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Religious intermarriage in England and Wales: Differences in individual and area characteristics of endogamous and exogamous couples (14 January 2019)

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Abstract

Religious intermarriage in England and Wales is an under-researched area, compared with ethnically divergent and immigrant/host intermarriage. More specifically, the aim of the study is to identify whether there are any statistically significant differences in personal or spatial characteristics between religiously endogamous and exogamous couples, and if so, to provide some explanation as to why. Use is made of the responses to the religion question in the 2001 and 2011 censuses and the Office for National Statistics (ONS) longitudinal study, so as to avoid bias inherent in trying to establish random survey samples of minor-religion members and their partners. Although the paper considers religious intermarriage generally, there is a focus on Jews as the only group which demonstrates a high level of stability of religion reporting and material levels of exogamy. Logistic regression indicates that Jewish population density, start decade of the partnership, and whether the individuals are in work and live in an area with a large synagogue are statistically significant differentiators that have a material impact on levels of exogamy and endogamy. A strong link between exogamy and cohabitation (and delayed child-bearing) is also established for this group. Some comparisons between Jews and religiously intermarried groups in general are also made; and the utility of the ONS longitudinal study for examination of small groups is established.

1 Introduction

Research into intermarriage (taking a partner from a cultural group other than your own) can generally be categorized into three strands: as a sociological feature in its own right; intermarriage as an element within the wider study of the assimilation or integration of minority/immigrant groups; or the impact of intermarriage on the transmission of religion or cultural heritage to children and the effect on the persistence of cultural groups. 'Cultural group' can be defined as an umbrella term that can include ethnic/racial identity, membership of a particular religion, and even a socio-economic classification or level of academic achievement.

This study falls largely into the first strand, in the context of the third. It considers religious intermarriage in England and Wales. The topic has been paid relatively little attention

compared with intermarriage between immigrant and host populations (particularly where the two groups have divergent ethnic backgrounds); and geographically, England and Wales, indeed the UK as a whole, has had rather less focus than North America. More specifically, the aim of the study is to identify whether there are any material differences in personal or spatial characteristics between those whose partner shares the same religion (endogamy), and those whose partner has a different religion (exogamy).

Sections of this paper set out the background to the investigation of intermarriage, and then discuss the sources of data that allow study of religious intermarriage in England and Wales. Consideration of those data have led to a focus on intermarriage (and also cohabitation) between Jews and other groups. Later sections deal with the application of logistic regression to the data to identify differences between the characteristics of individuals in different partnership types. The final section addresses conclusions to be drawn from the work.

2 Background

Mathias Kalmijn's (1998) oft-quoted seminal review of theoretical and empirical developments in the study of intermarriage must form the basis of any discussion on this topic. He summarised the drivers of marriage partner choice under three hypotheses:

- Preferences of marriage candidates – specifically the extent to which the socio-economic and cultural resources that each partner brings can 'produce family goods, such as economic well-being, status, social confirmation, and affection' (p398).
- The impact of third parties – principally the extent to which members of social/cultural groups encourage individuals to associate themselves and affiliate with their group and thus encourage endogamy, or impose 'sanctions' on inter-married couples to curtail exogamy.
- Marriage markets – the impact that group population sizes and distribution have on the opportunities for interaction between members of different socio-economic or cultural group at a regional, neighbourhood, employment or educational context.

A link between intermarriage levels (between immigrant groups and the host population) and the degree of assimilation of such groups into the mainstream was proposed by Milton Gordon in 1964. He defined various social/cultural levels of assimilation that he believed represented a trajectory along which minority groups might travel. Significant intermarriage levels would be associated with a high level of assimilation by the minority group and an acceptance of that group by the host population. This link between intermarriage and group assimilation or integration into wider society has been examined, developed, and critiqued by many subsequent

researchers – see, for example, Alba and Nee (1997); Osanami Törngren et al (2016); Kivisto (2017); and Alba (2017).

There has been a research focus on immigrant groups that have become increasingly important in discussions (particularly in North America and Europe) about integration and multiculturalism (Kalmijn et al, 2006). Recent examples of immigrant/host intermarriage analyses include: Sweden (Dribe and Lundh, 2011; Osanami Törngren, 2016); USA (Lee, 2015; Wu et al, 2015); Spain (Rodrıguez-Garcia et al, 2016); and Britain (Song, 2016). According to Kalmijn and colleagues, 'older ethno-religious groups, groups that are less visible, and groups that have declined in size have received comparatively little attention. This is particularly true for the position of Jewish persons in Europe.' (Kalmijn et al, 2006, p1347).

In contrast, Jews have been the focus of much research and analysis in United States of America. This is largely because, until the last few decades, Jews have formed the only significant non-Christian minority in Europe and North America. In addition, the level of out-marriage amongst American Jews has been significant and growing since the 1960s (Pew Centre, 2013). Within the Christian umbrella, there have been studies examining intermarriage between Catholic and Protestant denominations (for example, in a Canadian context, Larson & Munro, 1990; and Gauvreau & Thornton, 2015). Broadening out the groups covered, Bisin and colleagues have carried out much analysis and sought to derive models to explain levels of intermarriage between Protestants, Catholics, Jews, and 'others' in the USA (Bisin and Verdier, 2000). Bisin et al (2004) developed a state-level model of intermarriage that links inter-marriage levels with the degree to which parents 'socialize' their children into developing an affinity with the parents' religious group, controlled by the underlying proportions of the group in the state population and an inter-group 'intolerance' parameter.

Very little research on explicitly religious intermarriage (in Europe or North America) for other groups has been published – Bulut & Ebaugh (2014), who focused on Turkish Muslims in the USA, is a rare example.

In the 1930s most Jews lived in countries where intermarriage did not exceed 5% of the total marriages of Jewish people; at the start of the 21st century the bulk live in countries with out-marriage rates above 50% (Reinharz & DellaPergola, 2009). In the case of the USA, close to 60% of marriages since 2000 involving Jews include a non-Jewish spouse, up from about 40% for marriages in the 1980s, and 17% for marriages before 1970 (Pew Centre, 2013).

The majority of studies into out-marriage amongst Jews (particularly in America) have therefore arisen through concerns about the loss of Jewish identity and continuity; a dilemma best

expressed as 'the desire to be integrated into American society and, at the same time, to survive as a distinct and vital religious/cultural group' (JCAD, 2009, p1). These concerns have been articulated by Cromer (2004). He describes the attitudes of the various strands of American Judaism to intermarriage, and the divergent views on discouragement/prevention and outreach. A wide-ranging review of Jewish intermarriage in America founded on a sociological rather than a religious perspective is provided by Aviva Gordon (2015). Much of the literature takes a very pessimistic view of the likely outcomes for Jewry (Sacks, 1994; Encel and Stein, 2003; Kahn-Harris and Gidley, 2010). Other commentators argue that inter-marriage provides an opportunity to enrich Jewish communities (McGinity, 2009, 2014; Thompson 2013; Sasson et al, 2017).

Turning now to the European situation. As Kalmijn et al (2006) have noted, intermarriage amongst European Jews is relatively understudied. One of the earliest studies of Jewish intermarriage in Europe was presented by Engelman (1940). This purely descriptive paper examined the changing level of intermarriage by Jews in Germany, Russia, Belarus, and Ukraine in the first three decades of the twentieth century – that is the period predating the rise of Nazism and the holocaust; it thus examined a now-lost world.

More recent studies have incorporated an attitudinal element to their investigations (see Wójcik and Bilewicz, 2014, for Poland, and deVries, 2006, regarding The Netherlands). For example, deVries found that individuals who had two Jewish parents (and a 'Jewish upbringing') had a stronger association with Judaism than those with one. The association differed from that found in earlier generations – more of a chosen cultural association with 'Jewishness' and less a factual/inherited link with 'Judaism' as a religion.

Also in the Netherlands, a statistically complex and robust analysis of marriage data for Jews, designed to assess the extent to which family attitudes and behaviour influence the endogamous or exogamous choices of children, was carried out by Kalmijn and colleagues (2006). The researchers achieved this through an examination of partner choices of the siblings of survey respondents as well as the respondents themselves. They demonstrated that (in the case of Netherlands Jewry) one-third of the variation in endogamy can be attributed to family factors via two underlying mechanisms – intergenerational transmission of cultural identity, and provision of endogamous meeting opportunities.

The current study focuses on England and Wales, where the absence of a question on religion in censuses before 2001 had hampered examination of intermarriage. Schmool's (2003) paper on attitudes to intermarriage in British Jewry thus relied on small sample questionnaires, and Mills' (2016) study focused solely on the Jewish Lads' Brigade and Club in Manchester in the 1950s

and 1960s. A more comprehensive assessment of intermarriage among Anglo-Jewry was provided by the Institute for Jewish Policy Research (JPR) survey of 2013 (Graham et al, 2014). Based on a nationwide sample of 3700 individuals the level of exogamy amongst partnered members of the sample was ascertained. The study found that involvement in Jewish rituals varied greatly between in- and out-married Jews, but there were fewer differences in attitudinal responses. JPR's most recent report on marriage and intermarriage (Graham, 2016) takes full advantage of results from the 2011 national census to present a highly detailed and comprehensive descriptive statistical report of marriage, cohabitation, and intermarriage at a national level.

So, how does the current study take forward the subject of religious intermarriage (in England and Wales)? The focus is on Jewish intermarriage, for reasons that will become clear. One of the problems with investigating very small groups (Jews, for example, form just under 0.5% of the England and Wales population) is that achieving a truly random survey sample is not practical. Previous questionnaire studies (whether in the UK or elsewhere) have identified their participants either using persons known to various Jewish community organisations, or by selecting people with 'Jewish' surnames. This will inevitably produce a very biased sample for investigating intermarriage – as intermarried people are less likely to be associated with Jewish organisations, and less likely to have retained their original surnames than in-married, organisationally-linked, households. So, the current study uses data almost entirely from the national censuses, taking advantage both of the question on religion included in the 2001 and 2011 censuses and various specialist outputs from the census. Clearly, this means that attitudinal responses that could be achieved through a tailored questionnaire survey cannot be included. Some responses of this nature can, however, be inferred from the census. For example, commissioned census tables have been produced which present information on the religion ascribed to children of in- and out-partnered individuals; this information could be used to imply attitudes to onward transmission of religion by various groups (Graham, 2016).

The current study therefore analyses the data at a deeper level than previous researchers, to examine the extent to which the personal, household, and environmental characteristics associated with religiously in-married individuals differ from out-married persons. The study also adds a spatial element to the national situation and provides an explanatory element to the overall numerical picture.

3 Forming the Study Dataset

2001 and 2011 census outputs include the replies to the census question: 'What is your religion?' under the following responses: No religion, Christian, Buddhist, Hindu, Jewish,

Muslim, Sikh, and Other. In addition, 'not stated' is a valid response as the question was, uniquely, voluntary, and the Office for National Statistics (ONS) did not impute values where there was no response (ONS, 2012).

This study makes use of two specialised outputs from the England and Wales census. The 2011 census safeguarded individual grouped local authority (LA) microdata (an anonymised 5% random sample of individuals totalling 2.85 million records) is the first of these sources (see ONS, 2014). The microdata sample provides information on the presence of same, different, no religion, or not stated responses to the religion question by other household members as a whole.

This dataset provides a snapshot of the population in 2011. Logistic regression seeking to identify differences in characteristics between one-religion and mixed-religion partnerships/households indicated that current age of the individual was an important differentiator. However, it was not clear to what extent age was the primary parameter here, rather than the era in which the partnership was formed. Much of the literature reviewed above has highlighted the major increase in religious intermarriage that has taken place over recent decades – and it would not therefore be surprising to find intermarriage more prominent amongst younger respondents, simply because their partnerships are likely to be more recently formed than those of older respondents. Ideally, therefore, it would be useful to be able to access a longitudinal dataset that included a material number of members of minority religions, and also detailed their partnership histories. Unfortunately, Understanding Society (University of Essex, 2018) – the principal UK longitudinal survey – is too small (40,000 households) to allow religious intermarriage for small minorities to be addressed.

Instead, attention turned to the ONS Longitudinal Study (LS) that links 1971 to 2011 England and Wales census records and life events data associated with individuals born on four dates of the year (that is, just over 1% of the population) (ONS, 2015). Both the 2001 and 2011 censuses included the religion question; thus, those individuals present at either or both of those censuses, and in the LS sample, can be identified by religion, and various data relating to any census back to 1971 at which they were present can be explored. The census element of the LS is, in effect, a series of linked snapshots rather than a continuous dataset, noting partnership status each ten years, rather than identifying more precisely when partnerships were formed. The LS includes details of persons found in the same household as each LS member for each census. However, although LS members carry a unique identifier, other members of households do not, so additional analysis is needed to establish whether a partnered LS member has the same partner at consecutive censuses. This was achieved by examining the year of birth of

partners. Where partners were present at consecutive censuses (working back from 2011 and 2001) and they had the same birth year, this was assumed to identify a constant partner. Any break in census presence or a change in birth year was deemed to represent the census prior to the formation of a partnership of interest.

The approach taken was to identify partnered LS members at the 2011 census and trace back their status in preceding censuses; in order to maximise the sample size, LS members unpartnered (or unrecorded) in the 2011 census but partnered in 2001 were also added to the sample and traced back. This process identified almost 360,000 'twenty-first century partnerships' in the LS. The 'final partnership census' for each of these partnerships was either 2011 or 2001 depending on whether the LS member was in a partnership in 2011 or not. The 'first partnership census' was defined as the first (earliest continuous) census in which the partnership was recorded (1971, 1981, 1991, 2001, or 2011), that is the first census after partnership formation. The use of birth year for partner identification may have included a small number of false continuous partnerships (where different partners happen to share the same birth year) and also a small number of partnerships may have commenced earlier, but the LS member was for some reason not present at a census. Table 1 summarises the status of each partnered LS member at the census(es) prior to their 'first partnership census', in order to give reassurance as to likely scale of error.

[Table 1 about here]

The other issue to be considered prior to use of the LS data are 'not stated' and 'no religion' responses to the census religion question. At each of the 2001 and 2011 censuses, about 7% of respondents did not reply to the religion question. If there was a distinct 'no responding' group who had different characteristics to the population as a whole, that might introduce some bias into the investigation of religion using census data. The LS can be used to compare the 2001 and 2011 responses for those LS members present at both censuses and (more importantly from the perspective of this study) those in partnerships in 2011. That analysis showed that in fewer than 1% of partnerships was the LS member recorded as 'religion not stated' in both years. Thus, a very large majority of the 7% of individuals who did not have their religion recorded in one census had entered a specific response at the other census. This finding is very important for all researchers who make us of the religion response from the England and Wales censuses – there is no sizeable 'never responding' group that might introduce a bias into the analysis.

For the purposes of this study (and a desire to take a cautious approach to out-marriage), the following method has been adopted. The religion of an LS member who was present at both the 2001 and 2011 censuses, but did not respond to the question at one census, has had his or

her religion taken from the census at which they did respond. 'No religion' has been considered as a 'religion' in its own right – thus a Hindu/no religion partnership has been categorised as exogamous. Conversely, 'not stated' is assumed not to add to the mix of religions in a household or partnership – thus a Sikh/not stated partnership has been considered endogamous; for most religions, 'not stated' partners make up fewer than 5% of endogamous partnerships. The 2011 census table DC2201EW indicates that 90% of 'No Religion' individuals are of white British or Irish ethnic group, whereas only 1% to 3% of Hindus, Muslims, or Sikhs are from those ethnic groups – therefore it is reasonable to include 'No religion' partners as exogamous for minor religions. Based on these definitions, the 359,900 'twenty-first century partnerships' found in the LS can be summarised as shown in Table 2. It is also worth noting that 88% of Christians have white British or Irish ethnicity. In reality, therefore, it is inevitable that the vast majority of 'No religion' individuals are originally of Christian heritage, and it is arguable that Christian/'no religion' partnerships need not be regarded as exogamous. On that basis, the Christian exogamy proportion would be less than 1% (rather than 14% shown in Table 2).

[Table 2 about here]

Exogamy has been assessed by comparing the religion of the LS member and partner in the final partnership census (as religion is only recorded in 2001 and 2011). However, this categorisation is only meaningful if reporting of religion is itself stable. Table 3 compares the religion of LS members recorded in both the 2001 and 2011 censuses who were in a partnership in 2011. Of the minority religions, Muslims, Hindus, Sikhs and Jews demonstrate stability (94% or greater consistency), whereas Buddhists, members of 'other' religions and no religion show consistency levels of 80% or much lower. At such levels, categorising partnerships as either endogamous or exogamous is not reliable and analysis of such issues would be problematic. Of the higher consistency groups, Muslims, Hindus and Sikhs demonstrate only low levels of exogamy (5% to 8%); the focus of this study has thus fallen on Jews – the only group that demonstrates both a high stability of religion reporting (94%) and material levels of exogamy (27%).

[Table 3 about here]

As well as the increase in intermarriage over recent decades, there has also been a major increase in cohabitation rather than formal marriage. Table 2 indicates some association between the two elements – cohabitation is higher for groups where exogamy is also high. Due to this apparent association between these two issues, the analysis of Jewish intermarriage has considered both phenomena.

In addition to the 1,934 'twenty-first century' partnerships of LS-member Jews, there are a further 450 partnerships within the 359,900 identified in Table 2 in which a (non-Jewish) LS member has a Jewish partner. These 2,384 partnerships thus form the dataset for the detailed analysis reported in this paper, and are summarised in Table 4. It demonstrates the parallel rise in exogamy and cohabitation (though it should be noted that 1971 cohabitations may be under-reported as the census questionnaire for that year do not provide a simple 'cohabitation' category).

[Table 4 about here]

4 Analysis and Results

The aim of the analysis is therefore to determine whether there is a difference in the individual or environmental/area characteristics between Jews in exogamous partnerships compared with those with endogamous partners (and between cohabiting and married Jews). There is also a spatial element to the study. Area characteristics based on the LA of residence – the density of Jewish residents per hectare; of all persons per hectare; and the Jewish proportion of the total population – have been derived from standard output tables from the 2011 census (Tables KS209EW, KS101EW, QS102EW, downloaded from https://www.nomisweb.co.uk/census/2011/data_finder) and appended to each LS record. These parameters are intended to provide a measure of the likelihood of a Jewish resident having other Jews present in the area. An additional area parameter has also been included – the size of membership of the largest synagogue in the LA of residence. These values have been derived from a JPR report (Casale Mashiah & Boyd, 2017). The level of endogamy for religious minorities is higher than would be the case from a random mixing within a neighbourhood (Kalmijn, 1998). This implies that facilities might be in place that would facilitate/encourage endogamy – for example, the presence of a synagogue, particularly a large synagogue that may well act as the focus for social activities (or at least suggest a community infrastructure that enables socialising). This parameter has thus been included to establish whether this factor has an impact on exogamy.

All the individual characteristics have been derived directly from the LS data. These cover a wide range of individual socio-economic and demographic factors. Table 5 summarises these parameters and sets out how exogamy and cohabitation vary depending on the value of each parameter. The table shows raw data – it does not control for the impact of other characteristics. For example, 76% of the 935 partnered Jews living in LAs with a very large membership synagogue are in traditional endogamous marriages, whereas in areas with a small or no synagogue, the proportion of the 742 living in these areas is only 25%.

[Table 5 about here]

There is also a wide variation in the levels of exogamy and cohabitation geographically. In order to ensure that sufficient data is included in each cell, the standard regional structure for England and Wales has been modified to take account of the somewhat uneven distribution of Jews across the country. Table 6 summarises the situation. The final column of the table highlights this variation in density, noting how many Jewish partnerships there are per 1000 partnerships averaged across that area. Unsurprisingly, endogamous marriages are most frequent in the area of greatest Jewish density (London Borough of Barnet), and least frequent in the least dense areas (The English Midlands and south-west, and in Wales).

[Table 6 about here]

In order to assess the importance and impact of each characteristic, the study dataset has been subjected to logistic regression, using either exogamy or cohabitation as the dependent variable. Several dozen tests were carried out, including a wide variety of the characteristics listed in Table 5, to establish whether, having controlled for the impact of other variables, there were statistically significant differentiators.

Turning first to exogamy, Table 7 provides a summary of models found to produce the best fit for varying numbers of independent variables. The table shows the log likelihood goodness of fit statistic (together with an R^2 variant). In all cases the characteristics were found to be significant at the 5% level; however, the addition of further variables produces a progressively smaller improvement to the model. Ultimately, the additional complexity of the model is not justified by the marginal improvement achieved. In the case of exogamy, the four-variable model seems to strike an appropriate balance. The parameters for the four-variable model (including Jewish population density, era of partnership formation, whether the Jewish member was in work at the first partnership census, and scale of synagogue in the area) are set out in Table 8.

[Table 7 about here]

[Table 8 about here]

The largest single determinant of exogamy is thus the density of Jewish population within the wider population. The relationship is logarithmic (and negative for exogamy, positive for endogamy) – as the proportion of Jews in the local population increases, then endogamy rises, but progressively larger increases in density are need for each fixed increment change in the level of endogamy. The impact of the era in which the partnership formed has a major impact

on the level of exogamy – the odds of a twenty first century partnership being exogamous, if it commenced before 1981, are only a fifth of the odds for those formed after 2001. The influence of the presence of a large synagogue in the area is also material with the odds of a partnership being exogamous in an area with a small or no synagogue being over twice those for areas where a large-membership synagogue exists.

The equivalent tables for the cohabitation models are Tables 9 and 10. In this case the 5 variable model strikes the best balance.

[Table 9 about here]

[Table 10 about here]

The presence of dependent children in the household (at the first census after partnership formation) is the most dominant determinant of cohabitation or marriage – the odds of being married in such circumstance are five times that of cohabiting. The impact of the start era of the partnership has a greater impact on cohabitation than on exogamy – compared with partnerships commencing after 2001, the odds of a partnership being a cohabitation rather than a marriage prior to 1981 are extremely small (though, as noted previously, the 1971 census did not provide a simple way to record cohabitation). The impact of Jewish population density within the wider population is broadly similar to that found for exogamy. However, unlike exogamy where impact of age found in the preliminary 2011 microdata analysis was actually found to relate to era of partnership formation, in the case of cohabitation age at partnership formation continues to have an impact, even after start era has been accounted for. People aged over 30 at the first census after partnership formation have odds of only one-third to two-thirds compared with under 30s of cohabiting. The modelling also shows that overseas born people have only about half the odds of cohabiting compared with UK-born Jews.

Note that, in addition to the binomial logistic regression analysis presented here, a multinomial assessment (combining exogamy and cohabitation into a single dependent variable) was also carried out. This demonstrated the importance of Jewish population density, start era of the partnership, and the presence of dependent children as determinants. A lack of space, and that it does not materially add to the understanding of the subject compared to the analysis presented, means that the results of those assessments are not presented here, but can be obtained from the author.

5 Discussion and Conclusions

Table 7 demonstrates the importance of the density of Jewish population within the overall population of an area in determining the likelihood of a partnership being endogamous or exogamous. Of lesser impact, once other variables have been controlled for, is the presence and size of a synagogue in the area. These two environmental/spatial variables are examples of the third and second of Kalmijn's (1998) hypotheses: the impact of the 'marriage market' (availability of marriage partners in the pool) and the impact of 'third parties' (presence of Jewish organisations encouraging endogamy). These findings for England and Wales reflect the situation described by Kalmijn (2006) in the case of Netherlands Jews. Of the various categoric and continuous population density variables that were tested in the regression analysis, the density of Jews within the wider population (rather than any of the 'per hectare' based alternatives) was found to give superior performance. Indeed, the natural logarithm of the density was found to give a better fit to the data than the raw density rate or any other transposed value. Thus, while Jewish exogamy is higher in more rural area of the country, the relationship is more closely related to the low proportion of the population that Jews form in those areas, rather than ruralness, per se.

The synagogue variable may be influencing the situation through a number of mechanisms. Firstly, the synagogue (or associated community) provides a focal point for Jews wishing to socialise with other Jews; they may wish to do this as part of their cultural heritage or through parental/family desires for this to happen (Bisin et al, 2004; Larkin, 2014). Secondly, the community/synagogue might actively discourage exogamy through potential 'sanctions' (for example, exclusion of out-married Jews or their families from certain activities) (Kalmijn, 1998). Finally, it is worth considering which is the direction of causation here. To what extent has living away from areas of high Jewish density or the presence of a synagogue lead to exogamy; alternatively, have Jews with no strong preference regarding the religion of their (future) partner chosen to locate to more 'remote' locations?

Some analysis was carried out, comparing location of residence at the 'first partnership census' and 'last partnership census', however, too few changes in location were recorded to allow any conclusions to be reached, given the overall size of the dataset. Similarly, examining the residential location at the census prior to the partnership start was also inconclusive as many moves at that time are influenced by university/college choice. This is an area for further research.

Many studies examining intermarriage for immigrants/ethnic minorities, particularly in the USA, have found increased levels of exogamy for members of minority groups who are degree

holders, and/or who hold professional occupations (see, for example, Qian and Lichter, 2007, who argue that such individuals have greater levels of social interaction with the majority community). The raw data as set out in Table 5 suggest a similar pattern for Anglo-Jewry. However, the regression analysis, though finding socio-economic class and degree-holding as significant at the 5% level, demonstrates only a very small practical impact of these characteristics. Simply being 'in work' at the first partnership census has a slightly greater explanatory impact, though this factor may also reflect increased opportunities to mix with a wider variety of people through work itself, or through having more disposable income for leisure activities.

In the case of cohabitation, the presence of dependent children in the household at the first partnership census has (just) the greatest influence on the partnership type. In part this may arise as cohabitation and marriage are not binary alternatives – frequently cohabitation is a pre-cursor to marriage (Beaujouan & Bhrolchain, 2014; Berrington et al, 2015). In many cases, the decision to marry and 'formalise' the relationship is linked with decisions on child-bearing – hence the differential between the proportion of cohabitees with children compared with those in marriages. It may also be related to reduced levels of commitment in some cohabitation compared with people in marriages (Brown et al, 2017), and therefore a reluctance to commit to child-bearing. A further consideration is the data source used for this study. The ONS LS provides a series of 10-yearly linked snapshots. The partnerships recorded at their first census after formation may have been formed at any point in the preceding 10 years. Many of those recorded as marriages at that first census may well have commenced as cohabitations (particularly for more recently formed partnerships); in addition, many cohabitations break down. So, it is inevitable that, on average, partnerships recorded as marriages at their first census will have been extant longer than those recorded as cohabitations, and therefore more likely to have reached the point where child-bearing has taken place.

However, there is a strong link between exogamy and cohabitation in Anglo-Jewry – fewer than 1 in 15 same-religion partnerships are cohabitations, whereas 1 in 3 exogamous partnerships is a cohabitation. There is clearly a strong marriage tradition for Jews, and the decision to marry will reflect both parties views in a mixed-religion relationship. Nevertheless, the difference is stark. At one level this may reflect concerns regarding cultural differences between the parties, and a desire to avoid a failed marriage (exogamous Jewish marriages have been found to fail more frequently than endogamous ones – Graham, 2016). Whilst unions between Jews and 'non-Jews are no longer regarded, either by the state or by the wider society, as a form of intermarriage that transgresses a major boundary' (Song, 2009, p337), the same is not true from

the perspective of most Jewish authorities (Cromer, 2004) and many families. Cohabitation for exogamous partnerships may be deemed as less unacceptable than a formal marriage for some Jewish individuals and their families, as might also the decision not to (or not yet to) have children.

Although Jews are the only consistently-recorded religion group in England and Wales for whom exogamy has a material impact, not all intermarriage involves Jews. So, do the same factors differentiate endogamy and exogamy for religious intermarriage in England Wales more generally? The equivalent of the raw comparison shown in Table 5 has been drawn up for all religious intermarriages (not shown here for space reasons). There are a few differences. The apparent urban/rural contrast for Jews (actually related to Jewish population density), is absent for the population as a whole. In contrast to the Jewish group, there is a greater preponderance for exogamy amongst white British than other ethnicities for intermarriage more widely. Both groups share the slight predisposition for those in work, with degrees, or holding professional occupations to form exogamous relationships. As has already been noted, the absolute level of exogamy for Jews is much higher than for other groups. However, for Jews the level increased greatly between those partnerships commencing prior to 1981 and before 2001, but only increased slightly since then. For the wider population the sharp increase between the first two periods has continued since.

In summary, both exogamy and cohabitation have seen a rapid increase over the past 40 years for Jews and for other religions. For Jews there is a strong connection between cohabitation and exogamy that may not be present in the wider population. It seems that, notwithstanding the general integration of Jews into mainstream British society, there are still strong pressures in favour of endogamy within Anglo-Jewry (particularly so for those resident in areas with relatively high Jewish population density and major synagogues). This results in a much greater propensity for cohabitation in exogamous partnerships, and for child-bearing to be delayed with that partnership type. Whether the spatial distribution of exogamous Jews is a factor in their intermarriage or is a result of intermarriage is a topic warranting further analysis.

The level of exogamy in the religious groups associated with more recent arrivals in Britain is far below that exhibited by the largely British-born Jewish group whose last major influx occurred more than 100 years ago. It will be interesting to see if the Jewish pattern of progression from alien immigrant to acceptable marriage partner will be repeated in a briefer or longer timescale for members of other religious minorities.

This study has demonstrated that, notwithstanding that the data relate to linked 10-yearly snapshots rather than more frequent event recording, the ONS LS can be used to examine issues

for very small sub-populations. Given that Jews make up fewer than 0.5% of the England and Wales population, the restrictions on output that ONS has in place to avoid inadvertent identification of LS members have not proved a barrier to using the LS for the study of intermarriage. This bodes well for others who may wish to use this source for other small sub-population studies.

Acknowledgment

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The 2011 safe-guarded microdata were made available via the UK Data Service and accessed under the terms of its End User Licence.

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Tables

Table 1 - Partnership status at census prior to start of '21st century' partnership

Partnership in existence by 1971 census	18%
Recorded at immediately preceding census, with status:	
Not in a partnership	46%
partner born in different year to '21st century' partner	11%
Not recorded at immediately preceding census, status at an earlier census:	
not in partnership	6%
partner born in different year to '21st century' partner	1%
partner born in same year as '21st century' partner	3%
Not recorded at any prior census	16%
All '21st century' partnerships	359,900

Source: Author calculation based on ONS LS output

Table 2 - Partnerships categorised by religion of LS member in partnership

Religion of LS member in partnership	'Traditional' (married, same religion)	Exogamous (married or cohabiting)	Cohabiting (any religion)	All types (100%)	of which, same-sex
Christian	69%	14%	22%	270,200	1.0%
Muslim	91%	5%	5%	16,820	3.0%
Hindu	90%	8%	4%	6,396	4.1%
Sikh	92%	5%	4%	4,254	2.9%
Jewish	68%	27%	13%	1,934	1.4%
Asian Buddhist	54%	40%	13%	1,041	3.4%
all other Buddhist	29%	61%	33%	644	4.3%
other religion	35%	53%	33%	1,403	3.8%
no religion	40%	29%	42%	49,330	2.3%
changed religion	3%	95%	32%	1,936	2.8%
not stated	79%	0%	21%	5,906	1.7%
All groups	67%	16%	24%	359,900	1.4%

Source: Author calculation based on ONS LS output

Table 3 - Stability of religion (for LS members in partnerships in 2011)

Religion of LS member in 2001 census	Religion in 2011 census: unchanged (or not stated)	changed (inc to no religion)	Total	Proportion unchanged
Christian	127,279	14,027	141,306	90%
Muslim	6,776	151	6,927	98%
Hindu	2,867	171	3,038	94%
Sikh	2,282	72	2,354	97%
Jewish	934	64	998	94%
Asian Buddhist	234	57	291	80%
all other Buddhist	112	94	206	54%
other religion	290	230	520	56%
no religion	18,240	5,052	23,292	78%
not stated	1,873	8,565	10,438	18%
All groups	160,887	28,483	189,370	85%

Source: ONS LS

Table 4 – LS partnerships involving 1 or 2 Jewish partners extant in 2011 or 2001

Census at which partnership first recorded	'Traditional' (married, same religion)	Exogamous (married or cohabiting)	Cohabiting (any religion)	All types (100%)
1971 or 81	76%	23%	2%	757
1991 or 2001	48%	48%	21%	941
2011	39%	54%	28%	686
All years	54%	42%	17%	2,384

Source: Author calculation based on ONS LS output

Table 5 – Summary of Individual and Area Characteristics

Partnerships including Jews Individual characteristics at 1st census after start of partnership, or Area characteristic		all types of partnership	'Traditional' (married, same religion)	Exogamous (married or cohabiting)	Cohabiting (any religion)
N		*2,384*	*1,299*	*992*	*403*
Size of synagogue in area	small or none	742	25%	73%	25%
	very large	935	76%	19%	11%
Jewish residents per Ha*	<1	567	22%	76%	25%
	>1	1817	65%	31%	14%
Residents per Ha*	<12	477	31%	65%	22%
	>12	1907	60%	36%	16%
Jewish population density quintile*	lowest	612	23%	75%	25%
	top 2	762	75%	11%	19%
country of birth	UK	1841	54%	41%	18%
	elsewhere	543	55%	42%	12%
ethnic group	white British	1866	56%	40%	17%
	all others	518	49%	48%	17%
living with dependent children	yes	1349	64%	35%	6%
	no	1035	42%	51%	31%
living in owned-tenure residence	yes	1769	57%	40%	14%
	no	615	46%	47%	26%
NS socio-economic class professional/managerial	yes	1353	50%	46%	19%
	all others	1031	61%	36%	14%
degree qualified	yes	923	44%	51%	21%
	no	1461	61%	36%	14%
in work	yes	1762	51%	45%	19%
	no	622	63%	33%	12%
employed in professions/ education/health	yes	1080	49%	46%	20%
	no	1304	59%	38%	14%
gender	male	1184	52%	43%	17%
	female	1200	57%	40%	16%
age at 1st census after formation	under 30	586	57%	36%	23%
	40 or over	876	53%	44%	17%

* In addition to these categorical variables, equivalent continuous density variables were also calculated and used in the analysis

Source: Author calculation based on ONS LS output

Table 6 – Variation in Jewish exogamy and cohabitation by area

Region of partnership formation	'Traditional' (married, Jewish spouse)	Exogamous (married or cohabiting)	Cohabiting (any religion)	All types (100%)	Jewish partnerships per 1000 all religion partnerships
Manchester area	78%	18%	11%	159	14
NE & rest of NW England	35%	62%	23%	105	2
Yorkshire & Humber	55%	42%	18%	100	3
The Midlands, SW, and Wales	22%	77%	31%	159	1
East of England (exc Herts)	40%	58%	17%	123	4
Hertfordshire	50%	43%	18%	152	20
Hackney & Haringey	69%	26%	15%	158	51
Inner North London	43%	48%	25%	244	26
Barnet	80%	17%	7%	414	175
Rest of NW London	75%	22%	11%	237	31
NE London	66%	32%	15%	167	26
South & West London	27%	69%	22%	171	7
South East England	22%	76%	24%	195	3
All regions	54%	42%	17%	2384	7

Source: ONS LS

Table 7 - Optimum exogamy model performance per number of variables

No of variables	Variables included	-2LL	improvement over null model	Nagelkerke R^2
0	null model (intercept only)	3237		
1	add Jewish population density	2696	17%	0.27
2	add start decade of partnership	2517	22%	0.35
3	add in work or not	2492	23%	0.36
4	**add size of synagogue in area**	**2474**	**24%**	**0.37**
5	add presence (or not) of dependent child(ren)	2460	24%	0.38
6	add NS-SeC category or degree holder status	2452	24%	0.38

Source: Author calculation based on ONS LS output

Table 8 - Preferred exogamy logistic regression model **2384 cases**

	B	Std. Error	Sig.	Exp(B) (Odds ratio)	95% CI for odds ratio Lower Bound	Upper Bound
natural log Jews per 10000 residents	-0.456	0.057	***	0.634	0.567	0.709
first census after partnership formation 1971 or 81	-1.589	0.134	***	0.204	0.157	0.265
first census after partnership formation 1991 or 2001	-0.374	0.117	**	0.688	0.547	0.865
not in work	-0.551	0.116	***	0.576	0.459	0.723
synagogue size 200 to 1000 families	0.308	0.154	*	1.361	1.006	1.840
no synagogue (or below 200 families)	0.894	0.229	***	2.445	1.560	3.832
Constant	0.691	0.391		1.996		

-2LL Null model	-2LL this model	Chi-square	df	Sig.	Cox & Snell R Square	Nagelkerke R Square
3237	2474	763	6	***	0.27	0.37

Reference case: in endogamous (same religion) partnership, in work, first census after partnership formation 2011, living in local authority with very large (over 1000 families) synagogue

Significance level less than: *** 0.1%; ** 1%; * 5%

Source: Author calculation based on ONS LS output

Table 9 - Optimum cohabitation model performance per number of variables

No of variables	Variables included	-2LL	improvement over null model	Nagelkerke R^2
0	null model (intercept only)	2166		
1	add presence (or not) of dependent child(ren)	1907	12%	0.17
2	add start decade of partnership	1718	21%	0.29
3	add Jewish population density	1683	22%	0.31
4	add age at start of partnership	1655	24%	0.32
5	**add whether UK born (or not)**	**1628**	**25%**	**0.34**
6	add in work or not	1616	25%	0.35
7	add start decade / age interaction term	1603	26%	0.35
8	add residential tenure (owned or rented)	1592	26%	0.36

Source: Author calculation based on ONS LS output

Table 10 - Preferred Cohabitation logistic regression model **2384 cases**

	B	Std. Error	Sig.	Exp(B) (Odds ratio)	95% CI for odds ratio Lower Bound	Upper Bound
dependent child(ren) present	-1.684	0.143	***	0.186	0.140	0.246
first census after partnership formation 1971 or 81	-3.170	0.312	***	0.042	0.023	0.078
first census after partnership formation 1991 or 2001	-0.450	0.128	***	0.638	0.496	0.820
natural log Jews per 10000 residents	-0.229	0.035	***	0.795	0.742	0.852
age at first census after partnership start 30-39	-0.566	0.164	**	0.568	0.412	0.782
age at first census after partnership start 40 or more	-0.802	0.155	***	0.449	0.331	0.608
not UK born	-0.790	0.160	***	0.454	0.332	0.621
Constant	1.529	0.237	***	4.614		

-2LL Null model	-2LL this model	Chi-square	df	Sig.	Cox & Snell R Square	Nagelkerke R Square
2166	1628	538	7	0.000	0.20	0.34

Reference case: married, uk born, no dependent children, first census after partnership formation 2011, aged under 30 at that census and without dependent children at that census

Significance level less than: *** 0.1%;
** 1%; * 5%

Source: Author calculation based on ONS LS output