

March 2, 1984

TO: NES Board

FROM: Giovanna Morchio, Maria Sanchez

RE: Comparison of the Michigan method of district assignment
on the telephone with the personal interview simulated data.

The work done to create a filter variable for use in the analyses of the congressional candidate section led us to question the relative merit of the two approaches.

We asked in the first place: How successful was the Michigan CATI method in terms of the goal of matching telephone respondents to their congressional districts?

The district assignment achieved for CATI respondents during the telephone interview administration was compared to the congressional district identified for the same respondents through map lookups of addresses. This allowed us to measure the accuracy of the CD choice for each telephone respondent. For the personal interview sample, we simulated the process implemented in the CATI interview to establish whether a CD would have been assigned for the respondent based on information provided in the course of the interview. (The analysis was restricted to personal interview respondents residing in households with telephone.) Table 1 documents that the telephone method yields the same proportion of unclassified respondents as the personal interview sample, but a lower overall success rate than the personal interview because 13% of the telephone respondents are misclassified in

the end.

Table 1

| ISR.CATI | | PERSONAL | | |
|----------|----|----------|----|---|
| N | % | N | % | |
| 333 | 69 | 1091 | 82 | correct CD assignment resulted with CATI method |
| 65 | 13 | -- | -- | incorrect CD assignment resulted |
| 84 | 17 | 247 | 18 | CD never assigned based on answers to candidate questions |

A related question is: When in the congressional district assignment series do respondents tend to misclassify themselves into a district, at recall or recognition? This question obviously applies only to CATI.

Table 2

| | N | % | |
|-------|-----------|------------|--|
| | 13 | 20 | incorrectly self-assigned at recall |
| | 52 | 80 | incorrectly self-assigned at recognition |
| Total | <u>65</u> | <u>100</u> | |

Since the recall test happens first during the interview, and by definition it would be met by the best informed respondents, we expected a higher rate of misclassification at recognition. This is precisely the case as shown in table 2.

Three types of situations account for the reported 13% (n=65) of

all CATI respondents with incorrect CD assignments. These are:

- (1) respondents who recalled candidate names(s) for one and only one of the possible districts in the telephone cluster, only the candidates whose names were recalled did not run in R's true district,
- (2) respondents who recognized candidate names(s) for one and only one of the possible districts in the telephone cluster, only the district associated with these recognized candidate(s) turned out to be the wrong district for R,
- (3) respondents who, having recognized the name(s) of candidates running in two or three of the possible districts in the telephone cluster, were asked to identify the candidate slate for their own district and chose the wrong candidates for their true district.

From the description above, it is obvious that only multi-district telephone clusters offer the possibility of generating incorrect district assignments. Situations (2) and (3) do not apply to single-district clusters. Situations (2) and (3) would have been impossible for single-district clusters since the interview schedule for this type of clusters dealt at all times with the one possible candidate slate for the cluster. The only possible results for single district clusters are "assignment" (at recall or recognition) or "never assigned".

This difference in outcome probabilities for single-district and multi-district telephone clusters complicates comparisons with the

personal interview data. For all practical purposes, personal interview respondents faced a single-district cluster situation since their district was known before the interview took place, and the interview schedule dealt with a single candidate slate throughout.

Multi-district CATI clusters can be evaluated as single-district clusters after the true district has been identified for all CATI respondents based on map lookups. With knowledge of the true district in hand, we can reclassify respondents in Situations (2) and (3) according to the answers given during the interview for the "right" slate of candidates. Questionnaire data about the true candidates are not retrievable since the wrong candidate slate was used during the CATI administration, or the case was classified as "never assigned". Nonetheless, when the CATI data are manipulated to simulate a single-district situation after knowledge of the true district is in hand, it is obvious that a mode effect is present in the rates at which personal and telephone respondents are able to recall and recognize district candidates. (See table 3.) While 36% of the personal interview respondents could name candidates running in their district, only 27% of the CATI respondents could do the same. For recognition, the situation is reversed. 51% of the CATI respondents could recognize their district candidate names as compared to 45% among personal interview respondents. Virtually the same proportion of respondents in both samples (19% and 22%) could neither recall nor recognize the names of at least one of the candidates in their true district. The depressed recall rate for the telephone sample could be related to the telephone interviewing setting in which respondents may feel the

pressure, rightly or wrongly, to minimize the time spent thinking about answers to questions.

Table 3

Distribution of Congressional District Assignment for
ISR.CATI Corrected to Simulate Personal Situation

| | Pers. | ISR.CATI |
|---|------------|------------|
| Recall | 484 36% | 131 27% |
| Recognition | 607 45% | 249 51% |
| Never Assigned + Incorrectly Assigned | 247 19% | 109 22% |
| Total | 1338 | 489 |

The differences in recall rates are not due to sample differences with regard to the distribution of respondents by region or by type of race in the districts tapped in each sample.

The Personal and Berkeley/ISR.CATI samples were compared for possible biases in terms of the distribution of respondents by type of race of congressional districts they were in, and with regard to geographic region. The same analysis was performed at the district level (% of district with incumbent running and open races by region). Table 4 shows that both samples look remarkably alike.

Are incorrect district assignments on the part of telephone

respondents related to the type of race held in the respondent's true district? Table 5 shows that open races yielded slightly more than twice the rate of incorrect district classifications as races in which incumbents ran. Open races also had a lower overall rate of successful district assignments in both the personal and the telephone samples after adding cases never assigned to those resulting in incorrect classifications. This makes sense since incumbent candidates have higher name recognition and greater visibility among constituents than candidates lacking the office advantage.

Finally, since the South as a region has traditionally demonstrated lower political involvement than other regions, we decided to look at the patterns of district assignment by region. We encountered strong effects in the South and also in the West. (See Table 6.) Only 62% of all respondents interviewed over the telephone in the West were correctly assigned to a congressional district, and this low success rate is overwhelmingly accounted for by the high rate of improperly classified respondents (29%) in the region. In the South, about the same proportion (64%) of respondents as in the West are correctly assigned to districts, only the low success rate in this case is accounted for not by respondents incorrectly classified (6%), but by those never assigned at all (29%). The success rate for the South and the West deviate by a significant amount from the rates achieved by these two regions in the personal interview sample (87% vs. 64% for the South; 79% vs. 62% for the West). These large differences persist after imposing controls for type of congressional race. (See table 7.) We have no explanation to offer at this moment.

The possibility of inaccurate or incomplete CATI district definitions for telephone clusters in these two regions can be ruled out, however. Map lookups revealed that "true" respondent districts were included at all times among the congressional district choices offered to telephone respondents in the course of the CATI administration.

Table 4

Distribution of Respondents and Districts by Type of Race and Region for

Personal and ISR/Berkeley. CATI

| REGION | RESPONDENTS (N=1338) | | | | | | DISTRICTS (N=167) | | | | | | DISTRICTS (N=123) | | | | | |
|------------|-------------------------|------------|----------|---------------|------------|----------|----------------------|-----------|-----------|---------------|-----------|-----------|----------------------|---------|-----------|---------------|-----------|----------|
| | PERSONAL | | | BER/ISR. CATI | | | PERSONAL | | | BER/ISR. CATI | | | PERSONAL | | | BER/ISR. CATI | | |
| | DEM INC | REP INC | INC BOTH | DEM INC | REP INC | INC BOTH | DEM INC | REP INC | INC BOTH | DEM INC | REP INC | INC BOTH | DEM INC | REP INC | INC BOTH | DEM INC | REP INC | INC BOTH |
| N. EAST | 124 46% | 99 37% | 1 | 115 42% | 120 44% | 10 4% | 31 11% | 23 28% | 14 24% | 1 | 5 21% | 16 27% | 14 30% | 1 | 5 31% | 16 27% | 14 30% | 1 |
| N. CENTRAL | 156 42% | 175 48% | 18 5% | 85 39% | 122 56% | - | 10 5% | 20 24% | 18 31% | - | 6 25% | 11 18% | 15 33% | - | 1 6% | 11 18% | 15 33% | - |
| South | 257 55% | 165 35% | - | 186 59% | 93 29% | - | 39 12% | 25 30% | 13 22% | - | 3 13% | 24 40% | 11 24% | - | 5 31% | 24 40% | 11 24% | - |
| West | 99 43% | 98 42% | - | 63 42% | 57 38% | - | 31 21% | 15 18% | 14 24% | - | 10 42% | 9 15% | 6 13% | - | 5 31% | 9 15% | 6 13% | - |
| Total | 636 48% | 537 40% | 19 1% | 449 47% | 392 41% | 10 1% | 111 12% | 83 50% | 59 36% | 1 1% | 24 14% | 60 49% | 46 38% | 1 1% | 16 13% | 60 49% | 46 38% | 1 1% |

TABLE 5

DISTRIBUTION OF DISTRICT ASSIGNMENT BY TYPE OF RACE FOR

PERSONAL AND ISR.CATI.

PERSONAL ISR. CATI

| | INCUMB | OPEN | INCUMB | OPEN |
|-------------------------|-------------|------------|------------|-----------|
| CORRECTLY ASSIGNED | 986 83% | 105 72% | 301 70% | 32 59% |
| INCORRECTLY ASSIGNED | - | - | 51 12% | 14 26% |
| NEVER ASSIGNED | 206 17% | 41 28% | 76 18% | 8 15% |
| TOTAL | 1192 89% | 146 11% | 428 89% | 54 11% |

DISTRICT
ASSIGNMENT

TABLE 6

DISTRIBUTION OF DISTRICT ASSIGNMENT BY GEOGRAPHICAL REGION

FOR PERSONAL AND ISR. CATI

| | PERSONAL | | | | | | ISR. CATI | | | |
|----------------------|------------|---------------|------------|------------|------------|---------------|------------|-----------|--|--|
| | NORTH EAST | NORTH CENTRAL | SOUTH | WEST | NORTH EAST | NORTH CENTRAL | SOUTH | WEST | | |
| CORRECTLY ASSIGNED | 199 74% | 302 82% | 407 87% | 183 79% | 97 70% | 88 79% | 101 64% | 47 62% | | |
| INCORRECTLY ASSIGNED | - | - | - | - | 18 13% | 15 13% | 10 6% | 23 29% | | |
| NEVER ASSIGNED | 70 26% | 66 18% | 62 13% | 49 21% | 24 17% | 9 8% | 46 29% | 7 9% | | |
| TOTAL | 269 20% | 368 28% | 469 35% | 232 17% | 139 29% | 112 23% | 157 32% | 76 16% | | |

DISTRICT
ASSIGNMENT

TABLE 7.

DISTRIBUTION OF DISTRICT ASSIGNMENT BY TYPE OF RACE AND REGION

FOR PERSONAL AND ISR, CATI

| | INCUMBENTS | | | | | | OPEN RACES | | | | | | | | | |
|----------------------|------------|-----|-------|-----------|-----|-----|------------|------|-----|-----------|-------|------|-----|-----|-----|-----|
| | PERSONAL | | | ISR, CATI | | | PERSONAL | | | ISR, CATI | | | | | | |
| | N.E | N.C | SOUTH | WEST | N.E | N.C | SOUTH | WEST | N.E | N.C | SOUTH | WEST | | | | |
| CORRECTLY ASSIGNED | 170 | 284 | 374 | 158 | 89 | 84 | 89 | 39 | 29 | 18 | 33 | 25 | 8 | 4 | 12 | 8 |
| | 76% | 81% | 92% | 80% | 72% | 79% | 64% | 65% | 64% | 95% | 70% | 71% | 53% | 67% | 71% | 50% |
| INCORRECTLY ASSIGNED | - | - | - | - | 13 | 13 | 10 | 15 | - | - | - | - | - | 2 | - | 7 |
| | | | | | 11% | 12% | 7% | 25% | | | | | | 33% | | 44% |
| NEVER ASSIGNED | 54 | 65 | 48 | 39 | 21 | 9 | 40 | 6 | 16 | 1 | 14 | 10 | 2 | - | 5 | 1 |
| | 24% | 19% | 11% | 20% | 17% | 9% | 29% | 10% | 36% | 5% | 30% | 29% | 13% | | 29% | 6% |
| TOTAL | 224 | 349 | 422 | 197 | 123 | 106 | 139 | 60 | 45 | 19 | 47 | 35 | 15 | 6 | 17 | 16 |

STRICT ASSIGNMENT