

INTEGRATING SURVEY DATA WITH ARCHIVAL DATA: DEVELOPING A DYNAMIC
MODEL OF URBAN NEIGHBORHOOD CHANGE

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This paper sets forth a methodology for combining survey data with existing files of archival data. The importance of this technique to researchers is that it allows cross-sectional surveys to be merged with longitudinal data files. With cross-sectional longitudinal data the investigator can more fully specify models that seek to describe dynamic phenomena. Combining micro-level survey data with archival data over time permits aggregation on either an areal or temporal basis, thus providing some relief from the problems of cross-level bias and aggregation bias.

This paper illustrates this process by presenting a dynamic, micro- and macro-level model that measures trends in neighborhood evolution that might not be as readily apparent from macro-level data alone. The data base was developed from a survey of households in 24 neighborhoods. This data base has also been merged with archival records of housing title ownership changes.

The purpose of this paper is to develop and validate a relatively simple and inexpensive procedure for classifying urban neighborhoods that manifest different stages and rates of decline, revitalization or stability. It is clear that one of the major thrusts of this national urban policy is to stimulate the enhancement of the quality of life in urban neighborhoods. Prerequisite to any systematic and well-designed strategy for community development is an understanding of the factors that have affected change in specific neighborhoods. The procedures to be explored will provide suggestions to federal agencies, local governments and/or neighborhood organizations by describing exactly what has occurred over time in a given neighborhood and by identifying some of the factors that might help inhibit decline and enhance revitalization.

Background

While traditional urban growth theories (concentric zone theory, sector or wedge theory and dual migration theories) predict the eventual decline and decay of central-city neighborhoods, there is some evidence from a number of cities that tends to support the thesis that certain neighborhoods are revitalizing. Some observers cite areas such as Bolton Hill in Baltimore, Georgetown in Washington, D.C. and Inman Park in Atlanta as products of successful revitalization efforts. However, there is no widely accepted, precise definition or measurement of revitalization.

We presently know some of the factors influencing the desirability of certain neighborhoods. Yet neighborhood change is, to a very large extent, influenced by social and organizational factors that are not easily employed in

macro-level analyses. While recognizing the importance of macro-level factors, our purpose here is to develop a procedure useful in examining neighborhoods within any given regional context.

Previous efforts to classify neighborhoods have relied heavily on aggregate data, usually census tract data. Such efforts have failed to provide information precise enough to be useful in policy-making processes. These efforts have failed due to the insensitivity of aggregate models. The method used here will employ a dynamic, micro-level analysis much more sensitive to measuring smaller increments of change, thus permitting a detection of trends in neighborhood evolution that would not be apparent in analyses of aggregate data. This procedure will focus upon micro-level economic data which are used as indicators of the underlying social and cultural factors influencing neighborhood change.

This type of analysis is fraught with methodological problems, such as spatial autocorrelation (Cliff et. al., 1975). These difficulties make it necessary to proceed with caution when building a cross-sectional model. However, the important policy question concerning neighborhood change demands the highest quality data plus quantitative analysis that is both robust and efficient given the potential impact of major governmental policy decisions (or non-decisions). Data gathering thru survey research is both expensive and time consuming so that most previous research in neighborhood change has been done with macro-level data such as census information (see for instance Cannon, Lachman and Bernhard, 1977). The question of where redevelopment officials should apply effort is often made with little systematic data or analysis. Static models of neighborhood relative status may be useful as case studies (Cybriwsky, 1978), but neither can supply dynamic information for macro-level inferences. Research conducted from aggregated public data filters out such people concerns as crowding, neighborhood decay, crime, and racial tensions or social segregation. The purely macro-level research lacks insight into the attitudes, anxieties and behavioral processes that shape urban patterns.

A recent study by Meadows and Call (1978) proposed and partially tested "the usefulness of combining spatially disaggregated data on residential property value appreciation with resident attitudes as an instrument in planning neighborhood revitalization" (p. 297). They found that resident attitudes and housing market value are "broadly consistent." Additionally, the authors concluded that combining the two types of data "provide additional insight" and "illustrates the general complementarity of these two planning analysis tools." However, while this analysis is disaggregated from the city level, their data did not allow them to investigate the vital micro-level

of the individual home owner.

The purchase of a residence is to a great extent concurrently acquiring a neighborhood of certain social and physical attributes, a spatial location with access to jobs, shops and recreation, and also to receipt of municipal services (Muth, 1969). Other studies (e.g., Meadows, 1976) have shown that housing buyers care about the nonstructural attributes of housing and their concerns are reflected in where they move and how much they are willing to pay. These static factors are not able to explain change, and it is the hope of this micro-level study to be able to address this vital aspect of the problem of neighborhood change.

Leven et al. (1976) have published an extensive theoretical and empirical study of the dynamics of urban change. The authors argue that two dimensions of the factors in owning a residence are most susceptible to rapid change: 1) prestige of the neighborhood, and 2) quality of local services. Housing values are surely an important propelling influence in the dynamics of neighborhood change.

Given this research and the purpose of the study, the research question addressed is: which neighborhoods are either declining, stabilizing or revitalizing and what are some of the local institutional factors influencing stability or change? The method will involve relating longitudinal data on housing ownership changes to various social, political and economic attitudes of the occupants. Data for 24 neighborhoods and over 7,000 respondents will be related to ownership changes for 5 years.

There are several limitations to this study, some of which are obvious and some more subtle. Any attempt to measure social change must be loaded with caveats. Much change is brought about by impersonal social and economic forces little understood by the residents of a given neighborhood (or even by social researchers). It may often be the case that when a neighborhood experiences physical upgrading and higher socio-economic standing, the change may well be perceived by many residents as a decline in quality of life because of the changing social structure of a neighborhood. The corollary to this is that many residents might not perceive a decline in the physical condition of a neighborhood as indicative of quality of life decline. It is hoped that some aspects of this can be addressed by this paper. Thus this study will probe social dimensions of change as well as more objective economic factors.

METHODS

Data Bases

The survey component of the data comes from a survey of 7,079 households in the City of Atlanta and in Fulton County conducted in mid 1976. The survey instrument contained over 400 items and was administrated by paid, full-time

interviewers who were trained in survey research. Each household in the given area had an equal probability of being selected. This survey asked a number of questions concerning the respondents opinion about their neighborhood and satisfaction with it as a place to live. From this sample a subsample was developed which focused upon those residents of the City of Atlanta in Fulton County who responded that they owned their residence. As previous research noted, homeowners are those people who would generally see a direct impact of local government policies through their property taxes (Wilson & Banfield, 1971). There were 2,964 respondents who fell into this category.

The archive data base was developed from property title changes recorded in the county's court clerk's office. These records indicate date of title change, plus purchase price, mortgage amount and similar information. Various reporting services compile this information and it is available in a form sorted by the house's street address number. Using the house number of the survey respondents and comparing it with title changes over the period of time since the survey, a match of houses in the survey that have since been sold (i.e., title changed) was done.

It was found that among the 2,964 homeowner households in the 1976 survey that 234 had title changes by 1978. It appears to be safe to say that title change indicates that it was highly likely that the respondent moved. In this paper it is assumed that title changes does indicate a move when a "true value" sales price was indicated and the new title holder has a different name from the old one.

Analysis Procedure

The information that a title change has taken place and the data were cross classified with the respondent of the household's answers to such questions as: years at present address, did they consider moving to some other local area before moving to their present address, opinions about local government services, opinions about the neighborhood, and the likelihood of moving in 5 years. To do an initial check of the feasibility of this rationale a table was constructed that compared those homeowners' response to the question: "How likely is it that you will move from your current address in the next five years?" with title change status (Table 1). This table shows that 23% of those saying "very likely" had a title change while only 5% of those indicating "very unlikely" had title changes. This supports an interpretation that the intention to move is associated with actually moving even after only two years.

The data was analyzed on the smallest possible level of analysis. This was the Neighborhood Planning Unit (NPU) which were established by the city as basically homogeneous areas traditionally seen as comprising similiar physical and social boundaries. Figure 1 is a map of the NPU's.

The individual level data was thus analyzed at the NPU level. Comparisons were made on those who had moved in the 2 year period versus those who had stayed. A summary of the information is presented in Table 2. The general economic standing of the NPU's can be readily ascertained by the median sales price of those respondents having a title change since being interviewed. The northside NPU's show higher sales prices with exception of NPU's in the extreme southwest corner of the city.

Years at Present Residence

The question--"How long have you or anyone in this household lived at this address"--should be a sound measure of neighborhood stability. The NPU's that exhibited higher median for years at address of those moving than those staying were P, S, and Z--all three of which are in the southern part of the city and have experienced considerable racial transition. For instance, in NPU's the movers had a median of 23 years compared to the stayer median of 7 years.

Considered Other Areas

This question concerns whether the respondent had considered moving to any other area in the metropolitan city before moving to their present address and it was only asked of those who had been living from one to seven years at their present home. In most NPU's the movers have indeed considered moving to some other part of the metropolitan area with the exception of NPU's R, S, T, W, and Z where the movers had not indicated consideration of other areas. These NPU's, it should be noted, are all to be found on the southern boundary of the city.

Opinion of Public Services

This question about public services shows some indication that those who perceive public services to be getting better are less likely to move while those responding that services are getting worse are more likely to move. This finding suggests a possible area where policy intervention could increase neighborhood stability.

Satisfaction with Neighborhood

The respondent answer to this inquiry appears to be systematically related to a tendency of those dissatisfied with the neighborhood being more likely to have moved. This neighborhood satisfaction item is a measure of neighborhood prestige that agrees with Leven et al's contention that neighborhood satisfaction and public service satisfaction are most susceptible to rapid change. Perhaps this explains why some NPU's show satisfied respondents moving.

Likely to Move Within Five Years

As noted previously those who responded that they were likely to move within the next five years tended to indeed be more likely to move than

those responding "very unlikely." When broken down by NPU, this relationship becomes even stronger for the very likely group. Moreover, those very unlikely to move show this same tendency in reverse, where those responding "very unlikely" are less prone to move.

Like Neighborhood

In most cases those respondents who like their neighborhoods very much are less likely to move, with the exceptions of NPU's H (western boundary) and M (central business district). Not liking the neighborhood very much is not a very systematic indicator of moving or staying. The relative insensitivity of this question to moving status perhaps indicates it is not tapping the fundamental dimension of what a neighborhood means to homeowners.

Friends in the Neighborhood

For those respondents who said that all their friends were in their present neighborhood, moving or staying varied unsystematically. This pattern held for the few, hardly any, and none categories. It is surprising that friends do not have a strong influence on staying or moving but perhaps with ready residential transportation, proximity is not a vital concern influenced by friendship ties.

Neighborhood Getting Better/Worse

This question is one that hopefully would probe the underlying psyche of home owners. However, in 10 of the 20 NPU's a higher proportion of those who moved stated the neighborhood is getting better compared to the remaining. On the other hand, responding that the neighborhood was getting worse did not indicate a very strong tendency to move. This quirk in the data suggests that general questions about friends in the neighborhood or of getting better/worse do not tap the underlying composite housing bundle of simultaneous social and personal orientations toward a neighborhood.

Afraid to Walk at Night in Neighborhood

Meadows and Call (1978) in the aggregate data study used this question about fear: "How safe do you feel walking around your neighborhood alone at night?" The Atlanta Survey has this question: "Is there any area right around here--that is, within half a mile--where you would be afraid to walk at night?" Meadows and Call conclude that "it is clear that respondents living in the weaker housing market areas were twice as likely to view their neighborhood as 'unsafe'" (p. 302). The Atlanta data follows a similar pattern, but this aggregate finding is only a part of the relationship. The importance is: Does this attitude influence the composite attitude--home owning--to the extent of resulting in moving. Here again, the findings are more ambiguous. Perhaps an answer is that certain neighborhoods became rapid-

ly unstable since the survey in 1976. On the other hand, maybe it is just an indication that these questions lack the necessary qualities to truly probe fundamental feelings about neighborhoods. An additional factor could be that respondents could not or even did not want to predict their neighborhood would decline--a sort of false optimism.

CONCLUSIONS

The purpose of this paper was to merge survey data with archival records on property title transfer to explore the possibility of building a model of neighborhood change. The study used individual household level data on homeowners. Attitudinal items were cross-classified by whether a title change had taken place in the two years since the survey and also by neighborhood planning units (NPU). This data was both cross-sectional, spatial and longitudinal. The exploratory data analysis was done on the merge data sets.

The findings were that long-term residents moving was probably a sign of neighborhood unstableness. An important point for policy makers was that those who thought public services were getting better were less likely to move than those who thought they were getting worse. Those respondents who answer they were likely to move did tend to move more than those saying they would not likely move.

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TABLE 1
INTENT TO MOVE BY CHANGE OF TITLE:
HOW OWNERS IN THE FULTON COUNTY PORTION OF ATLANTA
(N=2,964)

	TITLE CHANGE: JUNE, 1976 THROUGH MAY, 1978		
How likely is it that you will move from your current address in the next five years?	%No Title Change	% Title Change	N
Very Likely	77	23	268
Somewhat Likely	86	14	187
Probably Will Not	94	6	699
Very Unlikely	95	5	1,620
Don't Know/No Answer	92	8	190
N	2,730	234	2,964

TABLE 2
SUMMARY TABLE OF COMPARISON OF RESPONSES WITH PROPERTY TITLE CHANGE STATUS FOR NPU'S

NPU	Median Sales Price	Median Years at Address	Other Areas Yes (%)	Public Service Getting Better		Satisfied Neighborhood			Likely Move Five Years			Like Neighborhood Not V. Much		Friends in Neighborhood Hardly				Neighborhood Getting Better		Afraid No
				Worse	V. Sat.	Dissat.	V. Dis.	V. Likely	Somewh.	V. Unlike.	V. Much	V. Much	All	Few	Any	None	Better	Worse		
A	\$121,900	10	32	29	6	10	10	4	10	9	49	86	5	11	19	26	13	19	9	45
Stay Move		5	40	50	0	0	13	13	38	25	38	75	0	13	38	25	25	25	0	14
B	\$57,844	13	43	37	5	20	12	0	12	12	55	93	1	15	41	14	2	26	6	54
Stay Move		8	67	24	3	12	10	3	38	21	21	96	0	0	52	16	0	44	4	52
C	\$65,000	15	38	32	4	10	8	7	10	21	46	97	0	16	37	20	3	20	6	52
Stay Move		8	60	22	0	18	9	9	45	25	38	100	0	9	36	9	0	18	9	54
E	\$34,220	15	30	20	7	12	9	1	18	9	61	90	2	17	40	13	2	40	10	28
Stay Move		11	75	13	0	5	11	0	15	15	40	90	5	20	50	10	5	58	0	40
F	\$38,300	17	40	23	2	11	8	3	17	8	53	92	2	14	36	14	7	43	10	35
Stay Move		6	50	19	6	12	12	6	50	28	5	83	11	6	76	0	6	35	12	47
G	\$16,400	12	0	11	16	6	20	4	4	8	56	70	8	10	39	19	4	20	18	37
Stay Move		5	0	0	17	0	40	0	17	0	50	67	17	0	29	14	29	17	33	29
H	\$27,000	11	15	15	16	6	11	4	6	1	77	80	4	8	29	26	8	17	14	51
Stay Move		9	67	33	22	0	45	0	9	9	55	100	0	0	20	20	0	18	0	36
I	\$36,800	10	20	17	8	5	9	1	2	4	65	80	3	9	30	15	4	17	9	48
Stay Move		9	33	14	0	0	13	0	0	25	38	89	0	22	11	11	22	13	0	33
J	\$16,500	13	4	9	14	2	14	2	5	3	66	69	6	23	36	15	5	26	13	45
Stay Move		10	50	40	20	13	50	0	57	0	43	38	63	0	13	38	25	50	13	38
K	\$23,850	20	12	5	12	2	10	1	2	3	67	73	2	23	30	19	2	19	15	55
Stay Move		13	50	0	0	0	0	0	0	0	100	50	0	25	25	50	0	50	13	25
M	\$4,300	21	50	11	13	7	10	3	2	0	48	75	3	31	22	15	3	12	14	23
Stay Move		14	100	0	0	0	0	0	0	0	50	100	0	0	100	0	0	0	0	0
N	\$29,750	15	17	10	13	3	7	0	7	4	62	63	7	17	41	20	2	33	15	30
Stay Move		11	100	17	100	0	0	0	20	20	40	33	17	0	30	0	17	33	17	17
P	\$32,000	10	25	14	11	4	10	0	7	8	55	88	2	14	37	24	5	19	8	54
Stay Move		14	50	16	16	4	21	4	25	8	50	80	4	12	36	28	8	0	14	75
R	\$19,000	6	21	18	10	1	11	2	6	4	53	61	9	9	31	39	5	7	26	41
Stay Move		7	0	0	0	0	0	0	20	0	70	36	9	0	64	18	0	0	27	30
S	\$8900	7	20	10	10	2	7	4	11	1	70	63	7	15	32	19	3	13	23	29
Stay Move		23	0	0	0	0	25	0	25	0	50	50	0	50	25	0	0	0	27	67
T	\$15,900	21	11	4	19	8	11	1	8	10	57	64	13	22	28	17	1	29	17	31
Stay Move		7	0	0	25	0	33	0	0	0	0	25	25	25	75	0	0	0	100	25
V	\$11,500	10	11	6	6	6	3	0	8	5	53	68	0	23	30	19	2	16	21	30
Stay Move		9	14	25	13	7	7	0	29	21	50	92	0	14	29	7	43	38	0	46
W	\$22,000	9	7	6	5	12	4	0	10	6	48	71	6	3	34	19	4	9	0	46
Stay Move		8	0	14	7	19	6	6	53	6	27	73	13	19	56	13	6	15	29	29
Y	\$13,000	15	0	19	17	1	12	0	8	6	63	75	6	20	45	14	2	16	31	26
Stay Move		15	0	0	0	20	0	0	0	0	100	60	0	0	20	20	40	40	20	40
Z	\$21,400	6	11	25	19	7	5	1	10	4	7	80	7	12	41	24	5	21	16	52
Stay Move		11	7	24	18	8	8	4	20	0	55	57	13	8	46	25	4	25	29	61

Note: Answers are percentages of those responding.