection for ages 0–4 years is constructed by applying the same child-woman ratio that was observed in 2011.¹³ Effectively, this means we assume the fertility of both groups will remain at the same level as it was in 2011. Figure 5 presents the projections. The first projection is made with the original census data, assuming no denominational switching between the two Jewish sub-groups.

13 See Section 5 on the exact meaning and uses of this indicator in the estimation of fertility.

This is set alongside a second projection which assumes that denominational switching will take place during the transition through childhood and teenage years to adulthood at a rate established by the NJCS: 26% of all Jews born into haredi families become non-haredi and 1% of all Jews born into mainstream Jewish families become haredi.

The results suggest that one can expect there to be 10,000–13,000 strictly Orthodox Jewish children aged 0–4 years living in the UK in 2031, compared to just 5,000–6,000 in 2011. Indeed, according to the projection which does not take into account the intra-Jewish denominational switching, in 2031 strictly Orthodox Jews would be expected to constitute about half of all Jewish children aged 0–4 years in Britain, and close to one third of those aged 20–29 years, as opposed to 32% and 14%, respectively, in 2011. The projection incorporating intra-Jewish denominational switching offers some nuance but does not change the overall picture. According to this projection, in 2031 strictly Orthodox children will still constitute about half of all Jewish children, and one-fifth to one-quarter of those aged 20–29

Figure 5. Proportion of strictly Orthodox Jews in the Jewish population of England and Wales, in 2011 and (projected) 2031, by age



Note. In the course of the preparation of the projections we also experimentally corrected the number of strictly Orthodox children aged 0-4 years in 2011 to see whether such a correction would have a bearing on the projections. The correction was carried out using the communal sources, as explained in footnote 12 of this report. This correction had very little impact on the figures obtained and the overall picture of compositional change suggested by the projections.

years. It is easy to see, by mentally progressing the youngest age group further forward into the year 2051, that this will be the time of near-parity between the mainstream and the strictly Orthodox among young adults, while among children, the strictly Orthodox will by then constitute a significant majority. This conclusion holds true under both scenarios – both with and without denominational switching. To sum up, strictly Orthodox Jews are expected to constitute a majority of the British Jewish population long before the twenty-first century is over.

Figure 6 looks at these dynamics in a slightly different way. It presents the ratios of those aged 0–9 years to those aged 20–29 years for the main religious groupings in England and Wales in 2011. In so doing, it shows the population replacement prospects of Jews, compared to those of other religious groups. The ratios are important as they give a good idea of whether children aged 0–9 years in 2011 constitute a sufficient numerical replacement for adults aged 20–29 years. The number of children aged 0–9 years in 2011 will approximate the number of adults aged 20–29

years in 2031, in the absence of significant age-selective migration. Thus, a ratio of 1 should be read as an indication that the size of the 20–29 year age group in 2031 will be identical to the size of the same age group in 2011. A ratio below 1 indicates that in 2031 the 20–29 age group will be smaller than it is in 2011, and a ratio of above 1 indicates that it will be larger.

Strictly Orthodox Jews show the highest ratio: in this population, the approximate expected number of 20–29 year-old adults in 2031 is more than twice the number found in 2011. The ratio changes relatively insignificantly (from 2.33 to 1.92) when intra-Jewish denominational switching is taken into account. The Muslim population of Britain follows at some significant distance: the approximate expected number of 20–29 year-old adults in 2031 is 18% higher than the number in 2011. Among mainstream Jews, Christians and Hindus, the approximate expected numbers in 2031 are 7%, 9%, and 38% lower, respectively, than the numbers in 2011. Among mainstream Jews, population replacement in this age group is only possible if

Figure 6. Ratio of age group 0-9 years to age group 20-29 years in England and Wales in 2011, by religious group

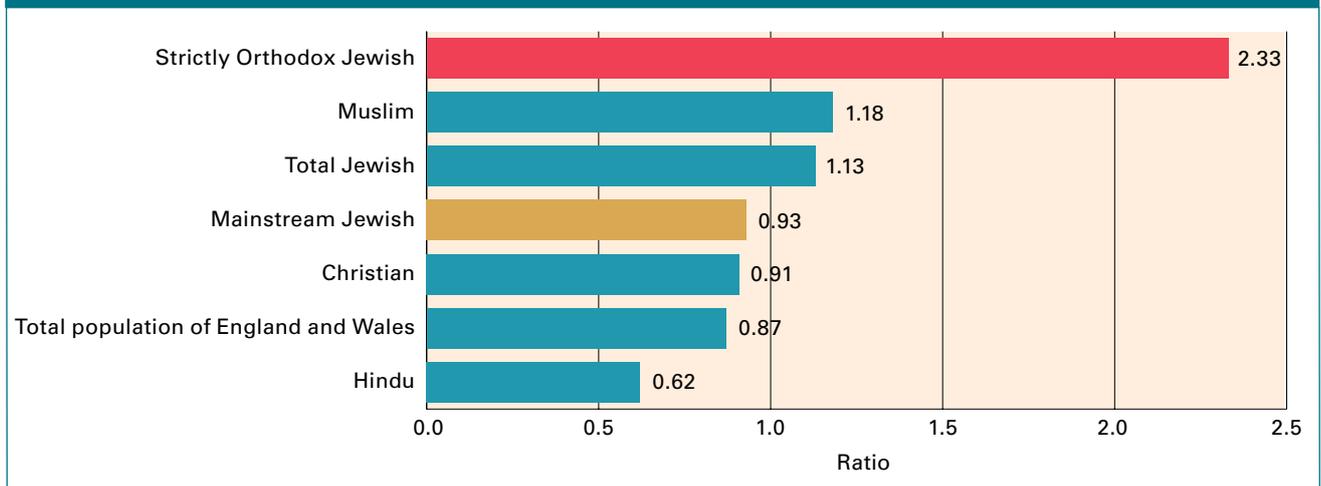


Table 4. Jewish population in England and Wales, by subgroup: Census 2011 versus Census 2001

Population group	2001	2011	Difference (2011–2001)	Change (b/n 2001 and 2011, %)	Annual rate of growth, %
Total Jewish	259,927	265,037	5,110	+2.0	+0.20
Strictly Orthodox	19,167	30,971	11,804	+61.6	+4.80
Mainstream Jewish	240,760	234,066	-6,694	-2.8	-0.28

Note: annual rate of growth is calculated on the basis of the formula of exponential population change, namely $P_1 = P_0 * e^{(r*t)}$, where P_1 and P_0 are population figures in 2011 and 2001, respectively, r is annual rate of growth and t is the number of years between census dates (10 in total). With known values of P_1 and P_0 , the annual rate of growth is obtained by solving the above equation for r .

denominational switching from haredi Judaism takes place: the ratio will change from 0.93 to 1.026, meaning that a 2.6% increase will be seen in this group instead of a 7% decline. Importantly, the replacement in the total Jewish population is entirely due to the contribution of strictly Orthodox Jews.

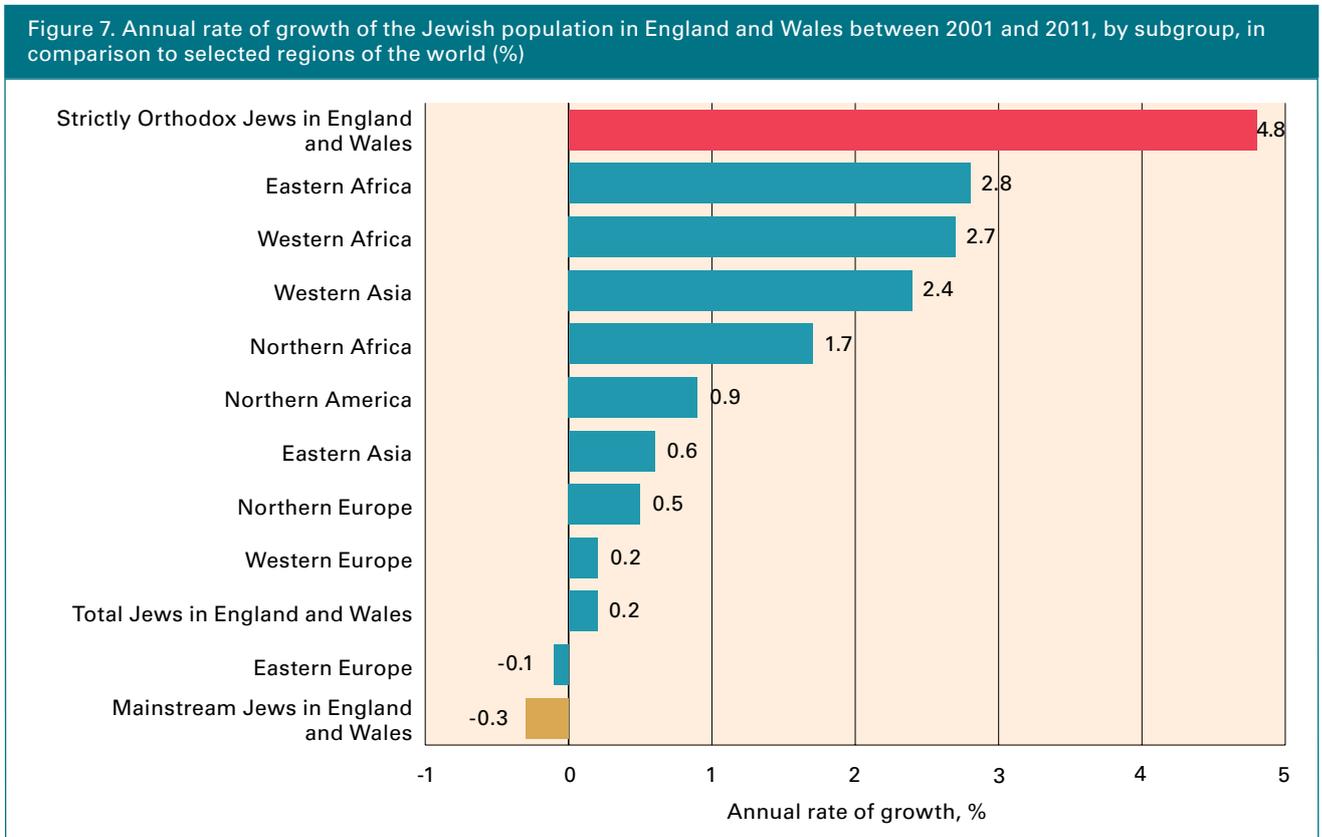
Thus the contours of the future British Jewish population are starting to emerge. First, there is an evolving compositional change. Indeed, we would expect to see a dramatic change in population composition and an associated change in religious and political predispositions, cultural preferences, levels of material prosperity and the pure visibility of Jews during the first half of the twenty-first century. In short, British Jewry is becoming more strictly Orthodox and there is little, in terms of *known demographic factors*, that can alter this.

Second, there is a reversal of the trend of population decline. The British Jewish population underwent a period of numerical decline that lasted for about half a century until it began to

show signs of levelling off during the 1990s.¹⁴ Now, we are starting to observe a resumption in the growth of the British Jewish population: the period between the 2001 and 2011 Censuses saw a small increase for the first time since the 1950s, and, quite unambiguously, the strictly Orthodox population was solely responsible for that. Table 4 further sharpens this point.

The Census results tell us that the strictly Orthodox population grew by 62% in the course of one decade. This corresponds to 4.8% annual growth. This rate of growth, we must emphasize, is a combined outcome of high fertility, migration and possibly a reduction in the scope of the census undercount in this population. A high rate of growth can be expected in this population due to its high fertility, but the probable levels of fertility (total fertility rate of 6–7 children

14 See Graham, D. (2011). “Enumerating Britain’s Jewish population: Reassessing the 2001 Census in the context of one hundred years of indirect estimates.” *Jewish Journal of Sociology* 53: 7–28.



Note: data for comparators are taken from United Nations, Department of Economic and Social Affairs, Population Division (2013). *World Population Prospects: The 2012 Revision*. Average annual population growth for all comparators are for years 2005-2010.

per woman) are not sufficient to generate growth on this scale. However, census data also demonstrate that international migration has additionally been a source of population gain for the strictly Orthodox since the stock of foreign-born among them increased both in absolute terms and as a proportion between the two censuses.¹⁵ In contrast, the mainstream Jewish population declined by 2.8% during the period between censuses.

Comparing these rates of growth to the rates observed in other parts of the world (Figure 7) reveals that the total population of British Jews grew between 2001 and 2011 at a similar rate to the one observed in the population of Western Europe as a whole. At the same time, it is clear that the *mainstream* British Jewish population declined at a rate comparable to the rates seen in

the populations of Eastern Europe, those currently experiencing a major population crisis. In striking contrast, the rate of growth exhibited by the strictly Orthodox Jewish population in the UK is unmatched on the world arena.

Over the course of time, further insights into changes in the scope of the census undercount and the role of migration will inevitably result in adjustments to the strictly Orthodox rate of growth. However, the essential features of the differential developments of these two British Jewish sub-populations are not expected to change as a result of such adjustments. Fundamentally, the strictly Orthodox British Jewish population has grown very significantly, whilst the mainstream Jewish population has declined in size, and it is the strictly Orthodox component that is responsible today for the growth of the total Jewish population in Britain.

15 The number of Jews born outside the UK and living in the haredi areas increased from 3,954 (20.5% of the total number of the strictly Orthodox) in 2001 to 6,874 (22%) in 2011. The figures are derived from the publicly available ONS Census Tables: DC2207EW (for Census 2011 data) and S150 (for Census 2001 data).

4 Age dependency ratios and their meaning

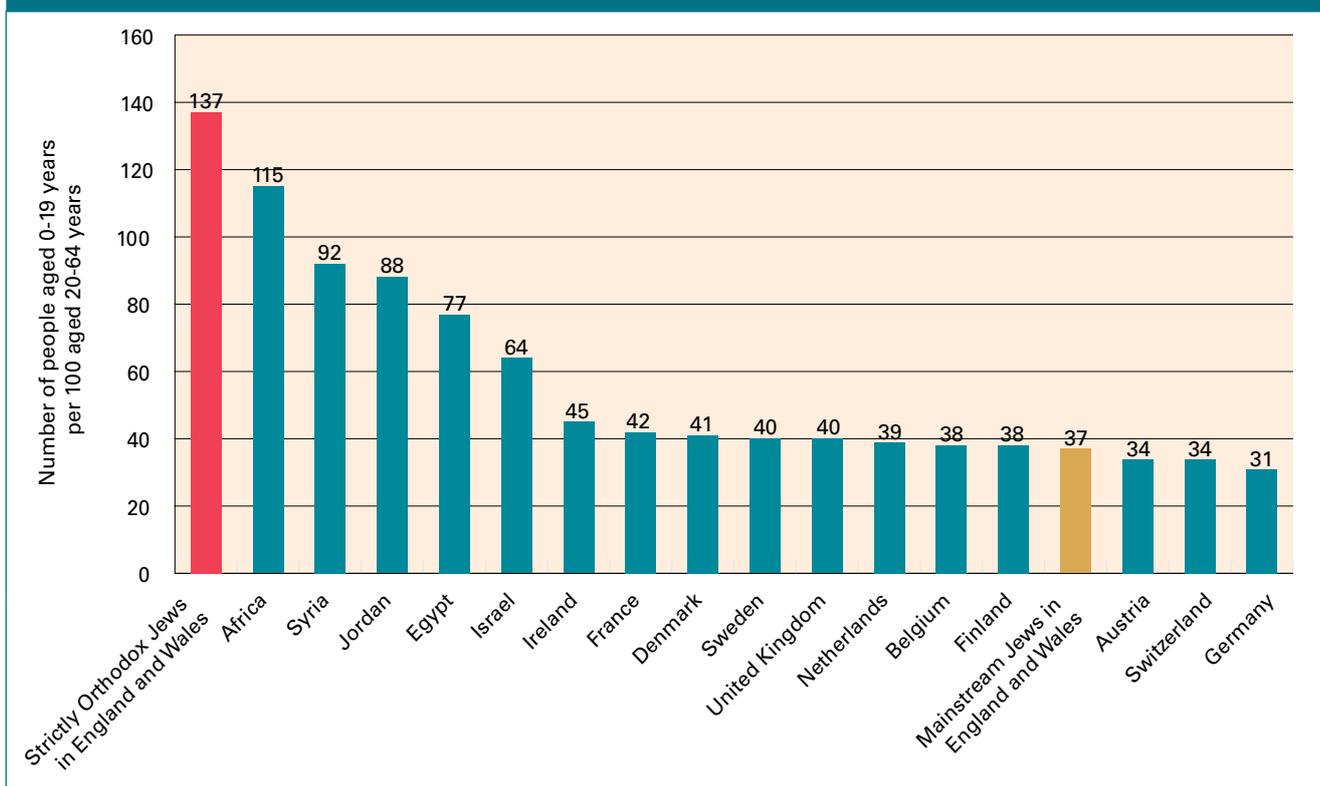
Looking beyond rates of population growth or decline, further analysis of population pyramids can also tell us a great deal about the social and cultural realities, processes and challenges that are inherent in populations with certain demographic features. In particular, age dependency ratios – i.e. the ratios of dependent parts of the population (e.g. children and the elderly) to those upon whom they are dependent (e.g. working adults), can be especially informative.

A child dependency ratio reflects the number of people aged 0–19 years (the group considered to be economically dependent on the basis of their age) to the number of people aged 20–64 years (i.e. the group engaged in productive economic activity). For the sake of clarity and simple comprehension, we will express the ratio as the number of economically dependent per 100 economically productive persons.

As Figure 8 makes clear, child dependency among strictly Orthodox Jews in the UK is very high. There are 137 people aged 0–19 years in this population for every 100 people aged 20–64 years. This is higher than in countries of Africa and the Middle East, which, in themselves, are world leaders in child dependency. In contrast, mainstream Jews exhibit levels of child dependency similar to those found in the low-fertility countries of Western Europe. Thus, their situation in relation to child dependency is far less extraordinary than that of strictly Orthodox Jews.

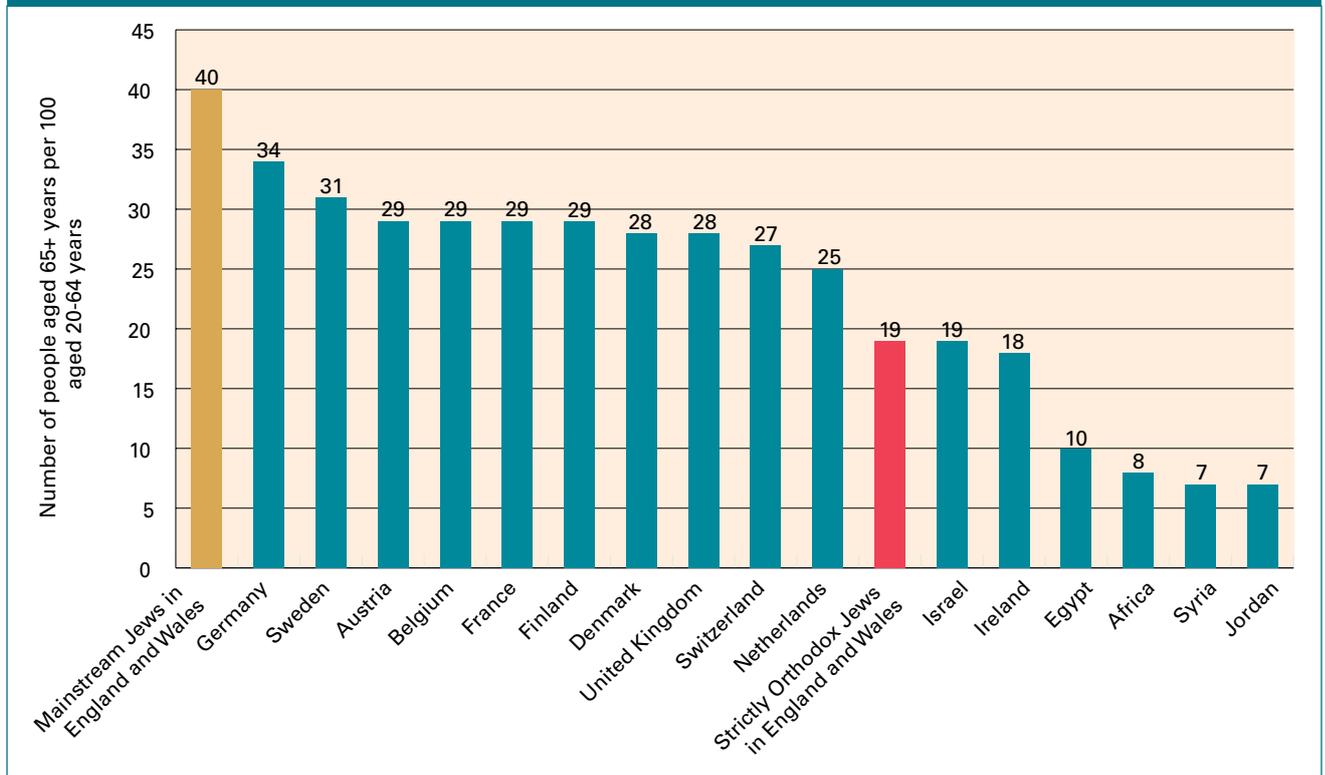
The old-age dependency ratio reflects the number of people aged 65 years and over, also considered as economically dependent solely on the basis of their age, to the number of people engaged in productive economic activity (those aged 20–64 years). It is also expressed here per 100 economically productive persons. British

Figure 8. Child dependency ratios of Jews in England and Wales, by subgroup, in comparison to selected developed and developing countries, 2011



Note: data for comparators are taken from United Nations, Department of Economic and Social Affairs, Population Division (2013). World Population Prospects: The 2012 Revision.

Figure 9. Old-age dependency ratios of Jews in England and Wales, by subgroup, in comparison to selected developed and developing countries, 2011



Note: data for comparators are taken from United Nations, Department of Economic and Social Affairs, Population Division (2013). World Population Prospects: The 2012 Revision.

mainstream Jews appear to possess very high levels of old-age dependency (Figure 9). Indeed, old-age dependency among mainstream British Jews is higher than in countries that lead in old-age dependency: Germany, Sweden and Austria. Interestingly, while the old-age dependency of strictly Orthodox Jews is much lower, it is not unprecedentedly low. Indeed, it is very similar to the levels observed in the total populations of Israel and Ireland.

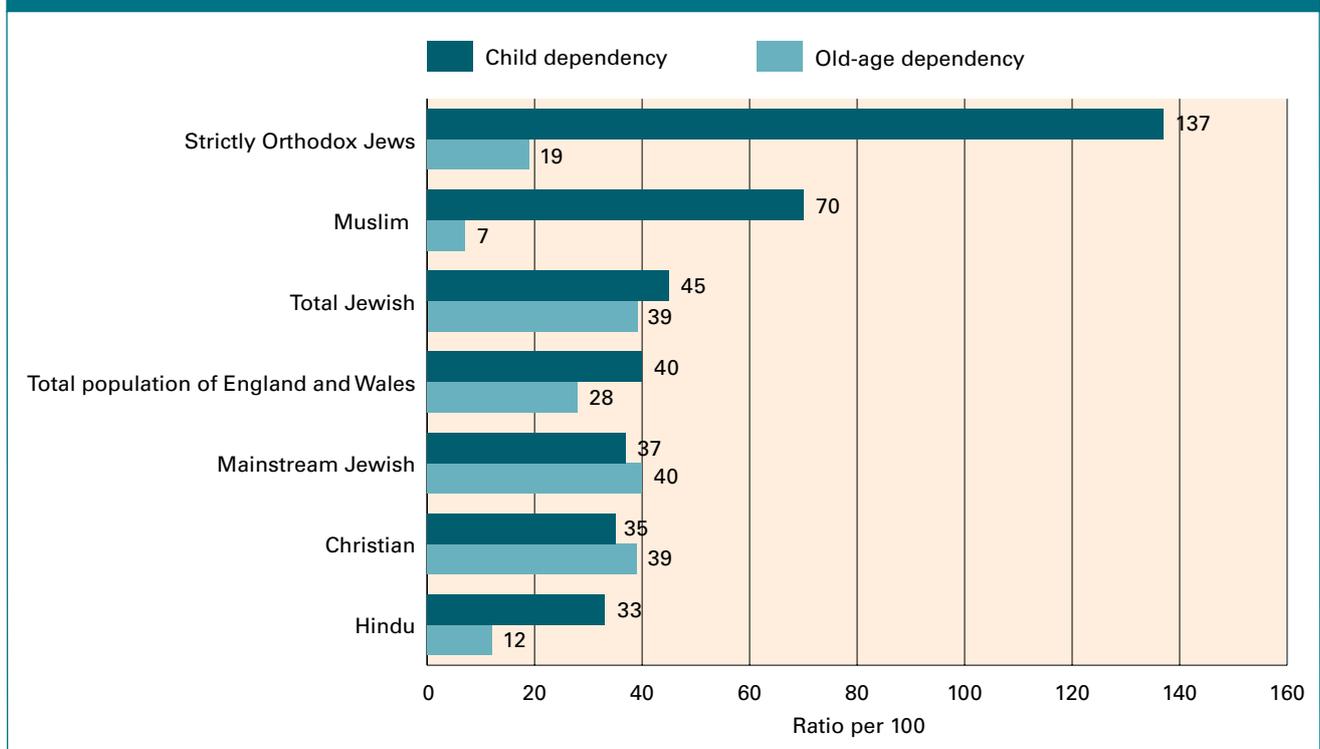
In journalistic and policy-related discourse, high dependency ratios are often interpreted as indicative of some sort of societal ‘difficulty’ in a vague sense that there may not be enough working people to support the relatively large non-working population. Simply put, government-sponsored health, education and social services are mostly used by the youngest and the eldest members of society. Fewer working people mean fewer people who operate and support government services, in the form of taxation. However, this analysis, though not incorrect in spirit, is insufficient in detail and rigour and, subsequently, usefulness. Why?

First, calculation of age dependency ratios aligns age with dependency. It is known, however, that employment rates of people aged 65 years and over are far from negligible, and have been increasing in the UK and the European Union as a whole since at least 2005. In fact, nearly one in five people aged 65 years and over in the UK was employed in 2011.¹⁶ Some people of retirement age work because they want to supplement their income (i.e. due to need), while others work because they want to, as a way of making the most out of their lives, in itself an understandable development in view of growing longevity and improving health. Either way, the increase in the scope of post-retirement work counteracts the impact of ageing on government expenditure.

Second, age dependency ratios do not have meaningful cut-off points which could be used for benchmarking and policy development. To put it differently, there is not a level of age dependency,

16 Eurofound (2012), *Income from work after retirement in the EU*, Publications Office of the European Union, Luxembourg.

Figure 10. Child and old-age dependency ratios in England and Wales in 2011, by religious group

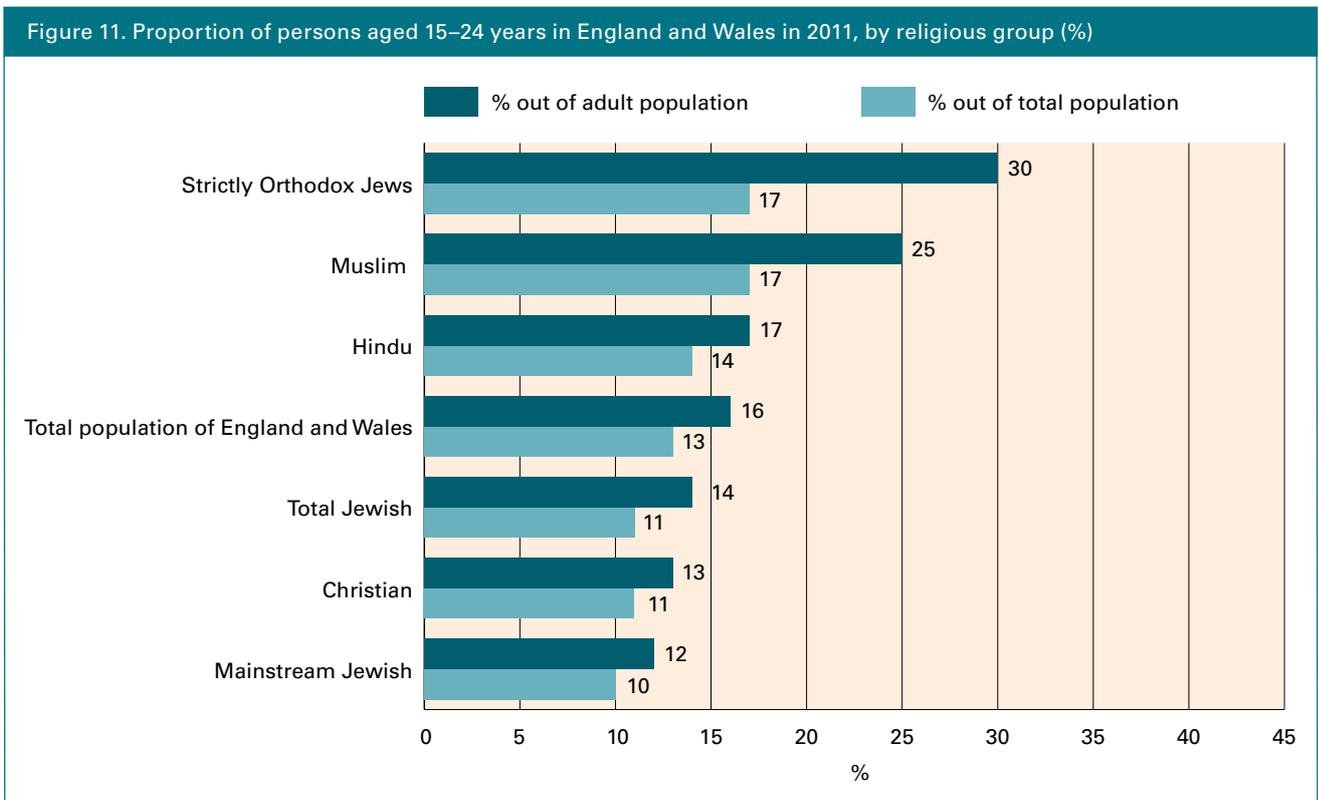


either child or old-age dependency, that can be understood as critical in relation to government expenditure. Germany and Sweden's high levels of old-age dependency have been maintained for a while, yet no collapse of social services has occurred. Thus, it is ultimately unclear how to read the observed ratios for strictly Orthodox or mainstream Jews. However, one observation stands out, although at this point it is not definitive in meaning and requires further investigation. Strictly Orthodox Jews seem to possess a unique combination of two types of high age dependency: their child dependency is high, while their old-age dependency is not negligible (Figure 10). None of the other religious groups in England and Wales possess such a feature. In particular, Muslims display lower levels of child dependency and lower levels of old-age dependency.

Furthermore, the core working population among strictly Orthodox Jewish men is known to combine employment with religious study. This feature, in particular, suggests that a more meaningful way to quantify the levels of dependency in this population would be to calculate dependency ratios which contain an adjustment for the extent of employment in the core working population.

There is another interesting aspect of age distribution that is suggested by the strictly Orthodox population pyramid: the youth bulge. The presence of high proportions of young people in the population has been linked by political scientists and demographers to social and political unrest, and growth in criminality, especially in the absence of attractive employment prospects. The explanatory mechanism of the socio-political consequences of the youth bulge is micro-economic. Young people, especially men, forming a large and impoverished group, see limited opportunities for income generation and thus face low opportunity costs (i.e. joining alternative activities, be it criminal activity or political movements, becomes easy because income foregone as a result of such behaviour is low or non-existent. In short, the costs of doing so are low).

One way to quantify the youth bulge is to divide the number of 15 to 24 year olds by the number of people in the total population or in the total adult population (i.e. aged 15 and over). Previous research has suggested some critical points in relation to these proportions: the risks of social unrest, and in particular, of armed conflict, are



especially high when youth reaches 30–35% of the adult population and about 20% of the total population.¹⁷

As Figure 11 shows, the strictly Orthodox Jewish population and the British Muslim population are the only religious groups in England and Wales approaching these levels.

Communal leaders, especially within the strictly Orthodox Jewish community, are advised to take note of these findings for the purposes of policy development in all areas of communal life. Although the precise form and timing of events cannot be predicted, the demographic dynamic of this community is conducive to the outbreak of social unrest. It is incumbent upon community leaders to devote some time

to preventative measures to address this, with particular emphasis on the creation of income-generating opportunities. The higher the income foregone, the lower the probability that youth will engage in anti-social activities, experience high levels of disillusionment, or abandon the strictly Orthodox lifestyle altogether. Early marriage and childbearing, as well as communal cohesiveness, operate as obstacles to such developments as they raise the cost of any deviation from a strictly Orthodox lifestyle. However, it is questionable whether such mechanisms alone are sufficient or satisfactory for a community interested in prosperous existence in the long term. In this respect, the incorporation of sound employment and professional training opportunities into the strictly Orthodox lifestyle may prove beneficial for its very preservation.

17 Urdal, H. (2012). 'A clash of generations? Youth bulges and political violence.' Population Division Expert Paper Series 2012/1. New York: United Nations, Department of Economic and Social Affairs; Huntington, S. (2002). *The Clash of Civilizations and the Remaking of World Order*. London: The Free Press, p.260.

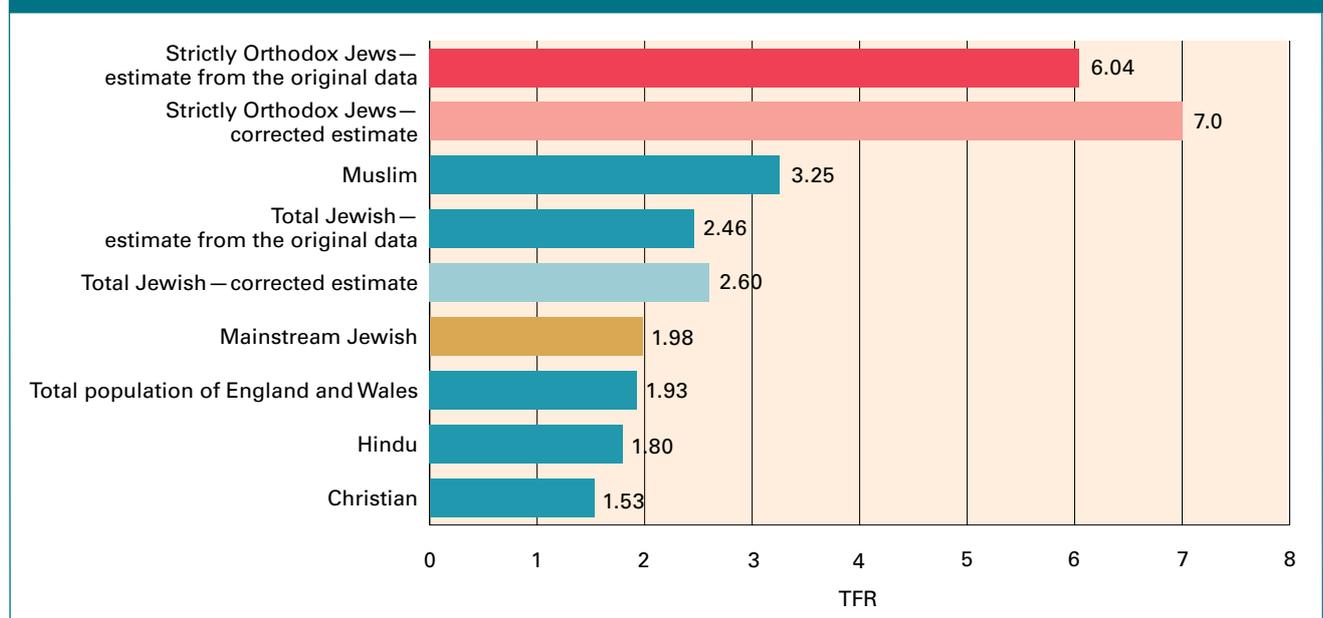
5 The population pyramid and estimation of fertility of the British Jewish population

A wide base of a population pyramid is commonly interpreted as an indication of high fertility. However, this is a very general characterisation. One can establish the actual level of fertility on the basis of certain features of the pyramid. The total fertility rate (TFR) is the average number of children that would be born to a woman over her lifetime. For an ethnic or a religious sub-group in a population, an approximation of the TFR can be obtained by comparing the relationship between the number of children aged 0–4 years, at the base of the pyramid, to the number of women of reproductive ages (those aged 15–49 years).¹⁸ Figure 12 shows the estimated TFR for Jews and selected religious groups in England and Wales.

Two measures are presented for the strictly Orthodox and the total Jewish population. One version of the TFR is calculated on the basis of the original Census data. The other version (corrected estimate) is calculated on the basis of the corrected count for strictly Orthodox children aged 0–4 years. The corrected count compensates for the census undercount of haredi children, and it has been developed on the basis of data on birth announcements in haredi communal sources.¹⁹

The results of this fertility estimation exercise are extraordinary. The fertility of the Jewish population as a whole (TFR around 2.46–2.60 children per woman) is higher than the fertility

Figure 12. Estimated total fertility rates in England and Wales in 2011, by religious group



Note: TFR of the total population of England and Wales is adopted from the Human Fertility Database, <http://www.humanfertility.org/cgi-bin/main.php>.

18 A detailed description of the method of fertility estimation presented here (known as the Child-Woman Ratio method) can be obtained from Dubuc, S. 2009. Application of the Own-Children Method for estimating fertility by ethnic and religious groups in the UK, *Journal of Population Research* 26, DOI 10.1007/s12546-009-9020-7. In essence, $TFR_J = TFR_{ALL} * (CWR_J / CWR_{ALL})$, where TFR_J is

TFR of Jewish population, or any religious group in a general case, TFR_{ALL} is TFR of total population of a given country (in this case, England and Wales), and CWR_J and CWR_{ALL} are Child-Woman Ratio of Jews and total population, respectively. See Dubuc (2009, p. 216).

19 See footnote 12.

of the total population of England and Wales. It is also significantly higher than the conventional cut-off point for the level of fertility sufficient for population replacement (TFR =2.1). However, this situation is a result of the very high fertility among strictly Orthodox Jews, which is estimated to exceed the level of six to seven children per woman –about twice as high as Muslim fertility. The fertility of the mainstream Jewish population is slightly higher than the fertility of the total population of England and Wales, but it does not reach replacement level.

This is the first time that estimates of British Jewish fertility have been presented in the public domain. There is some uncertainty as to the exact level of the fertility of strictly Orthodox Jews. However, this does not change the core message conveyed by these figures: the Jewish population of the UK appears to have high fertility. It is certainly higher than in the UK as a whole. Critically, British Jews owe this situation to the presence of the strictly Orthodox Jews in their midst.

6 Conclusion

This paper has presented the first overview of the key demographic realities of strictly Orthodox Jews in the UK. Employing the population pyramid as its main exhibit, it compares strictly Orthodox demography with the demography of other religious groups in England and Wales, as well as the populations of other countries, and it investigates some of the social and cultural dynamics that exist within the Jewish population of the UK.

We have shown that the British Jewish population is undergoing a powerful compositional change. It is becoming more strictly religious, not by means of ideational change but through demographic processes. In his 2010 book, *Shall the religious inherit the Earth?* Eric Kaufmann argued that a religious ‘take-over’ of the world is taking place through demography: while the secular population does not tend to replace itself through fertility, religious groups across many populations display fertility levels sufficient for vigorous growth.²⁰ This scenario is certainly materialising in the British Jewish population. This may be a cause for celebration for anyone concerned with the slow decline of the Jewish population in the UK over the past half a century at least. However, any change in the status quo brings uncertainty and anxiety with it too: how will the relationship between the mainstream and the strictly Orthodox Jewish components evolve in the course of time? What will be the economic and political future of strictly Orthodox Jews in Britain?

The strictly Orthodox Jewish population still constitutes a minority of the total Jewish population in the UK. In 2011, its proportion was, at most, 16%. However, among children it was approaching 30% in 2011, and it is expected to reach 50% among children around 2031, providing a clear indication of the future cultural landscape and the timing of its coming into existence. Among young adults, the strictly Orthodox are expected to reach a share of 30% around 2031. The strictly Orthodox Jewish population possesses the highest fertility of all religious groups in the UK (a total fertility rate of over 6 children per woman),

leaving not only mainstream Jews far behind, but also the Muslim and the Hindu populations.

Whatever growth the British Jewish population experienced during the decade between the last two censuses, it was generated exclusively by the strictly Orthodox sub-population, while mainstream Jewry continued to decline in size. Based on demographic factors alone, the strictly Orthodox Jewish population will be established as the majority group among British Jews during the second half of the twenty-first century.

The main weakness of this projection, and indeed, any population projections, lies in the unpredictability of social, political or economic developments. It is possible that the rate of growth of the strictly Orthodox population living in Britain could slow down, due, for example, to a significant increase in migration to Israel, or an increased proclivity to reject a strictly Orthodox lifestyle. However, normally, the pace of change in demographic processes, such as fertility and mortality, is rather slow. Indeed, even when levels of fertility and/or mortality change, their impact on population growth is not immediate. This is because of ‘population momentum’: the propensity for a population to retain its current rate of growth for some time after changes in fertility, for example, take place, simply because its overarching age structure, caused by past fertility, takes time to change shape. The population of young adults aged 20–24 years in 2031, for example, had already been born by 2011. Thus, their characteristics are already known, and the numerical relationship between the mainstream and strictly Orthodox Jewish components among young adults aged 20–24 years in 2031 is largely predetermined. Experimentally, we have taken into account intra-Jewish denomination switching (i.e. the transition from strictly Orthodox to mainstream and vice versa) only to discover that this process matters relatively little for the outcome of the projections. Looking ahead, this dramatic change over a relatively short period has potentially enormous implications for British Jewish communal life, and its structures and needs. As community leaders plan for the future, it is essential to monitor the pace and nature of Jewish population growth and decline, and prepare for the community as it will be, rather than as it currently is.

20 Kaufmann, E. (2010). *Shall the religious inherit the earth? Demography and politics in the twenty-first century*, Profile Books.

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