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American Jewish Population Estimates: 2012

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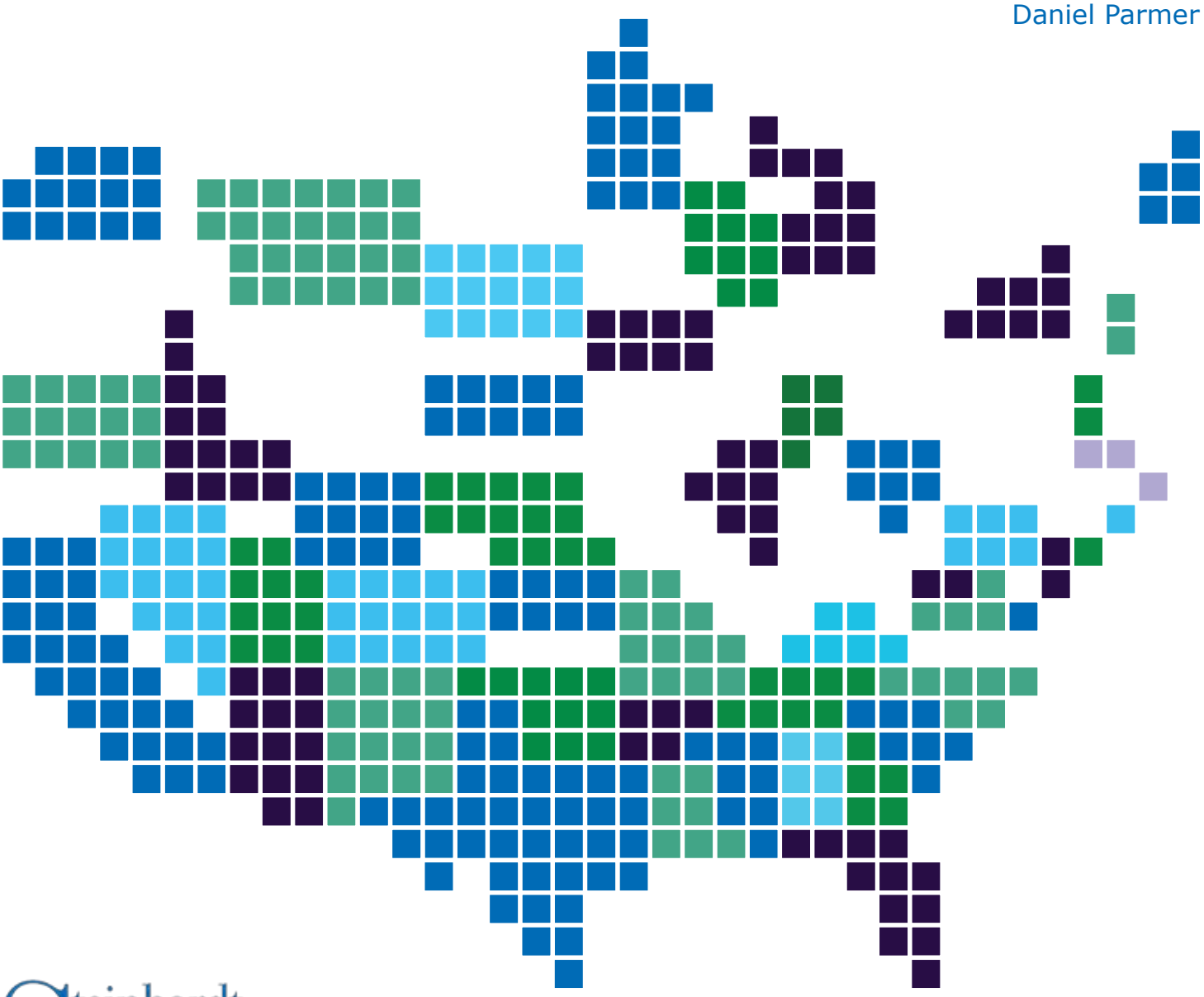

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The Cohen Center for Modern Jewish Studies, founded in 1980, is dedicated to providing independent, high quality research on issues related to contemporary Jewish life.

The Cohen Center is also the home of the Steinhardt Social Research Institute (SSRI). Established in 2005, SSRI uses innovative research methods to collect and analyze socio-demographic data on the Jewish community.

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http://www.brandeis.edu/ssri/noteworthy/amjewishpop.html

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Executive Summary

Socio-demographic studies of the U.S. Jewish population have, over the last several decades, painted a mostly negative portrait, indicating declining size and levels of affiliation. These studies, however, are inherently complex and methodologically problematic, albeit critical for our ability to understand American Jewry.

To develop reliable estimates of the size and characteristics of the Jewish population, the Steinhardt Social Research Institute (SSRI) has used data synthesis techniques to yield estimates of the proportion of U.S. adults who claim Judaism as their religion, along with the number of secular/cultural Jews (i.e., Jews who identify other than by religion), and the number of Jewish children.

Accumulated evidence indicates that the U.S. Jewish population is substantially larger than previously estimated. More than 1.8% of the total U.S. adult population, over 4.2 million adults, identify their religion as Judaism. Along with secular/cultural Jews and including children, the SSRI 2012 estimate of the total U.S. Jewish population is about 6.8 million.

SSRI's goal in developing estimates of the U.S. Jewish population is to enhance efforts to understand Jewish identity, attitudes and behavior. As part of our program of research on Jewish socio-demography, we are developing comparative analyses of the population -- nationally, locally, and over time. We have also mapped the U.S. Jewish population and made the data available online at the American Jewish Population Project (http://ajpp.brandeis.edu).

Key Findings

There are an estimated 6.8 million Jewish adults and children in the United States:

- 4.2 million adults self-identify as Jewish when asked about their religion
- Nearly 1 million adults consider themselves Jewish by background and other criteria
- There are an estimated 1.6 million Jewish children

The U.S. Jewish population is concentrated in a few states and metropolitan areas:

- Over 60% of American Jews live in just six states. Slightly over 20% resides in New York State, 14% in California, followed by 12% in Florida; 8% in New Jersey; and 5% each in Massachusetts and Pennsylvania.
- The largest percentage reside in New York City (13%), Southern Florida (8.6%), New York suburban areas (7%), Los Angeles area (7%).
- Additional centers include the region around Boston, Northern New Jersey, Chicago, Philadelphia, and Washington DC and suburbs.

Among adults who self-identify as Jewish by religion

- Just over 1 million (24%) are aged 65 years and older
- They are more than twice as likely as other Americans to be college graduates

The present findings, although they stand in contrast to the findings of key Jewish population surveys conducted around the year 2000, represent the accumulated findings of research conducted over the last decade. The portrait of American Jewry described by the 2012 SSRI findings is of a population, at least numerically, in ascent rather than decline. In conjunction with focused studies of the character of Jewish identity and engagement, the findings provide a foundation that will enable scholars and policy analysts to develop an evidence-based and nuanced narrative of American Jewish life.

Introduction

Socio-demographic studies of the U.S. Jewish population have, over the last several decades, painted a mostly negative portrait of American Jewry. The research suggests that, beset by assimilation pressures, declining identification and levels of engagement, the Jewish population is decreasing, both in absolute numbers and relative to the overall population (Saxe, Boxer, & Aronson, Forthcoming). Measuring Jewish identification at the population level is, however, inherently complex and the studies fueling the narrative of decline have been methodologically problematic (see, e.g., Kadushin et al., 2005). There are a host of questions about whether they capture accurately the size and characteristics of the population. Despite the research challenges, understanding the demographic characteristics of U.S. Jews has important implications for how we understand religion in America, the Jewish community, and a number of social and political issues.

Since 2006, in an effort to develop reliable estimates of U.S. Jewry, the Steinhardt Social Research Institute (SSRI) has been amassing data from hundreds of academic, government, and privately funded surveys that ask questions about religious and ethnic identification. Hierarchical Bayesian models are used to synthesize data across all of the surveys to yield estimates of the proportion of U.S. adults who claim Judaism as their religion. In addition, based partly on the data synthesis, estimates have been constructed of the number of secular/cultural Jews and the number of Jewish children. As of 2010, the accumulated evidence indicated that the U.S. Jewish population was substantially larger than previously estimated (Saxe & Tighe, 2013). The number of adults who consider Judaism their religion was more than 33% higher than the parallel number observed in the National Jewish Population Survey 2000-01 (NJPS; Kotler- Berkowitz et al., 2004) and the total number of American Jews was estimated to be at least 6.5 million individuals.

The number of American Jews is not, by itself, sufficient to provide scholars and policy analysts with an understanding of the Jewish community. Reliable data on the size and basic demographic composition of the population is, however, a foundation for any study of U.S. Jews. Most Jewish specific studies, such as the NJPS, conflate two goals: obtaining census-like population information and, at the same time, collecting substantive data on the nature of Jewish life. When the two are estimated from the same single source of data, any errors or sources of bias in the population totals dramatically affect understanding of Jewish life more broadly. Our effort to synthesize data from a large number of studies addresses the first goal and, in turn, provides the data needed to pursue the second. Unlike a single study, data synthesis has the potential to provide more reliable estimates and to incorporate new data on an ongoing basis.

The present report extends our prior work, both by updating the SSRI Jewish population estimates with new data (through 2012) and by describing the distribution and composition of the population. In addition, to provide context for understanding these and other estimates of the population, the history of efforts to assess the Jewish

population is reviewed. Our overall goal, in developing detailed estimates of the U.S. Jewish population is to enhance understanding of Jewry and to provide data that can be used, in conjunction with targeted surveys of Jews, as one basis for understanding community members' attitudes and behavior. In conjunction with this report, SSRI has developed the American Jewish Population Project, an innovative effort to map the Jewish population in the United States. This project is intended to allow comparative analyses nationally and locally, as well as over time.

Background

Socio-demographic studies of the Jewish community in the United States have been a central focus of efforts to understand American Jewry and have shaped the narrative of contemporary Jewish life in the Diaspora. The importance of having basic data on the composition of the population has long been recognized. As noted by Goldstein (1971):

Basic to an evaluation of the current status and future prospects of the Jewish community in the United States is an analysis of the group's demographic structure: its size, distribution, and composition, and factors affecting its future growth and character. (p. 3)

Since the 1970s, a series of national socio-demographic studies have been conducted with the aim of estimating the size and characteristics of the U.S. Jewish population (see review by DellaPergola 2013). In addition, nearly 100 Jewish communities have conducted their own local studies. These local community studies typically focus on catchment areas of Jewish Federations.[1] More than half of these communities have sponsored more than one study, often at ten-year intervals. The results of community studies have shaped both Jewish communal policy and how American Jews view themselves and others. The utility of targeted studies such as these is in the detailed data they provide regarding those living in the community. Because of challenges associated with conducting such studies, especially the cost and difficulty of obtaining representative samples of Jewish adults, there has been great variability in the accuracy of the key piece of information basic to evaluation research, the size of the population.

Because of constraints associated with the separation of church and state, the U.S. Census does not ask individuals to report their religious identity as part of any survey that requires a respondent to participate, such as the Census and the American Community Survey (ACS).[2] Thus, unlike other demographic groups defined by race, ethnicity, or economic status, there are no official statistics that describe the national Jewish population or its distribution and composition. Given the lack of official national-level data, a number of scholars and non-governmental organizations have sought to collect their own systematic data that could be used both as a means for describing the composition of the population nationally, and for assessing those aspects or elements of Jewish life that would be useful for policy and planning purposes.

Modern History of Surveys of American Jews

The first major national-level systematic survey of the population was in 1970, sponsored by the Council of Jewish

Federations and Welfare Funds and conducted by Fred Massarik and colleagues (Chenkin, 1971; Lazerwitz, 1971; Massarik & Chenkin, 1971). Prior to this effort, the primary source of data at the national level was from a pilot study conducted by the U.S. Census Current Population Survey in 1957, which was designed primarily to examine the likelihood that U.S. citizens would answer questions about religious identification (Goldstein, 1969; Mueller & Lane, 1972). Of 35,000 households surveyed, just over 1,000 (3.2%) identified as Jewish. The data from these respondents served as the primary national-level estimate of the size and demographic composition of the population. The Census did not continue with the collection of data on religious identification. Thus, there was no way to gauge growth of Jewish households over time (Lazerwitz, 1971).

Absent such census data, a goal of the 1970 survey was to establish a national level population profile of the U.S. Jewish population that would not be biased by the few larger communities who were better organized for local data collection.

Previous estimates were based upon the judgments of communities, in most cases without actual research. They were therefore susceptible to over-representation of a few large communities, while under-representing the population of small communities in a region. (Massarik & Chenkin, 1971, p. 2)

To better ensure a representative sample of the Jewish population that would not be biased toward the largest communities, counties in the United States were divided into 52 groups based on local community studies' estimates of the size of the Jewish community in each county (see Lazerwitz, 1971). Within each county group, much of the sample was identified through lists. It was assumed that "a sizable portion of the addresses of the nation's Jews are known to their local Jewish Federations and are available on lists from these organizations" (p.1). An exception was the New York metropolitan area where a standard probability sample was drawn.

The 1970 survey yielded an estimate of the overall size of the Jewish population as 5.4 million (Massarik & Chenkin, 1971). Re-analysis of the data adjusting for sources of bias in the estimates (Lazerwitz, 1978) indicated the true population estimate was likely 5.8 million with a lower limit of 5.6 million and upper limit of 6 million. The reanalysis yielded a result closer to the original estimate of 5.7 million that had been used to design the survey.

One lesson from the 1970 survey is the complexity associated with establishing the baseline population figure on which all of the research is based. Population estimates were based on pre-existing guesstimates of the size of the population, necessary to determine sampling ratios and survey weights. The pre-existing guesstimates were not ill informed. They were based on extensive experience of researchers devoted to the study of local Jewish communities. There was, however, no existing systematic source of data, such as the U.S. Census, with which to evaluate the over- or under-representation in those estimates. Lazerwitz (1971) was well aware of the problem, "We sought from this survey that very piece of information required to design the survey creating a sort of circular situation with the connecting link missing" (p. 2). It was, however, the best available solution to a complex problem.

The next major effort to collect national-level population data was in 1990 (Goldstein, 1993). In the proposal for this study, the developers noted:

The best alternatives are surveys in which information on religious identification is collected. Three types of such surveys are relevant to our concern: 1) national and local omnibus surveys; 2) local studies of the Jewish population; and 3) a national Jewish population survey. (Goldstein, Groeneman, Mott, Mott & Waksberg, 1988, p. 3-4)

The use of national and local omnibus surveys was ruled out because of the small sample sizes in individual surveys; if analyzed individually, they yielded too few Jewish respondents for meaningful analysis. The possibility of combining multiple surveys collected as part of a series was also considered infeasible because it would make the sample too heterogeneous for reliable analysis. Ultimately, however, population estimates derived from the 1990 survey were based on the amalgamation of a year's worth of weekly and biweekly surveys (conducted as part of an ongoing market research omnibus survey). The combined surveys were used to establish the proportion of the total U.S. population who identify as Jewish, ignoring possible heterogeneity across surveys. Respondents were then re-contacted for a longer, more in-depth survey on factors related to Jewish life.

The next major national survey was conducted in 2000. Rather than pooling multiple small samples from an omnibus survey, a single nationally representative survey was developed from which Jewish respondents could be identified (Kotler-Berkowitz, et al. 2004). Such a strategy obviated the need to adjust for possible heterogeneity (i.e., disparateness) across multiple samples and potential bias associated with omnibus market research surveys. The method could not, however, remedy the challenges associated with relying on random digit dial (RDD) phone survey methods to estimate a "rare" population. The survey had a very low response rate (less than 20%), accompanied by a host of administrative and methodological issues (see Kadushin, Phillips & Saxe, 2005). Furthermore, with the lack of independent, external data about the population, there was no way to evaluate possible over- or under-representation in the sample that was achieved with this low response rate.

In the end, the same circularity described by Lazerwitz (1971), the need in survey design and evaluation for the very information that the survey sought to provide, limited the utility of the survey for purposes of population estimation. Another survey conducted during the same period (Groeneman & Tobin, 2004) had similar problems of low response rates and lack of ability to evaluate and adjust for over- or under-representation of the samples. A third survey, employing the same design as the 1990 study (Kosmin, Mayer & Keysar, 2001), also had issues of low response rates and an increase in the rates of respondents who refused to answer the religious identification question. In addition, there was no way to gauge whether the Jewish respondents who participated were representative of the Jewish population as a whole.

The problems encountered in national Jewish population surveys reflect the broader challenges associated with general population surveys, particularly those that rely on telephones as the primary method for

contacting respondents. Response rates have deteriorated as phone technology has advanced and users increasing use call-screening, call-blocking and cell phones rather than traditional landlines (Groves et al. 2004; Massey, O'Connor, and Krotski 1998; Smith 1994). Declines in response rates are especially problematic for estimation of rare populations. Such estimates are highly sensitive to disparities between responders and nonresponders, especially if there are interactions with survey characteristics. For example, those for whom religion is most important might be more likely to participate in surveys that focus on issues of religion than surveys that focus on health or politics. This would lead to bias in estimates depending on how the survey is portrayed to potential respondents and who the sponsoring agency is.

The New Age: Data Synthesis

The method proposed in the design stage of the 1990 survey of using existing national and local sources of data may have been difficult to implement two decades ago. Since 1990, however, computational methods for data aggregation that enable direct assessment and modeling of heterogeneity have become common (Carlin & Lewis, 2011; Cooper, Hedges & Valentine, 2009; Ghosh, Natarajan, Stroud, & Carlin, 1998; Hox, 2002; Kreft & Leuw, 1998; Malec, Sedransk, Moriarity, & LeClere, 1997). What seemed infeasible in the past is feasible today, and is manifest in increased interest in mining "big data" (cf. Mervis, 2012).

Combining data across multiple independent samples of the U.S. population enables one to examine directly the variation inherent in any single survey and to derive a more precise estimate of the true underlying population distribution. This is especially important in terms of the Jewish population since it is a relatively small proportion (approximately 2%) of the entire population. No matter how well designed, any single survey of the U.S. population that seeks to identify such a small population group yields only an estimate of the group. Absent a standard source of data, there is no way to gauge how accurate the results from a single survey might be. Repeated, independent samples of the population, however, can provide more accurate population estimates—assuming appropriate statistical methods are employed to account for the different sampling distributions in each data source. In the present work, rather than relying on a single potentially biased omnibus survey as the source for the multiple samples as was done in the 1990 NJPS and American Jewish Identity Survey (AJIS) 2001, a representative sample of surveys from across a wide range of survey organizations are examined.

This data synthesis approach, thus, enables us to generate highly reliable estimates of the Jewish population who identify as Jewish in response to questions about religion that are common in national and local surveys. For those not represented in the cross-survey estimates (i.e., children and those who identify as Jewish but not in response to religion questions), data from targeted surveys of the Jewish population, such as the SSRI's Survey of American Jews (SAJ) 2012 (Boxer, Krasner Aronson, & Saxe, 2013) are used. The data aggregation methods presented here are not intended to replace the need for targeted surveys of the Jewish population to assess behaviors and attitudes that are unique to the group. They do, however, provide a baseline on the basic demographic structure described by Goldstein as essential for studies of the population.

Updated Estimates

Hundreds of data sources between 1988 and 2012 have been collected, reviewed, and analyzed to develop estimates of the Jewish population (Saxe & Tighe, 2013; Saxe, Tighe, & Boxer, In press; Tighe, Livert, Barnett, & Saxe, 2010; Tighe, et al., 2011). At the time of this report, data are available from nearly 750,000 respondents, including more than 16,000 respondents who indicate that their religion is Judaism. In the present report, data from the most recent years are used to provide an independent, external source of reference on the basic demographic profile of the current population, including national and state-level population counts and distributions by age and education.

The analyses are consistent with SSRI's previous estimates and converge on an estimate of 1.8% of the total U.S. adult population that identifies as Jewish by religion. This represents over 4.2 million people (see also, Saxe & Tighe, 2013). Based on the synthesis results, as well as focused studies of U.S. Jews, two additional sub-groups need to be added to the Adult Jews by religion: Jews of no religion (secular/cultural Jews) and Jewish children. As described in detail below, the 2012 estimate of the total population is about 6.8 million.

In the present report, national estimates of the Jewish population are based on data from nearly 350 independent samples of the U.S. adult population, over 320,000 respondents and 6,900 Jewish respondents. These studies represent a subset of the 447 samples that are part of our complete database. They were selected because, along with meeting our criteria for inclusion (see Tighe et al., 2011), they were conducted between 2006 and 2012. County-level estimates are based on a subset of these for which more detailed geographic information are available (n=235,000 total respondents, 4,841 Jewish respondents). Estimates include:

- Number of people who identify as Jewish by religion (JBR)
- Number of people within categories of age
- Number of people by educational attainment
- Number of people by state and metropolitan status
- Number of people by counties or groups of counties
- Number of people by census categories of race/Hispanic origin

New: County-Level Estimates

The inclusion of county-level estimates in this report extends our past work and is made possible both by the growing size of our cross-survey sample and by the increased availability of high performance computing resources needed to analyze heterogeneity across a large number of studies. County-level estimates are included for two reasons. One is that national and state-level estimates alone may be of limited utility for program and resource planning purposes. To make this work relevant to those most likely to use these data, more detailed estimates are required. The second reason is methodological. National estimates are based on the most readily available geographic variables across all surveys, namely state and metropolitan status. There is, however, variation in the distribution of the Jewish population within states and metropolitan areas. County-level analysis enables examination of whether estimates from the national model are

potentially biased by not accounting for sub-state variation. Although some surveys provide ZIP code or census tract level data, counties are the lowest level of geography available in sufficient number to be able to generate reliable estimates.

Prior to the present work, local community studies were the only source for county-level Jewish population estimates (cf. Comenetz, 2011). Comenetz notes that the ideal analysis "would be to attach a current and accurate Jewish population estimate to each of the more than 3000 counties in the U.S." Absent this, Comenetz summarizes data across a variety of sources and time periods. Any county included in any Jewish community survey conducted between 1980 and 2012 was reported, regardless of time period (i.e., no adjustments for possible changes over time for counties covered in earlier time periods). For counties not covered in the past two decades by recent community surveys, historical estimates as reported in Sheskin and Dashefsky (2012) were used, also with no adjustments for changes over time. For any remaining communities, estimates were based on either proxy variables from the American Community Survey (e.g., language spoken at home), presence of synagogues based on a decade old Synagogue Census (Scheckner, Schwartz & Kotler-Berkowitz, 2002), or estimates from the Religious Congregations and Membership Study (Grammich, et al., 2012). Without an external metric, it is not possible to determine the accuracy of these county-level estimates. Methodological differences (in particular, regarding how the sample is drawn), along with time disparities, makes it problematic to compare estimates across counties.

County-level analyses presented here provide an alternative method to establish baseline estimates of the known Jewish population in these counties. This enables one to establish estimates based on a fixed time period, a similar target population, and with the ability to account for variability in the estimates that might be associated with the different sources of data.

The estimates included in this report are preliminary. There is a much greater degree of uncertainty in county-level estimation than for states, particularly for counties for which there is less coverage in national probability samples.[3] Their reliability is a function of the size of the Jewish population in the area being described, as well as the development of "best fit" population models and the ability to account for possible interactions of demographics by county. We continue to build on these preliminary models, including adding additional levels of clustering of counties and exploring interactions between demographic characteristics associated with population estimates and counties. As additional data are added, estimation can be improved.

Analysis Overview

As described in detail elsewhere (see Saxe & Tighe, 2013; Saxe, Tighe, & Boxer, In press; Tighe, et al., 2010, 2011), our method draws on data from repeated independent samples of the U.S. adult population to estimate the proportion of the population who identify as Jewish. All available and relevant sources of data are reviewed. Analyses based on a representative sample of surveys allow development of a profile of the population and assessment of the reliability of estimates from individual studies. This is particularly important in estimating the size of a small population group.

The full sample of surveys in the SSRI database currently spans the years 2000 to 2012, with additional data from surveys conducted in 1988 and 1992. The database includes a total of 424 independent samples with a combined sample size of 734,314 respondents, of whom 16,279 identify as Jewish by religion. The present report is based on the most recent data, from the years 2006 to 2012, and for the continental United States[4] This subset consists of 348 samples with a total of 328,130 respondents and 6,912 Jewish respondents.

A majority of the surveys (62%) used random digit dialing (RDD) telephone techniques. Thirty-six percent were cell phone surveys and two percent were in-person interviews, mail or other. Landline surveys account for 78% of the cases, and cell phone surveys account for 17% of the cases. Cell phone surveys are typically included as an additional independent sample collected along with a landline sample. It improves estimation of particular demographic groups that tend to be under-represented in landline samples, such as younger and less affluent groups (Baker, et al., 2010; Biemer & Link, 2006; Blumberg & Luke, 2010; Lavrakas, et al., 2010; Link et al., 2007; Pew Research Center for the People and the Press, 2006). Forty-three percent of the surveys were mixed landline and cell phone samples. Given the different methods of selection for landline and cell phone surveys, each is treated as a separate independent sample.

All of the surveys provide data on those who identify as Jewish by religion (JBR), which is the largest proportion (over 80%) of the Jewish population (see Saxe, Tighe and Boxer, In press) and therefore serves as the baseline for generating total population estimates. Often the religious identification question is "What is your religion? Is it Protestant, Roman Catholic, Jewish, something else, or no religion?" Nearly all include Jewish as one of the discrete options. An increasing number of surveys provide no discrete options and ask simply, "What is your religion, if any?" and record all self-generated responses to the question.

The range in estimates of the Jewish population (self-identified by religion) across the sample of surveys is displayed in Figure 1. Each point represents the weighted estimate of the percent Jewish for that survey. Estimates ranged from below 1% to over 4% with most falling between 1.5% and 2%. Because these studies were not designed to estimate the incidence rate of rare groups, the survey weights may not have been optimal for the purpose of Jewish population estimation.[5] For example, many survey weights include adjustments for

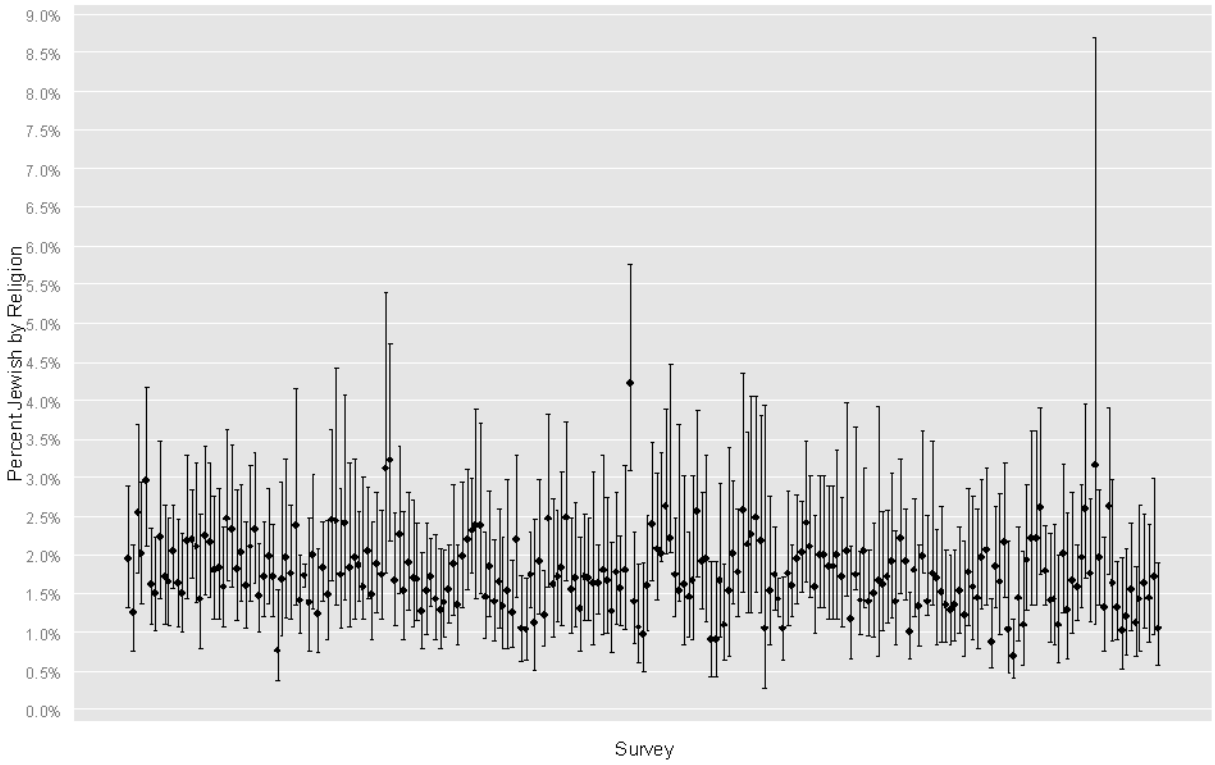


Figure 1. Estimated percent Jewish using existing survey weights, all surveys 2006 to 2012.

census regions of the Northeast, West, South, and Midwest, which could deflate estimates of Jews. The Jewish population, however, varies substantially within each region, particularly within certain metropolitan areas. Jews are also more likely to be older and college educated, though the latter also varies by age (see Tighe et al., 2010, 2011). Survey weights need to be optimized for estimation of these factors and have sufficient number of respondents to estimate these factors reliably in order to have confidence in a population estimation based on these data. This is not feasible for estimates derived from most single surveys analyzed on their own.

Cross-Survey Model

To overcome limitations associated with analysis of single surveys, respondent-level data from the individual studies are combined. Weighting factors associated with estimation of the Jewish population are estimated directly. These factors include geographic location and variation by age, education, and the interaction of age and education. Although one survey might have no Jewish respondents in certain age groups or in non-metropolitan areas, across all of the surveys we have a sufficient number of observations with which to estimate these factors. Data are combined using hierarchical Bayesian analysis methods to account for the clustering of respondents within surveys. This enables us both to estimate the population and account for the different sampling variances across the different sources of data (see Appendix E for model specification and parameter estimates).

Population Estimates

Consistent with SSRI's previous research, the overall 2012 estimate of the U.S. adult population who identify as Jewish by religion is 1.80% (CI: 1.75% - 1.85%), corresponding to 4.2 million U.S. adults (CI: 4,091,000 to 4,328,000; See Table 1). Distributions varied by age, education, race, and metropolitan status. For example, among older Americans, aged 65 years and older, 2.5% identify as Jewish by religion compared to 1.4% of 34 to 45-year-olds. A higher proportion of college graduates identify as Jewish (3.8%) compared to non-college graduates (1.0%).

Demographic Distribution

Figure 2 displays the distribution by age for Jewish adults (by religion) overall in comparison to U.S. population totals. Just over 12% of Jewish adults are aged 18 to 24 years, similar to the 12.8% among all U.S. adults. Among those between the ages of 25 and 55, however, there are fewer Jewish adults in comparison to the proportion observed among all U.S. adults. Nearly a quarter (24%) of all Jewish adults (by religion) are aged 65 years and older, compared to 18% within this age group

TABLE 1: 2006 TO 2012 POPULATION MODEL, ADULT JEWISH POPULATION BY RELIGION, ESTIMATES BASED TO CPS 2012

	U.S. Adults		Jewish Adults				
	Population	Pct	Percentage of U.S. Adults (CI)		Population	Lower Bound	Upper Bound
Total All Groups	**233,167,034**		**1.8**	**(1.8,1.9)**	**4,206,000**	**4,091,000**	**4,328,000**
Age							
18-24 years	29,919,014	12.8	1.7	(1.6,1.9)	517,000	468,000	564,000
25-34 years	40,957,750	17.6	1.5	(1.3,1.6)	600,000	550,000	650,000
35-44 years	39,682,053	17.0	1.4	(1.3,1.5)	570,000	532,000	610,000
45-54 years	43,680,336	18.7	1.7	(1.6,1.7)	722,000	683,000	762,000
55-64 years	37,675,421	16.2	2.1	(2.0,2.2)	787,000	747,000	828,000
65+ years	41,252,460	17.7	2.5	(2.3,2.6)	1,010,000	966,000	1,053,000
Education							
Non-College	167,390,130	71.8	1.0	(1.0,1.1)	1,700,000	1,624,000	1,783,000
College Grad	65,776,904	28.2	3.8	(3.7,3.9)	2,505,000	2,427,000	2,585,000
Race							
White, non-Hisp	155,417,364	66.7	2.4	(2.4,2.5)	3,748,000	3,650,000	3,856,000
Black, non-Hisp.	27,762,952	11.9	0.3	(0.2,0.3)	70,000	57,000	85,000
Hispanic	34,556,565	14.8	0.7	(0.6,0.8)	229,000	197,000	266,000
Other non-Hisp.	15,430,154	6.6	1.0	(0.9,1.2)	158,000	136,000	182,000
Metropolitan							
Non-Metro	36,696,976	15.7	0.3	(0.3,0.4)	126,000	113,000	142,000
Metro	196,470,058	84.3	2.1	(2.0,2.1)	4,080,000	3,965,000	4,201,000

Notes: a) Source: (U.S. Census Bureau, *Current Population Survey,2012 Annual Social and Economic (ASEC) Supplement*, March 2012).

FIGURE 2: AGE DISTRIBUTION OF U.S. JEWISH POPULATION: 2012.

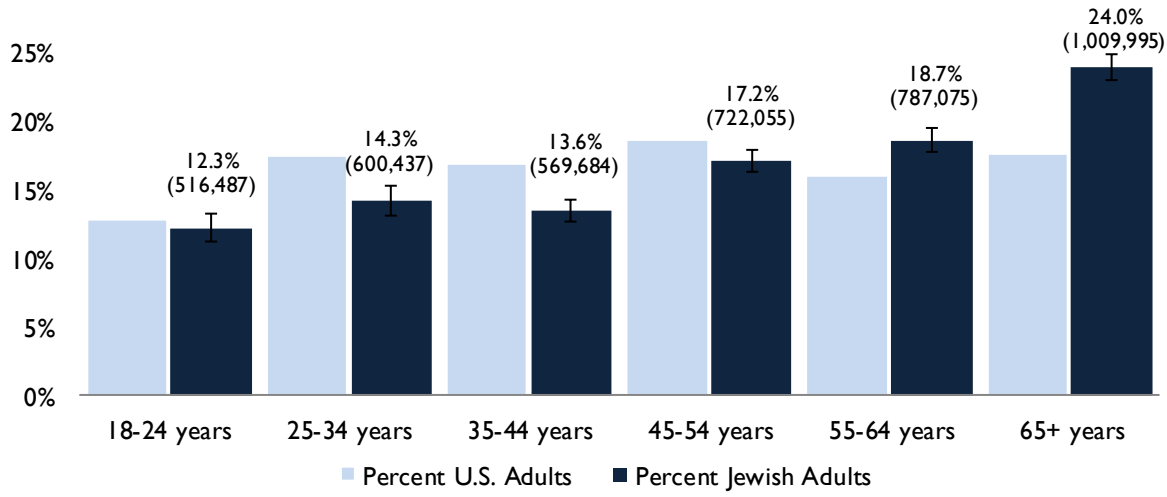
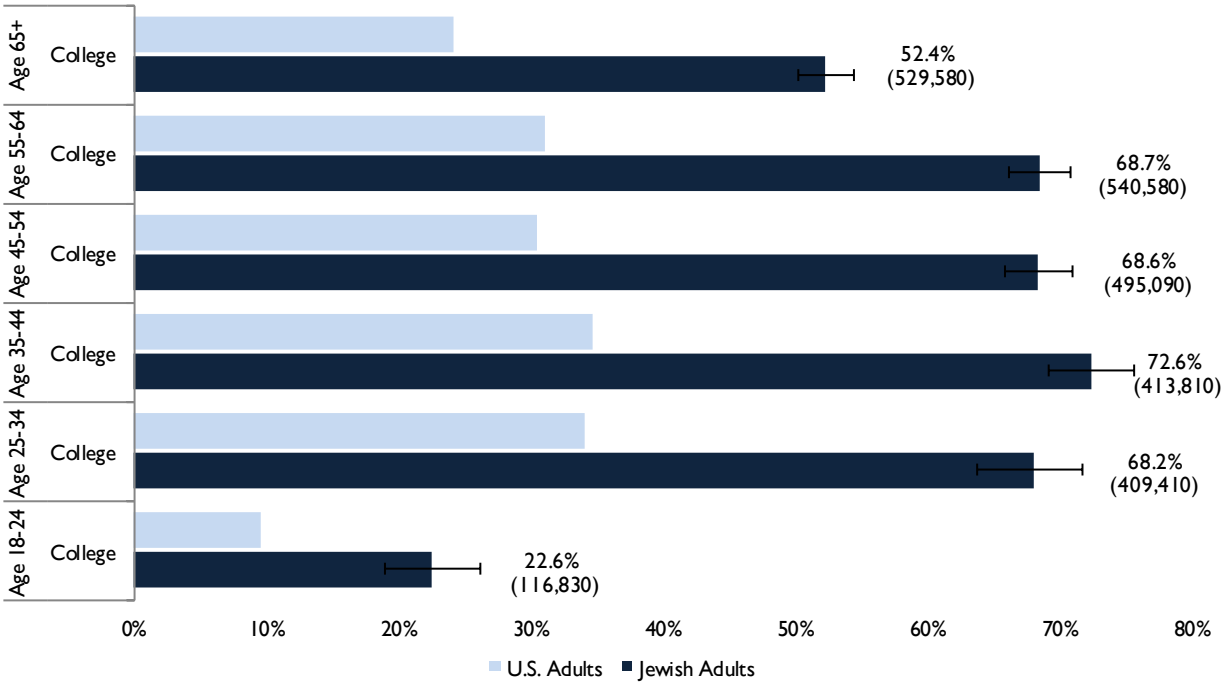


FIGURE 3: EDUCATIONAL ATTAINMENT FOR U.S. ADULTS AND JEWISH ADULTS.



among all U.S. adults. This is, in part, explained by longevity and the increased life expectancy among higher educated whites in the United States (Olshansky et al., 2012).

Jewish adults are also more likely to be college educated compared to other U.S. adults (see Figure 3). This is true across all age groups. Fifty-two percent of Jewish adults aged 65 and over are college graduates, compared to just 24% of U.S. adults.

Although Jews are for the most part, non-Hispanic white, just over 5% of Jewish adults identify as Hispanic, nearly 4% identify with some other non-White group and just under 2% identify as African American (see Figure 4).

Geographic Distribution

Figure 5 displays how the Jewish population (by religion) is distributed throughout the continental United States. Just over 20% of the population resides in New York State, 14% resides in California, followed by 12% in Florida; 8% in New Jersey; and 5% in Massachusetts and Pennsylvania. An interactive presentation of these data which includes demographic distributions of the Jewish population by state and local area is available online (http://ajpp.brandeis.edu/).

FIGURE 4: RACIAL COMPOSITION OF U.S. AND JEWISH ADULTS.

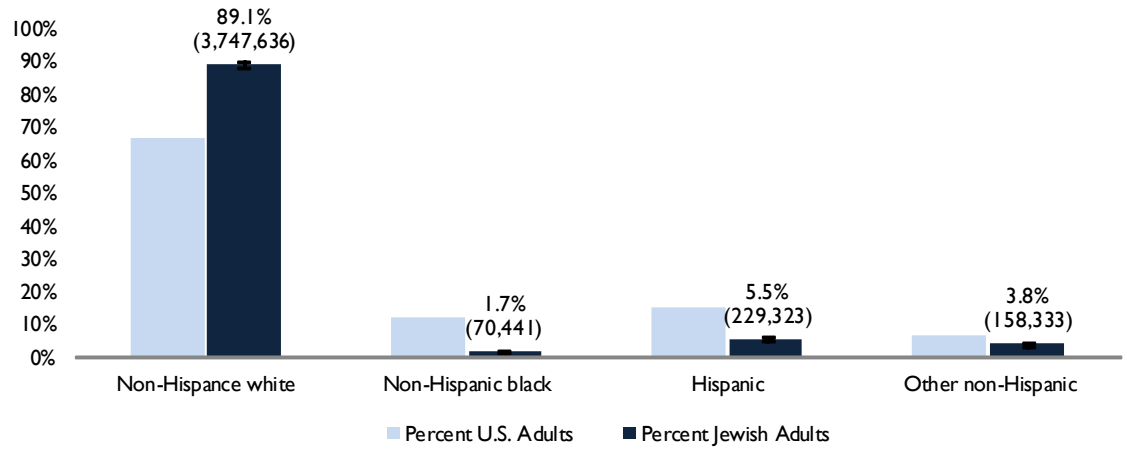
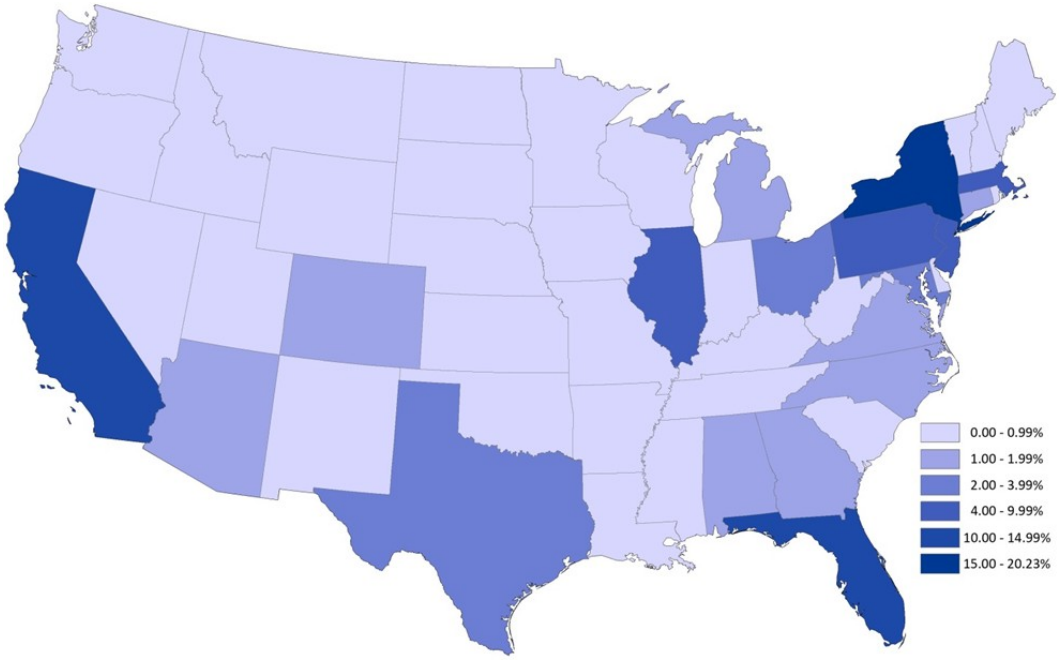


FIGURE 5. GEOGRAPHIC DISTRIBUTION OF JEWISH (JBR) ADULTS.



Steinhardt Social Research Institute

Nearly 80% of the U.S. Jewish population lives in 10 states. Table 2 displays the detailed estimates for these states in which the Jewish population (self-identified by religion) is between 2% and 20% of the total (see Appendix B for estimates for all states).

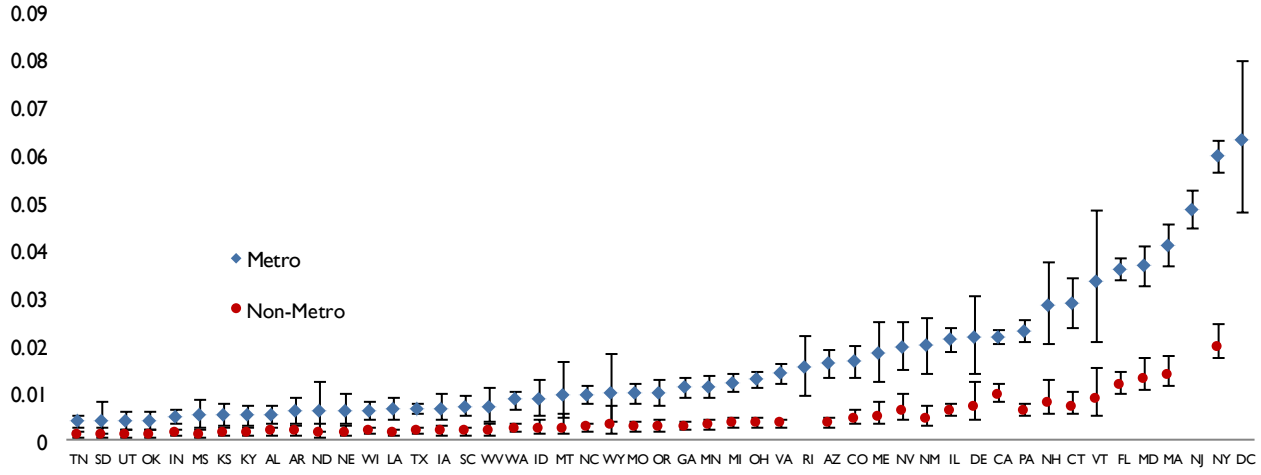
Not surprisingly, along with the concentration of Jews in a small number of states, the population is also concentrated primarily in metropolitan areas (97%), rather than in non-metropolitan areas. The distribution within metropolitan versus non-metropolitan areas, however, varies by state (see Figure 6). For example, in New York state 2% of adults outside of metropolitan areas identify as Jewish by religion, compared to 1.3% in states like Massachusetts and Maryland. In non-metropolitan areas of states like Pennsylvania and Illinois, less than one percent (0.6%) of adults are Jewish by religion (see Appendix C for detailed estimates).

TABLE 2: JEWISH POPULATION DISTRIBUTION BY STATES WITH THE LARGEST PROPORTION OF JEWISH POPULATION (SELF-IDENTIFIED BY RELIGION)

	U.S. Adults		Jewish Adults					
	Population	Pct	Percentage of U.S. Adults (CI)		Population	Lower Bound	Upper Bound	Percentage within US Jewish. Adults (CI)	
National Estimates	233,167,034		1.8	(1.8,1.9)	4,206,000	4,091,000	4,328,000		
New York	15,049,800	6.5	5.7	(5.3, 6.0)	850,800	803,900	897,600	20.2	(19.3, 21.2)
California	28,306,635	12.1	2.1	(2.0, 2.3)	604,900	564,500	645,800	14.4	(13.5, 15.2)
Florida	15,040,152	6.5	3.5	(3.3, 3.7)	523,900	489,600	562,800	12.5	(11.7, 13.3)
New Jersey	6,621,896	2.8	4.9	(4.5, 5.3)	321,200	294,900	349,500	7.6	(7.1, 8.2)
Massachusetts	5,100,843	2.2	4.0	(3.6, 4.5)	205,200	184,100	228,400	4.9	(4.4, 5.4)
Pennsylvania	10,023,029	4.3	2.0	(1.8, 2.2)	197,900	179,800	218,100	4.7	(4.3, 5.2)
Illinois	9,605,615	4.1	1.9	(1.7, 2.2)	185,500	164,900	207,800	4.4	(3.9, 4.9)
Maryland	4,446,450	1.9	3.6	(3.2, 4.0)	158,600	141,000	178,300	3.8	(3.4, 4.2)
Texas	18,605,982	8.0	0.6	(0.5, 0.7)	110,100	94,900	126,900	2.6	(2.3, 3.0)
Ohio	8,664,530	3.7	1.0	(0.9, 1.2)	89,100	76,900	103,400	2.1	(1.8, 2.5)

Notes: a) Source: (U.S. Census Bureau, *Current Population Survey,2012 Annual Social and Economic (ASEC) Supplement*, March 2012).

FIGURE 6. DISTRIBUTION OF JEWISH (JBR) ADULTS BY METROPOLITAN STATUS ACROSS STATES.



County-Level Estimates

The synthesis models for county-level estimates are based on 185 independent samples, which include a total of 235,000 respondents, and 4,841 Jewish respondents. For estimation purposes, counties were combined using Public Use Microdata Areas (PUMAs) used in the American Community Survey (ACS).[6]

County-level population models were similar to the national-level model. In addition to the clustering of respondents within surveys and states, the nesting of respondents within counties/county-groups was also included. Full model specification and parameter estimates are included in Appendix E. Estimates were post-stratified to the ACS 2011 for the six categories of age, two categories of education, four categories of race, the age x education interaction, as well as by state and county/ county-group.

The largest population centers, combining across counties, ordered by the size of the estimated JBR (Jewish by religion) population is displayed in Figure 7. The greatest percentage resides in the five boroughs of New York City (13%), with the next largest in Southern Florida (Miami, Palm Beach and Broward counties; 8.6%). Areas outside of New York City (Long Island & Westchester) account for 7% of the total population. And, Los Angeles County (including Venture and Orange counties), which encompasses one of the largest geographic areas, also accounts for just over 7% of the total population. The Boston area accounting for nearly 5% of the population, includes western suburbs and counties in western Massachusetts,[7] with the next largest areas Northern New Jersey, Chicago, Philadelphia, and Washington DC.

Variation within States

Within states there is variability in the geographic distribution of the Jewish population. In New York state, for example, the Jewish population is more highly concentrated in counties in the New York City Area (see Figure 8). In Brooklyn/Kings county, 11.2% of adults are JBR, accounting for 5% of the total U.S. JBR population. In Manhatten, 13.8% of all adults are JBR. The other counties with the highest concentration of the JBR population are Nassau (12.7% of the county, 3% of U.S. JBR), Queens (6.1% of the county, 2.5% of U.S. JBR) , Westchester (9.7% of the county, 1.8% of U.S. JBR) and Suffolk (5.7% of the county, 1.5% of U.S. JBR). The remainder of the state accounts for less than 5% of the total JBR population.

See Appendix D for full list of county-level estimates, also available online at: http://ajpp.brandeis.edu.

FIGURE 7. DISTRIBUTION OF THE JEWISH ADULT (JBR) POPULATION BY TOP POPULATION AREAS.[8]

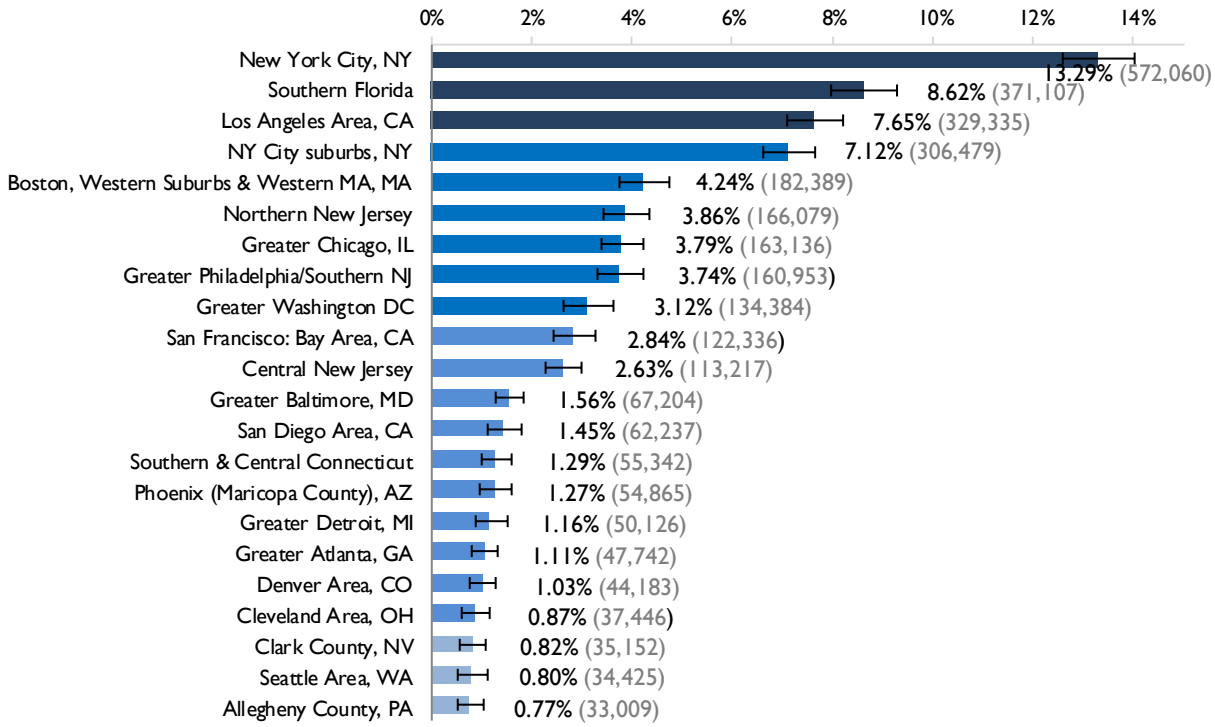
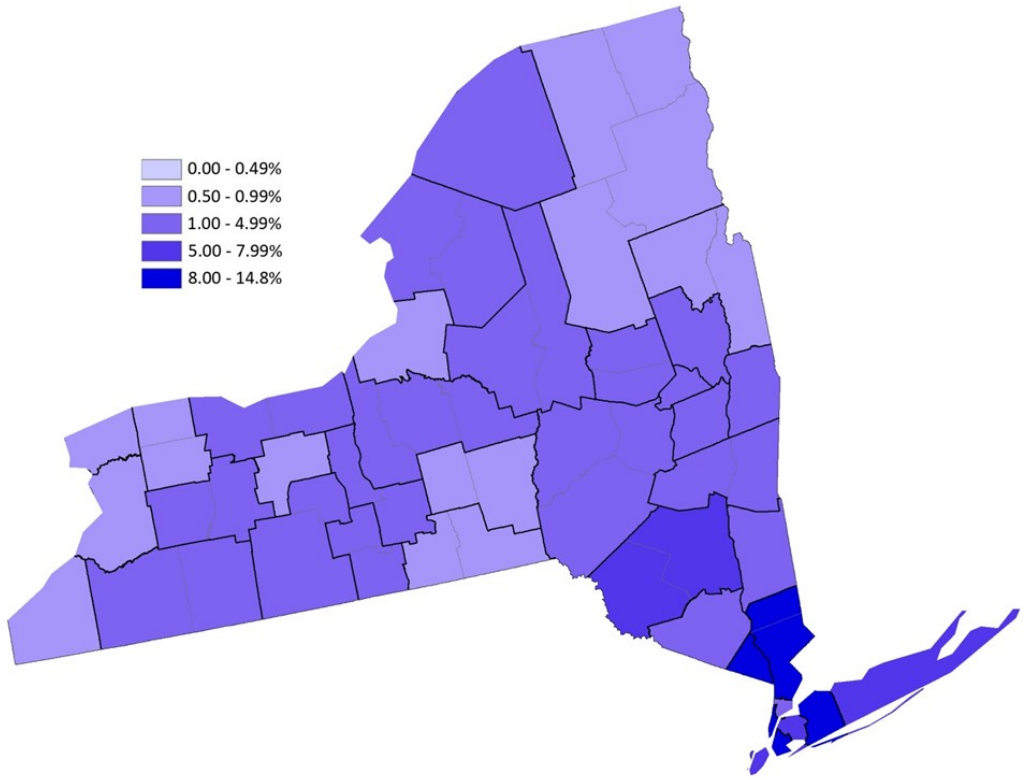


FIGURE 8. DISTRIBUTION OF THE JBR POPULATION WITHIN NEW YORK STATE.



Total Population Estimates

Including Children and Non-religiously Identified Jews

The data synthesis approach enables development of highly reliable estimates of the Jewish population who identify as Jewish in response to standard questions about religion. Two groups, however, are not represented in the cross-survey estimates based on the religious identification question:

- Jews who identify as such, but do not consider their religion to be Jewish.
- Children (those under 18 years of age)

In both cases, several alternative methods to estimate the size of these sub-populations can be applied. The methods require inferences from a variety of data sources.

Non-religiously Identified Jews

The majority of those who consider themselves Jewish in the United States identify as "Jewish by religion" (JBR) when asked by survey researchers. Some, however, do not. For the JBR population, the data synthesis approach can provide highly reliable estimates of the total population. For the "Jewish not by religion" (JNBR) population, national-level data to describe these individuals is available only in a few specific studies, such as the NJPS and AJIS.[9] Only a few general population surveys include assessment of Jewish ethnic or cultural identification and, while useful, it only provides partial data to generate an estimate of how many people in the United States identify as ethnic or secular Jews (i.e., JNBRs).

One such study is the American National Election Study (ANES) which includes an item that asks: "In addition to being American, what do you consider your main ethnic group or nationality group?" Only 10% of those who identified as Jewish by religion indicated Jewish in response to this open-ended question. Among those who did not identify as Jewish by religion, 0.3% indicated Jewish as the main ethnic group with which they identify. This corresponds to an increase in the estimated size of the Jewish population by 14%.[10]

Targeted surveys of the Jewish population are often inadequate for purposes of overall population estimation. However, to the extent that they contain representative samples of religiously and non-religiously identified Jews, they can provide useful information regarding the relative proportion of non-religiously identified Jews within the total Jewish population. For example, previous administrations of the NJPS (1990, 2001-2002) along with other targeted surveys such as the AJIS (2000, 2008) and SAJ (see Boxer et al., 2013) all include similar questions that enable one to estimate the proportion of the total Jewish population who identify as Jewish but not when asked about religion. Anyone who did not identify as Jewish in response to the initial religious identification question was asked follow-up questions about whether either of their parents were Jewish, whether they were raised Jewish, and whether they considered themselves Jewish (see Table 3).

Analysis of NJPS 2001 yielded an estimate of 15.8% of Jewish adults who identified as Jewish in response to the follow-up

TABLE 3: ESTIMATES OF THE TOTAL ADULT JEWISH POPULATION ACROSS SURVEYS THAT INCLUDE JEWS WHO DO NOT IDENTIFY AS JEWISH BY RELIGION

	NJPS 2001[a]	AJIS 2001[b]	AJIS 2008[b]	GSS 2008-2012	SAJ 2012
Jewish by religion (JBR)	3,066,300	2,930,000	2,800,000	3,919,824	4,206,000
Consider self Jewish (CSJ)	582,975			798,048	971,000
Raised Jewish	328,936				
No religion., J. parent(NRJP)	775,907	1,120,000	1,288,000		*307,000*
Total JBR+CSJ[d]	3,649,275	4,050,000	4,088,000	4,717,762	5,177,000
Total proportion of secular/other Jews[e]	.16	.27	.31	.17	.19

Notes: a) Secondary analysis conducted by SSRI. b) (Kosmin, 2009) Estimates for AJIS 2008 JBR is the mid-point estimate (2.7 -2.8 million). c) Based on 2008 and 2010 SSRI population estimates; CSJ adjusted based on results from SAJ 2010. d) Total for AJIS was calculated by adding the estimates of JBR and NRJP. e) This row indicates the degree to which the total population increases from the base JBR estimate with the inclusion of those who consider themselves Jewish, but not by religion.

questions after not identifying as Jewish by religion.[11] AJIS 2001 estimated 2.9 million Jewish by religion. Including a broader definition of others who could be considered to be Jewish by parentage, increases the population to 4 million; thus, 27% of the total Jewish population identifies as Jewish but not by religion.

More recent sources of data include AJIS 2008 (Kosmin, 2009), the SAJ 2010 & 2012, as well as the General Social Survey (Smith, Marsden & Hout, 2011). AJIS 2008 did not report a separate estimate for those who consider themselves Jewish but not by religion. Instead, they identify Jews of no religion as those who have at least one Jewish parent. Using this broader definition, the total number of Jewish adults in the United States increases by a factor of nearly 1.5. Beginning in 2008, a series of questions was added to the General Social Survey to include assessment of non-religious Jews. All who indicated "None" or did not answer questions about their current religious identification were asked "Do you consider yourself Jewish for any reason?" In addition, their parents' religious identification was assessed. These questions were also added to the Knowledge Network Panel (Knowledge Networks, December 17, 2010), which consists of a probability sample of approximately 50,000 adults in the United States, of whom 1,087 identify as Jewish by religion and an additional 274 indicated that they consider themselves to be Jewish even though they do not identify by religion as Jewish. This would correspond to an increase by a factor of 1.25, or 20% of all Jewish adults. Including only those in the panel who responded to the SAJ 2010, the proportion is 18% of adults in the sample.

Included in Table 3 is each survey's estimate of the Jewish population who identify by religion as Jewish (JBR) along with estimates of those who did not identify as Jewish by religion but who indicated that they were Jewish by other criteria. As described in Saxe and Tighe (2013), the SAJ 2012 indicated that 76.7% of Jewish adults self-declared as Jewish by religion. An additional 17.7% self-declared as Jewish but not by religion, and 5.6% did not self-declare as Jewish but had at least one Jewish parent. With the current base JBR population estimated as 4.2 million through data synthesis, the total adult Jewish

population including these additional subpopulations would be 5.5 million.[12] For the core Jewish population defined as those who self-declared either by religion or considered themselves to be Jewish, the total population is estimated to be 5.2 million, of which 19% consider themselves Jewish, but not by religion. This estimate is similar to the GSS 2008-2012, though the latter is based to a much smaller sample.

As additional data from targeted studies become available, even more precise estimates of the JNBR population can be developed. Important to the analysis will be assessing variability across communities in the proportion of ethnic/secular Jews and assessing trends. At present, however, the estimate of 19% JNBRs derived from our SAJ studies, will be used. Because it is based both on parentage and self-identification, it is likely an underestimate of the Jews who would be accepted by the community as such. It implies, as well, that our estimate of the total Jewish population is conservative, albeit within the bounds of those used in socio-demographic research of U.S. Jewish populations.

Children

A number of methods for estimating the size of the child population are described in previous work (Saxe & Tighe, 2013; Saxe, Tighe & Boxer, 2013; Tighe, et al., 2011). These include extrapolating from the cross-survey estimate of the adult population and the use of targeted surveys. From the data synthesis analysis there is an estimated number of 517,000 Jewish adults aged 18-24 (see Table 1). Taking into consideration 19% for those who are not represented in the cross-survey estimate (i.e., do not identify by religion but still consider themselves to be Jewish), this would be an additional 119,000 adults for a total of 636,000 adults in this age group, or 90,900 within each age cohort. Assuming, on average, an equivalent distribution across age groups (some ages might be higher, some lower), yields an estimate of 1.6 million children, or 1.3 million if limited only to the portion of the 18 to 24-year-old adult population who identify by religion as Jewish.

Our estimate of the number of children, extrapolating from the distribution of 18 to 24-year-olds who self-identify as Jewish by religion, is similar to what would one get if one were to apply the estimate of 1.5 total fertility proposed by DellaPergola (2005, 2013). Total fertility, in DellaPergola's analysis, is an estimate of the total number of children birthed to women between the ages of 18 to 44. The estimated number of JBR adults in this age group is 1,687,000, about half of whom are women. Assuming an average of 1.5 children per woman would yield an estimated 1.3 million JBR children. In addition, if JNBR adults are added, the estimate of children would be 1.56 million, nearly identical to the SSRI estimate.

As an alternative, a recent targeted survey, SAJ 2012, found that among all Jewish adults aged 18 or over, the average number of children was 0.41 (95% CI: 0.32 - 0.50) (Saxe, Tighe & Boxer, In press). If the total adult population, including those non-religiously identified, is estimated to be 5.2 million, with an average of .4 children per adult, the estimated number of Jewish children would be 2.1 million.

The range of our estimate of the number of children is, thus, between 1.3 and 2.1 million. The upper range of this estimate is perhaps the number of children who could claim Jewish identity, but some of these children are neither being raised as Jews nor

are considered as such by their parents. Further analysis of SAJ 2012 indicated wide variation in whether children of Jewish adults were being raised Jewish, from 60% of children in single-child households, and 56% of children for those with two children up to 76% of those with three or more children. Accounting for this variability, the estimated number of children was 1.3 million children (Saxe & Tighe, 2013), similar to the estimate of the size of the child population extrapolating from the JBR estimate of 18 to 24-year-olds and similar to the estimates based on total fertility.

For purposes of estimating the Jewish population, we will use the 1.6 million estimate based on the extrapolation of population estimates for the 18 to 24 year age group (1.3 million JBR and 307,000 JNBR). This estimate is based on the synthesis data and closely matches other estimates.

Total Population

Table 4 provides the total Jewish population and takes into account the cross-survey estimate of 4.2 million Jewish adults self-identified by religion, along with an estimate of the 971,000 Jewish adults who do not self-identify by religion, and an estimate of 1.6 million children.

Table 4: TOTAL JEWISH POPULATION ESTIMATE: 2012

Adults	
Jewish by religion	4,206,000
Jewish not by religion	971,000
Total Jewish adults	**5,177,000**
Children	
Jewish by religion	1,330,000
Jewish not by religion	307,000
Total Jewish population	**6,814,000**

Discussion

The present SSRI 2012 data synthesis of a large number of independent samples converges on an estimate of 4.2 million Jewish adults in the United States who consider Judaism their religion. In addition, we estimate that nearly 1 million adults consider themselves Jewish by criteria other than religion and there are 1.6 million Jewish children. The total U.S. Jewish population is, thus, approximately 6.8 million individuals.

Establishing a reliable population profile is a critical and necessary step for studies of the Jewish population in the U.S. The vast amount of existing data on religion in the United States enables us to create reliable estimates for the largest portion of the Jewish population -- adults who identify as Jewish by religion. The present approach is built on the premise that accumulated evidence, analyzed by taking account of heterogeneity across studies, will improve the accuracy of the population estimate. With this framework, additional sources of data can continue to be added to improve estimation, especially of local areas and to examine change over time.

Assessing a group such as American Jewry, who are a small percentage of the total population, is inherently challenging. It is particularly so if, as has been done in the past, one relied on a single survey. Even the U.S. Census is known to undercount: "Demographers everywhere assume that a census is an approximation of the true count, perhaps an overestimation but more likely an underestimation" (Prewitt, 2000, p. 6). Thus, the Census adopts a capture-recapture approach to population estimation where post-enumeration surveys are used to model the degree of undercount and population estimates are adjusted accordingly. Given the limitations associated with relying on a single survey as the basis for population estimation, others have sought to improve estimation by combining data from multiple prevalence surveys conducted on the same target population (cf. Giorgi, Sesay, Terlouw & Diggle, 2013), similar to the data synthesis approach employed here for Jewish population estimation.

A further benefit of this approach, demonstrated by the preliminary county-level population estimates, is that for areas of the country that have a large Jewish population, one can develop local estimates. Since our overall estimates make clear that Jews are heavily concentrated in a relatively small number of areas (principally metropolitan areas), local estimates can be developed for most of the Jewish population. Currently, local communities spend substantial resources to estimate the proportion of Jews in their community.[13]

The relative cost is greatest in communities where Jews are a small fraction of the total population. Not only are these studies expensive, but prior to the present work, it was difficult to validate the findings. A particular problem has been to compare studies over time as, invariably, methods and willingness of respondents to participate change over time.

Our estimate of the Jewish population by religion is the largest component of the total population estimate, but the two other components—Jews who identity by other

criteria and Jewish children—are nonetheless important. Although estimates of these sub-populations have to be developed using indirect methods, they too are based on multiple sources of data. In the case of Jews who identify other than by religion, we have examined multiple studies—including the results of the present synthesis—to generate estimates of this sub-population. Likewise, with the estimate of Jewish children, multiple data sources and methods have been applied. The figure used in our projection of the number of children is likely conservative.

Jewish identity is complex and fluid. Analysis and interpretation of data must be sensitive to these changes. Individuals express their Judaism in a variety ways and, for example, identifying as a Jew by religion does not mean that you practice Judaism. Similarly, some who are secular may engage in a variety of Jewish religious practices. It is also the case, particularly for children, but also for adults, that their Jewish identity may or may not be enacted. A Jewish child may not be provided Jewish education and an adult, even if educated, may choose not to identify or participate in the community. In terms of adults, the issue is that at different points in their lives they may or may not express their Jewish identity. As Horowitz (2000) has noted, "Jewishness unfolds and gets shaped by the different experiences and encounters in a person's life. Each new context or life stage brings with it new possibilities. A person's Jewishness can wax, wane, and change in emphasis. It is responsive to social relationships, historical experiences and personal events." (p. viii).

Some have suggested that our approach overestimates the size of the population and is not in line with demographic projections that were derived from the original 1970 survey (see DellaPergola 2005, 2013; DellaPergola et al. 1993). Changes over time in a group that is as complex as the Jewish community are affected by traditional demographic factors (e.g., births, deaths, migration), but also by social conditions. In terms of using demographic models to predict the Jewish population, the same problem of not having reliable data against which projections can be validated, is evident. Thus, for example, estimates of the number of recent Jewish immigrants from the Former Soviet Union vary widely (Sarna, 2013). Sarna's estimate is that there are now around 750,000 such individuals, including their children. How you count these individuals has a significant impact on estimates.

With respect to social conditions, it has long been recognized that the strength of local Jewish communities and institutions can influence the likelihood that someone will identify as Jewish (Lazerwitz, 1978). Furthermore, the acceptability of being Jewish within the broader culture can influence the likelihood of people self-identifying as Jewish. That is, willingness to identify as Jewish when asked in a survey may be increasing simply due to the fewer barriers to admitting to be Jewish. Although implicit stereotypes and discriminatory interpersonal behavior remain (Rudman & Ashmore, 2007), increased tolerance within the culture of the United States is demonstrated by changes in quota systems, near universal agreement in willingness to vote for a Jewish presidential candidate, and increased willingness to intermarry (Fischer & Hout, 2006).

One particular change since the 1970 survey that could contribute to an increase in Jewish identification was the Reform Movement's Resolution on Patrilineal Descent (1983).

This resolution included the declaration by the movement's Central Conference of American Rabbis that as long as at least one parent is Jewish and there have been formal acts of Jewish identification such as acquisition of a Hebrew name, Torah study, bar/bat mitzvah, and Kabbalat Torah (Confirmation) one is considered to have a "positive and exclusive Jewish identity." This resolution, combined with any number of factors similar to those identified by Lazerwitz over 30 years ago, would affect current population estimates and in ways that are incomparable to those based solely on traditional demographic dynamics.

The key dynamic underlying the Reform Movement's decision is intermarriage. If, as suggested by NJPS (Kosmin et al., 1991) approximately half of the Jewish population marries non-Jews, the question for population estimation is how many of the children of these families will claim Jewish identity. Again, the problem of not having a reliable external referent makes projections problematic. And, perhaps even more so than migration, the intermarriage situation is dynamic and dependent on the availability and quality of Jewish education (see Chertok et al., 2008). It is now evident, for example, that a particular educational intervention, Taglit-Birthright Israel, is altering marriage and family patterns (see Saxe & Chazan, 2008; Saxe et al., 2012). Taglit, which brings young adult Jews to Israel for educational visits, changes the trajectory of participants' involvement with Judaism and Jewish life and leads them to identify as Jews. Any survey is a snapshot of a dynamic process.

Along with improving our ability to validate the results of other studies, it is hoped that the present work will stimulate new efforts to understand the attitudes and behavior of American Jews. Furthermore, these methods can be extended to understand other "rare" populations. Understanding who these individuals are and how they are involved with their religious-ethnic identity is both a matter of general interest and specific interest to scholars and policy makers in the Jewish community.
What is clear is that a new narrative of contemporary American Jewish life is needed (Saxe et al., forthcoming): one that acknowledges the size and structure of the population and attempts to understand how Jewish life is evolving in the 21st century.

Notes

[1]A Jewish Federation is an organization that has centralized or 'confederated' all of the major service agencies, schools, and community centers of the local community (save for religious organizations) to provide a central address for the Jewish community (Elazar, 2002; see also Feldstein, 1998).

[2]Because respondents are required to answer the census, religion questions cannot be asked (cf. Good, 1959). That prohibition does not apply to other government surveys which are voluntary, such as the National Survey of Family Growth.

[3]Like any single survey, estimates based on analysis across surveys comes with the equivalent of a "margin of error," which represents the degree of certainty in the estimates given the data. In this case, the degree of certainty is represented in terms of the posterior probability, or the range of credible values observed in the data. For all population estimates, we provide the lower and upper ends of the range in which 95% of all estimates fall. For example, across all surveys the estimated proportion of U.S. adults who identify as Jewish is 1.8%, with a 95% probability that the estimate lies between 1.75% and 1.86%.

[4]For a description of search strategies used to identify surveys and inclusion criteria, (see Tighe, et al., 2010, 2011). See Appendix A for full list of surveys. Alaska and Hawaii are not included in the present analyses. All Appendices can be found at http://www.brandeis.edu/ssri/noteworthy/amjewishpop.html

[5]Criteria for the design of survey weights include factors that affect the probability of selection and the representativeness of the sample. A key issue in decisions about what factors related to the representativeness of the sample should be included in weighting is whether the factor is actually related to outcomes of interest. When the goal is to estimate the size of the Jewish population in the United States, the outcome of interest is whether an individual identifies as Jewish. Most general population survey weights are not designed with this as the primary outcome measure of interest, and, thus, the factors involved in weighting may or may not be relevant for Jewish population estimation.

[6]The American Community Survey is designed to provide reliable population estimates down to the county level. The Current Population Survey, in contrast, is designed for national and state-level estimation. PUMAs defined by each state sometimes combine different parts of counties based on places (towns, cities) within each county. County, however, was the lowest level of geography available across surveys. Thus, in some cases, PUMA areas were combined to be able to estimate uniquely defined county-to-PUMA areas. See Appendix D for full list of counties and PUMA combinations.

[7]The estimate for Boston includes the two main counties in the Boston area—Middlesex, Suffolk—as well as nearly all other counties in Massachusetts, with the exception of Essex county and the Cape and Islands. This is the result of the overlapping of PUMA geographic areas in the census, which prevents estimation of all of these counties singly in the national PUMA-level analysis. Separate models that estimate these counties singly are forthcoming.

[8]New York City, NY consists of the Five Boroughs. Greater Miami consists of Miami-Dade, Palm Beach and Broward counties. NY City suburbs includes Nassau, Suffolk,Westchester, Putnam, and Rockland counties. Greater Chicago includes Lake and Cook counties (IL) and Lake county (IN). Greater Philadelphia/Southern N.J. consists of Burlington and Camden Counties (NJ) and Bucks, Montgomery, Philadelphia, Delaware, and Chester Counties (PA). Northern New Jersey consists of Bergen, Passaic, Hudson, Essex, Morris, Sussex, Union, and Somerset counties. Greater Washington DC includes the District Of Columbia, Montgomery and Prince Georges county (MD), Arlington, Alexandria City, Fairfax City, and Fairfax Counties (VA). San Francisco Bay Area consists of Sonoma, Marin, Contra Costa, San Francisco, San Mateo, Alameda, and Santa Clara counties. Central New Jersey consists of Middlesex, Mommouth, Ocean, and Mercer counties. Greater Baltimore consists of Baltimore and Howard counties as well as Baltimore City. San Diego Area consists of San Diego, Imperial, and Riverside counties. Southern and Central Connecticut consists of Fairfield, Hartford, New Haven, and Middlesex counties. Greater Atlanta includes Pickens, Dawson, Forsyth, Fulton, Dekalb, Cobb, Clayton, Gwinnett, Henry, and Cherokee counties. Denver Area consists of Adams, Arapahoe, Boulder, Clear Creek, Denver, Douglas, Gilpin, Jefferson, and Broomfield Counties. Cleveland Area consists of Cuyahoga, Summit, Lorain, Geauga and Lake counties (OH). Seattle Area consists of King, Kitsap, Snohomish, and Pierce counties.

[9]There is also a forthcoming study conducted by the Pew Research Center, which was not available for analysis at the time of this report.

[10]Secondary analysis conducted by SSRI of the ANES for the years 2000 and 2004 where this question was assessed yielded an overall estimate of 2.2% of U.S. adults identified as Jewish by religion. The additional .3% of the sample identifying Jewish as their main ethnic group identification would correspond to an increase to 2.5% of U.S. adults.

[11] There are multiple ways to calculate the not-by-religion respondents to NJPS. See Sasson, Kadushin and Saxe (2010).

[12]This is a conservative estimate. Because the survey included the follow-up questions only for those who reported “None” in response to current religious identification, it excludes those of Jewish background who currently identify with another religion.

[13]The cost of the NY study has been estimated as c. $1.8M (Fishkoff, 2011).

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