The role of social network in the acquisition of local dialect norms by Appalachian migrants in Ypsilanti, Michigan

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ABSTRACT

This research explores the extent to which the speech of Appalachian migrants in Ypsilanti, Michigan has been affected by the emerging local norm, an ongoing dialect change labeled the Northern Cities Shift (NCS). Recorded speech from these migrants was acoustically analyzed to determine whether the NCS feature of low-front vowel raising of $/\alpha$ / was present. Index scores derived from formant values were then subjected to statistical analysis to determine the degree to which the respondents' use of this feature was correlated with their sex, social status, age, and social network characteristics to determine which, if any, have influenced respondents' participation, or lack of participation, in the NCS. The results show that social network and sex are statistically significant predictors of acquisition, or lack of acquisition, of the feature in question, whereas age and socio-economic status are not.

Network analysis considers an individual's network, the linkages, the strength of linkages and frequency of interaction, and their impact on that individual. A variety of researchers from anthropology (Barnes, 1954; Mitchell, 1969; Radcliffe-Brown, 1952), social psychology (Moreno, 1953), family sociology (Bott, 1957), and health/stress management (Caplan, 1974) have found great explanatory power in individual-level social network analysis. Boissevain pointed out that social networks are viewed in two ways: (1) as a system of relations that impinge on individuals and influence their behavior, and (2) as a series of relations that persons use to achieve their ends (1973:viii). Sociolinguists have found social network analysis to be a critical tool in explaining some linguistic behavior (Bortoni-Ricardo, 1985; Eckert, 2000; Gal, 1979; Labov, 1972; Milroy, 1980; Wolfram, 1974), very often with reference to statement (1). Lesley Milroy's 1980 study of three working-class neighborhoods in Belfast has been very influential in the use of social network analysis in sociolinguistics and serves as the model for this study. In her study, Milroy showed that strong ties to a social group can

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serve as pressure to conform to that group's linguistic norms. Milroy's study examined linguistic behavior and correlated that linguistic behavior with a respondent's social network, showing how the language use of members of these three Belfast speech communities reflected patterns of personal interaction within the communities. She concluded that "personal network structure is in these communities of very great importance in predicting language use: a dense, multiplex personal network structure predicts relative closeness to vernacular norms" (1980:160).

Milroy's analysis considers social network as a composition of two dimensions, density and plexity, that exist on a continuum. Thus, an individual's social network may be described as more or less dense/loose and more or less multiplex/ uniplex. Density relates to the structure of an individual's contacts. The more members of an individual's social network who know each other, the more his/ her social network is said to be dense. Plexity refers to the relationship to members within an individual's social network. If many members are connected to the individual by more than one type of relationship (e.g., a coworker is also a neighbor or a relative) then that individual's social network is said to be multiplex. She showed that there is a relationship between network structure and linguistic choice and that this relationship can explain individual linguistic behavior. For example, she found that the consistent variation between two female respondents could not be explained by social status, sex, age, or neighborhood (they were the same for both respondents), but rather by the social network structure of the individuals (1980:131).

PROFILES OF THE TWO DIALECTS IN CONTACT IN YPSILANTI

The Northern Cities Shift

The Northern Cities Shift is a widely documented (Callary, 1975; Eckert, 1989; Fasold, 1969; Gordon, 1997; Ito, 1999; Labov, 1994) ongoing sound change in urban areas in the northeastern part of the United States, including Buffalo, Cleveland, Detroit, and Chicago. It is slowly making its way to the surrounding less-urban areas (Gordon, 1997; Ito, 1999). The earliest description of the NCS was given in 1969 by Fasold, who described the raised position of $/\alpha$ /, the fronted position of /a/, and fronted and lowered position of /o/ of respondents from Detroit.

These "new positions" for vowels are described relative to an older vowel system of American English. Figure 1 shows such a system, based in part on Peterson and Barney (1952). Although their analysis of American vowels is based on a less than ideal sample of 76 speakers, most from Mid-Atlantic areas, it has been usefully employed in studies similar to the present one and has been reproduced with similar results by Stevens and House (1963) and Hillenbrand et al. (1995), the latter for Great Lakes area speakers. Thus, the terms "raised," "raising," "fronted," "fronting," and so forth, used here and throughout refer to the relative position of the F1 and F2 characteristics of a vowel with regard to older documented vowel systems (Figure 1) and not to tongue height or movement. In



FIGURE 1. A pre-Northern Cities Shift vowel system (Peterson & Barney, 1952, with additional /ey/ and /ow/ data from Stevens, 1998).

addition, the raised quality of $/\alpha$ / refers to its onset. It is not the case that $/\alpha$ / becomes a high-front vowel throughout its duration; in fact, it diphthongizes, and the remainder of the altered vowel reveals that it is a "centering" diphthong.

Labov (1994) proposed that the NCS is a change that progresses in several interconnected steps. Synchronic and diachronic research (such as Eckert, 1986; Gordon, 1997; Ito, 1999; Labov, 1994; and Labov, Yeager, & Steiner, 1972) has shown that the fronted and raised position of $/\alpha$ / is present either before other elements of the NCS or very early in the overall changes involved. Labov hypothesized that this shift in the location of $/\alpha$ / creates a void in the vowel space that leads to the fronting of /a/ and subsequent lowering and fronting of /a/. Figure 2 (arrows pointing from the old position to the new position) shows all the elements of the NCS. The status of the NCS as a chain shift or related series of changes has been debated (Gordon, 2000; Stockwell & Minkova, 1997), but this debate goes beyond the scope of this article.

If speakers demonstrate the later stages of the NCS (/ Λ / backing and / ϵ / lowering/backing), they are considered to be at an "advanced" stage in the NCS. Speakers with advanced systems are usually female, young, European American, and upper-working-class or lower-middle-class (Labov, 1994:156).

The NCS is a dialect feature of the Ypsilanti area. If the respondents in this study have been affected by the local dialect, there should be, at least, evidence of the oldest aspect of the NCS: the fronting and raising of $/\alpha$. Therefore, only that feature is considered here. This, of course, leaves open the question of whether or not other features of the NCS or, indeed, other features of Northern speech different from their own dialect are being acquired by these Ypsilanti respondents. In this work, a finely-tuned analysis of the acquisition of one feature is attempted.



FIGURE 2. The Northern Cities Shift (adapted from Labov, 1994:191).

Preliminary analyses of the data acquired for this study suggest that, in fact, only the first two stages, the raising and fronting of the onset of $/\alpha$ / and the fronting of /a/, as characterized in previous research on the shift, are present at all in the speech of these respondents. Limitation to $/\alpha$ / was, therefore, practical as well as hypothetical.

The Southern Shift

The community investigated here, Ypsilanti, Michigan, is distinguished by its large population of migrants from the Appalachian region of the United States. The local vowel systems for the respondents in this study, who were born in the South, is certainly different than that of Southeastern Michigan. The Southern United States is also involved in an ongoing sound change, but, in many cases, with the opposite results. In the Southern Shift (Feagin, 1986; Labov, 1991, 1994; Labov, Yeager, & Steiner, 1972) shown in Figure 3 (again with arrows pointing from the old position to the new one), $/\alpha/$ is fronting (but not raising, as in the NCS), /a/ and /5/ are not moving, the onset of /ey/ is found in the $/\epsilon/$ position (or lower), and $/\epsilon/$ diphthongizes with its onset moved to the /ey/ position. This reversal is also found with /iy/ and /I/.

Acquisition of raised /x/, rather than a general or even specific loss of Southern Shift features, is considered in this study.

The Ypsilanti community

Ypsilanti is located in Washtenaw county, Michigan, approximately 30 miles west of downtown Detroit and 10 miles east of Ann Arbor. Ypsilanti Township, on the eastern side of Ypsilanti, was the site for the Willow Run bomber plant, built by Ford Motor Company in 1941. Ford Motor Company recruitment programs and word-of-mouth drew many southerners to work in the plant in the early part of the 1940's. Of the 207,000 white Americans who migrated to the Detroit–Willow Run region between 1940 and 1944, 83,930 came from the states of Kentucky, Tennessee, Alabama, Mississippi, Ohio, Indiana, Illinois, and Wisconsin (Carr & Stermer, 1952:48). Because of poor economic conditions in the South, the migra-



FIGURE 3. The Southern Vowel Shift (adapted from Labov, Ash, & Boberg, 1997).

tion north continued after the war. Willow Run continued to operate under new management, although for automobile manufacture rather than B-24 bombers. Because most people settled near the plant, located on the east side of Ypsilanti, and because all Ypsilanti inhabitants were aware of the presence of southern migrants, that part of the community has become known as "Ypsitucky." The salience of Appalachians, demonstrated by the label "Ypsitucky," makes "Appalachian" available to these community members as an identity marker 40 years after the mass migration of southerners.

Treatment of social network and linguistic variation has not been carried out in settings where dramatically different dialects are in contact. Ypsilanti is especially interesting, because the details, including historical ones, of the two dialects and their own ongoing internal changes are so well-known, as shown in the characterizations of the Northern Cities Chain Shift and the Southern Chain Shift. In fact, the results of the present study suggest that the effect of social network may be more powerful than status in predicting dialect acquisition in this community. This study is one answer to de Bot and Stoessel's (2002:3) complaint that "there is very little, if any, quantitative support for a direct relation between social-network characteristics and language use."

This study aims to explore the speech of members of the migrant group to ascertain whether they have acquired a particular feature of the local dialect and whether their linguistic behavior is influenced by their network affiliations. The hypothesis is the following: The migrant inhabitants and their children whose social network ties are dense and multiplex (Milroy, 1980) will not have accommodated or will have accommodated least to the local norm (the NCS).

Index for mean score of /æ/ F1				
T-test result	Score			
Significantly greater than /E/	1			
Not different from /E/	2			
Significantly less than /E/	3			
Greater than ϵ / but closer to /I/	4			
Not significantly different from /I/	5			

 TABLE 1. Index scores assigned for rating F1

 means of /æ/

METHODS

Respondents

Twenty-eight respondents (17 females and 11 males, ranging in age from 28 to 81) were recruited at the Ypsilanti Township Adult Education Center, Ypsilanti City and Township community centers and churches, and through friends of friends. The Appendix shows each respondent's pseudonym, sex, age, age at migration to Michigan, which state she/he migrated from, her/his relationship to other respondents, socioeconomic status, and Appalachian integration score (explained below). Eight respondents were born in Michigan. Some of the respondents belong to the same family and some are related by marriage. The respondents in this study who were not born in Ypsilanti came from southern states (mostly Kentucky) between the 1940's and 1960's. All of these respondents indicated that they came to be in Ypsilanti for employment reasons (for themselves, their parents, or their spouse).

Analysis of recordings

Vowel formant frequencies of word list data were obtained using a Kay Elemetrics Computer Speech Lab model 4300B. Measurements were taken from the steady state of the onset of each vowel.¹ Formant frequency data was normalized using Plotnik.² To detect any divergence from a nonshifted vowel, an index system was used that allows for the quantification of the position of each vowel relative to other vowels in the individual's system. Such index scores can show discrete differences, visible only within individual systems, which are lost when only vowel formant data are analyzed (Evans & Preston, 2000). Index score assignment involves identifying a stable vowel, and comparing it to a vowel whose position may have changed. Because $/\varepsilon/$ is said to change only in later stages of the NCS, as shown in Figure 2, it was chosen as a stable vowel for comparison with $/\alpha/$. *T*-tests were performed on the normalized mean scores of these and other such pairs of vowels. According to the *t*-test results, a vowel was given a rating indicating its position relative to a stable vowel in the system. For

Respondent	F1 Mean	Index Score	
Laura	788	2	
Darcy	734	2	
Barbara	698	1	
Anna	657	1	

TABLE 2. Comparison of index and F1
normalized mean scores of /æ/ for four
respondents

example, in the case of $/\alpha$ /, if the mean F1 of $/\alpha$ / is significantly greater than $/\epsilon$ /, then it was given an index score of one, indicating that it is "lower" than $/\epsilon$ / or "unraised." If the mean F1 score of $/\alpha$ / is not significantly different from $/\epsilon$ /, it was given an index score of two and so on (see Table 1).

Table 2 demonstrates how index scores can reveal the relative position of a vowel, whereas the actual formant frequency means (even normalized ones) may be misleading. For example, Laura and Darcy have greater F1 scores for $/\alpha$ / than Barbara and Anna. This leads to the erroneous conclusion that Laura and Darcy have a lower $/\alpha$ / than Barbara and Anna, but *t*-tests on each respondent's $/\alpha$ / and $/\alpha$ / mean scores reveal that Barbara and Anna have a lower $/\alpha$ / (see Table 2) than Laura and Darcy, who have a slightly raised $/\alpha$ /. Index scores, therefore, are used for the statistical analysis of variables and subsequent interpretation and discussion of the results. The index scores and normalized mean scores were then analyzed using appropriate statistical procedures to determine any significance of the independent variables.

Appalachian integration score

Following Milroy (1980:141), a numeric calculation of each respondent's network was made. Throughout the interview, the respondents gave information pertaining to their friends, family, and coworkers. This information was used to calculate the density and plexity of the respondent's network. Respondents received points for having substantial kinship ties and coworkers in the community. Information about the respondent's social network was also collected overtly in the interview. Each was asked to indicate approximately what percentage of their friends and associates were from the South. For example, respondents reporting that 100% of their friends were Appalachian received five points, and those reporting that 0% of their friends were Appalachian received zero points.

Thus, the Appalachian integration score (0 =lowest, 19 = highest), parallel to Milroy's social network score, was obtained for each respondent by combining the points for percentage of Appalachian friends (0-5) and the points for density and plexity (0-5) of network. The resulting Appalachian integration score for each respondent is shown in the table in the Appendix.

respondents				
Index score	/æ/ F1	/æ/ F2		
1	19	9		
2	9	15		
3	0	4		

 TABLE 3. Index scores assigned to Ypsilanti respondents

RESULTS

Because fronting of $/\alpha$ / (a greater F2 mean score than found in older systems) is a characteristic of the Southern Shift, this feature in these respondents' data cannot be attributed to the NCS with any confidence. Therefore, only F1 of $/\alpha$ /, a feature of the NCS but not the Southern Shift, is examined. The results of the index score assignment for F1 of $/\alpha$ /, as described previously, are shown in Table 3. Nineteen of the 28 received an index score of 1 for F1 of $/\alpha$ /; that is, these respondents did not demonstrate any evidence of a raised $/\alpha$ / as is found in the NCS. Nine of the 28 received a 2 for F1 of $/\alpha$ /, that is, they have an F1 for $/\alpha$ / that is not significantly different from /E/ and is attributed to influence of the NCS.

Figure 4 provides an example of a respondent with index scores of 1 for F1 and F2 of $/\alpha$ /. George is a 46-year-old male who was born in Ypsilanti. His mean score for F1 of $/\alpha$ / was significantly lower (as determined by a *t*-test) than that for $/\epsilon$ /. In addition, the positions of his mid vowels, /e/ and $/\epsilon/$, were reversed as in the Southern Shift (Figure 3). In short, George does not possess features of the NCS.

Brenda, on the other hand, had an index score of 2 for F1 of /æ/. Her mean score for F1 of /æ/ was not significantly different (as determined by *t*-tests) from / ϵ /, as can be seen in Figure 5. Moreover, a comparison with Figure 1 shows that even the position of /a/ in Brenda's vowel system was more front (i.e., has a greater F2) than / Λ /, a feature of the NCS (see Figure 2). Brenda, also born in Michigan, did not exhibit features of the Southern Shift, but did show influences of the NCS.

A statistical analysis of these index scores was necessary to capture any significant patterns among the vowel position scores and other variables. An analysis of covariance (ANCOVA) was conducted to test the relationship of $/\alpha$ / F1 index scores with sex, socioeconomic status, age, and Appalachian integration, and to test for any interactions that may exist among the independent variables (IVs). An ANCOVA was chosen because it allows for both continuous and categorical variables in the model. The first step in the analysis was to test if any interactions among the IVs existed. All interactions were not significant at p < .05, therefore, the interactions were left out of the final model. The final



FIGURE 4. Results of acoustic analysis of data from respondent George.



FIGURE 5. Results of acoustic analysis of data from respondent Brenda.

model tested for the main effects of socioeconomic status, sex, age, and Appalachian integration. The model itself was significant (df = 4, F = 5.32, and p < .01). The IVs sex (p < .05) and Appalachian integration (p < .05) were the only significant contributors to the model. Each IV was also tested separately against $/\alpha$ / F1 index scores with the appropriate statistical analysis. These results are what follows.

Sex

Women have been found to be "leaders" of linguistic change in many variation studies (Labov, 1994). This pattern has also been found in NCS. For example, Eckert (1989) found that female respondents in suburban Detroit had more raised tokens of $/\alpha$ / than the males. Ito (1999) also found that female rural Michigan respondents lead in the use of raised $/\alpha$ / tokens. Therefore, it was expected that the women in this group would have higher F1 and F2 index scores than the men. The result of a chi-square analysis of sex and $/\alpha$ / F1 index scores showed that the difference between men and women was significant ($\chi^2 = 4.41$, df = 1, p < .05) with regard to $/\alpha$ / raising. A higher percentage of women (47% of women vs. 10% of men) received an index score of 2 for $/\alpha$ / F1; that is, $/\alpha$ / of 47% of the female respondents was not significantly different from $/\epsilon$ / in height. As expected, it appears that more women than men are raising $/\alpha$ / in this group.

Socioeconomic status

A chi-square analysis of $/\alpha$ / and socioeconomic status showed that the difference between the working-class and middle-class respondents was not significant ($\chi^2 =$ 1.47, df = 1, p > .05). The division of these respondents into only two social classes, middle and working, may have concealed discrete differences among them (Labov, 2001:31), however, the social structure of this group, originally working-class, did not allow for the addition of a large enough set of uppermiddle-class respondents for comparison.

Appalachian integration

A Pearson correlation analysis was conducted to determine whether the Appalachian integration score was significantly correlated with $/\alpha$ raising. A significant negative correlation for social network and F1 score was found (-.617, p =.001). That is, the higher the Appalachian integration score (indicating tighter networks), the lower the F1 index score. Figure 6 shows the trend indicated by the negative correlation; the respondents who received an index score of two (i.e., those who raise $/\alpha/$) had lower Appalachian integration scores than those who received an index score of one. Those respondents who had the highest Appalachian integration scores, that is, those respondents with the tightest Appalachian social networks, received an index score of one. It follows, therefore, that a tight Appalachian social network in Ypsilanti serves as an inhibitor to adopting features of the NCS. This result is consistent with the hypothesis that members of tight Appalachian networks will not have acquired /æ/ raising. As described earlier, Milroy (1980) showed that membership in a tight social network serves as a norm enforcement mechanism and discourages adoption of features not associated with the group.



FIGURE 6. $/\alpha$ / raising according to Appalachian integration score.



FIGURE 7. /æ/ raising according to age.

Age

With regard to the age of a respondent and $/\alpha/F1$ index scores, a Pearson correlation analysis was inconclusive, but Figure 7 shows that the majority of the older respondents received an F1 index score of 1. Nevertheless, those respon-

Respondents with an Index Score of 2	Age	Age at Migration	Respondents with an Index Score of 1	Age	Age at Migration
Shelly	28	born in MI	Rav	31	born in MI
Mark	28	born in MI	Joe	38	born in MI
Brenda	34	born in MI	Steve	45	4
Laura	40	born in MI	George	46	born in MI
Colleen	48	3	Carol	48	3
Darcy	50	6	Marion	52	8
Elizabeth	59	born in MI	Barbara	53	20
Julia	59	18	Keith	56	11
Rita	68	16	Frank	58	20
			Jane	59	7
			Martha	60	20
			James	66	22
			Rita	68	16
			Wilbur	69	15
			Anna	70	19
			Vera	75	18
			Edna	76	30
			Mae	79	27
			Howard	81	19

TABLE 4. Age and age of migration of respondents

dents who received an index score of 2 range from age 28 (the youngest respondents in the study) to age 68. One might assume that age of acquisition might be a more powerful predictor than age at the time of investigation. Table 4 shows the respondents' age in years at the interview and age at migration. If it is assumed that being born in or early arrival in Michigan gave a respondent an advantage for learning local norms, comparison of the respondents who received an index score of 1 with those who received an index score of 2 indicated that this is not always the case. Three respondents who were born in Michigan and even some who arrived in Michigan before age 16 received an index score of 1. It seems that age is not as reliable a predictor for acquisition or lack of acquisition of NCS features among Ypsilanti Appalachians as network, or sex.

Social network, however, did correlate with age, suggesting, perhaps, that a wider sample of more diverse age and network patterns might reveal independent significance for both. When social networks and age were analyzed, with a Pearson correlation analysis, they were found to be positively correlated (r = .4, p < .03). That is, the higher (older) the age of the respondent, the higher (tighter) the Appalachian integration score. Older respondents had tighter Appalachian social networks and perhaps older respondents were less likely to demonstrate NCS features simply because of their age rather than their tighter Appalachian social networks, but a larger sample would be necessary to confirm this.

CONCLUSION

In summary, only 9 of the 28 Ypsilanti respondents possess $/\alpha$ raising. Results of the statistical analysis of Ypsilanti respondents' index scores for $/\alpha$ / show that sex and Appalachian integration are the most important factors with regard to $/\alpha/\alpha$ raising.

Age, although it positively correlated with the Appalachian index score, was also not significantly correlated with raising, but more data from a wider variety of respondents would be required to reach a conclusion about the differences resulting from age on the basis of age of acquisition, as well as age at the time of investigation, and its possible interaction with the Appalachian integration score.

These Appalachian migrants certainly would have benefited from assimilating linguistically and socially to the local norms. Documentation about Willow Run exemplifies the prejudice against southerners that existed. Carr and Stermer (1952) described the events surrounding the establishment of the Willow Run bomber plant: "Later because of recruiting by the [Ford] plant, hillbillies from Kentucky, Tennessee took over second place [in number of migrants] and incidentally became 'problems' to the natives" (1952:41). Even the authors, who were sociologists, describe the migration as an "invasion" of "hillbillies" (1952:41). Evidence from folk linguistics indicates that the status of Appalachian speech and culture does not fare much better today (Preston, 1996). However, as the results above indicate, over half of these respondents, in spite of the social repercussions, do not possess an important feature of the local speech norm. Therefore, it is striking that Appalachian integration had more influence on maintenance of Appalachian speech features than socioeconomic status. Socioeconomic status has been a meaningful variable in sociolinguistic research and has been found to be significant in a multitude of studies. It is surprising, therefore, to find that Appalachian integration is not simply an addendum to, but has more explanatory value, than socioeconomic status in this study.

As Milroy (1980) showed in Belfast, these results show the importance and relevance of social network relations in explaining the different patterns of use of the local norm in this group. Appalachian integration helps us understand the different patterns demonstrated by Ypsilanti respondents who lived in Ypsilanti from a very young age who did not demonstrate /æ/ raising, such as George (see Figure 4), Ray, and Joe (see Table 4), and those who did demonstrate $/\alpha$ /raising, such as Shelly, Mark, and Brenda (see Table 4). These results call for more exploration of the complexities and influence of social network and socioeconomic status.

NOTES

 Only the raising and fronting of the onset is treated here.
 Plotnik is a program developed by William Labov at the University of Pennsylvania, which includes the normalization system developed by Neary (1977).

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Respondent	Sex	Age	Age at Migration (year)	Home State	Relationship to Other Respondents	Socioeconomic Status (score)	Appalachian Integration Score
Anna	F	70	19 (1947)	KY		W (58)	7
Barbara	F	53	20 (1966)	KY		M (34)	5
Brenda	F	34		MI	Daughter of Frank	M (45)	2
Carol	F	48	3 (1954)	AL		M (42)	2
Colleen	F	45		MI	Wife of Steve	M (34)	1
Darcy	F	50	6 (1955)	KY	Mother of Mark	M (31)	2
David	М	24	68	WV		M (49)	5
Edna	F	76	30 (1953)	KY		W (52)	8
Elizabeth	F	59		MI		W (50)	4
Frank	М	58	20 (1961)	KY	Father of Brenda, Shelly, and Joe	W (58)	4
George	М	46		MI	-	M (48)	7
Howard	М	81	19 (1937)	IL		W (55)	5
James	М	66	22 (1955)	TN	Husband of Martha	W (54)	9
Jane	F	59	7 (1947)	KY		M (40)	4
Joe	М	38		MI	Son of Frank	W (54)	5
Julia	F	59	18(1958)	KY		M (48)	4
Keith	М	56	11 (1954)	WV		W (51)	5
Laura	F	40		MI	Daughter of Jane	M (40)	1
Mae	F	79	27 (1947)	KY	-	M (45)	3
Marion	F	52	8 (1955)	KY	Mother of Ray	W (59)	4
Mark	Μ	28		MI	Son of Darcy	M (48)	1
Martha	F	60	20	TN	-	W (54)	9
Ray	М	31		MI	Son of Marion	W (53)	3
Rita	F	68		MI		W (52)	2
Shelly	F	28		MI	Daughter of Frank	W (56)	3
Steve	М	45	4 (1959)	MS	Husband of Colleen	M (49)	4
Vera	F	75	18 (1942)	MO		M (35)	1
Wilbur	М	69	15 (1945)	KY		W (52)	6

A P P E N D I X List of respondents