# METHODS:

# DATA COLLECTION AND POPULATION ESTIMATES

The Detroit Area Jewish Population Study
Interim Report #6

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## PREFACE

This is one of a series of reports on the Jewish population of the Detroit area drawn from the findings of the Detroit Area Jewish Population Study. The analysis is base on data collected in the geographic core of the Jewish community, which includes 75,000 Jews living in 12 Oakland County suburbs. The total Jewish population within the tri-county area is an estimated 96,000. This report was prepared by Ukeles Associates Inc.

The Study, commissioned by the Jewish Welfare Federation of Detroit, was co-directed by Dr. Steven M. Cohen, Professor of Sociology at Queens College and Dr. Jacob B. Ukeles, President of Ukeles Associates, Inc. and Adjunct Professor of Public Affairs at Columbia University. The random sample survey of 1,100 interviews was conducted by the Market Opinion Research Corporation in late 1989.

The Demographic Study Committee of the Detroit Jewish Welfare Federation is chaired by Stuart E. Hertzberg. Lawrence M. Ziffer, Director of Planning and Agency Relations, and Patricia C. Becker, Technical Consultant, are the Federation professional staff.

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## A Policy-Relevant Study

In the last two decades, dozens of Jewish communities in North America have undertaken local Jewish population studies. They all provide estimates of the Jewish population size as well as information on socio-demographic and Jewish identity characteristics. But, unfortunately, not all these studies, and not even all the most technically proficient among them, have been extensively utilized to inform and ultimately to influence the policies and programs of their sponsors, the local organized Jewish communities.

In designing and conducting the Detroit Jewish Population Study, we sought to go beyond scientific objectives alone, as important as they may be. Our primary aim has been to address the policy concerns of the leaders of Detroit's Jewish communal institutions. In our view, the success of the study should be measured by the extent to which lay and professional decision-makers use the findings, reports, and on-line data set to inform their decisions and thereby to make better Jewish communal policy and conduct better, more effective programs.

The theme of policy-relevance has guided the entire research process from start to finish. We began by seeking to identify the major decisions confronting the Detroit Jewish community over the next few years. We designed and conducted our key community leader interviews, our focus groups, the survey questionnaire, and the quantitative analysis so as to inform communal policy-making rather than merely to answer intriguing social scientific questions. In so doing, we certainly believe we have made a contribution to the social scientific understanding of contemporary American Jewry. But this contribution is the by-product of a research endeavor whose principal audience is the leaders of the organized Jewish community of metropolitan Detroit.

In the course of this study, we do not attempt to make explicit policy recommendations. We do hope to provide the information and analysis needed to describe the nature and severity of challenges facing the Detroit Jewish community, to elucidate policy alternatives, to illuminate the risks and opportunities associated with those alternatives, and, ultimately, to make policy formulation in the Detroit Jewish community a more intelligent process.

If this approach has been successful, then the Detroit Jewish Population Study and all its products will be both more useful and more used than the typical comparable study conducted elsewhere. We earnestly hope that because of this study, policy-makers will make decisions with better information and hence more confidence, and that professionals will design and implement better programs than they would have been able to in the absence of this study.

## The First Step: Key Leader Interviews

Following preliminary discussions with Federation staff and the Demographic Study Committee (the group of lay leaders under the chairmanship of Stuart Hertzberg), we (the principal investigators) conducted about twenty in-depth personal interviews with lay and professional leaders of the Detroit Jewish community. In each case, we asked three opening questions:

1) What do you think we (as outsiders) ought to know by way of background about the Detroit Jewish community?

2) What are the major decisions the community will need to make in the next 3-5 years?

3) What would you personally most like to learn from the Detroit Area Jewish Population Study?

The leaders were drawn from several sectors including the Federation, synagogues, the Jewish Community Center, social service agencies, and academia. They included current and past presidents, executive directors, rabbis, educators, and major philanthropic contributors.

Although all interviews started with the same initial questions, each tended to focus in a specific area, reflecting the interest and expertise of the particular interviewee. Although we heard common elements in many interviews, we were surprised at the extent to which each interview provided new insights and new information.

Upon the conclusion of this process, we were able to synthesize the principal policy concerns and interests of Detroit Jewry's lay and professional leadership. These can be succinctly described as follows:

1) BASIC BACKGROUND: Leaders asked for some very elementary and fundamental information on Detroit Jews. How many Jews live in the area and where? What are the profiles of their family, socio-economic, demographic, and Jewish identity characteristics?

2) COMPARISONS: Leaders were curious as to how Detroit compares with other Jewish communities, especially those of similar population size and those in the Midwest.

3) JEWISHNESS: Almost all were anxious about the current state and future health of Jewish identity and affiliation. How high (or low) are current levels of ritual observance and communal affiliation? What are the rates, determinants, and consequences of intermarriage? From a policy perspective, how can synagogues, schools, and other Jewish institutions reach a wider market of members and participants?

4) SOCIAL SERVICES: Many of those we interviewed expressed a deep concern with needy and vulnerable Jews and with the services they require. How can the Jewish community's social services (those that deal with such issues as child care, camping, vocational guidance, family counseling, geriatric care) do a better job of serving their current and potential clients? What are the current and future needs of Detroit Jews in these and related areas, and what are the policy and programmatic implications for the relevant agencies?

5) RESIDENTIAL STABILITY: Many leaders were uneasy over the prospects for the continuity and stability of Jewish populations in Southfield and Oak Park. Given the history of rapid migration and the impression of considerable out-migration today, how many Jews are indeed moving out of the two "inner suburbs" and why? If the Jewish population of these areas does in fact experience decline, how should the organized Jewish community respond to the prospect of Jewish population shrinkage in Southfield and Oak Park? Are current communal expenditures to enhance residential stability adequate to the task at hand, or are they in practical terms a well-intentioned but misguided waste of precious resources?

6) CAMPAIGN: The leaders generally and Campaign leaders specifically were eager to find ways to enhance the Campaign. They wanted to know why more Detroit area Jews fail to give more generously to the Campaign. Is Campaign giving adversely affected by competition from other charities, both Jewish and non-sectarian? How can the Campaign develop different approaches to address different population groups (or "market segments") so as to inspire high levels of giving and contributions by more donors?

7) LEADERSHIP: Most leaders saw Detroit's leadership network as unusually in-bred. Some found this characteristic troubling. They wanted to know whether the leadership community is in fact too cohesive. Is it so closely knit as to discourage potential leaders from emerging? How can the leadership pool be broadened?

In consultation with Federation staff and the Demographic Study Committee, we decided to address all but the last issue listed above. A study of leadership networks and recruitment patterns, though potentially of great usefulness, was well beyond the capacity of the survey methodology we would employ.

## Focus Groups

To enrich our understanding of the issues raised in the key leader interviews, we proceeded to conduct three focus groups with rank-and-file Detroit area Jews. Focus groups are simply group interviews in which the moderator uses a structured discussion guide consisting of open-ended questions. These questions call for discursive answers rather than forced choices among pre-determined responses. By contrast, close-ended questions, which presented a few defined choices, comprised the greater part of the random sample telephone survey.

We had three purposes in mind for the focus groups. First, we wanted to hear what members of the Jewish public thought about the critical issues identified by the key leader interviews. Second, we wanted to learn of the concepts and language used by the Jewish public in talking about these issues. And, third, we wanted to use the very phrases and vocabulary voiced in the focus groups as the basis for questions in our survey instrument.

Each of the three focus groups concentrated on a different topic: Jewish identity; residential mobility; and Campaign giving. The groups consisted of eight to twelve individuals. The participants were recruited by the researchers from lists prepared by Federation staff. The discussions took place at homes of Campaign activists in Huntington Woods, Southfield, and West Bloomfield. We selected these locations, with some hesitation, primarily for the sake of convenience. The free-wheeling nature of the discussions leads us to believe that the venue of the groups did not substantially influence the findings; of course, we can never be totally certain of this inference.

We believe that each group achieved the research goals we had set. Each contributed to our understanding of the specific issue under discussion and each influenced the phrasing of questions that were eventually included in the survey instrument.

Most members of the group on Jewish identity attested to a strong personal commitment to Jewish involvement even as they voiced diverse complaints about local Jewish institutions. They presented great diversity in their approaches to Jewish life. Most seemed open to more intensive Jewish experiences, although a few were skeptical of the sorts of involvement that would, in their view, promote Jewish insularity or an insular insensitivity to the needs of others.

Participants in the group on residential mobility expressed a keen attachment to their neighborhoods in Oak Park and Southfield and resentment at what they perceived as Federation leaders' lack of appreciation for the value of their Jewish residential communities. However, many feared that Jews were

leaving their areas in great number, and they might be compelled to leave as well. The history of rapid Jewish population movement out of Detroit in the late 1960s, the increase in minority group neighbors, and the perceived decline in the quality of local public schools were among the more prominent reasons cited for anticipating a continued exodus of Jews from the inner suburbs.

The group on the Campaign consisted of wealthier individuals whom Federation staff judged as capable of making more generous gifts to the Campaign than had been their custom. As so-called "under-givers", this group was ideally structured to provide insight into obstacles to Campaign giving. In other words, they were highly likely to clearly articulate complaints about the Campaign. Their chief objections revolved around the following issues: high-pressure Campaign tactics; alienation from Campaign leadership; a lack of opportunity to experience the positive impact of even very sizable gifts to the Campaign. All felt that they were expected by their peers to make Campaign contributions, but not all felt good about this social obligation.

The results from the focus groups helped us to shape the survey instrument to interpret of the findings from the population survey.

## Constructing the Survey Instrument

The survey questionnaire drew upon several sources for question topics and for their specific wording. Many of the questions on basic socio-demographic and Jewish identity characteristics replicated or slightly revised items found in the model instrument prepared by the Council of Jewish Federations (CJF) National Technical Advisory Committee for use in the 1990 National Jewish Population Study. Wherever possible, we maintained the question wording so as to maximize the comparability of the Detroit data with those to be collected less than a year later around the country. In addition to the CJF questionnaire, we drew upon surveys recently conducted in other Jewish communities.

The key leader and focus group interviews supplied several lines of questions. In particular, the survey questions on residential mobility and on images of the Campaign were heavily influenced by these earlier interviews.

In addition, we developed new questions to explore research hypotheses we had originated and to address areas that previous studies had, in our view, failed adequately to comprehend. In particular, the social service needs and utilization questions in this study are rather different from those found in other Jewish population studies.

As might be expected, the survey instrument went through numerous revisions. Our own files suggest at least 15 versions. We had extensive discussions with Federation and agency staff and with the Demographic Study Committee members, all of whom made numerous editorial and substantive suggestions.

As might be expected, the proposals for questions far exceeded the available interview time budget. To pare the questionnaire, we assigned an approximate time value to each question based both upon the estimated time the question and answer would demand, and the fraction of the population that would be asked the question. Some questions might be asked of all respondents, some might be asked of only those who met some requirement such as having children home, and some might be asked several times about each member of the household. We then presented the Committee with an overly long draft questionnaire as well as the estimated time allotments for each question. With the total time budget before the committee members, we asked them for their guidance on which questions to drop.

Once we had agreed on the questions to include in the final instrument, we submitted the questionnaire to Market Opinion Research (MOR) of Detroit for formatting and suggested revisions. MOR then proceeded to draw the sample and field the questionnaire.

## Sampling

The entire survey sample consists of three segments: Random Digit Dialing (RDD); Federation List; and "high givers." In all, Market Opinion Research completed 1096 interviews, divided as follows: 462 RDD interviews; 534 from the Federation list; and 100 "high givers".

The principal advantage of the RDD sample segment is that it is an unbiased sample of the Detroit Jewish population. However, RDD interviews are expensive. Great costs are associated with locating eligible (i.e., Jewish) households through randomly dialing residential telephone numbers. Most Detroit area households are non-Jewish and the RDD method results in hundreds of calls to ineligible households.

The principal advantage of the Federation List sample segment lies in its efficiency. Presumably, all the phone numbers on the Federation list belong to Jewish households.

The high giver segment was included so as to assure the presence of a sufficiently large number of Campaign donors for the analysis of philanthropic giving. Since the Campaign is so dependent upon a small number of larger contributors, a sample consisting of the RDD and Federation List segments alone would yield only a small number of Campaign contributors of $1,000 or more (less than 100 out of 1,000).

The RDD Sample: We restricted the RDD calls to 45 telephone exchanges in the main area of Jewish settlement in metropolitan Detroit. (A telephone exchange refers to the first three digits of the seven-digit telephone number.) We selected these 45 exchanges (see Appendix A for the complete list) on the basis of the distribution of households on the Federation Master List (see below). In other words, we used the distribution of Campaign donors and prospects by exchange to identify the approximate location of the bulk of the Jewish population.

Each exchange is divided into 100 "hundred-number" blocks of potential numbers, defined by the first two numbers of the last four of any working household number. The telephone company assigns hundred-number blocks non-randomly. Certain blocks contain no working numbers. Those hundred-number blocks within each of the 45 exchanges that have working residential telephones are indicated as such in the data base maintained by MOR. Thus, the sampling frame consisted of all hundred-number blocks within the 45 specified exchanges. A systematic random selection of hundred-number blocks was drawn. Two-digit random numbers were appended to each hundred-number block selected.

The geographic region covered by the 45 exchanges lies totally within Oakland County, extending from the Detroit City limits in the south to the northern parts of West Bloomfield and

Bloomfield Townships. Laterally, the region extends from parts of Royal Oak and adjacent areas to the western portions of West Bloomfield and Farmington Hills. Within this area, the 45 exchanges comprise almost all the working residential exchanges.

The Federation Master List: Federation staff prepared a Master List of households whose telephone numbers were among the 45 selected exchanges. The list included contributors, potential contributors, and members of the Jewish Community Center. Staff cleaned the list of duplicate and non-residential telephone numbers. The resulting list amounted to 15,856 names in all.

As we would learn from the RDD household survey, the Federation list represented almost half of the Jewish households within the 45 telephone exchanges. Since listed Jews tend to be more Jewishly involved and affluent than those who do not appear on the Federation list, reliance on the list alone would have resulted in a distorted portrait of the population.

## The Eligible Household

Households were eligible for interviewing, but not necessarily for inclusion in the analysis of the survey, if the initial respondent answered any of the following questions in the affirmative:

1. (S2) Do you or does anyone else living in your household consider him or herself to be Jewish?

2. (S3) Were you or anyone in your household raised Jewish?

3. (S4) Did you or anyone else in your household have a Jewish mother or a Jewish father?

The broad net cast by these questions includes current non-Jews. For example, a respondent who has a Jewish father, but was raised as a Roman Catholic and identifies as such today was eligible for interviewing. Prior to proceeding with the analysis, we removed from the data set the small number (about 2% of all households interviewed) who are, for all intents and purposes, non-Jewish. That is, we included in the analysis only those household where at least one member currently identifies as a Jew, or whose current religion is Jewish.

## Interviewing

The interviews were administered by Market Opinion Research between October, 1989 and December, 1989. Most interviewing was conducted on Monday through Thursday evenings and on Sunday afternoons and evenings.

The interviewers utilized a Computer-Assisted-Telephone Interviewing (CATI) system, working out of a field office in Livonia, Michigan. All interviewers had previous experience with the CATI system and were specially trained for this project. The CATI system features direct input of responses, either in the form of numeric responses or transcripts of answers.

Disposition of the RDD Sample:

1) Interviewers contacted 5,124 households.

2) Of these, 2,786 completed the screening questionnaire, indicating whether the household was eligible (i.e., Jewish).

3) Of these, 550 were eligible.

4) Of these, 462 completed the interviews. This figure implies a response rate of 78% of eligible households.

5) Of these, 453 currently identified as Jews and were included in the analysis. Nine of the 462 households interviewed in the RDD sample contained individuals who were of Jewish ancestry, making them eligible for interviewing, but they did not currently identify as Jews either in terms of religion or ethnicity.

Disposition of the Master List and High Giver Samples:

1) Federation staff provided MOR with a list of 190 High Givers, defined as households where at least one head of household donated $1000 or more to either the 1988 or 1989 Campaign.

2) Federation staff also provided MOR with a list of 1,190 households from the overall Master List.

3) MOR successfully contacted, screened and interviewed 100 High Givers and 538 from the Master List. Of the 538 interviews on the Master List, 4 were later determined to have duplicated RDD interviews and 3 were currently non-Jewish, leaving a total of 531 Master List interviews for the analysis.

Overall, MOR conducted 1,096 interviews, of which 1,084 were of households with at least one member identifying as Jewish. The completed interviews came from these sources:

| Type of Interview | Source | | | Total |
|---|---|---|---|---|
| | High Giver List | Master List | RDD | |
| High Giver | 100 | 71 | 28 | 199 |
| List, Not High Giver | 0 | 460 | 180 | 640 |
| Not Listed | 0 | 0 | 245 | 245 |
| Non-Jewish | 0 | 3 | 9 | 12 |
| Total | 100 | 534 | 462 | 1096 |

## Weighting

For purposes of the analysis, the three sample segments were weighted so as to reflect their true proportions in the population. We used the 453 RDD sample interviews to provide the best approximation for the distribution of the following three types of households:

1) High Giver households (28 interviews or 6.2% of the RDD total).

2) Master List households, but not High Givers (180 or 39.7%).

3) Unlisted households (453 - 28 High Givers - 180 duplicates = 245 or 54.1%).

The unweighted sample of 1084 eligible interviews heavily over-represents the High Givers, somewhat over-represents List households who are not High Givers, and under-represents the Unlisted households. The weights we derived adjust for these biases. When applied to the data set, they yield a weighted sample whose proportions of High Givers, Listed, and Unlisted households are identical with those found in the unweighted RDD sample alone. In other words, we derived weights which, when applied to all 199 High Giver households, would reduce their representation to just 6.2% of the weighted sample. Similarly, we weighted the 640 Master List/not High Giver households so that they would comprise 39.7% of the weighted sample, and we weighted the 245 Unlisted interviews so that they would constitute 54.1% of the weighted sample.

## Estimating The Jewish Population Size in Metropolitan Detroit

We estimate that the tri-county Jewish population amounts to 95,700 Jewish individuals living in 42,500 households. In addition, we estimate that 9,200 non-Jews live in these households.

These figures may be divided between those living in the "dialing region" (the south central portion of Oakland County where Jews are concentrated) and those living elsewhere or in the "non-dialing region". The dialing region is home to 78,600 Jews living in 33,800 households. The non-dialing region in the tri-county Detroit area includes 17,100 Jews in 8,600 households. (All numbers are rounded to the nearest 100.)

| | Jewish Households | Jewish Individuals |
|---|---|---|
| Dialing region | 34,533 | 80,254 |
| Non-dialing region | 7,969 | 15,712 |
| Total | 42,502 | 95,966 |

### Procedures: Beginning with the "Dialing Region"

In estimating the Detroit Metropolitan area's Jewish population size, we begin by estimating the number of Jewish households living in what we call the "dialing region." The dialing region consists of those households whose telephone exchanges (the first three digits of the phone number) were among the 45 exchanges that constituted the sampling frame for the telephone survey (see Appendix A). We selected these 45 exchanges on the basis of their distribution on the Federation list. These listings indicated that nearly 90% of Jews on the Federation list in the tri-county region have telephone numbers beginning with one of the 45 exchanges. However, upon completion of the study, we estimate that over 80% of all Jews in the tri-county region have such phone numbers. That is, we discovered that the number of Jews beyond the dialing region was much greater than most observers had thought or that inspection of the Federation list had led us to believe.

The dialing region,[1] built out of the 45 phone exchanges, follows no familiar geographic boundaries. In general terms, it includes the suburbs north of the Detroit City boundary where the vast majority of metropolitan area Jews reside.

The dialing region encompasses the following jurisdictions in their entirety:

| | |
|---|---|
| Oak Park | Birmingham |
| Huntington Woods | Hazel Park |
| Berkeley | Ferndale |
| Southfield | Beverly Hills |
| Lathrup Village | Pleasant Ridge |
| Bingham Village | Orchard Lake Village |
| Franklin | Royal Oak Township |

West Bloomfield Township (except for the North-west corner in the Union Lake post office)

In addition, the dialing region includes the following portions of the communities listed:

Bloomfield Township (south of Long Lake Road)

Farmington Hills (north of I-696)

Waterford Township (south central section)

Troy (southwest corner)

Madison Heights (south of 12-1/2 Mile Road)

Commerce Township (southeast corner)

Novi (northeast corner)

Royal Oak (south of 12-1/2 Mile Road)

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[1]In strict terms, a dialing region is an amalgam of telephone numbers rather than a geographic region. In practical terms, the dialing region referred to in this report is virtually identical to the geographic core area referred to in other reports.

Our total population estimates derive from adding the estimates for three areas:

A) The dialing region (as described above).

B) The inner non-dialing region area. These are towns and cities that closely border the dialing region. The inner non-dialing region includes: northwest Detroit, Livonia, Farmington, Farmington Hills south of I-696, Novi, Walled Lake, Union Lake.

C) The outer non-dialing region. This area consists of all sections of Wayne, Oakland, and Macomb Counties that lie beyond the dialing region and inner non-dialing region.

## An Outline of the Estimation Procedure

The procedure we used to estimate the Jewish population size consisted of several linked steps. We first estimated the number of Jewish households (i.e., households with at least one Jew present). Next, to estimate the number of Jewish people in each area, we multiplied the number of households by the average (mean) number of Jews per household. We then added the total number of Jews in each area to arrive at the total number of Jews in the tri-county region. We followed this procedure for the dialing region, the inner non-dialing region, and the outer non-dialing region.

Among the sources of information we used are the following:

1) The random sample survey of 1100 households living within the dialing region. Among other things, this survey provided us with an estimate of the number of Jewish individuals per household.

2) The Random Digit Dialing (RDD) segment of the survey. This segment provided the basis for estimating the proportion found on the Federation Master List, or "affiliation rate," a key number for estimating the number of Jewish households in the dialing region.

3) The Bresser's Company files. This company publishes reverse telephone directories for the Detroit area. Their files provided the numbers of Distinctive Jewish Name residential listings that appear in the telephone directories for the dialing region, the inner non-dialing region, and the outer non-dialing region.

4) A "mini-survey" of households outside the dialing region (in both the inner and outer areas) who are listed in the directories with DJN last names. This survey, conducted by Federation staff, provided the estimates of the number of Jews per household in each area and the extent to which DJN listings represent those who currently identify as Jews (as opposed to those with Jewish paternal ancestry who no longer identify as such and are consequently excluded from the Jewish population estimate).

## Estimating the Number of Jewish Households in the Dialing Region

We estimated the number of Jewish households in the dialing region by utilizing two numbers: 1) The number of households on the Federation list; and 2) the proportion of RDD households in the dialing region who appear on the Federation list. In effect, this technique (the "Affiliation Method") expands the number of Jewish households on the Federation list (so-called affiliated households) to take into account so-called unaffiliated households (i.e., Jewish households that do not appear on the list).

To obtain the total number of Jewish households in the dialing region (whether affiliated or not), we divide the number of affiliated households in the dialing region by the affiliation rate, or:

(Total Number of Affiliated Households)/(Affiliation Rate)=
Total Number of Jewish Households

The Federation Master List developed for this project contains a total of 15,856 households with telephone exchanges in the dialing region. For the purposes of this study, the Federation specially assembled and cleaned its list of duplications and business listings. In addition to Federation contributors and prospects, the list includes Jewish Community Center members.

In conducting the telephone survey, Market Opinion Research (MOR) interviewed two groups. One consisted of households drawn directly from the Federation list. The other consisted of households obtained through Random Digit Dialing (RDD), that is, by randomly calling computer-generated numbers within the 45 exchanges in which in which only a small fraction belonged to Jewish households. The Affiliation Method's estimates of Jewish households in the dialing region relies exclusively upon analysis of the RDD interviews.

Of the 453[2] RDD interviews with correctly recorded telephone numbers conducted by MOR, 208 were found on the Federation list. These figures mean that almost 47% of the Jewish households in the dialing region are "affiliated," or, more precisely, known to Federation by way of their residential telephone numbers (208/453 = 0.4592).[3]

To obtain the total number of Jewish households in the dialing region, we divide 15,873 (the total number of listings on the Federation master list of affiliated Jewish households) by .4695 (the affiliation rate) and arrive at an estimate of 33,806, as follows:

15,856/.4592 = 344,533

Estimating the Number of Jewish Individuals in the Dialing Region

The survey determined that the mean number of Jews per Jewish household in the dialing region is 2.324. Multiplying the estimated number of Jewish households in the dialing region by the estimated number of Jewish individuals in these households provides the estimated total number Jewish individuals in the dialing region. That is,

34,533 X 2.324 = 80,254.

In other words, we estimate that approximately 80,000 Jews live in approximately 34,500 households in the dialing region.

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[2]MOR conducted a total of 462 RDD interviews (and not 443) with eligible households. These were defined by the screening questions as household where someone currently identified as a Jew or had a Jewish parent. Of these, just 453 were households where someone currently identified as a Jew; the rest were Jewish by ancestry only.

[3]We have some corroborative evidence for this estimate of the affiliation rate. We examined the 2,944 Distinctive Jewish Name households listed in Bresser's telephone directory. Of these, 1,348, or 46%, appear on the Federation list, as compared with the almost identical figure (.4592) calculated above.

## Extension Beyond the Dialing Region

The procedures above suggest that there are about 33,800 Jewish households in southeast Oakland county whose telephones begin with one of the 45 telephone exchanges. Almost half of these are affiliated, that is, known to Federation; over half are not.

We need to augment this estimate with one for the households living elsewhere in the tri-county area. The only procedure that has even partial reliability entails the use of Distinctive Jewish Name (DJN) listings in the telephone directories. The DJN total count serves as a crude index of Jewish households. That is, for each DJN in the phone book, we will assume that there are a certain number of Jewish households in the same area. The problem is to derive that number, or ratio of households per DJN listing.

For the dialing region, we can readily calculate this ratio. The Bresser's Company reverse telephone directory lists 2,944 DJNs in the dialing region. Since we estimate 33,806 Jewish households in the dialing region, each listed DJN in the Bresser's directory, would represent 11.73 Jewish households. (34,533/2,944 = 11.73.)

It would be a simple matter to extrapolate to the area outside the dialing region if we could assume that the same relationship between DJN listings and number of Jewish households held for outside as well as for inside the dialing region. This assumption, in turn, implies three sub-assumptions regarding DJN's and the Jewish population inside and outside the dialing regions. Namely, for both areas:

1) The proportion of non-listed phone numbers is the same.
2) The proportion of Jews who have DJN's is the same.
3) The proportion of DJN's who are Jewish is the same.

Are all three assumptions, in fact, true?

Unfortunately, we have no information about the first two assumptions. However, we were able to partially test the third assumption and found rather surprising results.

Although we did not test for differences between the dialing and non-dialing region, we were able to ascertain whether DJNs in the more remote parts outside the dialing region are Jewish as often as those nearer the dialing region.

As noted earlier, Federation staff conducted a "mini-survey" of DJN households outside the dialing region. Federation interviewers asked respondents who had Distinctive Jewish Names the same screening questions that the MOR interviewers used in

the larger survey to determine whether the households in the dialing region were eligible (i.e., Jewish).

The mini-survey revealed a sharp variation in the Jewish incidence rate associated with proximity to the dialing region. Among 104 DJN households near the dialing region, 87.5% qualified as Jewish.[4] However, in the outer non-dialing region, only 52.1% of the 169 DJN respondents said they were Jewish households. In other words, a Katz in Mt. Clemens (or other parts of the outer non-dialing region) is less likely to be Jewish than a Katz living in North-west Detroit (or other areas in the inner non-dialing region). People with Jewish names living further away from the main area of Jewish settlement may well be descendants of or former wives of Jews, but they often do not identify as Jewish themselves.

These results suggested that we use two DJN multipliers or ratios. One should be used for the inner non-dialing region, the area outside but still near the dialing region; the other (a smaller ratio) should be used for the outer non-dialing region, those parts of the tri-county area distant from the dialing region.

For the inner non-dialing region, we used the same multiplier of 11.73 that was obtained from analysis of the dialing region. For the outer non-dialing region, we used a multiplier of 6.98, a figure that takes into account the lower Jewish incidence rates among DJN households in the outer non-dialing region ((.521/.875) X 11.73 = 6.98). In other words, a name such as Cohen in the telephone directory would imply the presence of 11.5 Jewish households in the dialing region or nearby; however it would imply only 6.9 Jewish households if it is found in the outer non-dialing region areas of Jewish settlement.

Among phone numbers outside the dialing region, Bresser's reports a total of 314 DJN households in the inner non-dialing region and 614 DJN households in the outer non-dialing region. We multiply the 384 by 11.73 and arrive at an estimate of 3,683 Jewish households in the inner non-dialing region; we multiply 614 by 6.98, and arrive at an estimate of 4,286 Jewish households in the outer non-dialing region. These calculations are summarized below:

| | |
|---|---|
| Inner non-dialing region: | 314 X 11.73 = 3,683 |
| Outer non-dialing region: | 614 X 6.98 = 4,286 |

[4]Notably, in the 1981 study of New York area Jews, 92% of a similar list of DJNs qualified as Jewish.

## From Households to Individual Jews Beyond the Dialing Region

The mini-survey of DJN households outside the dialing region found an average of 2.09 Jews per household in the inner non-dialing region area and 1.87 Jews in the outer non-dialing region. Multiplying by the respective number of households in each region, we obtain 9,229 Jews in the inner non-dialing region and 7,921 in the outer non-dialing region.

Inner non-dialing region: 3,683 X 2.09 = 7,698
Outer non-dialing region: 4,286 X 1.87 = 8,015

## Combining Estimates of Numbers of Jewish Households and Individuals

The results presented above for the three areas can be combined to provide an estimate of the total number of Jewish households in the tri-county area, as follows:

| | |
|---|---|
| A) The dialing region | 34,533 |
| B) The inner non-dialing region | 3,683 |
| C) The outer non-dialing region area | 4,286 |
| Total | 42,502 |

For the total number of Jewish individuals, we add the three sub-totals for the three regions and derive an estimate of 95,715 Jews for the entire tri-county Detroit metropolitan area.

| Area | House-holds | | Mean Jews | | Total |
|---|---|---|---|---|---|
| A) The dialing region | 34,533 | X | 2.324 | = | 80,254 |
| B) The inner non-dialing region area | 3,683 | X | 2.09 | = | 7,698 |
| C) The outer non-dialing region area | 4,286 | X | 1.87 | = | 8,015 |
| Total | 42,502 | | | | 95,966 |

## Estimating the Number of Non-Jews Living in Jewish Households

How many non-Jews live in Jewish households? Our survey found that about 11% of the households in the dialing region housed at least one non-Jew, and that, on average, each Jewish household was home to 0.17 non-Jews. The mini-survey in the non-dialing region found a similar small number of non-Jews per household (0.15) in the inner non-dialing region. However, theoretically consistent with the lower Jewish incidence rate among DJN's in the outer non-dialing region, we also find a higher average number of non-Jews per Jewish household (0.67) in the outer non-dialing region.

By direct extension from the methods employed above, we derive the following table:

| Area | Households Non-Jews | X | Mean Non-Jews | = | Total |
|---|---|---|---|---|---|
| A) The dialing region | 34,533 | X | 0.17 | = | 5,871 |
| B) The inner non-dialing region area | 3,683 | X | 0.15 | = | 552 |
| C) The outer non-dialing region area | 4,286 | X | 0.67 | = | 2,872 |
| Total | 42,502 | | | | 9,295 |

Therefore, we estimate that about 9,200 non-Jews live in the 42,500 Jewish households in the tri-county region.

## Cross-Checks on Estimation Procedures

We utilized three alternative methods to verify the population estimates presented above. Two of the procedures produced estimates higher than the Affiliation Method; the other generated a lower estimate. The offsetting nature of these results provides evidence that our estimate of 95,700 Jews in the tri-county region is significantly biased in neither an upward or a downward direction.

## The RDD Method

Over the last decade, the vast majority of Jewish population studies in the United States have estimated Jewish populations with what may be referred to as the "RDD method." It begins with the proportion of the Random Digit Dialed screener phone calls who qualified as Jewish households. We multiply this proportion by the total number of households living in the dialing region. To perform this calculation, we estimate two numbers:

1) The proportion of screened households who qualified as Jewish (or the Jewish incidence rate); and

2) The total population size, i.e., the total number of households (both Jewish and not).

The MOR survey produced a Jewish incidence rate of 19%. In other words, almost a fifth of the households in the dialing region who completed the initial screening questions are home to at least one Jew.

According the Michigan Bell, the total number of households with telephones in one of the 45 exchanges in the dialing region amounts to 181,413. The product of these two numbers (.191 X 181,413 = 34,560) yields an estimate of 34,560 Jewish households in the dialing region, as compared with our estimate of about 34,533 households. This insignificant difference implies an estimate of 96,041 individual Jews in the entire region.

How did we arrive at the Jewish incidence rate of 19.1%? In the course of securing their RDD interviews with Jewish households, MOR contacted 2,786 households that provided information on whether they qualified as Jewish households. Of these, 550 passed the initial "screening test".

The screening questions were designed to cast a wide net, so as to include people of Jewish ancestry who do not currently identify as Jews and Jews who have totally assimilated and no longer identify as such. Analysis of the survey results demonstrate that 96.5% of those who passed the screening test

currently identify as Jews and 3.5% do not. By implication, just 531 of the 550 respondents are to be regarded as identifying Jews. If so, then we learn that 19% of the households in the dialing region is Jewish (531/2786 = 0.19).

## Demographic Analysis

The 1963 Federation-sponsored study of the Detroit Jewish population provided an estimate of the number of Jews (84,600) and their age distribution. Standard demographic assumptions about mortality and birthrates of that population can be used to estimate the size of a population today.

The Demographic Method assumes that over the last 26 years, out-migration and in-migration have been balanced, and therefore that there were no losses or gains to the Detroit area Jewish population due to people moving into or out of the area. It also assumes that the life expectancy of Detroit area Jews is the same as that for other white Michigan residents, and that Detroit area Jewish women of child-bearing age gave birth to as many children as did white American women in this time period. (In fact, it is reasonable to assume that the errors built into these assumptions are offsetting: Jews probably live longer than others, but they may have fewer children than others.)

Applying these assumptions, the Demographic Method produces a figure of 93,200 in 1988, just slightly below the 95,700 we estimate above (see Appendix C).

Of course, the assumption of no net change due to migration is critical to this method. Many Detroit area Jewish parents have experienced the departure of their young adult children out of the region. Indeed, in our survey, over 40% of respondents' children age 30 and over were living outside the Detroit area. Nevertheless, the survey also reported that nearly a quarter (24%) of the Jews in the dialing region have arrived in the last 26 years. By extension, over the last 26 years or so, the dialing region has lost about 17,000 young adults (plus their children) and acquired about 18,500 Jews who have moved to the Detroit area. These figures suggest, without conclusively demonstrating, that the assumption of net migratory balance is reasonable. If so, then the estimate of 93,000 Jews in the area is reasonable as well.

Some readers may be surprised to learn that a population of 84,500 in 1963 grew by more than 10% by 1988. In point of fact, the 1963 population contained a large number of children, adolescents, and young adults owing to the post-World War II baby boom. In the last quarter century, these baby boomers married and had children of their own, resulting in a modest increase in

births in the mid-1980s, creating what some demographers have called the "echo of the baby boom."

The Demographic Method, then, points to an estimate only slightly smaller than the one we presented above using the Affiliation Method.

## The DJN Method

Last, we can derive a Jewish population estimate from the frequency of Distinctive Jewish Name households listed in the telephone directories (see Appendix B). This method combines the 15,856 households on the Federation list with an estimate of the number of "unaffiliated" Jews, that is, those who are not on the Federation list. This latter number is derived by estimating the number of DJN households who are Jewish and not on the Federation list and multiplying that number by the ratio of all Jewish households to those with specifically Distinctive Jewish Names.

As we noted earlier, there are 2,944 DJNs within the 45 telephone exchanges listed in Bresser's directory. Comparison of the pre-censal enumeration of housing units with the number of telephone lines suggests that dwelling units exceed listed telephones by 37%. Thus, 2,944 listed phones implies a total of 4,033 DJN households, both listed and not.

The Federation mini-survey determined that 87.5% of DJN households living near the dialing region currently identify as Jews. This figure suggests that of the estimated 4,033 DJNs in the dialing region, just 3,525 are actually Jewish households (.875 X 4033 = 3529).

Of the 3,529, we noted that 1,348 are on the Federation list. The remainder amounts to 2,181. These 2,181 households share the following characteristics:

a) They are Distinctive Jewish Name households.

b) They are Jewish (we have already subtracted the presumed number of non-Jews with DJNs).

c) They have telephone numbers that may be either listed or not listed in the telephone directory (we have already expanded the base by 37% to account for non-listed DJN households).

Of the 15,873 households on the Federation list, 1,808 have Distinctive Jewish Names. These figures imply that on the Federation list, each DJN represents 8.765 Jewish households

(15,873/1,808= 8.78). If so, then the 2,177 DJNs reported above in effect represent 19,092 households (2,177 X 8.78 = 19,114).

As we reported earlier, there are 15,873 affiliated households within the dialing region. The DJN method produces an estimate of 19,118 unaffiliated households. Combining the two figures, we arrive at a total of 34,974 (15,856 + 19,118 = 34,974).

This figure (34,974) is about 1% larger than the figure for Jewish households in the dialing region we estimated above. Applying this discrepancy to the total number of individual Jews, this method would estimate a total of individual Jews in the tri-county area (1.01 X 95,700 = 99,000).

## Comparing Estimates

The several alternative ways of estimating the Jewish population produce estimates that are, indeed, reasonably close to that generated by the Affiliation Method, as the following table demonstrates:

| | |
|---|---|
| Affiliation Method: | 95,966 |
| RDD Method: | 96,041 |
| Demographic Method: | 93,201 |
| DJN Method: | 97,132 |

Since the Affiliation Method requires fewer statistical assumptions, we regard it as superior to all the other methods. However, the clustering of the estimates produced by the other methods that are, to some degree, independent of each other, lends substantial confidence to the accuracy of the affiliation method.

To be sure, all four methods contain the same assumptions about Jewish household size and about the relationship of DJNs outside the dialing region to the number of Jewish households within the dialing region. Insofar as these two sets of statistics are in error, all four estimates are biased in the same direction.

Appendix A: The 45 Telephone Exchanges in the Dialing Region

| | | |
|---|---|---|
| 258 | 541 | 644 |
| 350 | 542 | 645 |
| 352 | 543 | 646 |
| 353 | 544 | 647 |
| 354 | 545 | 661 |
| 355 | 546 | 669 |
| 356 | 547 | 681 |
| 357 | 548 | 682 |
| 358 | 552 | 683 |
| 398 | 553 | 737 |
| 399 | 557 | 788 |
| 424 | 559 | 851 |
| 443 | 569 | 855 |
| 489 | 626 | 967 |
| 540 | 642 | 968 |

## Appendix B: The Distinctive Jewish Names

Berman
Bernstein
Caplan
Cohen
Cohn
Eisenberg
Epstein
Feldman
Feinberg
Freedman
Friedman
Gold
Goldberg
Goldman
Goldstein
Greenbaum
Greenberg
Grossman
Horowitz
Horwitz
Hurwitz
Jaffe
Kahn
Kaplan
Katz
Kohn
Levin
Levine
Levitt
Levy
Lieberman
Margolis
Rosen
Rosenbaum
Rosenberg
Rosenthal
Rubin
Segal
Shapiro
Siegel
Silverman
Silverstein
Steinberg
Weinberg
Weiner
Weinstein

## Appendix C: Detroit Jewish Population Demographic Estimate

| | 1963-67 | 1968-72 | 1973-77 | 1978-82 | 1983-87 |
|---|---|---|---|---|---|
| Birth Rate | 0.09746 | 0.08278 | 0.06175 | 0.05866 | 0.04452 |
| Women of Childbearing age | 16200 | 16907 | 18951 | 18726 | 26019 |
| Children born | 7894 | 6998 | 5851 | 5492 | 5792 |

| Survivor Rate | Age Group | 1963 | 1968 | 1973 | 1978 | 1983 | 1988 |
|---|---|---|---|---|---|---|---|
| 0.99771 | 0-4 | 5510 | 7894 | 6998 | 5851 | 5492 | 5792 |
| 0.99878 | 5-9 | 10090 | 5497 | 7876 | 6982 | 5838 | 5480 |
| 0.99728 | 10-14 | 8010 | 10078 | 5491 | 7867 | 6973 | 5831 |
| 0.99728 | 15-19 | 8010 | 7988 | 10050 | 5476 | 7845 | 6955 |
| 0.99523 | 20-24 | 3115 | 7988 | 7966 | 10023 | 5461 | 7824 |
| 0.99523 | 25-29 | 3115 | 3100 | 7950 | 7928 | 9975 | 5435 |
| 0.99218 | 30-34 | 5865 | 3100 | 3085 | 7912 | 7891 | 9927 |
| 0.99218 | 35-39 | 5865 | 5819 | 3076 | 3061 | 7850 | 7829 |
| 0.98475 | 40-44 | 6430 | 5819 | 5774 | 3052 | 3037 | 7789 |
| 0.97507 | 45-49 | 6430 | 6332 | 5730 | 5686 | 3005 | 2991 |
| 0.96066 | 50-54 | 5555 | 6270 | 6174 | 5588 | 5544 | 2930 |
| 0.93755 | 55-59 | 5555 | 5336 | 6023 | 5931 | 5368 | 5326 |
| 0.75676 | 60+ | 11050 | 13570 | 15273 | 17205 | 18581 | 19094 |
| | TOTAL | 84600 | 88793 | 91467 | 92561 | 92860 | 93201 |

BOTTOM LINE: Assuming ZERO MIGRATION, the 1988 population estimate for the Detroit Jewish Community would be 93,201.

NOTES:

Women of childbearing age are defined as 15 to 44 through 1982; 10 to 49 for 1983-87 period.

The birth rates and survival rates were obtained from Bureau of the Census.

The 1963 data were obtained from the 1963 Detroit Jewish Population Study.