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ABSTRACT

THE ECONOMIC IMPACT OF MULTIPLE UNIT PUBLIC HOUSING ON OCCUPANTS, PROXIMATE NEIGHBORS AND PUBLIC SERVICES

By

Kenneth Walter Steen

The procurement of multiple unit public housing stems from the intent of national housing policy, to provide "a decent home and suitable living environment at rents the poor can afford." Past and present failures lead to the belief that increased knowledge of the costs and benefits will increase the probability of achieving the desired goals of multiple unit public housing. The decision maker, through his policy choices of size, location, design, maintenance, and management alters the magnitude and incidence of costs and benefits. Presently however, the costs and benefits of multiple unit public housing are little understood with regard to who is affected and the direction of impact (i.e. whether those affected are receiving costs or benefits).

This study is an empirical examination of the impact of three multiple unit public housing projects in Lansing, Michigan, on occupants, proximate neighbors, and public

services. The projects are located in primarily single family home communities. Through responses to questionnaires from these three groups, insight into various perceived costs and benefits is obtained. Suggestions regarding possible changes in the decision maker's above mentioned policy choices provide insight into how these implied costs and benefits may be expected to change; thus, improving the decision maker's ability to make more informed choices among available policy alternatives.

The specific goals of multiple unit public housing are left to the decision maker. However, if the goals involve occupants, proximate neighbors, or public services, the contents of the study are relevant.

The study compares the occupants' present public housing residence with their previous residence in terms of a "decent home", a "suitable living environment", and relative rents. Proximate neighbors offer opinions with regard to the affect of the public housing complex on neighborhood property values and neighborhood "living environment." An empirical assessment of the affect on elementary public schools serves as an example of possible impacts on public services.

There was wide agreement among occupants that the direct housing services of their public housing residence was preferable to their previous residence. Direct housing services include size and conditions of house, plumbing and

bathroom facilities, major household appliances, furniture, and health related items. The occupants were not in general agreement on whether or not indirect services were improved. Indirect services include schools, parks, neighbors, child care, transportation, congestion, noise, privacy, trash disposal, and personal safety. In terms of numbers of respondents, the public housing residence was preferable in school, transportation and trash disposal services. The previous residence was preferable in the areas of congestion, noise, and privacy. The respondents were approximately equally divided on the remaining indirect services.

Forty-three percent of the proximate neighbor respondents felt the public housing complex had decreased the value of their property. The same percentage felt the complex had not affected their property values with the remainder having no opinion. Those perceiving a fall in property values generally estimated a decline of about ten percent of the property value. Between forty and fifty percent of the proximate neighbor responses also implied a negative impact on privacy, congestion, aesthetic values and schools from the public housing complex.

Four elementary schools contained children from the public housing complexes. Sixteen, eighteen, nineteen and twenty-seven percent of the total enrollment were children from the complexes. The addition of these children necessitated an increase in the number of teachers. Two of the

schools also received \$619,000 worth of capital additions. Given the impact on the schools it is perhaps somewhat surprising that school officials were not asked to participate in the decision of size and location of the public housing.

Through manipulation of size, location, design, maintenance, and management the decision maker can alter the impacts of multiple unit public housing. On the one hand, an attractive alternative to the occupants must be provided in order for them to choose to live in public housing and receive the benefits deemed desirable. On the other hand, the greater community, which ultimately decides the fate of public housing, must be satisfied with the results achieved. The study discusses various trade-offs implied by different policy choices and hopefully provides the decision maker with a better understanding of how to achieve the desired output from multiple unit public housing.

THE ECONOMIC IMPACT OF MULTIPLE UNIT
PUBLIC HOUSING ON OCCUPANTS, PROXIMATE
NEIGHBORS AND PUBLIC SERVICES

By

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One's work is the product of a countless number of historical events involving both the human and nonhuman. One could, I suppose, simply acknowledge the "Law of Nature" for his or her established level of accomplishments or lack thereof at any point in time and be done with it.

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CHAPTER I

INTRODUCTION, PROCEDURE AND BACKGROUND

Introduction

Reasons for Study

Since 1937 the federal government has allocated resources for the purpose of providing low cost housing to relatively low income groups.¹ Various federal, state and local programs concomitant with public and private institutions have been developed for this purpose. Unlike the private market, which presumably allocates resources primarily according to "dollar votes" and the "profit motive", the "public sector" relies mainly on intuitive judgments without the aid of "dollar votes" as a common denominator in carrying out economic decisions.² Profit prospects are the criteria for making "economic decisions" in the private sector. If the judgment is wrong, profits are not forthcoming and capital is dissipated. Public decisions as to whether and how much to appropriate and allocate often involve more complex criteria than profit.³ Because there are often multiple criteria, and weights among them differ among individual decision makers, and because quantification is difficult; decision makers find that they must draw on intuitive judgments to supplement quantitative information.

The extremely complex world of public economic decision making suggests that "intuition and judgment, generated by a lifetime of experience with simple systems that surround one's every action. . .,"⁴ are insufficient in developing policies which will achieve desired results in such complex systems. In the words of Professor Forrester:

In a situation where coincidental symptoms appear to be causes a person or government agency acts to dispel the symptoms. But the underlying causes remain. The treatment is either ineffective or actually detrimental. With a high degree of confidence we can say that the intuitive solutions to the problems of complex social systems will be wrong most of the time. Here lies much of the explanation for the problems of faltering companies, disappointments in developing nations, disappointments in low-income public housing, foreign exchange crises, and troubles of urban areas.⁵

The lack of knowledge concerning the social and economic impact of low income public housing as well as the large commitment of resources toward its provision has prompted this study. More specifically, more needs to be known about why multiple unit public housing often fails to obtain its objectives; and what human affairs management procedures offer hope of improvement. This study examines multi-unit public housing (hereafter also denoted MUPH), its institutional structure and the magnitude and incidence of the costs and benefits derived therefrom. The objectives of the study since its conception have been: 1) that the results will improve the ability of decision makers in the making

and carrying out of economic decisions concerning multi-unit public housing (MUPH); and, 2) that sufficient insight into the problem area will be developed so that more in-depth meaningful analyses may be conducted in the future. Considering the scope of the study and the time and budget restrictions, some of the examination is necessarily peripheral; thus the greater part of the analysis is concentrated on identifying who is affected, to what extent they are affected, and alternative courses of action.

Importance of Study

Billions of dollars have been and are being committed to the development of multi-unit public housing. Moreover, millions of human lives are directly affected by MUPH projects. With all of the adverse conditions (pollution, disease, disasters, poverty, ignorance, etc.) which affect the well being of mankind, it is important that we allocate our scarce resources efficiently and that we understand the returns to different groups from our social investments so we can choose what categories of inputs and outputs we wish to use for our efficiency calculations.

The direct costs of MUPH (e.g., site cost, development cost, construction cost, management and maintenance cost, etc.) can be readily determined. However, the indirect costs and benefits and the value of output--which are necessary in order to determine where to allocate our

resources and how to allocate them efficiently--are elusive figures indeed.

Dynamic computerized simulation systems promise to assist in the estimation of economic impacts due to changes in public policy. These systems unfortunately are only as good as the assumptions on which they are based. This study may be viewed as a very early prelude to a more sophisticated dynamic model. It attempts to identify and articulate some of the important characteristics and fundamental relationships which, when better understood may later provide data upon which such a model could be built.

The value of a better understanding of the social-economic impact of MUPH is clearly illustrated by the Pruitt-Igoe project in St. Louis. This project was considered to be one of the finest public housing facilities in the United States when it was built in 1954. In 1967 the Pruitt-Igoe project was described as,

'...the worst slum in the entire north half of St. Louis.' His, [the reporter's] story tells of the surrounding land being 'strewn with broken bottles, empty cans and piles of miscellaneous debris, of hallway floors filled with litter and overrun by rats and mice and bugs, of broken windows and inadequate heating, of vandalism by bands of roving youths, of 60% of the families without a male head.'⁶

In 1972, the Washington Post featured an article entitled, "Death of the 'City of the Future,'" which argued that MUPH had "...died in the agony of Pruitt-Igoe and its muggings,

rapes, vandalism and abandonment to the point where today only 700 of the 2,800 apartments are still occupied."⁷

Despite attempts by both the federal and local governments to remedy the many shortcomings of MUPH, there are still many deficiencies whose consequences appear rather regularly in major newspapers.

Housing is a relatively expensive durable good; thus, incorrect planning leads to a relatively large and long-term misallocation of resources as typified by the Pruitt-Igoe project. The greatest loss of resources may be the waste of potential productive individuals due to the adverse environment within which they are forced to live. These possibilities suggest a "look before we leap" attitude may be in order concerning the development of MUPH projects.

What is society attempting to procure with the development of MUPH projects, i.e., what is the output? What are some of the indirect costs and benefits, and what is their incidence? This study attempts to provide some insight into these and other questions with the hope of ultimately assisting public decision makers in pursuing a more informed allocation of society's resources in the area of MUPH.

The study is also important in a more fundamental sense in that it is related to the problem of understanding how social standards, rules and requirements of neighborhoods and housing cause certain groups to gain or lose at the expense of others. Zoning and building codes, tax laws and

density requirements are other examples of housing policy which assist certain groups to the possible detriment of others.⁸

Conceptualizing the Problem

Society considers it right and proper that public housing should be provided to certain groups of individuals. The economic justification of this type of governmental participation in the housing market, while important, is not directly considered in this study.

Once the decision is made that the government will enter the housing market, the basic economic decision of what, when, where, how, how much and for whom to produce must still be answered. Since the government is not in the housing market to make a profit in the conventional use of the term, but in some sense does hope to improve the well-being of certain individuals; each of these economic decisions become more complex. Very few, if any, of these decisions which the decision maker must make involve a Pareto-better solution.⁹ Some individuals will be adversely affected and some will be benefitted. Without knowledge of the magnitude or even the direction of the benefits and costs contained within a given set of alternatives, the decision maker cannot knowingly make desirable choices. It is hoped that more desirable choices can be identified by better understanding the nature of the impacts, those likely

to be affected (whether positively or negatively), and some sense of the magnitude of costs and benefits.

When considering the developing and managing of a MUPH project, the decision maker is faced with a set of alternatives each containing a certain combination of costs and benefits. Before any quantitative assessment of the alternatives can be conducted, the recipients of the costs and benefits must be identified. Realizing that the incidence and magnitude of costs and benefits would probably vary between communities and MUPH projects, the study seeks to determine if certain generalizable relationships concerning the incidence and magnitude of costs and benefits are intrinsic to the type of multiple unit projects examined.

For the purpose of identifying these relationships, three groups were selected: 1) the residents of MUPH; 2) the proximate neighbors of the project; and 3) the larger community which provides most of the public goods and services to the project.

The residents of MUPH are obviously included since the justification of public housing partially rests upon the assumption that recipients of that housing will be better off because of living there. It is assumed, then, that the impact on the recipients will play a significant part in determining the final value of output from the project. The decision makers of society have deemed it desirable for individuals with relatively low incomes to have "better"

housing and live in a "better" neighborhood at rents they can "afford." To what extent then does MUPH--from the occupants viewpoint--provide "better" housing and a "better" neighborhood?

Proximate neighbors are included as a study group because of the pervasive externalities associated within a neighborhood. Any significant short-term indirect costs and benefits identified with MUPH would likely be expressed in the immediate geographical area.

The "larger community" with their tax dollars pay for a significant portion of the developing, constructing, maintaining and servicing of MUPH. For this reason, the larger community is included indirectly through the costs of public service provision involved with MUPH. Moreover, it is this group which will ultimately decide the fate of public housing. What they decide will in some part be determined by the cost or the perceived cost they must bear.

Understanding the impact of MUPH on these groups provide the decision maker additional knowledge with which to vary policy inputs in order to achieve various desirable outputs. Production theory offers useful methods of conceptualizing this relationship. For example, assume the policy variable, size of the housing project, is inversely related to the percent of proximate neighbors who feel their privacy has been reduced. Furthermore, assume that proximate neighbor privacy is a good and the cost per unit

decreases with the size of project (i.e. economies of scale are present in project construction and management).

Figure 1.1 illustrates two possible types of "production functions" with "favorable" proximate neighbor responses being the output and various project sizes the input. Suppose the decision maker is going to choose either a fifty unit or one hundred unit complex. If the input-output relationship is typified by Y_1 , a fifty unit project will not affect the privacy of sixty percent of the proximate neighbors (point a'). However, a one hundred unit project will only affect the privacy of an additional five percent (point b). On the other hand, if Y_2 is the input-output relationship, a fifty unit project affects the privacy of only ten percent of the proximate neighbors (point a). In this case, one hundred unit project will adversely affect the privacy of an additional thirty-five percent. In other words, the difference in the cost of a fifty and one hundred unit project, in terms of adversely affecting proximate neighbor privacy, varies greatly between the two production functions. It is this type of relationship the decision maker needs to know in order to make informed trade-offs with his policy decisions.

Another conceptualization of the trade-offs involved may be illustrated with an "input-input" model. Consider, for example, the inputs of direct housing services (those

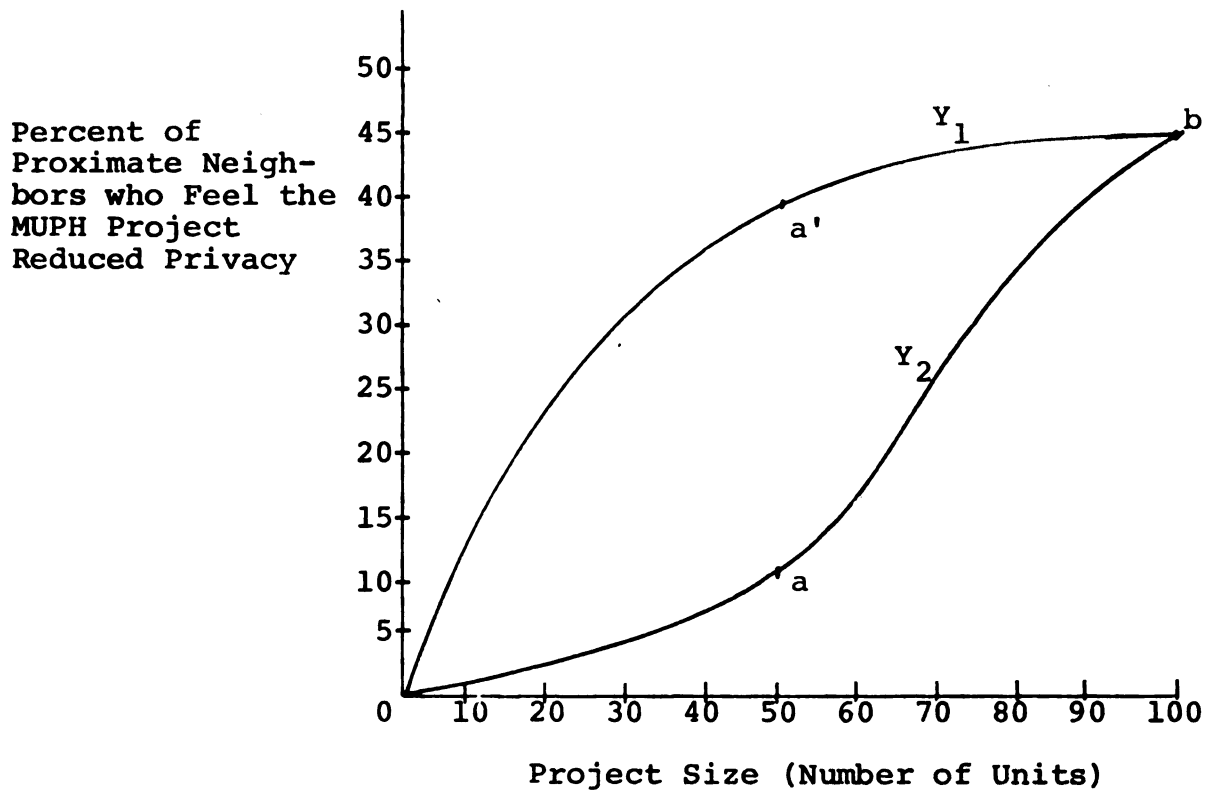


Figure 1.1. Possible input-output relationships between project size and proximate neighbor privacy.

services provided by the house itself) and indirect housing services (those services provided by the surrounding environment). The occupants of MUPH can assess the improvement of these services over those provided in their previous neighborhood. The percent of occupants preferring MUPH over their previous housing may be considered a measure of output.

Assume the decision maker wants to provide an additional amount of indirect services to the occupants and that such a decision will mean fewer direct services can be offered. Assume also that he wants to maintain the same percent of occupants who prefer MUPH to previous housing.

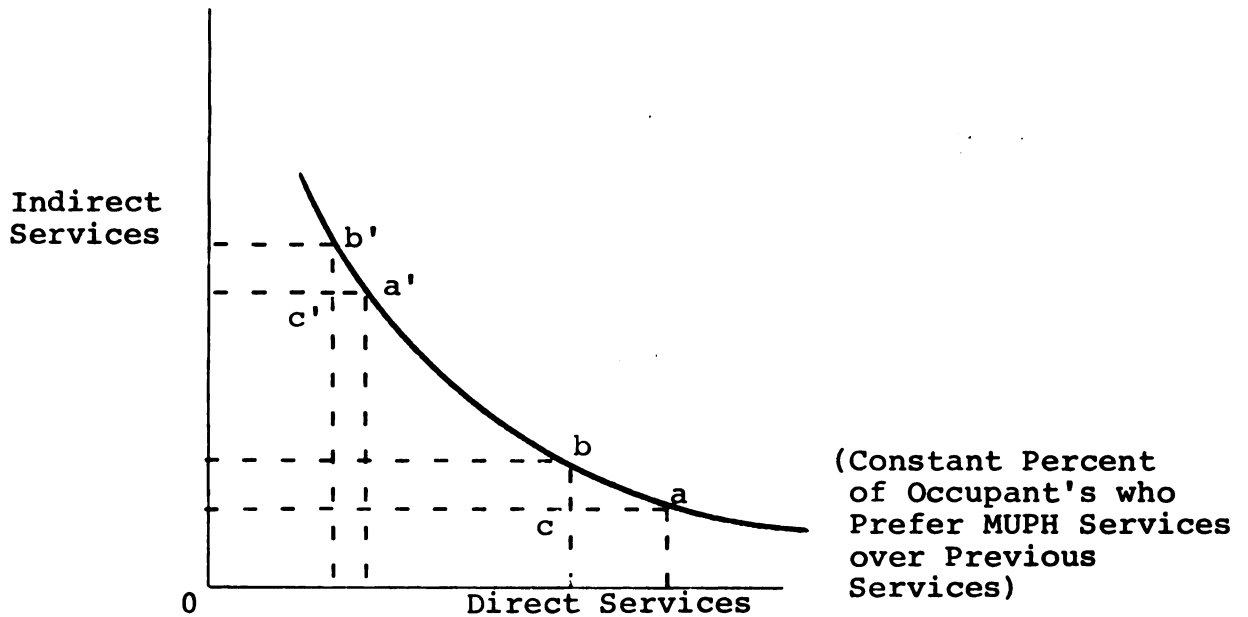


Figure 1.2. Inputs of direct and indirect housing services while maintaining a constant percent of occupants preferring MUPH services to previous services.

In Figure 1.2, two different rates of change between direct and indirect services is shown. Note that $bc = b'c'$. At point a, ac amount of direct services must be given up to receive an additional bc of indirect services without changing the percent of occupants preferring MUPH. However at point a' , only $a'c'$ (less than ac) amount of direct services must be given up to obtain $b'c'$ (equal to bc) amount of indirect services without changing the percent of occupants preferring MUPH. The rate of change between direct and indirect housing services varies differently between the two points. Again it is knowledge of this type of trade-off which allows the decision maker to choose between policy alternatives.

The Scope of the Study and Major Findings

Being essentially a policy study, the concern is with a "real world" problem. At the present stage of inquiry, undue simplification may overlook important sources of costs and benefits. The study, therefore, examines a wide range of relationships and possible relationships derived from the impact of MUPH.

Possible important impacts not included in the study include the impact on 1) the neighborhood from which the occupants of public housing moved; 2) local business activity and employment; 3) the local construction industry and housing market; 4) those displaced by the MUPH projects (in this case the projects were built on vacant land).

Specific questions are asked with respect to occupants, proximate neighbors and public services. Responses to the questions allow an assessment of possible courses of action of the decision maker through his manipulation of location, design, size, maintenance and management.

In Chapter II, occupants are asked to compare the rent, the direct services and the indirect services of MUPH with their previous housing. "Direct services" are defined as services derived from the housing structure itself and major appliances and appurtenances thereof. The services derived from the surrounding land and community are defined as the "indirect services." With respect to direct housing services, occupants are asked to compare their MUPH residence with

their previous residence in the area of: 1) size and condition of house; 2) plumbing and bathroom facilities; 3) major household appliances; 4) furniture; and 5) health related items. Sixty percent of the responses implied the public housing residence was preferable to the previous residence in the area of direct housing services.

The indirect services of MUPH did not seem to be generally preferable to the previous residence. The indirect services compared included: 1) schools; 2) parks; 3) neighbors; 4) child-care facilities; 5) transportation services; 6) congestion; 7) noise; 8) garbage collection and storage; 9) theft and personal safety; and, 10) privacy. More occupants preferred their previous residence to MUPH with respect to noise, congestion and privacy. The MUPH residence was largely preferable with respect to garbage collection and transportation services.

Occupants were also asked to compare their present and previous monthly rent. The results indicate no significant difference between rents. It should be noted that rents of the previous residence had a much larger standard deviation than rents of MUPH.

Chapter III examines the perceived impact on proximate neighbors. They were asked if they felt their property values had changed because of MUPH. Forty-three percent of the respondents felt their property values had declined. Forty-three percent also felt as though their property values had not been affected. Approximately two-thirds of those

offering dollar figures felt their property had declined from \$2000-\$4000 (about 10 percent of the value of the home).

Proximate neighbors are also asked to assess any change in the indirect neighborhood services including aesthetic values, congestion, noise, privacy and schools. Approximately thirty to fifty percent of the occupants felt as though MUPH had adversely affected these indirect services. Various policy alternatives of the decision maker are discussed which may alter the perceived impact.

The impact of MUPH on the magnitude and incidence of benefits and costs of public provided services is examined in Chapter IV. The impact originates from the change in the demand and the change in the composition of demand for public services. Moreover it is noted that MUPH can affect the tax base which supports public services.

An empirical analysis of the impact of three MUPH complexes on elementary schools is also provided in Chapter IV. The children from MUPH make up from sixteen to twenty-seven percent of the population of the four elementary schools they attend. Manipulation of the size, location and design of the housing complexes will alter the impact on schools. There appeared to be a complete lack of participation between public housing officials and school officials regarding the impact on schools and possible trade-offs.

Uses of the Study Findings

There are two main uses of the study and both are based on increasing available knowledge in the area of public housing. First, it is hoped the study will provide additional insight for the decision makers in assessing how various choices of size, location, design, maintenance and management affect different groups. With a more complete understanding of the magnitude and incidence of the costs and benefits of MUPH, the decision maker will be in a better position to make determinations which improve the ability of MUPH to achieve its desired goals.

Second, it is hoped the study will suggest additional areas of research related to public housing. Presently, it is not always possible to determine the direction of impact let alone the magnitude. Additional research is required to better understand the actual impact of MUPH. The "Summary, Conclusions and Recommendations" chapter suggests various researchable areas which promise to improve knowledge in the public housing area.

Procedure

Definition of the Problem

Scarce resources have been and are being allocated toward the provision of multiple unit public housing. The decision maker's decisions regarding size, location, design, maintenance and management determine the affects on occupants,

proximate neighbors and public provided services. Presently, the affect on these three groups is little understood. Without understanding the impact of multiple unit public housing, the decision maker cannot meaningfully use his policy tools to achieve desired results. The basic problem is to better understand how MUPH affects the three groups, and how the decision maker can employ his policy tools to achieve the desired output.

The problem can be viewed as an input-output relationship. Given that the decision maker has a certain desired output in mind, he may alter the inputs (size, location, design, maintenance and management) in order to achieve that output. First, however, it is necessary to have some idea of the various trade-offs involved in alternative decisions.

The problem is a policy problem in the sense that the basic question is: What do we do to get what we want?¹⁰ The study takes the desired output of the decision maker as a given. However, as long as the desired output relates to the occupants, proximate neighbors or public services, the study is relevant.

Given that, ". . .we can study facts intelligently and fruitfully only in the light of hypotheses, while hypotheses have value more or less in proportion to the amount of antecedent concrete knowlege of fact on which they are based;"¹¹ a somewhat related problem definition follows. That is, the

intent of the study is also to provide more "concrete knowledge of fact" for the purpose of developing more meaningful hypotheses. In the sense, the study attempts to provide additional insight for the use of future inquiry.

The Problem Setting

Three MUPH projects in Lansing, Michigan provide the information for the study. Each contains one hundred town-house units and is located within primarily single family home neighborhoods.¹² The neighborhoods may be broadly classified as lower middle to middle income and predominately white. Thus, the study may not be relevant with regard to the large high density public housing complexes found in many of the larger cities.

The 1970 population of Lansing City and the Lansing Standard Metropolitan Statistical Area (SMSA) was 131,403 and 378,423, respectively.¹³ The three housing complexes were occupied in 1968, 1969 and 1970. The total impact on the area in terms of population is relatively small.

More important than actual size of population, is the type of area within which the complexes are located. In a general sense they are somewhat "typical" of single family home neighborhoods of similar home value (\$15,000-\$50,000). All but a few of the surrounding homes are owned by the families who live there.

Method of Data Collection

Questionnaires were developed for the purpose of soliciting desired information. Information from the occupants is intended to reflect their perceived costs and benefits of MUPH. It was further determined that a relative assessment of MUPH compared to their previous housing would be most useful. This comparison is couched in terms of a "decent home and suitable living environment at rents the poor can afford." In other words, from the point of view of the occupants, how well did MUPH provide its intended services relative to previous housing?

Information from proximate neighbors is intended to reflect the perceived impact of MUPH on property values and the "living environment" of the neighborhood. As in the case of occupants, personal information was collected in the attempt to determine any differences of opinion between various identifiable groups.

Data for determination of the possible impact on public services was obtained primarily through formal questionnaires and informal discussions with public service decision makers. Available data from the Lansing school district provided the information necessary to examine the impact on elementary schools.

Thus, the greater part of the study is directly dependent on the information provided by the three major groups. This approach stems partially from the belief that ". . .it

may be that a small step, but the first step, toward a practical comprehension of the social system is to isolate and follow out to their logical conclusion a relatively small number of fundamental tendencies discoverable in it."¹⁴ Moreover, this approach stems from the belief that policy problems affecting the well-being of human life can only be meaningfully understood and rewardingly altered if the perceived costs and benefits of those affected is better understood.

Background

Housing Need and Public Assistance

The purpose of this section is to: describe the historical and social background from which public housing has evolved; discuss related public assistance programs in housing and define the rules and regulations associated with public housing. An understanding of the existing institutional framework surrounding public housing is provided with the hope that the reader will be better able to place the study in perspective and determine its relevance within the larger design of public policies intended to achieve national housing goals.

Historical Evolution of Public Housing

Previous to 1937, governmental involvement in housing was primarily limited to assistance in mortgage lending.

In 1932, the Federal Home Loan Bank Board was ". . . authorized

to extend loans to its member savings and loan institutions through regional Federal Home Loan Banks. In effect, the savings and loan associations were required to invest primarily in real estate mortgages and, consequently, became major factors in residential finance."¹⁵ The general financial crisis during that period, plus opposition from private credit sources of mortgage funds, led to more effective measures designed to support the mortgage market.

The Home Owners Loan Corporation established in 1933 supported the mortgage market through the buying of mortgages threatened with foreclosure. "The Corporation was able to rescue families for whom loss of home was imminent and also to provide an opportunity for mortgage lenders to convert 'frozen' assets to cash. . . ." ¹⁶ The Corporation at one time held 15 percent of the mortgage debt in the United States.

Another effort designed to assist the private mortgage market was the National Housing Act of 1934, ". . . which established a system of mortgage insurance to be administered by the newly created Federal Housing Administration (FHA)."¹⁷ The FHA insurance program reduced the risks to mortgage lenders who were thus willing to lengthen the term of the mortgage and decrease the down payment which ". . . brought the possibility of home ownership within the reach of millions of additional American families."¹⁸

It is interesting to note that the above programs as well as the public housing programs were originally initiated primarily as a means to create jobs and not provide

". . .decent, safe, and sanitary dwellings for families of low income"¹⁹ as stated in the U.S. Housing Act of 1937. It was this act, as previously stated (see page 19), which provided for public housing.

The unique feature of the public housing program is that development, ownership, and management of the projects is the responsibility of local governments.²⁰ Previous to the permanent Housing Act of 1937, the federal government assumed the role of promoting and developing low-rent housing through such temporary agencies as the Reconstruction Finance Corporation (1932-33), the Housing Division of the Public Works Administration, and the United States Housing Authority.²¹

The Housing Act of 1949 expanded the goals of the 1937 act by committing the federal government to the ". . .realization as soon as possible of the goal of a decent home and a suitable living environment for every American family."²² The act authorized an expanded public housing program and allowed the Farmers Home Administration to make loans and grants for farm housing. Congressional budget restrictions limited the proposed production and the average annual output of public housing in the 1950's was only about 7,500 units higher than in the 1940's.²³

The Housing Act of 1959 established an important precedent by allowing public assistance to private nonprofit sponsors of rental projects for the elderly and handicapped. The Housing Act of 1961, following this precedent, expanded

opportunities for private development of subsidized housing.

The program [Section 221(d)(3) Below Market Interest Rate (BMIR) program] authorized [the establishment] of FNMA [Federal National Mortgage Association 'Fannie May'] to purchase mortgage loans made to limited dividend and cooperative, as well as non-profit, entities at low interest rates based on the average interest paid on the outstanding Federal debt [later limited to 3 percent by the Housing Act of 1965]. For the first time in the history of American housing, profit motivated private organizations could develop subsidized housing.²⁴

HUD and Subsidized Housing

With the creation of the cabinet-level Department of Housing and Urban Development (HUD) in 1965, federally assisted housing entered a new era. Governmental programs became a significantly more important force in the housing market.

Along with the creation of HUD, the Housing Act of 1965 provided for the Rent Supplement and Section 23 leasing program. The Rent Supplement provision required that tenants supply 25 percent of their adjusted income toward rent; the remaining rent being financed through a governmental subsidy. Section 23 enables local public housing agencies to lease dwellings from private owners and make them available to low-income families at "rents they can afford." Annual contributions from the federal government to the local agency finance the program.

The Housing Act of 1968 significantly increased the appropriations for subsidized housing. Moreover, the act

created several new programs and policies. The most important new additions (in terms of size) were the Section 235 and 236 programs. Section 235 allows low and moderate income individuals to purchase a home at below market rates. The purchaser must apply 20 percent of his monthly income toward payment with the federal government paying the difference, up to an amount equal to the difference between the monthly payment and what the payment would have been if the mortgage interest rate were 1 percent.

While Section 235 concentrates on single family home ownership, Section 236 is primarily multi-unit rental housing. This program requires that low-income families contribute 25 percent of their adjusted family income toward rent. HUD makes monthly payments to mortgages on behalf of mortgagors, by an amount which ". . . cannot exceed the difference between the amount required for principle, interest, and mortgage insurance premium on a market-rate mortgage and the amount required for principle and interest on a mortgage at 1 percent interest."²⁵ The mortgagees must be FHA insured.

Rules and Regulations Concerning Multi-Unit Public Housing in Lansing, Michigan

The HUD-FHA low-rent public housing program provides financial and technical assistance to local housing authorities (LHA's) for the purpose of developing, owning and operating low-rent public housing projects. It is this public ownership-management provision which separates public

housing from other government subsidized housing programs. The LHA must operate within the general guidelines established by HUD in determining financing, eligibility and rents.

Under HUD regulations, occupants must meet certain income specifications and, "be a 'family' as defined by LHA (there must be concept of family life), or a single person at least 62 years of age, disabled or handicapped, or be displaced by urban renewal or other governmental action, or natural disaster."²⁶ The LHA establishes additional regulations concerning such things as housing need, assets, displaced status, elderly status, paying ability, present housing condition, etc.

The eligibility income limits for admission and continued occupancy vary depending on whether the project is located in a high-cost or low-cost area. The Lansing Housing Commission established the following maximum qualified income levels per family size as given in Table 1.1.

The figures in Table 1.1 are gross income figures. Net income is less 8 percent of gross income and \$100 per child. The income requirements vary according to age and disability status.

First preference is given to families displaced by governmental action. Second preference is provided to disabled and handicapped persons. Within this preference scheme, veterans receive a higher priority than nonveterans. Also, "families who have resided within the City of Lansing

for the past year to the date of their application will be given prior preference over nonresidents."²⁷

Table 1.1. Resident Income Requirements of Lansing Public Housing, 1972¹

Number of Persons	Eligibility Income Limit for Admission (Dollars/Year)	Maximum Income and Remain a Resident (Dollars/Year)
1 person	3,000	3,800
2 persons (elderly)	3,900	4,900
2 persons (nonelderly)	4,500	5,600
3 persons	5,300	6,600
4 persons	5,600	7,000
5 persons	5,800	7,200
6 persons	5,900	7,400
7 persons	6,000	7,500
8 persons	6,100	7,600
9 persons	6,200	7,700
10 persons	6,300	7,800
11 or more	6,400	7,900

¹Regulations Establishing Admission Policies of the Lansing Housing Commission" unpublished paper, p. 1.

In addition to the above regulations and preferences, "consideration is to be given to achieving a social and economic mix"²⁸ both within MUPH and in the neighborhood.

Rent Determination

When the data for this study were being collected, the rent requirements were in the process of change. However, since all of the individuals interviewed decided to move into MUPH under the previous rent system, it will be used in all calculations and hereinafter assumed unless otherwise stated.

The rent in MUPH is 25 percent of family income (used interchangeably with adjusted income). Family income is equal to total family income less: a) five percent of total family income (ten percent in the case of an elderly head of household); b) \$300 for each dependent (other than head of household and spouse); c) other deductions for "extraordinary medical expenses," "unusual occupational expenses" and "amounts paid by the family for the care of children or sick or incapacitated family members when determined to be necessary to employment of the head or spouse;" and d) \$300 for each secondary wage earner.²⁹ However, this formula is only used when more than fifty percent (50 percent) of the tenant's income is derived from sources other than public assistance.

When the tenant receives fifty percent or more of his income from public assistance, he is charged the maximum rent for low-income families. In the three Lansing projects the maximum rent for low-income families in 1972 was:

<u>Number of Bedrooms</u>	<u>Maximum Rent for Low Income Families</u> ³⁰
1	\$ 90 per month
2	\$110 per month
3	\$120 per month
4	\$125 per month
5	\$125 per month
6	\$130 per month

(Note, utilities--the phone excepted--are included in the rent. A security deposit of \$50 is also required.)

The Housing Act of 1970 included public assistance payments as family income which then entitled those tenants receiving more than 50 percent of their income from public assistance to qualify for rental payments based on 25 percent of family income.³¹

Public Housing Subsidies in Perspective

From the brief description above there are three basic observations which are manifest and directly related to the central theme of the thesis. First, the commitment of resources and development of more powerful institutions illustrates the growing concern over the "housing problem" in the United States. Given that this trend continues, it becomes increasingly important to allocate our public resources in this area properly. Second, it is important to note that public housing is a relatively small part of the total subsidized housing picture. The two major differences of public housing are: 1) public housing is owned and operated by a public entity; and 2) the occupants of public housing will, for the most part, have a lower income.

Proper judgment concerning these differences allows for greater insight into the economic impact of other types of housing programs. Third, the role of public housing cannot be separated from other types of public assistance. Those who qualify for public assistance of one type will in many cases qualify for public assistance of another type. For example, a family which qualifies for welfare payments will likely qualify for food stamps and public housing services also. Thus, occupants of public housing are affected by a range of public services presumably designed in their interest.

FOOTNOTES

¹Public Law 412, 75th Congress, C.896 1st Session. Approved September 1, 1937, S.1685, 50 Stat. 888, 42 V.S.C. 1401. Referred to as the "United States Housing Act of 1937." For an excellent discussion of the early history of public housing law, see William Ebenstein, The Law of Public Housing (Madison, Wisconsin: The University of Wisconsin Press, 1940).

²See Peter O. Steiner, "The Public Sector and the Public Interest," Public Expenditures and Policy Analysis, ed. by Robert H. Haveman and Julius Margolis (Chicago: 1970), pp. 21-58.

³It should be pointed out, however, that public rules also determine what private acts are profitable.

⁴Jay W. Forrester, Urban Dynamics (Cambridge, Mass.: 1969), p. 109.

⁵Ibid., p. 110

⁶D. J. R. Bruckner, The Los Angeles Times, Pt. I, p. 22; reprinted in L. Freedman Public Housing--The Politics of Poverty (Los Angeles, Calif.: 1969), pp. 109-110.

⁷Wolf Von Eckardt, "Death of the 'City of the Future'," The Washington Post (Washington, D.C.: Saturday June 24, 1972), Section B p. 1.

⁸See Anthony Downs, Opening Up the Suburbs: An Urban Strategy for America (New Haven and London: Yale University Press 1973), pp. 46-60.

⁹A "Pareto-better solution" is where at least one person is better off and no one is worse off. Most policy solutions make some better off and some worse off; thus, the desirability of the solution rests with the subjective opinion of the decision maker.

¹⁰It should be pointed out that policy problems are indeed abstractions of a complex social situation. To the policy maker "the world is seen in a perspective that reduces things to a means-end schema. What do we do in order to achieve what we want? See Scott Greer, The Logic of Social Inquiry (Chicago: 1969), p. 10. Also Glenn L. Johnson and Lewis K. Zerby, What Economists Do About Values (East Lansing, Mich.: 1973), pp. 5-7.

¹¹Frank H. Knight, Risk, Uncertainty and Profit (New York: Eight Impression, 1957), p. 6.

¹²See Appendix II-1 and II-2 for a more complete description of occupants.

¹³Michigan Manual 1971-1972; Compiled and published by the Department of Administration, State of Michigan.

¹⁴Cited in Frank H. Knight, op. cit., p. 7.

¹⁵A Decent Home, the Report of the President's Committee on Urban Housing, Edgar F. Kaiser Chairman (Washington, D.C.: 1969), p. 55.

¹⁶Ibid.

¹⁷Ibid.

¹⁸Ibid.

¹⁹"United States Housing Act of 1937," Public Law 412, 75th Congress, C.896 1st Session, S1685, 50 Stat. 888, 42 V.S.C. 1401.

²⁰Ibid., p. 56.

²¹Robert Moore Fisher, 20 Years of Public Housing (New York: 1959), pp. 80-81.

²²United States Housing Act of 1949, July 15, 1949, Ch. 338, 63 Stat. 413.

²³Housing Need and Federal Failure in Rural America, prepared by the Select Committee on Nutrition and Human Needs (Washington D.C.: 1971), p. 16.

²⁴A Decent Home, op. cit., p. 58.

²⁵Ibid., p. 66.

²⁶"HUD-FHA Assisted Program for Low-Rent Public Housing," HUD Handout.

²⁷Ibid., p. 3.

²⁸"HUD-FHA Assisted Program for Low-Rent Public Housing," op. cit.

²⁹Ibid.

³⁰"Regulations Establishing Admission Policies of the Lansing Housing Commission," op. cit., p. 4.

³¹Housing and Urban Development Act of 1970; Pub. L. 91-609, December 31, 1970, 84 Stat. 1770. The "Brooks Amendment" refers to: Section 208(a) Section 2(1) of the United States Housing Act of 1937 is amended by adding at the end of the second paragraph the following:

In defining income for purposes of applying the one-fourth of family income limitation set forth above, the Secretary shall consider income from all sources of each member of the family residing in the household who is at least eighteen years of age, except that (A) nonrecurring income, as determined by the Secretary, and the income of full-time students shall be excluded; (B) an amount equal to the sum of (i) \$300 for each dependent, (ii) \$300 for each secondary wage earner, (iii) 5 per centum of the family's gross income (10 per centum in the case of elderly families), and (iv) those medical expenses of the family properly considered extraordinary shall be deducted; and (C) the Secretary may allow further deductions in recognition of unusual circumstances.

CHAPTER II

THE ECONOMIC IMPACT OF MULTIPLE UNIT PUBLIC HOUSING ON THE OCCUPANTS

Introduction

The occupants of MUPH are one of the major groups examined in the study. They are the "target group"--the direct recipients of the services rendered; and, to a large extent, determine the degree to which the stated societal objectives of a "decent home at rents the poor can afford" and a "suitable living environment" are attained.

Without attempting to determine exactly what "decent home," "rents the poor can afford," or "suitable living environment" means, the study compares the previous residence with the present residence of occupants of MUPH. Such a comparison allows the decision maker to better judge the output (e.g. housing improvement of occupants) with his value determined expectations. That is, are the benefits to the occupants the desired benefits; and, if so, are these benefits greater than the costs incurred to provide them? The findings of this chapter may assist the decision maker in making these value judgments.

The costs and quality of services provided by public housing and alternative residences primarily determine

whether or not individuals choose to live there. There is presently an excess demand for the public housing examined in this study. However, possible underlying causes of rapid deterioration, such as in the Pruitt-Igoe project in St. Louis,¹ may ultimately result in high vacancy rates. Some insight is provided into why the occupants choose to live in public housing.

In a sense the findings of this chapter can be viewed as a "consumer demand study." In a competitive market the firms must continually cater to the tastes and preferences of their consumers. In some cases consumer surveys and market studies are performed. For the decision maker, who is providing a service for both the "buyers" and "sellers" of public housing, consumer information is even more important.² There are many alternative combinations of housing services available at a given cost. The question is: Are the choices of trade-offs among housing services consistent with "consumer demands" and the decision makers values?

Part I of this chapter analyzes and discusses the direct housing services (those services derived from the housing structure and major appliances) offered at the occupant's present and previous residence. Part II examines indirect housing services (those services derived from the total living environment excluding direct housing services) and the "suitable living environment" goal of national

housing policy. Part III follows with an examination of rents and relates to the "rents the poor can afford" objective.

Part I: "A Decent Home: The Quality of
Direct Housing Services as Perceived
by the Occupants

Introduction

Direct housing services include those services emanating from the physical structure itself plus certain appurtenances and major appliances. These direct housing services are listed along with respondents preferences, in Table 2.1.

Part I compares the direct housing services of MUPH against the previous residence and a "reasonable" societal norm. Following these comparisons, policy variables available to the housing decision maker are discussed with regard to certain trade-offs among direct housing services.

The Level of Previous Direct Housing Services

For the comparison--between the services derived from MUPH and previous housing--to be very meaningful, a policy maker would have to be aware of the "absolute" level of the direct housing services available to the occupants at their previous residence. Therefore, this section briefly analyzes the direct housing services occupants of MUPH were receiving previous to locating in MUPH.

Two sources of data were used to measure the level of services of previous housing. One involved use of public

housing applications records and the second involved a questionnaire. The comments gathered from the application records of present occupants yeilded the following information:

- a) Forty-six of the 89 applications contained negative comments toward the applicant's direct housing services;
- b) The negative comments in order of number of times most often mentioned are: 1) over crowded (28), 2) lack of heating (9), 3) substandard (7), 4) structurally unsafe (5), 5) condemned (4), 6) lack of running water (2), 7) lack of kitchen sink and stove (1);
- c) Some (perhaps 5-10) of the previous residences were in extremely poor condition. They contained a number of maladies such as being overcrowded, infested with rats and insects and structurally unsafe.

The above information is very incomplete but provides a supplement to the questionnaire data reported below. A knowledge of the level of previous housing services puts the following comparison between MUPH and previous housing in better perspective.

A Comparison of the Level of Direct Housing Services of MUPH Versus Previous Housing

Respondents were asked to compare the following items of their present residence with their previous residence:

1) the size and condition of the house; 2) plumbing and bathroom facilities; 3) major household appliances (i.e., refrigerators, stoves, laundry facilities, garbage disposal(s), food storage); 4) furniture; and 5) health related items

(i.e., food preparation, heating, ventilation). Without exception the respondents preferred the direct housing services of MUPH to those of their previous residence by a wide margin.

The relatively large number of indifferent responses with respect to furniture stems from the fact that the MUPH residences were not furnished. Other than this exception, preference for direct services of MUPH exceeded the number of indifferent responses by a 2:1 to 3:1 margin. The seemingly irrational preference for MUPH furniture when in fact no such furniture was offered, may have several rational explanations. First, at least one respondent felt that the better condition of her MUPH residence indirectly allowed her to justify additional expenditures on improved furniture. Second, some respondents may have felt the lower rent of MUPH allowed the procurement of better furniture. Third, certain respondents were so convinced of the general preferability of their MUPH residence that they automatically responded in its favor.

Whether or not the complexes examined provide a "decent home," they certainly provide better direct housing services than the respondents' previous residence in most of the examined cases. Some respondents replied that their present residence was the best house they had lived in. Compared to their previous residence and any reasonable social standards, MUPH, from the occupants' viewpoint,

Table 2.1. Responses Obtained from Comparison of Direct Housing Services of Previous Residence and MUPH Residence

Direct Housing Service	Number of Respondents Who Preferred Services at Their Previous Residence		Number of Respondents Who Preferred Services at MUPH Residence		Number of Respondents Indifferent to Services Provided	
	Percent	Number	Percent	Number	Percent	Number
1. Size and condition of house	13	4	67	20	20	6
2. Plumbing and bathroom facilities	0	0	63	19	37	11
3. Major household appliances	7	2	70	21	23	7
a) refrigerator						
b) stove						
c) laundry facilities						
d) garbage disposal(s)						
e) food storage						
4. Furniture	0	0	30	9	70	21
5. Health related items	3	1	70	21	27	8
a) food preparation						
b) heating						
c) ventilation						
Summation of Responses	5	7	60	90	35	53

seems indeed to move toward its goal of providing "decent" direct housing services.

Policy Actions of the Decision
Maker and the Quality of Direct
Housing Services

Resource Allocation Among Direct Housing Services

The results of the comparison between direct housing services provide little insight into a more desired allocation of resources between those services. There is nothing to imply that resources should be transferred from the provision of one direct service to the provision of another. Moreover, marginal increases in the size of the structure, for example, may cost more than most other direct services are worth; thus, the trade-off in some cases is not between the quality of various direct services but between marginal improvements of one service at the total exclusion of another.

Given a fixed amount of resources for any housing project, the quality of direct housing services may be improved at the expense of fewer units or perhaps fewer indirect housing services or any combination of the two. The latter (indirect housing services) is discussed under Part II. With respect to the former (fewer units), it is assumed that any trade-off would be untenable.³ Therefore, when considering possible trade-offs between direct housing services, the total amount of resources for that purpose (providing direct housing services) is assumed fixed.

The objective of the following is to examine those relationships between policy variables and direct housing services which appear to be most pertinent. In no case should policy alternatives be considered as "what ought to be", but rather as possible alternatives suggested during the course of the study and seemingly worthy of discussion.

Location and Level of Direct Housing Services

Locational decisions concerning MUPH complexes probably have many effects on direct housing services; however, most interesting in the study is the effect location has on food and laundry services.

Since central laundry facilities are not provided at certain MUPH complexes (none of the sampled complexes had laundry facilities) and since demand may not be sufficient to attract nearby private facilities, the location of the complex with respect to such facilities becomes important. The cost of obtaining laundry services--for those who do not have private facilities--is somewhat dependent on the location decision. Also, the location decision affects the costs of food and perhaps the diet of the occupants.

The magnitude of the costs and thus the importance of the location decision are largely dependent on the cost of transportation. Of the 30 respondents, 11 had a car and 19 did not. The cost of transportation for those who do not have a car seems to increase for laundry and shopping purposes. This cost stems from the fact that it is very

difficult to carry more than 1 or 2 bags when riding the bus or walking. Several trips would have to be made, whereas with an automobile one trip would suffice.

Thus, indirectly, location decisions affect the cost and quality of direct housing services. These costs seem to occur primarily through laundry and food services. The desired services from food storage and preparation facilities, for example, may not be forthcoming because the locational decision has imposed a constraint on the occupants ability to use such services.

Size and the Level of Housing Services

The size of the living unit determines, to a large extent, the amount of usable space. The units in the sample group were of the following size:

Number of Bedrooms	Square Feet
0	400-525
1	550
2	720
3	900
4	1120
5	1300
6	1640

Altering the size of the units would affect the structure of costs and benefits. Such things as occupant satisfaction, construction cost, maintenance cost and rate of deterioration would change. Unfortunately, the magnitude and direction of change is unknown. However, for the most

part the respondents gave the distinct impression that the size of their MUPH was satisfactory. The extremely crowded condition of some of the families at their previous residence undoubtedly caused their present residence to seem "large."⁵ For such individuals, marginal increases in the size of the living unit would likely add little to the total utility derived from the size of the unit.

There is no evidence to support policies which would increase the size of the living units at the expense of many other amenities (or possible amenities).⁶

Design and the Level of Direct Housing Services

The most fundamental policy question concerning the provision of direct housing services is: What services should be provided? This is normally determined by policy maker's value judgments of the "needs" of the recipients of MUPH. Without questioning in depth the decisions of the policy makers concerning the provision of direct housing services, there are two perhaps related questions implied from observations made during the study.

First, the decision concerning the absence of central laundry facilities within the complex is questioned. Without such facilities, the occupants must either purchase their own or use--presumably the nearest--commercial facilities. A third alternative may be a lower cost method. For example, collectively owned laundry facilities operating on a non-profit basis may be both lower cost and viable. The

relatively large expense of purchasing one's own laundry equipment, and the seemingly high transportation cost with respect to laundry chores implies the possibility of a profitable third alternative.

Second, the decision to include garbage disposals is questioned. Since relatively few of the individuals moving into MUPH have experience with garbage disposals, the costs of provision and maintenance may exceed the benefits derived. Several respondents commented on the garbage disposal being broken and at least one respondent voluntarily choose not to use it.⁷

If the above argument is correct, a transfer of resources from garbage disposals toward laundry facilities may be a preferable alternative and worthy of consideration. Of course, it should be noted that in the longer run garbage disposals may become institutional requirements and have to be included in public housing services.

Maintenance and Direct Housing Services

Following from above, it appears that maintenance costs may be relatively high due to the lack of familiarity and experience of MUPH families with certain appliances. A reasonable policy may then be to furnish the units with relatively less sophisticated appliances. With respect to refrigerators, however, one housing decision maker argued for the more sophisticated and expensive "frost-free" type

on the grounds or reduced maintenance cost. Improper defrosting techniques--such as icepicks--may increase maintenance cost.

Regardless of its factual content, the refrigerator example illustrates the interrelationship and individuality of maintenance and the provision of any direct housing service. Each relationship between the level and cost of maintenance and the number and quality of housing services must be examined separately.

Management and Direct Housing Services

Management is a broad term including many different layers of decision makers. For purposes of this section, management includes only those in authority who are directly involved with the occupants. In other words, most of the decisions concerning direct housing services have already been made.

The local housing decision maker has, what appears to be, a very important role regarding direct housing services. This role includes an effect on the occupants attitude toward "ownership" or control over his housing services.

In one of the complexes examined, several occupants complained of reduced direct housing services due to management decisions. For example, one respondent was particularly concerned about not being able to paint a room a certain color. She said the manager had informed her that she "could not paint these walls--these are the government's walls."

It is certainly possible that the occupants' attitude toward control over housing services can affect satisfaction derived from those services. Thus, management may directly affect the level of services provided by affecting the occupants' attitudes.

The implication for public housing decision makers in general is the importance of understanding the "feeling" of ownership and its relationship to derived housing services and occupant satisfaction.

Summary of Part I: Direct Housing Services

The respondents in the sample preferred the direct services of the MUPH residence to their previous residence by a wide margin. Relative to the previous residence and even some "reasonable" social norm, it was judged that MUPH moved toward its goal of providing a "decent home."

The policy variables of location, size, design, maintenance and management affect the level and provision of direct housing services. While the data do not present conclusive evidence on which to base policy actions, the insights provided were sufficient to discuss several alternative policies.

Part II: "A Suitable Living Environment"
Indirect Housing Services and the Occupants of MUPH

Introduction

Other than providing a "decent home", national housing policy also includes a "suitable living environment" as part of the national housing objective. This total living environment (excluding direct services) will be referred to here as indirect housing services. The purpose of Part II is to examine three MUPH developments and their affect on the "living environment" of the occupants. Moreover, certain policy alternatives are discussed which affect the "living environment" with respect to various indirect housing services.

Indirect housing services are the myriad of services, or lack thereof, which affect the "living environment" of a neighborhood. For the purpose of this study, the ten indirect services listed in Table 2.2 are selected as characteristic of the "living environment". While these services are not all inclusive of the "living environment", they do play a large part in determining the quality of life in most neighborhoods.

It is much easier to formally institutionalize and establish minimum requirements for direct housing services than it is for indirect housing services. Traditional societal values and the lack of objective measurement of indirect services probably account for the relatively few formal guidelines concerning indirect services. Nevertheless,

it cannot be assumed that indirect housing services are any less important to the individual recipient or to society than direct housing services.

The indirect services chosen for this study are compared with similar services provided in the occupants previous neighborhood. Such a comparison provides the decision maker with greater knowledge of how the housing complexes affect the "living environment" of its low income recipients relative to their previous residence. Again the problem of an absolute standard must be examined if the relative comparison is to be useful for policy decisions. The question in this case is: What is and what is not "suitable"? While the study does not attempt to answer this question directly, hopefully some insight into the level of "suitability" is provided.

The Level of Indirect Housing Services at the Occupants Previous Residence

Certain observations concerning the absolute level of services are offered in order to develop and maintain a perspective of the neighborhoods in question. In this vein, it is worthwhile to mention that the level of indirect housing services of low income neighborhoods "on the average" are typically less "suitable" than those in higher income neighborhoods, thus, the reason for including "decent living environment" as part of national housing policy. Following from this--and since the occupants are from among the lowest income groups--it is reasonable to conclude that a high

proportion of the residents previously lived in neighborhoods which offered a relatively low level of indirect housing services. However, this does not mean the "living environment" was "unsuitable."

Whether or not the "living environment" is "suitable" depends on the various indirect services included in the "living environment" and the relative importance attached to each. Without the relative importance of each of the indirect services, one could not say the "living environment" of one neighborhood was more or less preferable to that of another; unless, all of the indirect services of that neighborhood were each more or less preferable to the comparable indirect services in the opposing neighborhood.⁸

Presently, public housing decision makers must rely primarily on intuition and existing institutional constraints as to the type and relative importance of the indirect services offered the occupants. Since decision makers do not have control over the total "living environment" because of various constraints; and since the relative importance assigned to the indirect services varies among decision makers, each indirect service will be discussed on its own merits in a later section.

In concluding this section, it should be pointed out that after the study the author was convinced that the "living environment" (both at their previous and present residence) of many of the residents questioned was below

that level which most individuals in this society at this time expect and in fact achieve. Thus, "suitable living environment", while extremely difficult to assess in an absolute sense, is not without content in this regard.

Comparison of the Level of Indirect Housing Services Offered by MUPH and the Previous Residence

The respondents were asked to compare certain indirect housing services of MUPH with similar services in their previous neighborhoods. The results of this comparison are presented in Table 2.2.

The responses indicate that the indirect services of MUPH were more often preferred in the area of schools, transportation and garbage collection. Conversely, more respondents preferred the indirect services of their previous residence in the area of congestion, noise and privacy. The respondents are approximately equally divided in their locational preference with respect to parks, neighbors, day care and personal safety.

Eight-five or 28 percent of the total responses favored the MUPH neighborhood while 82 or 27 percent preferred the previous neighborhood. Altogether, 132 or 44 percent of the responses were indifferent between neighborhoods. According to these results, the housing complexes of this study are much better at improving the occupant's direct housing services than his indirect housing services.

Another question was asked of the respondents in order

Table 2.2. Responses Obtained from Comparison of Indirect Services of Previous Residence and MUPH Residence

Indirect Housing Service	Number of Respondents Who Preferred Services at Their Previous Residence		Number of Respondents Who Preferred Services at MUPH Residence		Number of Respondents Indifferent to Services	
	Percent	Number	Percent	Number	Percent	Number
1. Schools	10	3	23	7	67	20
2. Parks	33	10	40	12	27	8
3. Neighbors	23	7	27	8	50	15
4. Child-care Facilities	13	4	13	4	73	22
5. Car pool, Bus service	3	1	27	8	70	21
6. Congestion	50	15	23	7	23	7
7. Noise	57	17	20	6	23	7
8. Garbage Collection and storage	3	1	47	17	40	12
9. Theft and personal safety	33	10	37	11	30	9
10 Privacy	47	14	17	5	37	11
Total Responses	27	82	28	85	44	132

to help determine their preference of neighborhood apart from direct housing services; it reads, "If this same housing at the same rent were available in your old neighborhood, would you prefer to live there rather than here?" Sixteen respondents preferred to stay in their MUPH neighborhood; 13 preferred their previous neighborhood, and 1 was indifferent. The one "indifferent" respondent said he preferred to live in neither neighborhood.

According to the respondents of this study, MUPH--excluding the direct housing services--does very little to improve their general "living environment" as identified by the indirect services examined. These results can at least partially be explained by the following two reasons: 1) the level of indirect housing services are not as directly related to the respondent's income as direct housing services, and therefore did not fall to as low a level; and/or 2) the primary concern of the decision makers deals with the improvement of direct housing services, and indirect housing services are ignored or given a lower priority.

With respect to the first reason, the study provides some insight. The respondents were asked, "would you rather have enough money per month and find other similar housing accommodations or have this housing at the present rent?"⁹ Unless the present neighborhood were exactly what the respondent wanted he would choose the money and live elsewhere.¹⁰ Perhaps surprisingly, 12 respondents said they prefer the money; 12 preferred their present housing

accommodations and 6 were indifferent. Thus, 12 of the respondents would not move even if sufficient money were provided for them to acquire similar housing in another neighborhood of their choice. This implies that for these respondents, the expected level of indirect housing services are no higher in areas where "similar" housing can be obtained than the level found in MUPH.¹¹ Such expectations can perhaps be explained by the very low income level of the respondents. For some of them, MUPH offers the best housing services they have ever experienced; thus, it is not unusual for them to reject a comparable "money" offer. They simply feel as though they could do no better elsewhere.

Concerning the absolute "suitability" of their present neighborhood, the results of the last question also sheds some light. That is, the indirect services must be of a sufficient level to allow 12 respondents to refuse a hypothetical offer to do better elsewhere. From these occupants' point of view, MUPH must offer a "suitable living environment" or they would choose the money and search elsewhere.¹² However, this does not necessarily mean the decision makers, from their point of view, would agree the "living environment" is in fact "suitable."

In any event, the responses to this question seem to imply that indirect housing services of the occupants did not fall to as low a level as direct housing services.

With respect to the second possible reason as to why

MUPH did not substantially improve indirect housing services, the following observations are made. In discussions with MUPH decision makers, it was determined that the institutional fabric of public housing is biased toward the provision of direct housing services. That is, in terms of real resources, much more is allocated toward the provision of direct housing services than toward the provision of indirect housing services. This is not only true in a "real" resource sense but also in terms of the decision makers time and effort.

Concluding this section, the following points are made:

- 1) A majority of the respondents preferred some of the indirect services of MUPH to those of their previous neighborhood; and conversely, a majority of the respondents preferred some of the indirect services of their previous residence to those of their present neighborhood.
- 2) In total, responses preferring present indirect services approximately equaled the responses preferring the indirect services of the previous residence.
- 3) When asked which neighborhood they preferred--apart from the direct housing services--a small majority preferred MUPH.
- 4) When offered a choice between a sufficient amount of money income to purchase similar housing elsewhere

or remain at their present residence, 12 of the 30 respondents preferred the present residence.

- 5) The complexes examined seem to offer at least as good and perhaps a slightly better quality of indirect services as the occupants' previous residence. However, the results of this study indicate that MUPH does a much better job of improving the direct housing services than the indirect housing services in the eyes of the recipients. Given the relative amounts of resources allocated toward direct and indirect services, this is perhaps the desired outcome of the public housing decision makers.

The Allocation of Resources on Direct and Indirect Housing Services

Given a certain amount of resources, the public housing decision makers must determine how much to allocate toward the provision of direct housing services and how much to allocate toward the provision of indirect housing services. This decision is primarily based upon values and beliefs of the decision makers and the institutional constraints of society. With respect to the latter, there may be little, for example, the public housing decision maker can do to affect the educational services offered in the community.

The decision makers, however, necessarily decide upon the level of some of the indirect housing services through

their choice of location, size, design, maintenance and management. Since it is not known how these decisions affect the level of indirect services and since many possible alternatives exist, there are most likely many "Pareto-better" decisions which could be made. Nevertheless, some comments on the relationship (trade-off) between direct and indirect services are appropriate.

MUPH, it is assumed, reflects the values and beliefs of societies decision makers (perhaps after the lag) toward the "type" of housing the recipients should receive. That is, the type of services--both direct and indirect--the occupants ought to obtain in order to accomplish various societal objectives.¹³ The goal of a "decent home" (direct services) can be measured by the number of square feet, type of amenities, etc. However, the goal of a "suitable living environment" (indirect services) encompasses a much wider spectrum of services. Moreover, the decision makers' concept of a "suitable living environment" may differ considerably from the occupants' concept--probably more so than the notion of a "decent home."

The goal of a "suitable living environment" also begs the question: For what purpose? To increase the satisfaction of those now experiencing that environment? To assist them in becoming better, more productive members of society? It is necessary to first know the answers to these questions if one is to accurately identify a "suitable living environment."

For example, should education or transportation be given more weight in the choice of communities?

Even if the concept of "suitable living environment" is fully understood, the problem of understanding the relationship between "suitable living environment" and a "decent home" remains. First, there is a strong possibility that a "decent home" and "suitable living environment" are complementary services.¹⁴ (For example, a larger home with a private yard would likely reduce the congestion, noise and lack of privacy in MUPH.) Second, it is often possible that no simple relationship between the two exists. (For example, bus service may be totally unrelated to direct housing services.) Finally, it should again be mentioned that often times the public housing decision makers can affect parts of the "living environment" only very indirectly if at all. Regardless, the MUPH decision maker must necessarily make various decision which do in fact affect the level of indirect housing services. The next section discusses how the decision maker can affect certain indirect housing services through decisions concerning location, design, size, maintenance and management of the MUPH complex.

Policy Decisions and the Level of Indirect MUPH Services with Respect to:

Schools (Educational Services)

The educational services of neighborhood are to a large extent determined by the larger school district of

which they are a part. Thus, for the purposes of the present discussion, it is assumed that the housing decision makers cannot affect the overall level of educational services and must operate within a given school district. However, the decision makers' choice concerning location primarily determines which physical institution the children of the complex attend; and, his decisions concerning size (with respect to the number of school age children in the complex) partially determine the impact on the individual school.

Comments from the interviews provide some interesting concerns with regard to educational services.¹⁵ First, it should again be mentioned that two-thirds of the respondents were indifferent between MUPH and their previous residence. The remaining one-third is composed of seven who prefer educational services of the present neighborhood and three who prefer their previous neighborhood.

Those who preferred the educational services of the MUPH neighborhood did so primarily on the grounds that: 1) there are "more and better opportunities"; 2) there is more "interest" in education; and 3) they are of "higher quality". There seemed to be an attitude, by some respondents, that since this is a higher income area, the quality of educational services is also obviously higher.

Two major negative concerns of educational services can be affected by the public housing decision makers. First, several respondents (including some of those who

preferred the educational services of the present neighborhood) were concerned that the teachers would not be able to spend sufficient time with their children. It was argued that the children from the complex were "behind" those of the other neighborhood children and therefore would need special assistance. However, since there are several children from the complex in the class, the teacher will simply not have time to provide the individual assistance required.

The MUPH decision maker can help remove this possibility by altering the location and/or size of the complex. With respect to the former, a housing project could be located such that the children attend several schools of approximately the same distance. This would allow for any economies of scale in the construction maintenance and management of larger complexes; and, at the same time, reduce the impact on any one school.¹⁶

Smaller complexes is another possibility of reducing the impact on schools, however, economies of scale may be lost and the per unit cost of housing services may increase.

The second major concern of respondents was the identifiability of MUPH children and the ensuing problems. One black mother complained that the only black children in the school were from the MUPH complex. Thus, she seemed to fear both racial and economic discrimination from her children's peers. However, certain white respondents also

mentioned a possible stigma associated with MUPH and were concerned about their children's ability to "fit in."

A possible solution to the economic discrimination problem would be to locate MUPH in areas where other relatively low-income children attend the same school. Similarly with respect to blacks or other minorities; that is, instead of locating a MUPH complex (which will have, say, 50 percent black) in a completely white neighborhood, perhaps a more integrated neighborhood would remove much of the ability to discriminate both racially and economically.

Neighbors

The close quarters (high density per unit of land) of MUPH provided reason to inquire about the feelings toward present neighbors and the neighbors of the occupants' previous residence. As Table 2.2 shows, seven preferred their previous neighbors, eight preferred their present neighbors and fifteen were indifferent.

Several other questions were asked of the respondent concerning neighbors. They are as follows: 1) Do you still have close ties in your old neighborhood? Ten said they did and twenty said they did not. 2) Do you associate socially with any people living outside of the complex but nearby? Twenty-one replied they did and nine said they did not. 3) Would you say the people in the neighborhood outside the complex are friendly? Nineteen said yes, four said no and seven had no opinion. 4) Do you find people in

the complex friendly? Twentny-one responded yes, four said no, and four did not respond.

Given the very close proximity, the racial mixture and the lack of "common ground"--such as type of employment--the responses are generally favorable in that most respondents feel that their neighbors, both inside and outside the complex, are "friendly."

The two negative comments most often mentioned with respect to MUPH neighbors are: 1) they are too noisy; and 2) there is too much fighting. Similar policies may be directed toward the solution of both. More room between the units would help reduce the noice and friction. Also, a private yard may remove possible friction by providing a "buffer zone" and "free movement" area for the tenants.

Again these suggestions may increase the cost per unit; however, in two of the complexes examined, there was sufficient vacant land to build the buildings (with 4 or 6 living units) further apart; perhaps unfortunately, they were built very close together. This "closeness" will necessarily increase the amount of noise and possible conflicts.

Child-Day Care Services

None of the MUPH complexes examined provided child care services. This undoubtably helps to explain the responses of the residents when asked to compare their present and previous residence with regard to child care services--four preferred

their previous residence, four preferred MUPH and twenty-two were indifferent.

None of the respondents actually used the services of a "licensed day care center or nursery." One respondent did however use "licensed family day care" services. The "family" refers to an individual who either takes care of children in their own home or the child's home. Given the allowance available to a parent or parents receiving public assistance for child care, it is interesting to note that few respondents took advantage of these services.

Depending on whether the day care center is state or federally licensed, subsidized day care payments range from a maximum of \$4.50 to \$5.70 per day per child, respectively.¹⁸ For "in-home care", maximum payments are \$4.00 per day for the first child and \$2.00 per day for each additional child. For "licensed family day care" not "in-home", payments of up to \$3.00 per day per child are authorized. Moreover, a transportation subsidy of \$1.00 per day per child is available where the center provides the transport. Furthermore, licensed day care units are not allowed to charge a higher rate to subsidized recipients than the authorized subsidy; or, charge the subsidized recipient more than nonsubsidized users of the day care facility.

It is perhaps worthwhile to examine several reasons why the respondents chose not to use day care services. First, unless there are "special" reasons--such as physical

and/or emotional problems--child care payments are reserved for single parent families who either work or attend school.¹⁹ Only five of the 30 respondents interviewed are eligible for the day care program on this basis. Second, licensed day care facilities (other than "in-home") seldom provide services for children under the age of two-and-a-half years. Thus, even if a parent were able to receive day care payments, a licensed day care center may not be a possible (or preferable) alternative if the children under this age are in the home. That is, if "in-home" care were necessary because of one child's age, the other children in the family could also receive care in the home without going to a day care facility. (Nine of the 30 respondents had children under the age of two-and-a-half.)

With this brief overview, the general question of the public housing decision maker in this respect is still-- Should day care services be provided at the MUPH complex?²⁰ The results of this study indicate that there is little demand for regular day care service even at very low cost to many of the occupants. This conclusion is based on the fact that day care services are available within a few miles of each of the complexes and these services are presently not being used to any great extent by the occupants of the MUPH projects examined. Since cost does not seem to be prohibitive for the occupants who can receive the day care subsidy, the lack of demand for these services must stem

from: a) a voluntary desire not to use day care services and/or b) the institutional constraints on eligibility requirements for day care subsidy. In any event, given the existing situation, day care facilities in MUPH projects would likely benefit relatively few of the occupants.

A more basic question is whether or not the institutional constraints and subsidy provision of child care services should be altered to include more service provisions to more children. While this study is not directly concerned with child care provision, several comments are appropriate. First, there is substantial evidence that much of a child's social behavior is developed during the preschool years. Thus, public funds designed to "favorably" develop the preschool child's emotional and attitudinal characteristic can be justified on a "public good" basis. If this is so, it follows that expenditures on preschool children from "atypical" or more adverse backgrounds (i.e. many of those with low income) may be even more of a "public good".

Concluding this section, it is perhaps sufficient to note that while formal day care services in MUPH may not be feasible under present institutional constraints, the existing institutions regarding preschool child services should themselves be critically examined.

Car Pool and Bus Service

Twenty-one of the respondents were indifferent between their previous and present residence with regard to

transportation services. Eight respondents preferred MUPH and one preferred his previous neighborhood. Each of the complexes studied was provided with regular bus service.

Of the thirty respondents, seventeen owned their own car while thirteen did not. However, there was no indication of any regular car pools existing in any of the complexes at that time. Several of the respondents, however, would ride with others particularly for food shopping and laundry. Given the high number of unemployed in the complexes, the lack of car pools except for occasional chores is perhaps understandable.

Congestion, Noise and Privacy

Fifteen of the respondents preferred the congestion level of their previous neighborhood to MUPH. Again, this is partially due to the density within the MUPH complex.

In one of the complexes, several of the tenants referred to the death of a tenant child when asked about congestion. It seems the child was hit by a car while crossing the street. This brings up another point perhaps related to congestion. Locating a housing complex across a busy street from the nearest store or any other place often frequented by children should be avoided if possible. If the location cannot be avoided, safe walkways or slow speed limits should probably be provided.

Regarding noise, 17 respondents argued that MUPH was noisier than their previous residences. However, several

of these respondents said the noise was "nice." Thus, in three or four cases more noise was preferable to less noise.

If the decision maker is concerned with reducing congestion and noise, there are several possibilities: 1) the size of the complex can be reduced, thus losing possible economies of scale; and/or, 2) the density of the complex may be reduced; and/or, 3) the number of children in the complex could be reduced. (It was the children who seemed to be primarily responsible for the noise.) Each of these alternatives may increase the per unit cost of housing; however, as already mentioned, in certain cases lower density seems to be ruled out at relatively low per unit increases in cost. Since the previous residence was preferable to public housing by the largest number of occupants in the area of noise and congestion, a lower density at a higher cost may be desirable.

These alternatives become even more desirable when privacy is also considered. Fourteen respondents felt they had more privacy in their previous neighborhood than in their present location; while only five preferred the privacy of the public housing complex. Thus, in the area of indirect services primarily affected by density, the public housing complexes examined seemed to be lacking when compared to the previous residence.

Garbage Collection and Storage

The respondents preferred MUPH in this regard by a wide margin over their previous residence. (Seventeen preferred present facilities while only one preferred the previous residence.) This is perhaps due to the fact that in the city of Lansing, garbage collection is a private service provided at a specific price to the individual.²¹ However, in the MUPH complexes, garbage collection is provided by a low bid contract and paid by the city public housing authority. While all or a portion of the price of garbage collection services may be included in the rent to the occupants, they may not perceive this cost. The actual or perceived lower cost of garbage containers perhaps explain the respondents preference for public housing in this regard.

Theft and Personal Safety

With respect to theft and personal safety, the respondents were approximately equally divided three ways between 1) their previous residence, 2) their present residence and 3) indifference. In an absolute sense, it is probably safe to assume that when compared to some societal norm, neither neighborhood was particularly "safe." That is, many of the respondents referred to the large number of thefts (or fear of theft) in both their present and previous neighborhood.

However, it is interesting to note that theft and personal safety are not always considered "complementary" items. For example, several respondents said that even

though there is more theft in the MUPH neighborhood, they felt safer.

Besides designing the MUPH complex such that theft is more difficult and providing additional security, there seems to be little the public housing decision makers can do to reduce the probability of theft or personal harm. These additional preventions will require additional resources. Whether or not such additional resources are justified is not known. All that may be said is that according to this study, MUPH provides as "safe" a neighborhood on the average as the occupants' previous neighborhood.

Family Life, Desire, Self Respect

In order to determine an overall impact of MUPH on the occupants' general feeling of well being they were asked, "Do you feel that this housing as compared to your old housing has had any effect on your: a) family life, b) person (desire, self respect, etc.)?" Admittedly, this question refers to both direct and indirect services of MUPH and is included here primarily for convenience.

Concerning effects on their family life, 17 of the respondents said there was no effect, 8 felt as though their family life had improved and 5 said the effects were negative. The improvement, according to the occupants, included: a) more room, b) "better" for children, and c) "better" opportunity. Those who felt their family life had improved were not always explicit as to why. They simply felt things

were better. Those expressing negative impacts of MUPH on their family life were more vocal. Five of these said that "fighting" between their children and other children in the complex was the primary reason for more family problems. Twenty of the respondents felt that MUPH had no affect on their person (desire, self respect, etc.). Five felt as though there had been an improvement and five felt personal detriment.

Regarding the positive effects on their personal desires and self respect, the respondents again would reply that they were "happier" or "felt better as a person." However, in one case, the respondent said he had more "self respect" here and that his "old place was all torn down."

Some of the negative things affecting the individual from living in MUPH were expressed as: 1) feeling like a "welfare case," 2) more "stress" due to violence, 3) feeling like a "slob" and 4) "crushed pride."

While this question is too broad to draw any specific policy implications for the public housing decision maker, it perhaps provides some insight into the occupants' "feelings" toward public housing.

The results do point out the important role of children in affecting responses concerning family life. In many of the other questions the respondents also referred to the childrens' actions or the effect on the children when

answering a question. As will be seen later, the proximate neighbors interviewed shared this characteristic.²²

Summary of Part II

Part II evaluated the second major feature of the national housing goal--the provision of a "suitable living environment" as it pertains to MUPH. The inherent difficulty of qualitatively determining some absolute level of "living environment" was seen to depend on what characteristics were included in the environment; and, the decision makers' assignment of relative priorities.

Ten indirect services were identified as important characteristics of the "living environment." From the comparison between the MUPH neighborhood and the occupants' neighborhood, it was determined that public housing was preferred by twenty-eight percent of the responses and the previous neighborhood was preferred by twenty-seven percent. Forty-four percent of the responses were indifferent between the two neighborhoods.

As measured by number of responses, the MUPH neighborhood was preferred in the area of schools, transportation and garbage collection and storage. The occupants' previous neighborhood was preferred most often in the area of noise, congestion and privacy. It was determined that the MUPH examined in the study overall did a better job of improving direct housing services than improving indirect housing services.

Of the policy variables including size, location, design, maintenance and management; the design (density) and size of the complex seemed to offer the most promise in removing many of the negative aspects of MUPH as perceived by the occupants. In certain cases these changes would increase the per unit cost of providing housing, however, in other cases certain seemingly preferable changes could be made at relatively minor increases in per unit costs.

Part III: "Rents the Poor Can Afford":
A Comparison of the Present and
Previous Rents of MUPH Occupants

Introduction

Part III examines the third major feature of the national housing goal which is concerned with "rents the poor can afford." Presumably, the desire of the public housing decision makers is to provide a "decent home and suitable living environment" at a price which does not exceed some predetermined portion of income to the group deemed "poor."²³

The criteria used for establishing the rules and regulations in order to achieve this desired goal is based on the values and beliefs of the public decision makers. The problems associated with this effort are the subject of the next section.

Following this discussion, the trade-off between rents (real income) and housing services (both direct and indirect) is examined. Since the desire to reside in public housing can stem from: 1) the desire to improve housing service;

2) the desire to increase real income; 3) or both, this examination is necessary to determine the relative success of national housing policy with respect to the multiple goals.

The results of the analysis of present and previous rent payments provides an insight into the decisions of occupants to reside in MUPH. Of particular concern is the relationship between "a decent home and suitable living environment" and the "rents the poor can afford."

How Much Rent Can the Poor Afford?

How much anyone can "afford" for anything is primarily determined by the basic "determinants of demand."²⁴ Thus, how much the "poor can afford" for housing services is primarily determined by their income, expectations and individual tastes and preferences and prices of related goods. Without additional coercion, an individual will determine his shelter requirements based upon these criteria (assuming some knowledge or the ability to obtain knowledge of various alternatives).

However, rents are not to exceed 25 percent of adjusted income. Thus, the public housing decision makers have determined how much the "poor can afford." This is a determination of how much those who qualify for public housing "should" pay for housing services. Presumably the values and beliefs of public housing decision makers, to a certain extent, simply reflect the values and beliefs of the majority

of individuals in society at any given time. The determination of the maximum amount one should pay for housing services is basically a function of the social and economic condition of society (which in turn affect and are affected by the individual values and beliefs).

However, as values, beliefs and economic and social conditions change; the criteria which determines "rents the poor can afford" can be expected to change in two fundamental ways. First, the definition of "poor" is not an absolute but a relative term which changes as other conditions of society change. Second, the term "afford" with respect to housing services can also be expected to change in meaning as these other conditions change. The term "poor" refers in some sense to "real income"; while "afford", with respect to housing services, refers to the proportion of "real income" which should be allocated toward housing services as opposed to other services. "Rents the poor can afford" then, is simply whatever the public decision makers define it to be at any given point in time.

Comparison of Present and Previous Occupants' Rent

As mentioned in the introduction the desire to move into public housing with subsidized rents is based on money income, housing services, or a combination of both. If an individual chooses to live in MUPH at the expense of a decrease in money income, then presumably the services

received would be higher valued than the costs involved. On the other hand, if an individual chooses to move into MUPH and at the same time expects to increase his money income; then his decision may be based on either preferable services or more money income or both. Thus, previous rents which are significantly less than MUPH rents would support the hypothesis that individuals reside in MUPH because of greater money income or preferable housing services or a combination of both.

Before comparing present and previous rents, it is necessary to consider the difference between ADC (Aid for Dependent Children) recipients and non-ADC recipients. As mentioned in Chapter I, individuals receiving more than 50 percent of their income from some form of "public assistance" are required to pay maximum MUPH rents. Since actual and maximum ADC rent allowance may differ, there is a range where differences in rents will not be of any budgetary concern to the recipient. For example, given a maximum rent allowance of \$120 per month and assuming a present monthly rent of \$100; an ADC recipient moving into MUPH at a rent of up to \$120 will not have his money income affected. Thus, when an ADC recipient who is presently receiving less than the maximum rent allowance moves into MUPH, his increase in rent will be partially or totally offset by an increase in the rent allowance.²⁴

Given that those occupants receiving more than 50 percent

of their income from public assistance have different rent determinations, it is necessary to consider this fact in the present and previous rent comparisons.

On the basis of a 190 observations (132 from public housing records and 58 from personal interviews) there was no significant (95 percent confidence interval) difference in the occupants' previous rent and their present rent. The mean monthly rent from MUPH was \$106.83 as compared to a mean monthly rent of \$100.74 at the previous residence. Looking only at the mean one must conclude the public housing services are obtainable at approximately the same cost to the occupant as his previous housing services. This implies that lower rent (greater money income) was not the primary motivating factor enticing individuals to reside in public housing.

An examination of the standard deviations from the two sets of monthly rents yields some interesting observations. The standard deviation of MUPH rents is \$21.19 as compared to \$46.68 for previous rents. The explanation of this large difference lies with both public housing and the previous residences. The deviation of the rents for public housing occupants would be expected to be smaller primarily because of the standardized rents for public assistance recipients. Conversely, the relatively large deviation in previous rents are derived from the diverse backgrounds of the occupants. Some had previously lived with friends or

relatives at zero rents, while others had previously lived in a middle income rent setting. Those living with friends and relatives moved into public housing in order to obtain better housing services (removal of crowded conditions, etc.); while those paying highest previous rents primarily moved into public housing because of income considerations and alternative housing services.

The impact of public assistance recipients and their rent determination on the results is shown below.

Table 2.3. A Comparison of Occupants' Present and Previous Monthly Rents by Percent of Income Received from Public Assistance

<u>A. Occupants Receiving 50 Percent or More of Income from Public Assistance</u>	
21 (33%)	paid higher previous rents
11 (17%)	paid the same monthly rent previous to moving into MUPH
31 (49%)	paid lower previous monthly rents
<u>B. Occupants Receiving Less than 50 Percent of Income from Public Assistance</u>	
19 (58%)	paid higher previous monthly rents
4 (12%)	paid the same monthly rent previous to moving into MUPH
10 (30%)	paid lower previous monthly rents
<u>C. Total All Occupants</u>	
40 (42%)	paid higher previous monthly rents
15 (16%)	paid the same monthly rent previous to moving into MUPH
41 (43%)	paid lower previous monthly rents

Given that certain ADC recipients incurred no additional costs from moving into MUPH at higher rents; and, given that 63 percent (75 out of 119) of the occupants sampled received more than 50 percent of their income from public assistance (primarily ADC), it is possible to at least partially understand why the mean monthly rent in public housing is not significantly different than the mean of previous monthly rents.

Those receiving more than 50 percent of their income from public assistance have a present monthly rent of \$115.80 and, those receiving less than 50 percent of their income from public assistance have a mean monthly rent of \$89.36. It is interesting to note that where both previous and present (MUPH) rents were known, individuals which received more than 50 percent of their income from public assistance chose public housing at higher rents more often than those who received less than 50 percent of their income from public assistance. This is presumably due to the fact that the former group did not always have to pay the higher rents, while the latter did.

The comparison of present and previous rents can be summarized in the following statements:

- 1) The rents of the MUPH occupants examined does not "on the average" differ significantly from their previous rents;
- 2) Approximately the same number of those sampled

paid higher rents previous to moving into public housing as those who paid lower rents;

- 3) The calculation of rents for public assistance recipients, and the large number of families receiving more public assistance tends to bias the public housing rents upward.

Summary of Part III

In analyzing the national housing goal of "rents the poor can afford", it is argued that the meaning of both "poor" and "afford" are determined by general economic and social conditions and are subject to change as these general conditions change. Presently, "poor" is defined by the income limits listed in Chapter I and "afford" is defined as being no greater than 25 percent of income.

The comparison of previous and present rents suggest that in general there was no significant change in the amount of rent the occupants paid. These results imply little or no money income gain to most of the occupants examined. Thus, the reason for moving into public housing seems to be expectations of preferable housing services.

Summary and Conclusions

Summary

Chapter II examines and discusses the primary goals set forth in the National Housing Act of 1949. In the attempt to achieve the goals of a "decent home" and "suitable

living environment" at "rents the poor can afford", public decision makers provided various types of "low income" housing. One of the most important "types" (in terms of numbers) being multiple unit public housing.

In order to assess these goals it is necessary to obtain the occupants' point of view since they are presumably the "target" group and receive a share of the benefits from public housing. Therefore, Chapter II is concerned with those occupants and various policy decisions which affect the benefits they derive from public housing.

While the goals of national housing policy contain a certain amount of euphemistic appeal, it is shown in each case that they contained little measurable content. The meaning of a "decent home" and "suitable living environment" at "rents the poor can afford" is relative, and is based primarily on the values and beliefs of the public decision makers; which, certainly in the long run, reflect the general social and economic conditions of society. However, it was argued that in terms of any "reasonable" societal norm many of the occupants studied had in fact previously resided in homes and living environments which would not be considered "decent" or "suitable."

With respect to "rents the poor can afford" it is argued that two ambiguities are contained. First it is necessary to define "poor", which is not an absolute but a relative term; then, it is necessary to define "afford",

which presumably refers to some portion of income to be used for housing services. Both are normative value judgments determined by the public decision makers.

Not being able to meaningfully employ the "decent home" and "suitable living environment" aspects of the national housing goal, it is necessary to approximate their intent. Regarding "decent home," it is assumed that this referred to the "direct housing services"--those services emanating from the structure itself and certain major appliances. Similarly, "living environment" is identified as "indirect housing services"--the myriad of services which the neighborhood provides apart from the home itself. The direct and indirect housing services used for this study are located in Table 2.1 and 2.2, respectively.

Since an absolute level of services provided by the public housing complexes cannot be judged without reference to a societal norm, the services of MUPH are compared with the occupants' previous residence. The requirements for eligibility discussed in Chapter I determine whether or not an individual is in "need" of public housing assistance. Following from the fact that public housing is intended for those in "need" of public housing services, the occupants of MUPH likely had previously received a relatively low level of housing services. Thus a comparison of previous housing services with those of public housing yields the change in such services from the occupants point of view.

Viewing the changes in the quality of housing services from the previous residence to the present residence, allows the public decision maker more knowledge with which to determine the relative success or failure of MUPH. The public decision maker has the general policy tools of size, location, maintenance, management and design with which to alter the quality of services derived from public housing. Therefore, these policy tools are discussed in reference to the direct and indirect services which seem most important. There are many possible trade-off involved, the allocation of economic resources. For example, the density of the complexes influence the level of noise, congestion and privacy. A lower density will tend to reduce these levels but this may involve a higher construction cost. Also, the decision not to include central laundry facilities imposes additional costs to the occupants. However, the costs of providing public housing may increase if central laundry services are included. The point is, the decision maker must subjectively evaluate these trade-offs from the point of view of the occupants as well as the taxpayer. The following section discusses some of these trade-offs.

Conclusions

The results of Chapter II indicate that the respondents largely preferred the direct services of public housing. Sixty percent of the total responses favored their present

residence as opposed to five percent favoring the previous residence. Thirty-five percent were indifferent.

Compared to direct services, the complexes examined provided much less improvement in the area of indirect services. The responses were 28 percent, 27 percent and 44 percent preferring public housing, preferring previous residence and being indifferent, respectively.

The occupants thus seemed to receive, on the average, preferable direct services and similar indirect services. Moreover, their present services are obtained at approximately the same average rent as were their previous services.

Some of the more important considerations from a policy making viewpoint are given below:

1. The provision of community laundry services may be a worthy consideration. Inclusion of central laundry services would allow the occupants a third alternative to either incurring the cost of privately owned facilities or using commercial facilities. The cost of private laundry services exceeds the budget limitation of many of the occupants, and commercial facilities contain the additional cost of transportation. Moreover, transportation costs increase when more than one trip is required--as may be the case with food shopping and laundry chores.
2. The question of the degree of sophistication of

appliances also seems important. High maintenance costs and lack of use of certain sophisticated appliances implies that the facilities included should be matched with the degree of familiarity of prospective occupants. More specifically, it is questionable whether the resources used to supply and maintain garbage disposals could not have been better used elsewhere.

3. Another consideration is the impact on schools and, in turn, the impact of the schools on the children of the complex. The respondents were most concerned about the lack of personal attention from the teacher and economic and racial discrimination. First it is suggested that the location of the complex could be such that the children would attend several schools; thus reducing the impact on any one school. Second, location of public housing in neighborhoods with racial and economic mixtures would reduce the "identifiability" of the children from the complex, and perhaps reduce the amount of real or perceived racial and economic discrimination.
4. Day care or child care services did not seem to be in great demand from the occupants questioned. However, this does not imply that the inclusion of day care centers is untenable. The question

must be decided on the grounds of the public benefit derived from day care services rather than as a lower cost alternative to a majority of the occupants.

5. The primary shortcoming of MUPH from the occupants point of view, was in the area of congestion, noise and privacy. Perhaps the failure of certain multiple unit housing projects stems from this shortcoming. The designing of complexes with additional outside private space may be a partial solution to this problem. In the housing examined there is essentially no outside private space. Also, in a long run sense, it may become increasingly difficult to rent housing which has few amenities. In other words, a complex with an expected life of forty years may only be effectively useful for say twenty years. However, a project which appeals to a wider income bracket may remain rented-up throughout its useful life. With continued increases in income, housing with the barest amenities will appeal to a smaller market. Of course, there is presently considerable excess demand for public housing services at the subsidized price.

Improvements in design would reduce noise and congestion and allow more privacy. Such

improvements would not only increase the services of MUPH but would also help insure continued usefulness of the project over a longer period of time.

Negative aspects of congestion, noise and privacy contribute to many of the negative comments concerning neighbors and personal family problems. Thus, possible reductions in noise and congestion and additional privacy should be an important consideration to the public housing decision makers when locating, designing and managing public housing complexes.

FOOTNOTES

¹See Chapter I.

²In some cases the public decision maker is in a monopoly position and there are no close substitutes for the service. Thus, he cannot to some extent view the demand for substitute services as an indicator of the desirability of his product.

³This assumption is based on the observation that a saving of \$200 per unit on direct housing services would perhaps be sufficient to build one additional unit in a 100 unit complex. On the other hand, it may be argued that the level of direct housing services is sufficiently high such that additional expenditures on direct housing services are "luxuries" and not worth the cost of providing housing for fewer individuals.

⁴Includes efficiency and smaller one bedroom units.

⁵One of the respondents with 5 children had been living with a sister who has 7 children in a two bedroom house.

⁶See Anthony Downs, Opening up the Suburbs: An Urban Strategy for America (New Haven and London: 1973), pp. 48-53. Some interesting comparisons: the average four-person household unit in Moscow contains about 550 square feet. In Britain, a two-bedroom unit occupies around 800 square feet. Minimum square footage standards are relatively high in the United States.

⁷Many housing managers commented on the inability of certain respondents to properly decide what should and should not be put through a garbage disposal. To the extent this is true the cost of a garbage disposal may exceed the value of providing the service. This is related however to a larger community decision to require disposals in the city of Lansing. This is probably related to a decision to not have public solid waste pick-up.

⁸In the limit one neighborhood may be said to be preferred to another if at least one indirect service is preferred and the others are equally desirable.

⁹This question often required further explanation. However, the author is satisfied that most respondents understood the intent of the question.

¹⁰The problem of economic efficiency is also brought out by this question and the responses. In his Welfare and Competition, Scitovsky argues that ". . .relief payments in cash are preferable to a (housing) subsidy, because they are economically more efficient, giving the relief recipients either a greater gain at the same cost to the government (society) or the same gain at a lower cost." See Tibor Scitovsky, Welfare and Competition: The Economics of a Fully Employed Economy (Chicago, Illinois: 1951), pp. 60-69.

¹¹It should be noted that the question should have included a clause assuming zero cost to moving. By not including this, the respondent may have implicitly discounted the value of living elsewhere by the cost of moving; thus biasing "marginal" responses toward MUPH.

¹²This is not strictly true. Some of these respondents may have simply "given-up" any aspirations of improving their economic well being and instead prefer that their housing decisions be determined by the state.

¹³Of course, there is the problem of deciding how much and how "nice" the housing should be. Thus, the services "they ought to receive" may be less due to the desire to provide fewer services to more people. Presumably, the available resources would not be spread so thinly as to cause services to fall below some minimum level.

¹⁴According to Hick's definition, ". . .Y is complementary with X if the marginal rate of substitution of Y for money is increased when X is substituted for money." See J. R. Hicks, Value and Capital: An Inquiry into Some Fundamental Principles of Economic Theory; Second Edition (Oxford: 1946), p. 44.

¹⁵Originally, the author asked the respondents to compare the "schools" of two neighborhoods. It quickly became apparent that some respondents were interpreting the question as a reference to the physical structure and not to the services provided. Thus it was necessary to explain that the overall quality of educational services was the intent of the question.

¹⁶Busing of the children to different schools would presumably achieve similar results. However, a "correct" location may not incur the same political problems or the costs of busing.

¹⁷In at least one case the builder preferred building the complex in a small area. Thus a higher cost may have been incurred if the space between the buildings were increased. However, the marginal increase in cost would probably be minor.

¹⁸The licensing of day care centers is based on a myriad of requirements including health, sanitation, staff-child ratios, staff qualifications, safety and etc. See Federal Interagency Day Care Requirements Pursuant to Sec. 522(d) of the Economic Opportunity Act as approved by U.S. Department of Health, Education, and Welfare; U.S. Office of Economic Opportunity; U.S. Department of Labor. 1968. Also Nursery Schools and Day Care Centers: Requirements for Licensing and Recommended Standards, Department of Social Services. (Lansing, Michigan: 1973). The maximum rate charges were also provided by the Michigan Department of Social Service.

¹⁹The recipient may receive two weeks of day care payments while seeking employment. Also, certain "types" of educational services are not covered--such as graduate school.

²⁰For the sake of discussion this question is admittedly over simplified. Size of the complex, availability of existing day care facilities and other factors may determine whether the question would even be given consideration.

²¹In the study area the cost of garbage collection was typically between \$1.25 and \$1.50 per week in 1973.

²²There is little doubt that the children-adult ratio has many fundamental social and economic affects on society.

²³See Chapter I for a more thorough discussion of rents and income qualifications.

²⁴At the time of this study in 1973, the "Brooks Amendment" was just being implemented. The amendment essentially prohibits reductions in welfare assistance payments to tenants of low-rent housing. Under this amendment, occupants of public housing receiving welfare payments are required to pay no more than 25 percent of their income toward rent. For instance, a welfare recipient receiving \$120 per month rent allowance previous to moving into public housing is entitled to receive the \$120 allowance after moving. This implies a sizable real income gain for those welfare occupants living in public housing. For example assume a welfare recipient receiving \$240 per month from welfare plus a monthly housing allowance of \$120 per month rent. On moving into public housing, his monthly rent is calculated at \$90 per month (.25 times \$360 = \$90), with a resulting money income increase or \$30 per month.

CHAPTER III

THE ECONOMIC IMPACT OF MUPH ON PROXIMATE NEIGHBORS AND CERTAIN POLICY CONSIDERATIONS

Introduction

Multiple unit housing projects may create cost and benefits which accrue to the proximate neighbors of these projects.¹ The direction and magnitude of the costs and benefits is dependent upon many characteristics and inter-relationships of both the housing project and the neighboring community. This chapter examines the impact of three multiple unit public housing projects (the occupants of which are discussed in Chapter II²) as perceived by the proximate neighbors. The neighborhoods involved may be broadly classified as primarily single family-home ownership communities.³

The fact that many such communities often oppose the location of public housing in any nearby proximity, suggests an expected positive cost to the individuals of the community. The purpose of this chapter is an attempt to: 1) determine if the housing complexes in question impose a perceived cost on proximate neighbors; 2) determine where and how these costs are manifested; and 3) suggest various policy alternatives available to the decision maker and implied by the results.

The public housing decision maker should take into account the impact on proximate neighbors for at least three reasons. First, in order to more correctly assess the desired social value of any good or service for which a well functioning market is not available, an identification of the costs and benefits to the parties involved is required. Second, even if the decision maker is only concerned with, say, the occupants of public housing, it behooves him to realize that adverse affects on proximate neighbors can in turn reduce the "suitability" of the living environment for both groups. Thus, perhaps falling short in the development of the national goal of a "suitable living environment." Third, collective opposition by proximate neighbors may successfully prevent the location of a public housing complex in their neighborhood.

The costs to proximate neighbors of public housing is examined in terms of changes in relative property values and indirect services (the indirect services in this chapter refer to privacy, congestion, noise, aesthetic values, and schools). Since there is no a priori reason to expect a public housing complex to affect the physical structure of neighboring homes in the short run, direct housing services are assumed unchanged. However, while the services a housing structure provides may not change, capital gains and losses due to changes in property values can still occur. Thus, the "value in use" (of direct housing services) is

assumed constant and the perceived change in the "value in exchange" (i.e. relative property values) is examined. There is no clear way to separate changes in "value in exchange" from changes in indirect services, since they are often strongly related. Perceived changes in the level of indirect services of proximate neighbors due to public housing is estimated by examining perceived changes in the aesthetic value, congestion, noise, privacy and schools. Identification of the perceived impact on these variables allows for development of policies designed to alter the impact in some desired manner. Again, because of the positive relationship between property values and the level of indirect housing services, policies designed to affect one will likely affect the other in the same direction.

Apart from perceived changes in property values and the level of indirect housing services, a certain number of the respondents are affected by the change in the racial and economic mix of the neighborhood. While personal feelings toward other racial and economic groups is somewhat beyond the scope of this study, they are of sufficient importance to deserve comment: Both because of their inherent importance in the decision maker's ability to locate multiple unit public housing; and, because of the respondents' implied bias against the housing complex.

Before examining empirical results and developing policy alternatives, it is useful to discuss the nonmarket

aspect of the costs generated by two groups living in close proximity; and, specifically mention the limitations of the general applicability of the results.

"Neighborhood Effects" and the Relationship
Between MUPH and Proximate Neighbors

"Neighborhood effects" are defined as those ". . .actions of individuals (or groups of individuals) which have effects on other individuals (or groups of individuals) for which it is not feasible to charge or recompense them."⁴ While no less "real" than market prices, costs and benefits from "neighborhood effects" have no money exchange market common denominator.⁵ Their distribution must be determined by another source. Under current policies, the public decision maker, in his choice of size, location, design, maintenance and management, is the distributor of the "neighborhood effects" associated with public housing.

When public housing (as with other goods) gives rise to "neighborhood effects", the public rules determine whose interest count. The alternative chosen is usually labeled as the one with the greatest social value or in the public interest, but these terms only indicate the speaker's values. The purpose of this section is to identify and clarify the incidence and magnitude of "neighborhood effects" on proximate neighbors of multiple unit public housing. The goal being to assist the decision maker in adopting public housing policy.

Individuals and families faced with the possibility of becoming proximate neighbors to multiple unit public housing have three options--all of which may incur social costs (both positive and negative) which are not reflected in the market place. First, they may jointly oppose the project politically. If successful in their opposition the complex will not be built, or will be built in another location. In either event, the net impact may be less than if the project had been located in the original neighborhood. The expectations of proximate neighbors (whether correct or not) may detract from their welfare as defined by those in power. Second, many of the existing families in the neighborhood may choose to sell. If the relative market price of their home has fallen, they may lose but others may gain. This is because "costs" to the seller are "gains" to the buyer. However, if prices continue to fall (because of "panic selling" or some "real" adverse affect of MUPH), individuals with lower incomes will move into homes they normally could not afford. These individuals will be less able to repair and maintain the existing housing stock; thus, possibly leading to a continued downward trend in prices along with an increase in blighted conditions.⁶ To the extent that these blighted conditions contain costs to society, the private cost of the public housing complex will be less than its social cost. Conversely, to the extent a public housing complex improves a blighted condition

(and the social costs attached thereto), its social value is greater than its private value.⁷ Third, the proximate neighbor may choose not to sell and continue living in the same location. However, this individual is also subject to certain cost and benefits emanating from the public housing complex. Since, in the short term, there is no reason to assume any change in the level of direct housing services provided by his home, any realized costs must ultimately rest with changes in the indirect services of the neighborhood.

Why does this individual simply not sell his home and be done with any cost imposed on him by the public housing complex? First, there are moving expenses which may exceed the cost of living near the complex; and second, the relative market price of his home may have declined due to the housing project. He may be in a "fixed" situation. That is, while the marginal value of his home is less than the original "price of acquisition", it is greater than the "price of salvage".⁸ This implies that the greater the fall in property values, the greater the indirect costs proximate neighbors will assume living near the public housing complex.⁹

The individuals who choose to say albeit not to sell, and incur positive costs associated with the public housing complex are of special concern to the decision maker. Their reaction against these costs may lead to a decline in the "living environment" of both the occupants and proximate neighbors.

The relative decline in property values plus moving expenses limits the costs proximate neighbors would be willing to assume from a decline in indirect services. Thus, if a proximate neighbor feels his property value declined by \$2,000 (including moving expenses) and he chooses not to sell, his perceived cost of lower quality indirect services must be less than \$2,000 (i.e. his implicit valuation of remaining in the neighborhood has not declined by over \$2,000).

Assuming alternative available housing, relative property values are based on the quantity and quality of direct and indirect housing services provided. Since direct housing services are unaffected in the relevant time period, changes (or expected changes) in indirect services will primarily determine the direction and magnitude of relative changes in property values. Thus, perceived changes in property values are important in that they establish a limit on the cost proximate neighbors are willing to assume from staying in the neighborhood; and, the perceived impact on indirect services are important in that they will largely determine the direction and magnitude of changes in relative property values.

In summary, "neighborhood effects" of MUPH may create costs and benefits which accrue to the proximate neighbors. These costs and benefits (or expected costs and benefits) are manifested through perceived changes (or expected

changes) in relative property values and indirect housing services. Moreover, changes in indirect housing services and property values are fundamentally related; and, together these changes largely determine the magnitude of the MUPH impact on proximate neighbors. With additional knowledge, the decision maker can hopefully use his policy tools of size, location, design, maintenance and management in order to alter the impact of public housing and increase its desired benefits.

Limitations of the General Applicability of the Results

The respondents of this study are 90 proximate neighbors of the three public housing complexes examined in Chapter II. In a sense every neighborhood (somehow defined) is unique and the impact from any particular public housing complex is also, to a certain extent, unique. Thus, any specific impact or policy alternative designed for one neighborhood may not have the same effect in another. This is true even if the neighborhoods and public housing complexes contain many similarities; since, the unique characteristics may be more important in determining impact than similarities. Moreover, the "mix" of neighborhood characteristics may play an important role in determining impact. Neighborhood characteristics such as income, degree of mobility, value of homes, age, number of children and the level of education all affect the perceived impact

from a particular housing complex. While the particular "mix of characteristics may be unique, certain important (useful) similarities may exist.

The similar aspects of the three neighborhoods in this study include:

1. Each is affected by a similar public housing project. Where similar refers to project size, family size and family income.
2. Each is characterized by "single-family" home ownership with a similar range of home value.
3. Each is predominately white with growing minorities.
4. Each contains a similar range of income and employment groups.
5. Each could broadly be defined as a middle to lower-middle income neighborhood.¹⁰

The study offers possible policy alternatives suggested by the results. These suggestions should not be interpreted as what "ought to be", but rather as possible alternatives where proximate neighbor responses imply their desirability.

In order to determine the general applicability of factors which influence the impact of public housing projects on proximate neighbors, other studies on other projects must be conducted. Toward this end, the study hopefully provides additional insight into the construction and testing of hypotheses related to this area of endeavor.

The Impact of MUPH on Property Values--Some
Empirical, Theoretical and Policy Considerations

Introduction

The impact of a public housing complex on property values is important from the point of view of individuals who stand to incur any capital gains or losses. Moreover, as previously shown, the actual impact may diverge from the desired impact if property values rise or fall sufficiently to generate conditions whereby other portions of society are affected (i.e., through the costs and benefits incurred by proximate neighbors).

Perceived changes in property values also provide an insight into the magnitude of costs associated with changes in the indirect services of the neighborhood. That is, if a proximate neighbor feels the public housing project has detracted from the indirect services of the neighborhood, and yet he chooses not to sell, he evidently would rather pay this cost than the cost of moving plus any capital losses.

An understanding of some of the empirical and theoretical effects of public housing on property values allows for the development of policies regarding size, location, design, maintenance and management, in order to improve the desirable effects of multiple unit public housing.

Empirical Results From Proximate Neighbors
Concerning the Impact on Property Values

Respondents were asked three questions concerning changes in property value and ownership. Table 3.1 presents the results in the question concerning changes in the individual's property values.

Table 3.1. Proximate Neighbor Responses to the Question: "Do You Think The Value of Your Property was Affected in any Way?"¹

Neighborhood	Number of Responses ²					
	Yes		No		Don't Know	
	Percent	Number	Percent	Number	Percent	Number
Hildebrant	48	14	31	9	21	6
La Roy	36	11	52	16	13	4
Mt. Vernon	46	13	46	13	7	2
Total	43	38	43	38	14	12

¹After the respondents answered "yes" they were asked in which direction the value changed and by approximately how much. Only one respondent (in the Hildebrant area) thought property values "probably increased." However, he answered "no" to the original question.

²Two of the respondents from the Hildebrandt neighborhood are renters, and are not involved in this question.

The results of Table 3.1 show that one half of those responding "yes" or "no" felt as though property values were affected; and all of these agreed that property values had decreased. The difference in the number of "yes" and "no" responses between neighborhoods may be attributable to differences in the relationship of the neighbors to the complex

(e.g. different location with respect to public housing, etc.).

After responding "yes" to the above question, the respondents were asked if they thought their property value went "up" or "down" and by approximately how much. All respondents answering "yes" felt their property values had decreased. The responses as to "how much" were varied. In dollar amounts the figures ranged from \$1500 to \$15,000 with eight (approximately two-thirds) respondents located in the \$2000-\$4000 range. Some simply responded "a little bit" and others said "way down." While there was not a consensus on how far property values had fallen, these individuals felt they had, in fact, declined.

The respondents were also asked, "Do you think there has been an increase in home sales in this area?" To this question there are forty-one "yes" responses, thirty-three "no" responses, and thirteen "don't know" responses. The Mt. Vernon neighbors accounted for seventeen of the "yes" responses, with thirteen and eleven respectively from the Hildebrant and La Roy neighborhoods. Those who responded "yes" were also asked if they knew what had caused this increase. Only seventeen responded that public housing was the cause. Taxes, schools and "less desirable people" were mentioned at least once. One respondent from the Mt. Vernon neighborhood said that two people sold because a house near theirs was broken into shortly after the public housing

complex was occupied. However, it seems that when the thieves were apprehended they were boys from the neighborhood and not from the complex at all. Several respondents mentioned that there had been some "panic selling" shortly after the complexes were occupied, but that everybody had "cooled down."

The respondents were also asked: "Do you or have you recently planned to sell your house?" Twenty-nine responded "yes" and fifty-two replied "no"--the remainder being undecided. According to neighborhoods there were ten, eight and eleven who responded "yes" from Hildebrant, La Roy and Mt. Vernon, respectively. Those responding "yes" were then asked, "What are, or were your reasons for want to sell?" Only four individuals referred to the public housing complex as being a reason for wanting to sell. A few others mentioned they "wished they could move." However, most respondents cited reasons other than public housing, and in fact said their reasons were "not related to public housing."

The relatively small number of individuals wanting to move because of public housing, compared to the relatively large number who feel their property values are depressed, implies that these respondents are willing to accept the cost of any perceived decrease in indirect neighborhood services (discussed below) rather than sell now and assume moving expenses and the expected loss in property value.

While property values may have declined in these

neighborhoods--relative to what they would have been had the public housing complexes not been built--there does not appear to be any widespread expectations of continuing falling values. If such expectations were widely held, it seems reasonable to expect that a greater number of proximate neighbors would be desirous of selling. In other words, if property values are expected to continue falling, many of the respondents would prefer to take the expected loss now rather than a greater loss at a later date.¹¹

Another observation from the study indicates that owners of relatively high valued homes felt as though their property values were more adversely affected than owners of lower valued homes. Several mentioned being "over built" for the neighborhood. One respondent mentioned that when he had built his home he had assumed property values in the neighborhood would increase. However, he contended, public housing had prevented this and had "cost him about \$10,000." Another said his home cost \$60,000 and "he would be lucky to get \$45,000."

The above is primarily a brief data presentation which hopefully provides an insight into how the proximate neighbors perceived the impact of MUPH on property values. Below is a more general discussion of how public housing complexes may affect neighborhood property values.

Some Theoretical and Policy Considerations
Of the Impact of MUPH on Neighboring
Property Values

Perhaps the first thing to consider, with respect to the impact on property values, is to determine their importance for policy. It has already been argued that an adverse impact on property values is not necessarily a wholly "bad" thing. In fact, it could be argued that a fall in property values would allow relatively lower-income families to purchase desired homes, while those who move also choose a preferable setting. But, those whose savings and assets are reduced are harmed.

The harmful aspects of an adverse (or expected adverse) impact on neighborhood property values with respect to MUPH, seem to have three possible consequences.¹² First, a continued fall in property values may lead to dilapidation, abandonment, squalor, disease and other maladies which detract from societal welfare (i.e. incur a social cost which must be imputed into the cost of the public housing complex). Second, a perceived decline in property values by proximate neighbors may lead to animosity and dislike which diminish the value ("living environment") of the neighborhood. Third, an expected fall in property values will increase neighborhood resistance to any proposed public housing complex in their area, even if such expectations are groundless.

Regarding the first consequence, certeris paribus, any sustained fall in property values due to a public housing

complex implies considerable deterioration of the direct or indirect housing services of the neighborhood in the eyes of a significant portion of the home buying public. Where "significant portion" is based on the number, tastes, and income of potential home buyers; as well as the costs of alternative housing services.

Rapid deterioration of direct housing services can follow the "panic selling" which may occur when news of a public housing complex becomes known and construction starts. That is, as the supply of homes offered for sale in a given neighborhood increase, prices will fall and individuals with relatively lower incomes will now be able to enter this market. If prices fall sufficiently, homes may be purchased by individuals whose incomes do not allow for adequate maintenance. Thus, the home is allowed to deteriorate at a more rapid rate. The increased deterioration will "cause" a continued decline in price.

In order to decrease the possibility of a large amount of "panic selling" and subsequent (artificially) depressed prices, the public decision maker can increase the "lag" between proximate neighbor knowledge and the actual construction of the complex. The longer the "lag" the less likelihood of as many homes being on the market at any one time. The longer time limit may also allow some of the potential sellers to "cool down."

An increased "lag" may also be useful with regard to

the second consequence (i.e. deterioration in the "living environment"). For example, if the entry of a MUPH complex increases home sales and forces prices down, some of those individuals desiring to sell may decide otherwise in view of the larger than expected capital loss. Wanting to leave and yet feeling "forced" to stay may increase neighborhood animosity toward the complex. Thus, leading to a less desirable neighborhood for many individuals--both outside and within the complex. A longer "lag" would allow some of these individuals to receive acceptable prices (i.e. prices high enough to prevent capital losses from being greater than the expected cost of remaining in the neighborhood).

How long should this time "lag" between notification and construction be? This of course depends on the housing market conditions in the (greater) community, credit availability, income and the "need" for low cost housing. With the exception of the latter, one year may be a reasonable policy alternative.¹³

A sustained fall in neighboring property values may also occur if the indirect services of the neighborhood are sufficiently negatively affected. Certain of these indirect services are considered in more detail in the next section. Nonetheless, the relationship between direct and indirect housing services is an important consideration regarding property values. That is, the demand for housing services is based on the combined demand of direct and indirect

housing services. This relates to the "necessity" and "luxury" aspects of housing. Quoting from Muth:

On the subject of income elasticity, Morton asserts that, 'because of the absolute necessity of shelter, housing stands with food very high in the order of urgency. . . .Housing expenditures, accordingly, do not bear a constant but a decreasing ratio to income.' This is in direct contradiction to Marshall's classic comment that 'house room satisfies the imperative need for shelter from the weather; but that need plays very little part in the affective demand for house room' and that 'where the condition of society is healthy. . .there seems always to be an elastic demand for house room, on account of the real conveniences and the social distinction which it affords.¹⁴

The contradiction of the two authors may stem more from the definition of the good in question than from any disagreement regarding the "necessity" of housing or the income range considered. It is quite possible that the demand for direct housing services is income inelastic, over a range, whereas the demand for indirect housing services is income elastic. Regardless, a broad statement regarding the income elasticity of housing service demand is somewhat analogous to a similar statement with respect to the income elasticity of food demand. That is, there are many housing services with widely differing income elasticities, just as there are food items with extreme differences in income elasticities. However, in the area of housing, it would be very useful to determine the proportion of income allocated on direct and indirect housing services between different income groups.¹⁵

The relationship of direct and indirect housing services and the many unique aspects of any particular neighborhood and MUPH complex, suggest against a general statement concerning the impact on property values. However, since it is reasonable to expect that the location of, say, \$15,000 homes in a \$60,000 neighborhood (or vice versa), will increase the value of the former and decrease the value of the latter; it seems reasonable to construct MUPH of such value that it "fits in" with the neighborhood (assuming one is concerned with neighborhood property values).¹⁶ Unfortunately, in many cases, this would increase the cost per unit of public housing in higher income neighborhoods and reduce the total number of units built (given a fixed budget).

Summarizing, the impact on property values concerns the decision maker primarily due to the possibility of rapid neighborhood deterioration and/or proximate neighbor antagonism. In order to decrease the likelihood of such an impact, a longer time "lag" between proximate neighbor knowledge of planned construction and actual construction is suggested as a possibility. Similarly, the construction of public housing units whose value per unit approximates that of the neighborhood would also work toward this end. It must be concluded, however, the study offered no definitive statement on the general impact of MUPH on property values. The inability to make such a statement rests with the multitude of housing and human characteristics involved.

Sales records are also spotty and to separate out causes of value changes other than MUPH would require a major study in itself.

According to Bish and Nourse, two studies have compared the effect of public housing projects on neighboring property values. The two studies attempted to determine whether there were social benefits or costs to neighboring families. The arguments run:

Changes in site value express the changes in the relative value of one neighborhood environment over others. Site value itself is difficult to measure, but changes in property value can be used as a measure of these changes as long as care is taken with respect to changes in improvements occurring on each side. The technique requires comparing the changes in property values in blocks surrounding a given project with changes in property values in other neighborhoods that were of comparable quality and accessibility prior to the introduction of public housing.¹⁷

There are, of course, many unknowns in such an approach as well as an implicit assumption that changes in property values somehow accurately reflect "social" benefits and costs. Neither study found any substantial differences in rent changes between the two groups. However, these results would not necessarily have any implications for this study. The public housing projects in the above studies were located in low-income neighborhoods. The complexes examined in the present study are located in more middle-income neighborhoods.

The Impact of MUPH on Certain Indirect Housing Services as
Perceived by Proximate Neighbors; and, Some
Policy Considerations

Introduction

The location of a public housing complex in a neighborhood will have certain effects on the indirect housing services. These services create costs and benefits to the occupants and neighbors of public housing. The recipients of the costs and benefits, however, have no market within which to reflect their satisfaction or dissatisfaction with regard to these benefits and costs.¹⁸ This section examines the impact of MUPH on certain indirect services (normally considered to be important in the desirability of a neighborhood) as perceived by proximate neighbors.

The indirect services considered are privacy, congestion, noise, aesthetic value and schools. While this is not an exhaustive list of indirect services, it seems to represent a number of areas where a public housing complex may have an impact on the neighborhood. Especially since the broad and rather vague definitions of the above services (as shown later) allows the respondents considerable flexibility in their response.

The primary difficulty in examining the above indirect services is the determination of "goodness" and "badness" or benefits and costs associated with each. For example, more "noise" or "congestion" may be considered "bad" by certain individuals and "good" by others. Thus, other than

at the extreme it is very difficult for the decision maker to assess costs and benefits. It is therefore necessary to attempt to determine not only the affect on the indirect services, but whether or not the result is a perceived benefit or cost.

Even if one can assume an accurate measurement of the direction of impact on indirect services (as perceived by proximate neighbors), the magnitude of impact poses more difficult problems. For example, again using the noise level, assume that proximate neighbors generally perceive a cost to an increased noise level. This does not tell the decision maker how much if any additional resources should be used to reduce the noise level.¹⁹ Such a decision rests with the judgment of the decision maker.²⁰ The following discussion of the impact on indirect services will hopefully provide the decision maker with additional insight and ideas on which to make these decisions. Below the perceived impact on each of the indirect services is presented.

Impact on Indirect Services of Proximate Neighbors

Privacy

Table 3.2 presents the responses of proximate neighbors, by neighborhood, regarding the question of privacy.

Of those responding "yes" or "no" to the question, 41 percent felt as though the housing complex had affected their privacy. The two primary reasons given for this

Table 3.2. Responses to the Question, "Do you Feel that Your Privacy has been Adversely Affected due to the Public Housing Complex?"

Neighborhood	Responses					
	Yes		No		No Opinion	
	Percent	Number	Percent	Number	Percent	Number
Hildebrant	35	11	52	16	13	4
La Roy	42	13	58	18	0	0
Mt. Vernon	39	11	57	16	4	1
Total	39	35	56	50	6	5

adverse impact on privacy are: 1) trespassing--mainly by the children of the complex; and 2) the fear of theft. The latter being implied by eight respondents while the remainder are primarily concerned with the former.

Considering trespassing first, the respondents varied in their opinion with regard to the importance of the problem. Some said it was no "big deal" and that they would "put up a fence if necessary." Others argued their lawn, flowers and other shrubs were being destroyed. Evidently, however, the cost was not sufficient to warrant building a fence; even so, certain of these respondents were quite angry.

Several of the respondents and built a fence specifically because of trespassing. An interesting observation on the effect and importance of fencing was provided by the Mt. Vernon neighborhood. When the project was built, a

fence was constructed part-way around the complex--between the complex and the single-family homes to the south. It seems that children (from the complex) would walk along the fence until it ended and then turn south toward their destination (school). As expected, the person's house directly behind where the fence stopped would catch a large amount of the cut-across traffic. This encouraged the owner to construct a fence; which, would subsequently improve the desirability of his neighbor's yard for short cut purposes. Thus, his neighbor would be encouraged to build a fence and so forth.

The upshot of this fence building implies the possibility of a waste of resources. That is, fencing the project completely (or, more specifically fencing up to a public route) would presumably be a lower cost alternative in terms of real resources, than for proximate neighbors to separately construct fences. Both economies of scale and less fencing material imply lower cost.

If for one reason or another fencing the project is undesirable, an alternative location of the complex may be preferable.²¹ For example, locating the project near the school, or directly adjacent to public routes would likely decrease the desirability of trespassing and, thus reduce the need of fencing.

As previously mentioned, the fear of theft is another impact on privacy voiced by proximate neighbors. Some felt as though they "could no longer leave anything laying around,"

A few complained of having been robbed, and/or of knowing others who had been.²² Other than additional police patrols and lighting, there appears to be little the decision maker can do regarding the fear of theft.

Summarizing, the decision maker can employ alternative choices of location and design in order to alter the impact on proximate neighbor privacy. More specifically, choice of location and design which encourage the use of public routes (and/or decrease the desirability of traveling across proximate neighbor yards) seem most promising in this regard. While travel to and from schools was the primary problem identified in this study, the same reasoning would apply to any nearby establishment (e.g. supermarket, church) commonly frequented by the occupants of a public housing complex.

Congestion

The proximate neighbors were asked "Do you feel that there has been a change in congestion since the public housing complex was occupied?" The responses for each neighborhood are listed in Table 3.3.

Again children were identified by a number of respondents as being an important reason for the increase in congestion. However, more traffic (especially at night according to some), parking on streets, and "just more people," seemed to be the primary causes of the increased congestion.

The results also indicate a feeling of greater increased congestion in the La Roy neighborhood than in either of the

Table 3.3. Responses of Proximate Neighbors Concerning the Question:
 "Do you Feel that there has been a Change in Congestion
 Since the Public Housing Complex was Occupied?"

Neighborhood	Responses							
	Not at All		Some		Much		No Opinion	
	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent	Number
Hildebrant	45	14	23	7	16	5	16	5
La Roy	39	12	23	7	39	12	0	0
Mt. Vernon	64	18	18	5	14	4	4	1
Total	49	44	21	19	23	21	7	6

others. This perhaps stems from the location of the complex with respect to major streets. Both the Mt. Vernon and Hildebrant complexes are located and designed such that the traffic to and from the complex enters and exits on a relatively well traveled major street. Whereas it is possible to reach the La Roy complex from several directions--none of which could be considered a "major" street.

The important policy question in this regard; therefore, seems to be the location of MUPH with respect to the entry and exit of automobiles. Location of the complex near a major street, prevents the necessity of driving through the neighboring residential area; thus reducing the amount of congestion (as perceived by proximate neighbors).

However, locating the complex near a major street can have certain drawbacks. For example, when asked the question

on congestion, several of the respondents of the Hildebrant neighborhood referred to an incident in which a child from the complex was hit while crossing Turner (the "major" street from which one may enter the Hildebrant complex). Directly across Turner from the complex is a small store often frequented by the children of the complex. It seems the child was going to (or returning from) this store when hit. The implication, from the decision makers point of view, seems to be that when it is desirable to locate a complex on the opposite side of a well-traveled street from an establishment regularly frequented by children; certain safety precautions (i.e. design considerations) should be considered in order to avoid accidents.

Interestingly, some respondents are concerned about the congestion within the complex. Such concerns ranged from "the parking lot (in the complex) looks like a junk yard," to "its dangerous for the children (of the complex).". While each neighborhood was affected by the same size housing complex, the perceived amount of increased congestion varied considerably between neighborhoods. Of course, alternations in size could presumably solve any congestion problem. However, where smaller size complexes are deemed as being too costly, various alternatives in location and design can seemingly limit the perceived amount of increased congestion due to a multiple housing complex.

Noise

Responses concerning the affect of the public housing complex on the noise level are shown in Table 3.4.

Table 3.4. Responses of Proximate Neighbors Concerning the Question:
"Do you Feel there has been a Change in the Amount of
Noise Since the Public Housing Complex was Occupied?"

Neighborhood	Responses							
	Not at All		Much		No Opinion		Some	
	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent	Number
Hildebrant	65	20	3	1	6	2	26	8
La Roy	58	18	35	11	0	0	6	2
Mt. Vernon	82	23	0	0	0	0	18	5
Total	68	61	13	12	2	2	17	15

Again, the data show that the La Roy neighborhood perceived the greatest increase in noise followed by the Hildebrant Park neighborhood.

The major sources of the noise, according to the respondents, are automobiles ("hot-rods" some argued), yelling, sirens and children. A majority of the respondents referred to the "noise at night" (primarily automobiles) as being their primary concern.

It is not unexpected that the Mt. Vernon neighborhood voiced the fewest complaints with respect to noise. This could simply be due to the geographical distance from that

complex to the neighbors. However, it is not easy to understand why the Hildebrant complex received fewer "much" responses, since it is surrounded rather closely by neighboring homes. One possibility may be the amount of vegetation around that complex. Perhaps the trees and shrubs helped muffle the sounds. Also, much of the housing around the Hildebrant complex is either of equal or higher elevation, whereas the La Roy project is of slightly higher elevation than the surrounding community. Being of slightly higher elevation and not having a vegetation "buffer", it is understandable that noise from the La Roy complex would carry farther with greater impact.

Since noise, congestion and privacy are often times complimentary "bads", it is reasonable to expect that certain policy alternatives designed to improve one will also improve the other. For example, if fencing is desirable in order to prevent trespassing, a fence consisting of trees and shrubs would also tend to reduce noise levels. Also, the suggestion of locating a public housing complex such that entry and exit can take place without driving through the neighborhood would decrease the amount of automobile noise.

Along with location and design, the size of a project can be decreased to reduce the noise level. However, the different impact on noise from three like sized complexes, suggests that alterations in size within a certain range may have a small affect. That is, it is not clear that, ceteris

paribus, a reduction in size from 100 to 50 units would reduce noise sufficiently to warrant any additional costs.

Aesthetic Values

"Aesthetic values" contain the singular problem of definition. The intent of attempting to obtain proximate neighbor opinions regarding "aesthetic values," was to gain insight into the perceived changes in the physical beauty of the neighborhood due to the public housing complex. While some respondents commented on physical changes, a majority referred to the people (or possible acts of the people) in the public housing complex. Comments often times referred to those items affecting congestion, noise and privacy previously discussed. Roughly one-third offering negative comments referred to safety and security; and several others criticized the economic and racial characteristics of the occupants. The question of "aesthetic value" seemed to invite responses outlining the respondent's primary observation concerning his relationship with the people in the public housing complex. In other words, when asked about "aesthetic values", the respondent's offering comments referred to the individuals living in the complex, and not to the complex itself. Numerically, comments on this question identified the affects of the occupants by a two-to-one margin over the affect of the structure itself.

From a policy view point, the implication of significant external costs originating from relationships between

individuals; poses several problems with regard to policy choice. These problems arise primarily due to the limitation of the decision makers policy tools (i.e. size, location, design, maintenance and management). With the exception of physical separation there seems to be little a decision maker can do with regard to dislike or fear between individuals or groups of individuals.

However, several of the respondents were careful to specify "some" or "a few" of the occupants (or friends of the occupants) are responsible for the detraction in neighborhood "aesthetic values." If, as seems likely, there are a few "bad apples", then certain management options are available. For example, managers of private multiple unit housing may remove tenants who continually create problems for the other occupants. In the case of private housing, it is assumed the individual evicted can find suitable alternative shelter. Public housing, however, is housing of the last resort and eviction from such housing leaves perhaps no suitable alternative, and may be legally prohibitive.

One possibility open to the decision maker is the creation of a "half-way" house to public housing. That is, individuals removed from public housing could be offered the option of living in a "suitable" house at the same rent. Such housing, whether single or multiple, could be relatively isolated from surrounding neighbors. This course, however, simply removes the housing of last resort to another project; and, may prove to be only a costly temporary solution.

Maintenance played a large role in the comments concerning the physical beauty of the neighborhood. A number of the proximate neighbors commented on the excellent upkeep of the housing projects. However, only four respondents felt the neighborhood had in fact been improved by the complex. One of the concerns of certain proximate neighbors in this regard, was the fully expected forthcoming deterioration of the neighborhood. The arguemnt runs: While the complex appears attractive, it is still relatively new--wait another five or ten years. Empirical observations over time would yield valuable insight into the rate of deterioration.

The previous state of the site on which the public housing complex is built may also affect proximate neighbor repsonses. For example, as shown in Table 3.5 below, the proximate neighbor responses of Hildebrant Park differed considerably from the responses in the other two neighborhoods.

Table 3.5. Responses of Proximate Neighbors to the Question: "Do You Feel there has been a Change in the Aesthetic Value of the Neighborhood?"

Neighborhood	Responses							
	Not at All		Some		Much		No Opinion	
	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number
Hildebrant	32	10	23	7	32	10	13	4
La Roy	58	18	29	9	10	3	3	1
Mt. Vernon	79	22	11	3	11	3	0	0
Total	56	50	21	19	18	16	6	5

Respondents from this neighborhood often referred to the "woods" and "park-like" condition of the site previous to the multiple unit housing project. The other projects (Mt. Vernon and La Roy) were constructed on vacant but cleared land, not particularly valuable for alternative uses (other than residential). Thus, the clearing of the woods considerably detracted from the "aesthetic values" of the neighborhood in the opinion of many of the Hildebrant neighbors.²³

Thus, when selecting a site for the multiple unit housing project, the decision maker should consider the existing use of the site by individuals in the neighborhood. If such present use is highly valued by proximate neighbors, construction of a housing project increases the cost on the neighbors and may tend to create a general feeling of animosity toward the complex.

Related to the area of "aesthetic values" and physical beauty is the question (along with responses) shown in Table 3.6. Forty-four percent of the respondents felt as though public housing had a different impact than similar private housing. Only one respondent felt the impact from public housing would be preferable to private housing.

Lower property values and a "less respectable class of people" were the most often mentioned causes of public housings' negative influence. As expected, then, responses in the affirmative to the above question are significantly related to responses which also tended to argue that:

Table 3.6. Responses of Proximate Neighbors to the Question: "If a Multiple Unit Housing Complex of the Same Size, which was not Public Housing, had been Built in the same Location, do you think the affect on you, your Family, or your Property would have been any Different?"

Neighborhood	Responses					
	Yes		No		No Opinion	
	Percent	Number	Percent	Number	Percent	Number
Hildebrant	42	13	32	10	26	8
La Roy	42	13	55	17	3	1
Mt. Vernon	32	9	64	18	4	1
Total	39	35	50	45	11	10

1) the public housing complex had adversely affected property values; and 2) MUPH adversely affected the "aesthetic value" of the neighborhood.

The attitude of "less respectable" people, as previously mentioned, poses difficult problems for the decision maker. Manipulation of location, size, design, maintenance and management within a given area would have little affect on the perceived "respectability" of individuals. In a negative sense, proximate neighborhood attitudes toward the "respectability" of public housing occupants can affect the decision makers' opinions regarding size. For example, proximate neighbor costs from "less respectable people" may be rather invariant over a range of project sizes. That is, four twenty-five unit structures located in four separate

neighborhoods may increase the total amount of proximate neighbor dissatisfaction relative to a single hundred unit complex. Thus, while smaller size complexes may tend to reduce certain other costs to occupants and neighbors; they may tend to increase costs in this respect. The implication being that no simple paretian welfare solution can be found with regard to complex size. Proceeding along the line of the desirability of public housing, the respondents were asked, "Do you think public housing in general is desirable?" Thirty of the respondents replied "not at all"; thirty-nine responded "somewhat" and three replied "very". One respondent perhaps typified many of those replying "somewhat", when he said, "I guess public housing is necessary, but I wish they would build it on the other side of town."

An optimal solution regarding dislike and fear between occupants and neighbors may be the selection of a neighborhood which holds more positive values toward public housing and its occupants. As previously mentioned, the selection of a neighborhood containing a racial and economic mix which is at least partially similar to that of the complex, may help to achieve this desired end. However, this is not guaranteed and such a location contains certain policy drawbacks (e.g. the assimilation of the poor into middle income society). Nevertheless, it is difficult to see how such assimilation can proceed under conditions of fear and dislike.

Schools

Of the total of forty-seven responses concerning the impact on schools, two felt the schools were improved; twenty-seven felt the schools were harmed, while eighteen perceived no impact at all. These results are shown in Table 3.7.

Table 3.7. Responses of Proximate Neighbors to the Question: "Do You Feel that the Public Housing Complex affects the Schools your Children Attend?"

Neighborhood	Responses					
	Yes				No	
	Better		Worse		Percent	Number
	Percent	Number	Percent	Number		
Hildebrant	0	0	32	6	68	13
La Roy	11	2	67	12	22	4
Mt. Vernon	0	0	90	9	10	1
Total	4	2	57	27	38	18

A considerable majority of those contending a worsening of the schools, identified overcrowding as the primary cause. This was followed by expressions concerned with "friction among the student," and adverse feelings between whites and blacks. A lower level of educational services was expressed and indirectly implied by many of these respondents.²⁴

The concerns voiced by proximate neighbors do not differ in content from the concerns offered by the occupants

of public housing discussed in Chapter II. Similarly, the policy alternatives, as they pertain to MUPH, are identical. Briefly, the policy alternatives previously mentioned were designed to reduce the impact (fears of overcrowding) on any one school; and, to locate public housing projects in somewhat integrated neighborhoods.

Contact and questioning of school officials in the neighborhoods did not substantiate the claim of overcrowding.²⁵ In certain cases, additions to the school were constructed; and in the Hildebrant neighborhood, pre-seventh grade children of the complex are bused to a school which had excess capacity. Some officials mentioned that certain parents from the neighborhood are concerned, and that "public housing is not very popular" with these parents. Whether or not the schools are "overcrowded", does not detract from the concerns of parents with regard to a more crowded condition.

The two individuals who felt that the impact on schools had been favorable, cited "more and different kids" and "integration" as reasons for the improvement. Unfortunately, some very difficult problems and external costs seem to arise from these perceived improvements. For example, one neighbor respondent said her children had never been "racists" until the housing project was occupied. This attitude was evidently developed due to the adverse relationships between some children in the complex and her children.

The location of public housing in certain neighborhoods

may increase the social cost of this housing with respect to the children. This seems to be particularly true when one group is essentially poor, black, and lives in a housing complex; and the other is white, middle income and lives in single family homes. Again, this suggests locating public housing projects in areas which, at least, to a small extent, reflect the expected racial and economic mix of the project. Such a location may help to prevent the stereotypes of poor and black, rich and white, along with the hard feelings and social cost thereby generated. The increasing number of integrated neighborhoods increases the number of possible sites, and enhances the desirability of this suggestion.

Summary and Conclusions

To better understand the net social value of multiple unit public housing, it is necessary to understand its costs and benefits to individuals other than occupants.²⁶ Proximate neighbors may also incur benefits and costs through "neighborhood effects". These "neighborhood effects" arise because of an imperfect market within which proximate neighbors may express their desires and because of the existing power structure.

For purpose of clarity, the costs and benefits incurred from public housing on proximate neighbors, is qualitatively divided between property values and indirect services. However, it is argued that the interrelationship between

changes in property values and changes in indirect housing services is fundamental in understanding the benefits and costs of multiple unit housing. Assuming "similar" alternative available housing, changes in relative property values (along with moving expenses) establish the limit at which proximate neighbors would incur any perceived change in indirect housing services.

Changes in property values, per se, is not necessarily a "bad" thing from the decision makers' viewpoint. What is, for instance, a cost to one individual (e.g. the seller) would be a benefit to another (the buyer). Changes in property values occur if: 1) they augment or diminish blighted conditions; 2) they affect the attitudes between proximate neighbors and occupants, and thus the desirability ("living environment") of the neighborhood.

Thirty-eight of the eighty-eight respondents (forty-three percent) felt their property values had declined. The range of decline was from a "little bit" to a "whole lot", with approximately two-thirds of those answering in dollar amounts referring to between \$2,000-\$4,000. Forty-one of eighty-seven respondents felt that home sales in the neighborhood had increased; however, only seventeen felt that public housing was the cause. Similarly, of the twenty-nine respondents who planned to sell their homes, only four mentioned public housing as a reason for selling. Moreover, the results indicate that widespread expectations of decreasing

property values probably do not exist; since such expectations would encourage home owners to sell now rather than later.

Assuming that policy makers are concerned with the public housing impact on property values, two suggestions are presented. First, is the desirability of constructing public housing complexes which "fit-in" with the surrounding community. Since home buyers, ceteris paribus, normally prefer similar valued homes in the neighborhood, the incursion of lower valued homes will tend to decrease property values of existing homes. However, at times this alternative will greatly increase the unit cost of public housing (i.e. when the public housing is to be constructed in relatively high income neighborhoods). Second, a longer time "lag" between the decision and notification of the intent to construct a public housing complex, and actual constructions, may be desirable. Such a "lag" would decrease the likelihood of "panic selling", and a subsequent fall in property values.

However, both of the above suggestions are intended to prevent a short-term fall in property values. (Though as previously shown, a short-term fall may lead to a continuing downward trend through an increased rate of deterioration.) Assuming no effect on direct housing services, a continuing fall in property values must stem from adverse affects on indirect housing services. Thus, various indirect services are examined in order to determine the perceived

affect of the housing complexes on these services. Moreover, the implicit costs involved with changes in the indirect services and various policy alternatives are discussed.

Privacy, congestion, noise, aesthetic values and schools are the indirect services examined. While not exhaustive, they seem to be sufficiently broad in nature to allow proximate neighbors considerable flexibility in their responses. Whether or not these services are "good" or "bad," and the magnitude of the "goodness" and "badness" partially determine the public housing impact on proximate neighbors; and must be judged and weighed by the decision maker.

Essentially all of the proximate neighbors of this study implied either a zero or negative cost associated with the impact on the above indirect services. The number and percent of respondents implying an adverse impact on the various indirect services, is shown in Table 3.8. With respect to privacy and schools, the number of negative responses are fairly evenly divided between the three neighborhoods. However, the La Roy neighborhood accounted for approximately fifty percent of the negative responses concerning noise and congestion; while the Hildebrant neighborhood accounted for approximately fifty percent of the negative responses concerning "aesthetic values."

The decision maker has available the policy tools of size, location, design, maintenance and management with which to alter the impact of public housing on proximate

Table 3.8. The Number and Percent of Proximate Neighbor Responses
Implying an Adverse Impact of MUPH on Indirect Services

Indirect Service	Number of Respondents Implying a Negative Impact	Percent of Total Respondents Implying A Negative Impact ¹
Privacy	35	41
Congestion	40	48
Noise	27	31
Aesthetic Values	35	41
Schools	35	44

¹The percent is calculated from the total who answered "yes" or "no" or, who answered "not at all", "some" or "a lot". Those having no opinion are excluded. The "some" and "a lot" answers are combined.

neighbors. It is useful to conclude this chapter with a brief discussion of each policy tool and its desired impact on the indirect services considered.

Size

If the size of a public housing project could be reduced to any given size, the impact on the indirect services of privacy, congestion, noise and schools could likewise be reduced. However, the perceived different impact on indirect services from similar sized housing complexes, indicates that changes in size alone may be only partially effective. In other words, the additional unit cost from smaller complexes may not warrant the benefits derived therefrom. This opinion was reinforced by several proximate neighbors who were more concerned about the Section 235 housing in the neighborhood than the public housing

complex.²⁷ Thus, a hundred single family subsidized units may have a greater impact on indirect services (so far as proximate neighbors are concerned) than a single hundred unit complex.

Changes in size seems to be a useful policy tool regarding the impact on schools. Both occupants and proximate neighbors voice opinions concerned with "over-crowding" of schools. In the Hildebrant neighborhood, children from the complex are bused to a school different from the one attended by the other neighboring children. Where this or some other alternative is not available or desirable, a reduction in the size of the multiple housing complex will reduce the impact on schools. Again, smaller complexes will often times increase the unit costs of construction, maintenance and management.

Location

The location of a multiple unit public housing complex seems to have an effect on each of the indirect services considered.²⁸ To reduce the impact on proximate neighbor privacy, it is argued that the complex should be located so as to reduce the desirability of trespassing (particularly with respect to school children). Locating either near establishments often frequented, and/or near direct public routes thereto would likely have this result.

Location of a multiple housing complex with direct

entry and exit to a major street seems to reduce neighborhood congestion. Moreover, the inability to enter or exit the complex on any of several residential streets, will tend to reduce the perceived noise level increase. These conclusions are implied by the relatively large number of negative responses concerning noise and congestion in the La Roy neighborhood.²⁹

Location is also important in the perceived impact on "aesthetic values". That is, if a public housing complex removes or detracts from an area considered desirable by proximate neighbors (e.g. woods, parks); the perceived negative impact on "aesthetic values" will likely be greater. The relatively large number of Hildebrant neighbors feeling a negative impact on "aesthetic values" is consistent with this conclusion. Moreover, since a sizable number of proximate neighbors felt that a "lower class of people" from the complex detracted from the "aesthetic value," it may be advantageous to locate public housing in neighborhoods where the residents are less likely to hold this view.³⁰

As shown in Chapter II, location may also be used to alter the impact on schools. Repeating, a public housing complex may be located near schools with excess capacity and/or located such that the children from the complex attend several different schools. However, the latter possibility may increase trespassing if convenient direct public routes to the schools are not available.

Sufficient lighting of the complex and surrounding neighborhood may help to reduce the fear of theft; which is a concern voiced by proximate neighbors and occupants.

Maintenance

The excellent maintenance of the complexes examined is perhaps the strongest "plus" as far as the proximate neighbors are concerned. However, a certain number feel that this is a temporary phenomena which will become worse as the projects age. Since sufficient maintenance is undoubtedly important in order to keep the projects from being an "eye sore", the decision maker may want to increase maintenance expenditures as they are warranted.

Management

There is little the public decision maker can do with management in order to alter the impact on proximate neighbors. One possibility may be the managements' ability to remove "troublemakers" (i.e. those who detract from the "living environment" of others). This possibility may require the construction of housing units specifically for these individuals. However, the creation of "hardcore" housing does not imply a "suitable living environment"; and, may have such harmful results on the individuals living there as to create additional social costs.

Also, additional powers of management to police or discipline occupants of public housing may breed additional

dislike and antagonism among those already considered "disadvantaged." Such a course contains many long term negative social implications.

The above policy tools should not be viewed from an either-or context. Rather, they should be viewed as a mix of possible tools which may be used to improve the relationship between the occupants and neighbors of multiple unit public housing. Realizing that this relationship at times is secondary to other goals of public housing.

FOOTNOTES

¹The terms "benefits" and "costs" are often used together for purpose of clarity. However, in some cases the term "benefits" is not explicitly mentioned; because, in an economic sense, "costs" can be either positive or negative. Thus, the term "benefits" is a negative cost and its inclusion may be redundant.

²The three neighborhoods examined are identified by the names of the public housing complexes; namely Hildebrant (HN), La Roy (LRN), and Mt. Vernon (MVN).

³See Appendix 3.1 for a more complete description of the characteristics of the three neighborhoods.

⁴Milton Friedman, Capitalism and Freedom (Chicago: 1962), p. 30.

⁵This does not mean a money exchange market would not be a possible alternative in the case of MUPH. For example, if the pricing system worked smoothly (i.e. the operating of a market system without costs) the proximate neighbors and public housing authority could bid on whether or not the land would yield its highest value in public housing. Moreover, the amount of public housing to be constructed would also be determined. From the point of view of the value of production (given the distribution of income) it doesn't matter if the proximate neighbors, the housing authority or a third party own the land. Quoting from Coase,

"It is necessary to know whether the damaging business (e.g. public housing) is liable or not for damage caused (e.g. to proximate neighbors) since without the establishment of this initial delimitation of rights there can be no market transaction to transfer and recombine them. But the ultimate result, which maximises the value of production is independent of the legal position if the pricing system is assumed to work without cost."

The question to be determined is: Can the locating of public housing be handled desirably through a money exchange market, or would the market transaction mechanism be exceedingly costly? Again quoting Coase,

"Once the costs of carrying out market transactions are taken into account it is clear that. . . a rearrangement of rights will only be undertaken when the increase in the value of production consequent upon the rearrangement is greater than the costs which would be involved in bringing it about."

When market transactions are not costless the initial delimitation of legal rights can have an effect on the efficiency

with which the economic system operates (and indeed, the definition of efficient).

Whether or not the present administrative costs of certain public housing decisions exceed the costs of market transactions in this area is not clear. Market transaction determination of the location and amount of public housing has several desirable attributes. First, it would reflect the "irksomeness" of proximate neighbors and help prevent locating public housing (or an excess amount of public housing) in areas where substantial opposition exists. Second, the ability of proximate neighbors to voice dissatisfaction according to income could be correspondingly reduced by the housing authority agreeing to offer proportionately higher bids in higher income neighborhoods.

However, as Coase points out,
 ". . .it is, of course, desirable that the choice between different social arrangements for the solution of economic problems should be carried out in broader terms than this and that the total effect of these arrangements in all spheres of life should be taken into account. As Frank H. Knight has so often emphasized, problems of welfare economics must ultimately dissolve into a study of aesthetics and morals."

A. Allan Schmid stated similarly, "One cannot talk of Pareto better trades unless property rights are first established to say who counts." For a more indepth discussion of this problem see A. Allan Schmid, "Economic Analysis of Water Resource Problems: Nonmarket Values and Efficiency of Public Investments in Water Resources," The American Economic Review; Vol. 53, No. 2, (May 1967), pp. 158-168. And, Ronald Coase, "The Distinction Between Private and Social Benefits and Costs," Journal of Law and Economics (October 1960); Reprinted in Readings in Microeconomics, edited by William Breit and Harold M. Hochman; (New York: 1968), pp. 423-456.

⁶Homes in Detroit, sold by HUD to low income qualifying individuals who normally could not afford to purchase these homes, have been abandoned and gutted by vandals, resulting in a deterioration instead of an improvement in the neighborhood.

⁷As defined by Scitovsky, "The price that reflects the marginal valuation of a commodity by each person who buys it is called its private marginal value. This may differ from its social marginal value, which is the hypothetical price that would express its marginal valuation if everybody whose welfare is affected by its consumption could express his preferences through the market mechanism." See Tibor Scitovsky, op. cit., pp. 182-183.

⁸The argument could be phrased in terms of an increase in indirect services and property values (i.e. if the "sale price"--"price of salvage"--exceeds the "price of acquisition" he would choose to sell if his marginal valuation is less than the "sale price" and remain if it is greater.

⁹Of course proximate neighbor expectations play an important role in deciding whether to sell. That is, if the expected cost of living near the project exceeded moving expenses and the relative price decline, he would choose to sell.

¹⁰Again, for a more specific and complete description of the characteristics of the neighborhoods, refer to Appendix II-1.

¹¹This, of course, depends on how much the present value has incorporated expected future changes.

¹²Since the construction of public housing requires scarce resources, it is likely that the cost of private new housing will be affected. However, it is assumed that the stock of private housing in the neighborhood is constant.

¹³This would not include the lag of approximately one year between beginning construction and substantial rent-up.

¹⁴Richard F. Muth, "The Demand for Non-Farm Housing," The Demand for Durable Goods, edited by Arnold C. Harberger (Chicago: 1960), p. 29.

¹⁵See Kelvin J. Lancaster, "A New Approach to Consumer Theory," The Journal of Political Economy; Vol. No. 2 (April 1966).

¹⁶Henry J. Aaron, Shelter and Subsidies: Who Benefits From Federal Housing Policy? (Washington: 1972).

¹⁷Robert L. Bish and Hugh O. Nourse, Urban Economics and Policy Analysis (New York: 1975), pp. 231-232. See also Hugh O. Nourse, "The Effect of Public Housing on Property Values in St. Louis," Land Economics, 39 (November 1963), and Salvatore V. Ferrera, "The Effects of Urban Renewal and Public Housing on Neighboring Property Values and Rents in Chicago," unpublished Ph.D. dissertation, Department of Economics, University of Chicago, 1969.

¹⁸This is assuming: 1) that because of no preferable (lower cost) alternative the recipients choose not to move. As previously shown, occupants and proximate neighbors may choose not to move even if the costs of indirect services are quite large; 2) that payments cannot be made to officials to site project elsewhere.

¹⁹As previously implied, if the decision maker is not concerned with changes in property values, the costs of resources to alter any impact on indirect services (related to proximate neighbors) is limited by the capital cost and moving expenses of proximate neighbors. Ceteris paribus, if the cost of altering the impact exceeded the capital and moving cost, it would presumably be of greater net social benefit to simply let the proximate neighbors move.

²⁰The same issue arises when a judge or legislation decides whether person A or B owns a private property right; a decision that preceeds trade in the commodity.

²¹Robert Frost's "Mending Wall" provides some poetic insight into the problem of fences. "Before I build a wall I'd ask to know/What I was walling in or walling out,/ And to whom I was like to give offence. . ." It is likely that fencing a public housing complex would increase the occupant's feeling of isolation from the surrounding community; and hinder the assimilation of these "poor" into the "mainstream" of societal life. In other words, the feeling and perhaps fact that they are being "walled-in". One is torn between "Something there is that doesn't love a wall, that wants it down;" and, "Good fences make good neighbors."

While attractive barriers of water and shrubs can often be constructed, the alternative of a more suitable location, ceteris paribus, may be preferable. See Robert Frost, Complete Poems of Robert Frost reprinted in The New Pocket Anthology of American Verse: From Colonial Days to the Present; Edited by Oscar Williams (New York: 1955), pp. 200-201.

²²There was no direct evidence of any people in the complex committing the thefts. The argument was that before the complex was occupied the incidence of theft was practically nonexistent; and, since occupancy the amount of theft greatly increased.

²³This objection may occur with any kind of development when people get used to open space.

²⁴This chapter examines how proximate neighbors perceived the impact on schools. Chapter IV attempts to identify the impact on elementary schools due to changes in numbers of students and comments of school officials.

²⁵Michigan law limits the number of students per teacher for different grades; though, as seen in Chapter IV the student-teacher ratio increased after the public housing complex entered.

²⁶While the proximate neighbors of this study did not find many benefits from MUPH, it should be mentioned that this may change in different neighborhoods. For example, proximate neighbors of a MUPH project located in a run down neighborhood may perceive many benefits derived from this housing.

²⁷Section 235 provides for subsidized single family home ownership to qualifying individuals.

²⁸Like size, location may be taken to extremes. For example, locating a complex where the nearest neighbor is five miles removed would certainly tend to reduce the impact on indirect services. However, at present, such a consideration is assumed unrealistic and the present concern is location within an existing neighborhood.

²⁹It will be remembered that the La Roy complex was the only one which provided for entry and exit on rather small residential streets.

³⁰This is not to imply that segregation is desirable. However, integration in an environment of fear and dislike may be counterproductive. Perhaps people accommodate over time as not only their neighborhood but all neighborhoods become more mixed. The question seems to be one of: Where do we start?

CHAPTER IV

THE ECONOMIC IMPACT OF MUPH ON PUBLICLY PROVIDED SERVICES

Introduction

The public decision maker's alternative choices of location, size and design of multiple unit public housing have different effects on the magnitude and incidence of costs and benefits related to publicly provided services. The type of public services concerned with in this study are those primarily controlled by the local units of government (e.g. city, county); and, includes certain education, transportation, sewage, police and fire control services.

The two previous chapters were concerned with the costs and benefits of MUPH on occupants and proximate neighbors, and how the decision maker can alter these costs and benefits. The present chapter examines the impact on public services, and attempts to identify significant considerations for the decision maker regarding this impact.

The first part of the chapter deals with the impact of MUPH on publicly provided services in general. That is, the concern is with how MUPH may affect publicly provided services; and, moreover, attention is given to related considerations which should be taken into account in order to more closely estimate the MUPH impact.

The second part of the chapter is devoted to an empirical examination of the impact on elementary public schools. This section deals with the specific schools affected by MUPH, and also possible impacts on the greater Lansing school district. The measurement of the impact is limited in that the quality of education (presumably one of the goals of public education) cannot be accurately measured within this study.

How MUPH Affects the Magnitude and Incidence of
Benefits and Costs of Publicly Provided Services

In this discussion it is necessary to simplify the analysis in order to examine how MUPH can alter the magnitude and incidence of the costs and benefits of publicly provided services. Assume a community with a constant population in which public services are being provided at the minimum unit costs. Furthermore, assume the decision maker is institutionally bound to supply all members of the community with a minimum of public services (which they are presently receiving). Thus, any change in demand for public services will cause a change in the quantity of services supplied.

Now, the question is, what is the impact on public services when a public housing complex is built in this community? With the subsidized rents it is not unreasonable to assume that the complex will become fully occupied. Some people, attracted by the low rents, will come from outside of the community (public service supplying area). Others,

for the same reason, will move from their present housing within the community into the complex. Both those moving from outside the community, and those moving from within, can alter the demand for and costs of providing public services. For the purpose of identifying the impact on public services, it is useful to examine these two groups separately.

Those who move from outside the community (public service supplying area) directly increase the demand for public services. In order to supply these individuals with some desirable level of public services, the total cost of public service provision increases in the short run.¹ Who pays the additional cost depends on the number of individuals coming from outside of the community, their use of public provided services, and the amount of revenue they contribute to the public services supplier. Regarding the latter, the relatively low incomes of those living in public housing plus the fact the public housing complex pays ten percent of receipts in lieu of property taxes, implies their contribution to local tax revenue may be low relatively to the rest of the community. However, Bish and Nourse argue that, "The evidence is clear that this payment in lieu of taxes results in greater payments to local government than could have been generated in property taxes from the same low-income family occupancy of private housing."² Whether or not it pays local governments to procure public housing when a large proportion of the occupants come from

outside the public service supplying area is an unanswered question.

The impact on public services from those who move within the community is more complicated. The complication stems from the fact that certain forces work to increase and others to decrease the costs of public services.

When individuals within the community move into a multiple unit public housing complex, there will normally be a change in the composition of demand for public services. That is, as individuals move from various locations to a single project, there may be a perceived change in demand (and costs of supplying) public services. For example, if twenty second-grade children, each from a different school, move into a public housing complex, the demand for second grade teachers at their previous schools may not decrease. However, another second grade teacher may be required to accomodate the increased demand at the new location. Similarly, a one person reduction in demand for bus service at twenty different bus stops may not entail a reduction in bus service to any of these areas. But, additional bus service may be desirable at the new location. A perceived increase in the aggregate demand for public services may occur even if total individual demand does not actually change. This result is due to the imperceptable decrease in demand (increase in excess capacity) at any one location, coupled with a significant increase in demand at a single

location. Such a situation could lead to the purchase of additional physical capacity even if excess capacity in other areas of the community presently exists.

Using a similar argument one could arrive at a lower cost of public service provision due to public housing. That is, if there is presently an inefficient use of resources (i.e. high unit cost of services rendered due to excess plant capacity); a movement of people to a public housing complex may lower the cost of public service provision to the community. Consider, for example, a school operating with excess capacity. The number of students attending the school is sufficiently large to preclude closing the school and having the students attend other nearby schools (which also have a certain amount of excess capacity). Now, if a public housing complex causes a sufficient number of children to leave the school (and assuming the homes they leave are either left vacant or families with fewer children move in), the school may be closed with the remaining children attending the nearby schools. This possibility suggests that multiple unit public housing, in some cases, may lower the cost of public service provision.

In order to determine the impact on the cost of providing public services as people move within a community, the decision maker needs to know: 1) the change (if any) in the costs of providing services to those areas from which the individuals move; 2) the change (if any) in the costs

of providing services in the public housing area; and, 3) the cost of reallocating resources from one area of the community to another.

Movement of people within the community in order to live in public housing may also have an impact on tax revenues. Given a constant population, the addition of multiple unit housing increases the supply of housing and tends to reduce the price of housing services. In a competitive housing market, existing homes may be removed from the private housing stock. However, it is unlikely that private housing will decrease the housing stock as much as public housing increased the housing stock. This is due to the fact that a certain number of public housing recipients may presently be residing with family or friends. Also, some housing may be converted to other uses; and, though they may be removed from the housing stock, they are not removed from the tax base. The impact on tax revenue is dependent on the number and value of the homes removed from the tax base; and, the amount the public housing complex pays in lieu of taxes.

From the decision maker's point of view it is important to conclude that MUPH can affect both the magnitude and incidence of costs and benefits of public service provision. With various choices of size, location and design impact can be altered. Of course, choices of size, location and design with regard to the impact on public service provision is also dependent on other considerations.

Alternative Policy Decisions Regarding the
Impact on Public Service Provision When the
Population is Changing and Finance
Provisions are Considered

Expected Population Growth
Rate of the Community

The above discussion of how MUPH affects the costs and benefits of public services was conducted with the population growth rate held constant. Without being concerned with the absolute rate of change or the income level of those coming and going; the present discussion is restricted to a net increase or decrease in population. That is, does the impact on public services due to MUPH differ depending on whether the population is increasing or decreasing?

When the population of the community is increasing, the costs of excess capacity in those areas where public housing occupants moved from would tend to be less. That is, as people moved into public housing, others would be moving into their previous housing, and these new individuals would use existing public services. There would be less tendency to reallocate resources between areas and a greater tendency to simply increase total capacity. Moreover, these new individuals would help prevent an erosion of the tax base by occupying houses which may be left vacant if the population were constant or decreasing.

In communities with increasing populations, the decision maker may also want to examine the possibility of a "crowding-out" effect on private home building. That is,

if existing local home building resources (i.e. labor and entrepreneurship) are being fully utilized, then the decision to build public housing would tend to remove resources from the private housing market. The net effect may be to increase public housing at the expense of private housing. If such an outcome is not consistent with the goals of the decision maker, he may choose to provide public housing when excess capacity is available in the local residential construction industry.

On the other hand, when the community population is decreasing, the decision maker may attempt to match excess capacity being created from out migration, with the location of public housing. The primary concern may be to reallocate existing public services, and not create additional services.

A community with a decreasing population which builds public housing may incur certain costs related to public service provision. For example, as the population decreases, the existing housing stock should also decrease. Of course, building public housing increases the housing stock. The normal process of filtering would not occur at a sufficient rate, and a greater number of homes would become vacant.³ The tendency may be to create "slum conditions" and increase the cost of housing removal.

In summary, decisions as to size, location and design of public housing may differ depending on whether the community population is expected to increase or decrease.

If the population is expected to increase, the decision maker may be more concerned with constructing public housing in such a way as to minimize the cost of providing additional public services. If the population is expected to decrease, the concern may be to match the expected excess capacity of public services with additional demand created by the public housing.

Method of Financing

The decision maker's alternatives of size, location, design and maintenance may also be influenced by the method of financing; both with respect to financing the project itself, and the financing of certain public services.

Considering the financing of a public housing project, the federal government, through HUD, agrees to retire the debt incurred in building a project.⁴ The borrowing results from the sale of tax free bonds. On the other hand, the local unit of government is required to pay a certain portion of yearly operating expenses (maintenance and management). Exactly how much the local unit of government is required to pay is based on historical costs and receipts; plus, HUD's decision as to how much costs and receipts are allowed to increase in any given year. This "formula" determines the proportion of operating expenses the federal government will pay for. The important point is that the local housing authority is required to pay a portion of operating expenses; but, it does not have to contributed toward debt retirement.

This method of financing encourages the local authority to substitute capital for current expenditures. The incentive arises because the local authority is held accountable for a certain portion of current expenditures, and not the original capital expenditures. Muth presents a similar argument and states that, "The chronic complaint that public housing projects are poorly maintained is also no surprise in view of the financial incentive to substitute capital for current expenditures."⁵ He continues:

When I discussed this point with a colleague recently, he related a conversation with the local authorities in his community regarding the high capital costs of public housing. Vandalism and other sources of above average deterioration made it necessary, they said, to use concrete stairs and wall surfaces that needed little maintenance. However, even with the high rates of physical deterioration, wooden stairs could be repaired or replaced and walls repainted as needed. I suspect this alternative was not chosen primarily because it is more costly for an LHA (local housing authority) than for a private developer.⁶

Thus, how multiple unit public housing projects are financed influences the decision makers decisions as to size, location, design and maintenance. The relative costs of current expenditures among possible alternatives determines the significance of project financing considerations on the type of public housing to be constructed.

Financing considerations with respect to public services may also be important to the housing decision maker. For example, the federal government provides funds to the

state which in turn are provided to the local school districts. These funds are then given to individual schools on some acceptable basis (i.e. a basis that reflects "disadvantaged" students). The Lansing school district divides up the funds according to the percentage of students from ADC (Aid for Dependent Children) families. Since the funds are limited, and since a minimum amount is required for each eligible student, only those schools with a relatively high percentage of ADC students qualify.

A change in the number of qualifying students attending the various schools, may also entail a change in the amount of funds these schools receive. This change may or may not be desirable from the point of view of providing "better" educational services. That is, a movement of ADC families from one school may reduce the funds and the quality of educational services available. Whether or not the school receiving these families obtains any additional funds depends on its new percentage of qualifiable students.

The point is, the location of the public housing complex may alter the financing of schools. This change may in turn affect the costs and quality of educational services. Since various alternative locations and size of housing projects may have different effects on the costs and quality of educational services; the decision maker, in order to allocate community resources desirability, must take into account the financing of public schools (and

perhaps other public services). This implies that a working relationships between housing and school officials (and other public service decision makers) may be desirable.

In summary, the financing of public housing and public services may have certain influences on the decision maker's choices of size, location and design of public housing complexes with regard to the costs and benefits of public service provision.

An Empirical Examination of the Impact
of MUPH on Elementary Schools in the
Lansing School District

Introduction

The purpose of this section is two-fold. First, an attempt is made to determine the impact on the schools directly affected by the public housing complexes (i.e. those containing children from the complexes). Second, the impact on the school district is examined with various alternatives discussed. Again the objective is to provide greater insight to the decision maker concerning size, location and design of MUPH. Since only four of the forty-seven elementary schools in the Lansing school district contain children from the public housing complexes; and, since "other things" cannot be held constant, it is impossible to determine cause and effect from the standpoint of the school district as a whole. However, some interesting observations can be made. Similarly, it is not always possible to determine cause

and effect on the schools directly affected by the public housing.

In the two previous chapters, schools were examined from the occupants and proximate neighbors point of view. The occupants were asked to compare their old schools with the schools their children presently attend. Proximate neighbors were asked if they felt MUPH had changed the services received from the schools. This chapter analyzes some of the physical changes that in fact occurred and some of the comments of school officials.

A brief discussion is also presented on the importance of coordinating activities in the public housing sector with the education sector.

Impact on the Elementary Schools Receiving Children from Public Housing

Children from the three public housing complexes in Lansing attend four elementary schools. Children from the La Roy complex attend Pleasant View, those from Hildebrant attend Gier Park; and the children from Mt. Vernon attend both Cumberland and Northwestern.

Table 4.1, below, shows the number of children attending these schools along with the number of children from public housing.

Table 4.2 shows the attendance figures for these schools from 1967 through 1973.

Table 4.1. Elementary Schools Receiving Children from MUPH:
Number of children in Attendance September 1973
(Total and From Public Housing)

School	Total Attendance	Number From MUPH	Percent of Children From Public Housing
Pleasant View	593	106	18
Gier Park	480	91	19
Cumberland	375	103	27
Northwestern	323	52	16

Table 4.2. Attendance in Schools Receiving Children from MUPH; and
Attendance of School District from 1967 through 1973

School	Attendance by Year						
	1967	1968	1969	1970	1971	1972	1973
Pleasant View	442	660	673	657	653	586	593
Gier Park	362	348	454	556	546	492	480
Cumberland	356	375	366	418	444	388	375
Northwestern	334	309	281	357	341	355	323
School District	18,055	18,604	18,785	18,901	18,717	18,075	17,316

The initial impact on Pleasant View occurred during 1968 and 1969. From 1967 to 1969, attendance increased by 231 students or 52.2 percent. During this same period, attendance in the school district increased by 730 students or four percent. While the La Roy public housing complex presumably accounted for slightly less than half the impact on Pleasant View during this period, it is still a large impact relative to the total school attendance, and to the total change in the number of students in the Lansing school district.⁷

Similarly, during 1969 and 1970, attendance at Gier Park increased by 208 students or 59.8 percent. Again, the Hildebrant complex accounted for only about half of this increase.⁸ Approximately 100 students began attending Gier Park due to the closing of another school. During this same period, attendance in the school district increased by 297 (about 1.6 percent).

The increase in attendance at Cumberland and Northwestern during 1970 and 1971 was 78 (21.3 percent) and 60 (21.4 percent) respectively. Unlike La Roy and Hildebrant, the Mt. Vernon project seemingly accounted for the major share of these increases. During this same period attendance in the school district declined by 68 students.

The above discussion simply shows the increase in the numbers of students during the two years following the renting up of the public housing complexes. The increase in

the number of students required the hiring of additional teachers. Table 4.3 presents the number of teachers in each of these schools from 1967 through 1973.

Table 4.3. Number of Teachers at Elementary Schools
Frequented by Children from MUPH, 1967-1973

School	Number of Teachers by Year						
	1967	1968	1969	1970	1971	1972	1973
Pleasant View	17	24	24	22	23	22	21
Gier Park	13	15	17	19	19	19	18
Cumberland	14	15	14	16	17	14	13
Northwestern	13	13	11	14	13	13	12

From 1967 to 1969, the number of teachers at Pleasant View increased by seven. From 1968 to 1970, the nubmer of teachers at Gier Park increased by four. From 1969 to 1971, the numbers of teachers at Cumberland and Northwestern increased by three and two, respectively. While some of these teachers may have been hired in any case, it is likely that the housing complexes caused a net increase in hiring (this is discussed in the next section).

Moreover, Pleasant View and Gier Park received structural additions in 1968 and 1969, respectively. The cost of the former being approximately \$378,000 and the latter \$241,000. Officials from the Lansing school district said the additions would probably have been built even if the public housing complexes had not. However, the principals at the two schools

are of the opinion that the additions were built at least in part due to public housing. Regardless, the declining number of students in the school district and the growing excess capacity, on hind sight, causes questions as to the appropriateness of the decisions.

The impact of MUPH on schools may also affect the quality of education and well-being of the students. This negative affect seems to be due primarily to adverse expectations of parents in the community with respect to public housing. According to the principals questioned, some of the children in the community had probably heard their parents' unfavorable remarks concerning the project. Thus, friction between children of the complex and the other children in the neighborhood developed. However, this adverse impact seemed to be rather short lived. Over time, the public housing complex seems to become accepted and the animosity becomes less according to the school officials.

One other negative aspect seems to be the lack of privacy of the children living in the public housing complexes. That is, for example, a fight between parents or neighbors of the complex involving the policy is immediately common knowledge among the school children. This, of course, causes a certain amount of embarrassment to the child. Perhaps alternative designs of the complexes would help to alleviate this problem.

Impact of MUPH on the Remaining Elementary Schools and the Importance of Working with School Officials

The impact on the elementary schools which do not contain children from the public housing complexes, arises from the fact that resources used for schools directly affected by public housing cannot be used for others. The opportunity cost of using resources in one school may be the resources foregone in another; which, can affect the net benefits attributable to the school district. This possibility is discussed with respect to number of teachers, additions to building capacity, and "quality" of education.

The addition of the number of teachers at Pleasant View provides an example of the impact on the remaining school district. From 1967 to 1968, the number of students at Pleasant View increased by 218. During this same period the remaining schools had an increase in attendance of 331. The increase at Pleasant View was accompanied by an increase of seven teachers. However, the total number of teachers in the school district increased by only eight. Thus, while Pleasant View received seven teachers for an additional 218 students, the remaining school district received only one teacher for an additional 331 students.

The impact on the student/teacher ratio is shown in Table 4.4. The relative small number of students in any one school limits the impact on the student/teacher ratio of the district. Moreover, the limit of the student/teacher ratio is thirty as determined by state law. This limit was

Table 4.4. Student/Teacher Ratio of the Lansing School District and of the Four Schools Containing Children from MUPH 1967-1973

Location	Student/Teacher Ratio by Year						
	1967	1968	1969	1970	1971	1972	1973
Lansing School District	26.67	27.16	27.19	29.17	27.24	26.62	27.53
Cumberland	25.43	25.00	26.14	26.13	26.12	27.71	28.85
Northwestern	25.69	23.77	25.55	25.50	26.23	27.31	26.92
Gier Park	27.84	23.20	26.70	29.26	28.74	25.89	26.67
Pleasant View	26.00	27.50	28.04	29.86	28.39	26.64	28.24

most closely approached in 1970 when a millage increase proposal failed to pass at the polls. Particularly at Gier Park and Pleasant View, the change in the student/teacher ratio is most noticable. The increase in the student/teacher ratio lends credence to the "more crowded" argument voiced by both occupants and neighbors.¹⁰ However, this does not answer the questions of whether MUPH caused an increase in the student/teacher ratio of the remainder of the district; nor, if this change had any negative effect on the quality of education offered.

Previously mentioned is the fact that approximately \$619,000 worth of additions were added to Gier Park and Pleasant View in 1969 and 1967, respectively. Without questioning the appropriateness of adding additional capacity in light of the subsequent decrease in the number of students, it seems reasonable to question the additional capacity at

these particular schools. Percent of capacity for the school district and of the four schools containing children from MUPH, is presented in Table 4.5.

Table 4.5. Percent of Capacity of School District and the Four Schools Containing MUPH Children 1967-1973

Location	Percent of Capacity by Year							
	1967	1968	1969	1970	1971	1972	1973	Average
School District	91	94	95	95	94	91	87	92
Cumberland	84	82	82	84	95	92	81	86
Northwestern	87	80	73	92	88	92	84	85
Gier Park	66	64	83	101	100	90	88	85
Pleasant View	67	100	102	100	99	89	90	92

Excluding Northwestern, each of the schools began with a percent of capacity less than the average of the school district, then increased to a greater percent and subsequently decreased at a faster rate. It is possible that MUPH had an influence on this trend. That is, MUPH helped cause the utilized capacity to increase, and then as other families moved (perhaps because of MUPH) the utilization decreased more rapidly than within the district. This is an unanswered question but worthy of consideration.

In terms of "equity" Gier Park and Pleasant View, which received additions, operated at an average capacity of 85 and 92 percent, respectively. During this same period (1967-1973), sixteen schools operated at a capacity rate of

less than eighty-five percent, while twenty-eight had a capacity utilization of greater than eighty-five percent. Correspondingly, twenty-eight operated at less than ninety-two percent capacity while sixteen operated at greater than ninety-two percent capacity. Again during the same period, six schools averaged greater than one hundred percent capacity.

While the above does not mean to imply that Gier Park and Pleasant View should not have received additions; it does show that additions to other schools could also have been justified on the basis of capacity utilization. It is possible that MUPH focuses attention on certain schools at the exclusion of others. However, it is not clear to what extent greater and lesser capacity utilization affects the quality of education.

In the case of Lansing, the school officials were not asked to help in the location decision of MUPH. However, it is clear that location decision can affect the benefits and costs of educational services to the community. In view of this consideration, it appears that school officials could add valuable contributions to the location decisions of MUPH. A similar argument could likely be made for officials of other public services. However, it is not clear the benefits received from joint decision making would exceed the transactions cost incurred in reaching a decision.

In view of the special financing considerations of schools, consultation with school officials is even more

important. As previously mentioned, federal money is divided up between schools in the district on the basis of the number of children obtaining ADC payments. Since a minimum amount must be provided for each child (approximately \$600 including administrative costs), only those fifteen schools with the greatest percentage of ADC students qualified in February 1974. Both Pleasant View and Gier Park qualified with thirty-seven and thirty-one percent, respectively. (The elementary average was twenty-four percent for the school district, and thirty-nine percent for those schools qualifying.) However, Northwestern and Cumberland with twenty-nine and twenty-six percent ADC children, respectively, did not qualify. Thus, with this type of financing, the location of MUPH and the schools they attend, determine whether or not the school will be entitled to these federal funds. For example, if another ten ADC children attended Northwestern, the school would be able to obtain approximately \$600 for each ADC child. With this money additional teachers can be hired to help "disadvantaged" children.

The decision maker can alter the impact of MUPH by considering various options. For example, the impact on Northwestern (in terms of the quality of education) may be greater even though a smaller number of MUPH children attended this school than Gier Park. This is because Gier Park qualifies for the federal money and can hire additional teachers and conduct special assistance. The local housing

authority can alter the impact on schools through these financing considerations. Again, the usefulness of working with other public service officials in determining the location, size and design of MUPH is illustrated.

Summary and Conclusions

The impact of publicly provided services due to MUPH is analyzed from the point of view of those moving within the public service supplying areas, and those moving from outside the public service supplying area.

Those from outside the public service supplying area, ceteris paribus, cause a net increase in the demand for public services. Their contribution in the provision of these services is dependent, to a certain extent, on their income and property taxes. The number of families moving from outside the public service supplying area, their demand for public services, and their contribution toward tax revenues, is directly related to who pays for any additional costs of supplying public services.

People moving from within the public service supplying area may also affect the costs of public service provision. In this case, it is not intuitively obvious whether the demand for public services will tend to increase or decrease. There will be a change in the composition of demand, but whether this change increases or decreases costs must be empirically determined.

A movement into public housing from individuals within the community may have a negative impact on the existing tax base. In order to maintain the existing level of public services with decreasing tax revenues, an increase in the tax rate to the citizens of the community would be necessary. Other things constant, it is not clear whether MUPH will have a positive or negative impact on the costs of public services provision.

Other things, however, are subject to change and their change can also affect the impact of MUPH on public services. Other considerations examined in this regard include: 1) the expected population growth rate of the community; and, 2) the method of financing. These two considerations may affect the magnitude and relative importance of the impact on public services from MUPH and should be taken into account by the decision maker.

The impact on elementary schools due to the public housing complexes is also examined. Four of the forty-seven schools in the Lansing school district contain children from the three public housing complexes. Sixteen, eighteen, nineteen and twenty-seven percent of the total student body were made up of children from public housing in September 1973. The increase in the number of students necessitated an increase in the number of teachers. Pleasant View added an additional seven teachers, while four were added at Gier Park. These two schools also received

\$619,000 worth of capital additions in 1967 and 1969. The impact on the other two schools was relatively small in terms of number of students from MUPH since they shared the children from one complex.

The impact on the school district is examined from the point of view that additional resources, being employed by the four schools containing children from public housing, cannot be used by the remainder of the school district. Thus, when Pleasant View increased by 218 students an additional seven teachers were employed. During the same period an additional 331 students were attending the remainder of the school district; however, only one additional teacher was employed. Nonetheless, the change in the student/teacher ratio was seemingly small, and little may be said regarding the quality of education received by the children.

In terms of equity, there were sixteen schools which operated at a greater capacity utilization from 1967-1973 than the two schools receiving additions to capacity. Moreover, six schools average greater than one hundred percent capacity. It is not clear whether or not the additions were built (at least in part) to accommodate children from the public housing complexes. However, on the basis of "equity" considerations, additions could have been justified on several schools. Again, the effect on the quality of education is now known.

In view of the impact on particular schools and the

school district in general, it is somewhat surprising that school officials were not asked for recommendations regarding the location, size and design of the public housing complexes. The importance of obtaining the viewpoint of school officials is compounded since the attendance of ADC recipient children affects internal financing of the school district.

Perhaps the single most important thing the public housing decision maker can do to minimize the impact on public services, is to obtain the viewpoint of officials in charge of public services in the community. Their input would likely be useful in determining the size, location and design of MUPH such that the impact on public provided services could be minimized (given other goals). However, as mentioned, this possibility may be precluded by the transactions costs of making a joint decision.

FOOTNOTES

¹Long run cost considerations depend on the economies of scale in the particular public service area. For an interesting theoretical and empirical presentation on this topic see Werner Z. Hirsch, "Expenditure Implications of Metropolitan Growth and Consolidation," Review of Economics and Statistics; Vol. 4 (August 1959), pp. 232-241.

²Robert L. Bish and Hugh O. Nourse, op. cit., pp. 229-230. Also, Hugh O. Nourse, "Redistribution of Income from Public Housing," National Tax Journal, 19 (March, 1966), reprinted in Hugh O. Nourse, The Effect of Public Housing Policy on Housing Markets, (Lexington, Mass.: 1973), pp. 29-42.

³For an excellent study of the filtering process see, John B. Lansing, Charles Wade Clifton, James N. Morgan, New Homes and Poor People: A Study of Chains of Moves, Institute for Social Research, (Ann Arbor, Michigan: The University of Michigan, 1969).

⁴The method of financing public housing has a broader influence on the decision maker's policy choices than simply the impact on public service provision. It also has an impact on occupants and neighbors and is included here primarily for convenience since finance provisions do have a direct bearing on public service provisions.

⁵Richard F. Muth, Public Housing: An Economic Evaluation (Washington: 1973), p. 18.

⁶Ibid.

⁷The increase in attendance at Pleasant View was 231 students. Of this number, 106 were from the La Roy complex in September 1973.

⁸Again, the 208 increase is from 1968 to 1970 is compared to the 91 students attending the school from the Hildebrant complex in September 1973.

⁹The cost of the addition at Gier Park of \$241,000 is inclusive of furniture and architect fees. However, the cost of the Pleasant View addition was \$315,000 exclusive of furniture and architect fees. The \$378,000 figure is derived assuming the same proportionate costs of furniture and architect fees at Pleasant View as at Gier Park.

¹⁰It should be pointed out that crowding is also a matter of square feet per student. This measure of crowding seemed to be more of a concern with proximate neighbors than occupants. Given that one group viewed an increase in the number of children attending "their" school; and, given that some of the others perhaps came from more "crowded" (square feet per student) schools, such a result is understandable.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Intent and Objectives

This study empirically determine some input-output relationships of three multiple unit public housing projects as they pertain to occupants, proximate neighbors, and public services (mainly schools). Most traditional input-output studies are conducted with an accepted understanding of what outputs and inputs are most important. The production of corn serves as a useful example. The quantity of corn produced may be an acceptable definition of output. Inputs would include such things as land, labor, seed, fertilizer and water. Various combinations of these inputs would yield various amounts of corn.

The analysis of multiple unit public housing must start at a more fundamental level. The first question is: What are the outputs or catagories of outputs derived? There is no single easily identifiable output. The outputs of multiple unit public housing include not only the effect on occupants, but the effects on proximate neighbors and the larger community as well. Some outputs will be "positive" and others "negative" with various trade-offs existing within and between the different groups. Thus, one of the

objectives of the study is to determine the outputs of multiple unit public housing on occupants, proximate neighbors, and public services. Without an understanding of the outputs involved, the decision maker cannot knowingly make meaningful changes toward the achievement of desirable goals.

Outputs can always be viewed as some function of inputs and this leads to a second objective of the study. Namely, what are some of the more important inputs which seem to affect outputs? Output in this sense refers to more or less favorable impacts on occupants, proximate neighbors, and public services. The decision maker can change the input variables through changes in the policy tools of size, location, design, maintenance, and management of multiple unit public housing. A better understanding of which inputs affect which outputs will permit the decision maker to use policy tools to alter the inputs in order to achieve the desired outputs (or combination of outputs).

A third objective of the study is to assist in the development of future research projects in the area of public housing (and multiple housing in general). Once outputs are identified and the relationship between outputs and inputs somewhat understood; the next step is to understand the rate of change in input variables which correspond to the rate of change in output. While this study provided some estimation of certain of these changes, its primary contribution toward further research is that it provides

insight into which inputs are most important in changing outputs.

Finally, it is hoped the study will cause public housing decision makers to view the results of their actions in a broader framework. The cost of providing public housing may include more than the costs of bricks and mortar. A public program budgeting assessment should include the costs of all resources and not just the cost of construction. The well being of the individuals in a neighborhood is a resource. If public housing adds to or detracts from this resource it should be included in any budgeting decision. Presently, many public program budgeting decisions are made without knowing the output which will be forthcoming or the various inputs which can alter the output. Without such knowledge it is difficult to see how meaningful programs can be instituted or changed to yield the desired results (not to mention least cost alternatives).

On the following page is a checklist summarizing the "inputs" which appeared to be the most important in affecting the impact of multiple unit public housing on the three groups. It is important to keep in mind that each of the "inputs" has a cost and contributes differently to output. Where output again refers to occupant and proximate neighbor satisfaction (or dissatisfaction) as measured by responses to the questionnaires.

With additional information concerning the magnitude

Checklist of Most Important Inputs Affecting
Occupants, Proximate Neighbors and Schools
 (With Illustrations Summarized from Three Lansing Projects)

Impact on Occupants

- A. Direct Housing Services (The size and condition of house; plumbing and bathroom facilities; major household appliances; furniture; health related items--food preparation, heating, ventilation)
 1. With the exception of furniture (which was not provided) the occupants generally seemed satisfied with the direct housing services provided.
 2. The garbage disposals were often broken and many occupants did not use them.
 3. Certain occupants (especially those without automobiles) argued they would have benefitted from central laundry facilities located within the complex.
 4. The management decisions which prevented certain alterations (such as painting the walls a different color) were disliked by certain occupants.
- B. Indirect Housing Services (Schools, parks, neighbors, child care services, transportation services, congestion, noise, garbage collection, theft and personal safety, privacy)
 1. The provision of adequate garbage containers and nearby bus services perhaps helps to explain the occupants' seeming satisfaction with these services.
 2. The design of the project was such that the units were close together and there was no private yard room. This plus the size of the projects seemed to account for the increased amount of noise and congestion from which many of the occupants had previously experienced. The perceived lack of privacy may also be explained by the size and design of the complexes.
 3. Multiple unit public housing did not substantially improve the "living environment" (indirect housing services) of very many of the occupants.

Impact on Indirect Services of Proximate Neighbors
 (Noise, Congestion, Privacy, Aesthetic Value)

- A. While the degree of geographical separation seemed to be important, it did not by itself seem to explain proximate neighbors responses regarding the impact on noise, congestion, and privacy.
- B. However, the degree of isolation which includes the degree of separation, the amount of fencing, the location of automobile entrances, the amount of vegetation, and the placement of the project with regard to often frequented locations; seemed to be important in explaining responses in the area of indirect services. This implies that both location and design are important variables in this regard.
- C. The three public housing complexes examined contained the same number of units. While size may be an important variable in determining the impact on proximate neighbors, there was insufficient variation to test size.¹ Nevertheless, the difference in responses between the neighborhoods implies other significant input variables.
- D. Certain of the neighbors were angered by the different economic and racial characteristics of the occupants. This may be the direct result of the management decision to promote racial and economic integration.
- E. Proximate neighbors were generally satisfied with the maintenance and upkeep of the projects. However, some were concerned about longer term deterioration.

Impact on Schools

- A. Both occupants and proximate neighbors were concerned about overcrowding of the schools. The impact on schools stems from the size, location and design of the complexes.
- B. Friction among students (presumably because of economic and racial differences) was also a concern of proximate neighbors, occupants and school officials.
- C. Occupants were also concerned about their children being behind the other children and the inability of the teacher to provide special attention.

¹Size, of course, is important not only from the "output" side, but also from the cost side where economies of scale may be important. For an interesting discussion on this topic see, James Russell Prescott, Economic Aspects of Public Housing (California: 1974), pp. 91-96.

and incidence of the costs and benefits of inputs and outputs, the decision maker will be in a better position to make meaningful changes toward the achievement of desirable goals. The researcher will be in a better position to identify and measure the magnitude and incidence of costs and benefits. The goals of multiple unit public housing and their relative importance is left to the individual decision maker. The only necessary condition for the study to be of use is that the desired goals are somehow related to the well-being of the occupants, proximate neighbors, or users (payers) of the same public services. For example, if the goal is to stimulate activity in the construction industry "at all costs," then this study would be of little practical use.¹

Data on the perceived impact of occupants, proximate neighbors and public services were obtained primarily through responses to questionnaires. The responses in turn provide insight into possible areas of costs and benefits. From the various perceptions gained, it is subsequently possible to discuss how manipulation of size, location, design, maintenance and management may alter the costs and benefits. Before summarizing the impact on the three groups (occupants, proximate neighbors, public services) separately, it is perhaps desirable to summarize the role of the practising social scientist on matters of public policy.

Social Inquiry on Matters of Public Policy

The basic premise on which the study is based is the belief that social inquiry on matters of public policies, which affect the quality of human life, is a valid area of endeavor. However, when examining the unique characteristics of public policy this validation is not intuitively obvious.

Policy problems are problems of practical urgency; they are defined by the values of different groups in society; and, their solution is limited by the existing social institutional framework and existing resource base. Moreover, these characteristics are continually changing with the reasons for, and the direction and rate of change presently being little understood. The inquirer who chooses to be involved with policy issues must be willing to accept a greater amount of uncertainty than is usually present in other areas of social inquiry.

Economics as a science is concerned with how scarce resources are allocated to achieve desired ends and whose desires count. The public decision maker allocates resources within multiple unit public housing. The problematic situation arises from the belief that a more desirable allocation of resources in the public housing area can improve the quality of life of those affected. Before any desirable alteration in the allocation of resources can be made; however, it is necessary to know how individuals are affected by multiple unit public housing.

The Impact of Multiple Unit Public
Housing on the Occupants

The national housing goal of a "decent home and suitable living environment at rents the poor can afford" contains little actual content with which to assess multiple unit public housing's impact on occupants. The statement is not based on any well defined social norms and at best provides one with a subjective "feel" grounded in personal experience. Thus, in this sense it is not possible to estimate the effectiveness of MUPH in achieving the stated objectives.

However, it is possible to compare the occupants' MUPH residence with their previous residence in each of these areas. In other words, in the occupants' opinion, were they provided with "better housing", a more "suitable living environment", at lower rents?

In the attempt to evaluate the "decent home" aspect, occupants were asked to compare the direct services of MUPH with their previous housing services. Direct housing services are those services obtainable from the housing structure itself along with any appurtenances and major appliances. Indirect housing services are those services offered from living at a particular location. They include all neighborhood services which are not direct housing services. Indirect housing services of MUPH and the previous residence are compared in the attempt to understand the perceived changes in "living environment." Finally,

present and previous rents are compared for the purpose of evaluating the "rents the poor can afford" aspect.

According to the occupants, MUPH substantially improved their direct housing services. The thirty occupants were asked to compare the MUPH residence and the previous residence with respect to: 1) the size and condition of house; 2) plumbing and bathroom facilities; 3) major household appliances (i.e., refrigerator, stove, laundry facilities, garbage disposal, and food storage); 4) furniture; 5) health related items (i.e., food preparation, heating, ventilation). Only five percent of the total number of responses to these question (150) preferred the previous residence. Sixty percent of the responses preferred the direct housing services of MUPH. There were thirty-five percent indifferent responses, with 21 of the 53 indifferent responses related to furniture. Since the MUPH complexes were not provided with furniture, this results is not unexpected.

To better understand the perceived change in direct housing services, an "absolute" level of the direct housing services was provided on the occupants' applications. Of the eighty-nine applications examined, forty-six contained negative comments about the applicant's previous direct housing services. Overcrowding was mentioned twenty-eight times; lack of heating, nine times; structurally unsafe, five times; condemned, four times; lack of running water,

two times; and, lack of kitchen sink and stove was mentioned once. Given the relatively low level of previous direct housing services, it is understandable that MUPH provided a significant improvement.

Turning to indirect housing services (the "living environment"), MUPH did not seem to provide a general improvement. The indirect services which occupants were asked to compare included; schools, parks, neighbors, child care facilities, transportation, congestion, noise, garbage collection, theft and personal safety, and privacy. Of the total 299 responses to these questions, 44 percent were indifferent between neighborhoods. The MUPH neighborhood seemed to be preferable (in terms of number of responses) in the area of schools, transportation, and garbage collection. However, according to the number of responses, the previous neighborhood was preferable in the area of congestion, noise and privacy. Twenty-eight percent of the responses felt that MUPH had improved indirect services; while 27 percent of the responses favored the indirect services of the previous neighborhood. The results indicated that MUPH had little if any net positive impact on occupants regarding indirect services.

The final comparison made between MUPH and the previous residence is in the area of rents. On the basis of 199 observations there was no significant difference (95 percent confidence interval) between the occupants'

previous and present rent. The mean monthly rent at MUPH was \$106.83 compared to a mean monthly rent of \$100.74 at the previous residence. However, the standard deviations from the two sets of monthly rents differed considerably. The standard deviation of MUPH rents was \$21.19; while that of the previous residence was \$46.68. The fact that occupants which derive more than 50 percent of their income from public assistance have standardized rents; and, the diverse backgrounds of the occupants, helps to explain the difference in the standard deviations.

In terms of numbers, 42 percent (40) paid higher previous monthly rents, 16 percent (15) paid the same monthly rent, and 43 percent (41) paid lower previous monthly rents. Whether or not the rents in MUPH are "rents the poor can afford", there was not on the average, any reduction in rent from moving into MUPH.

The Impact of Multiple Unit Public Housing on Proximate Neighbors

Results from Questionnaire

A random sample of 89 proximate neighbors of the three housing projects were interviewed to determine the perceived impact on them from MUPH. Proximate neighbors incur benefits and costs primarily through the existence of "neighborhood effects." The costs and benefits of "neighborhood effects" do not operate within a voluntary money exchange market; thus, the "market" cannot charge or

recompense proximate neighbors for the services (both positive and negative) which they receive.

However, the public housing decision maker may want to take into account the impact on proximate neighbors for at least three reasons. First, in order to assess the impact on those concerned, the costs and benefits on all parties must be better understood. Second, the impact on proximate neighbors can affect the "living environment" of the entire neighborhood including the MUPH occupants. Third, collective opposition by proximate neighbors (even if unwarranted) can prevent the locating of a public housing complex in their neighborhood.²

For simplicity, the impact on proximate neighbors is viewed from two points of view. On the one hand, perceived changes in property values is examined. On the other, the level of indirect services ("living environment") is assessed. Unlike the occupants of multiple unit public housing, there is no reason to believe that proximate neighbors' direct housing services (the housing structure itself) will change--at least not in the short run. A third impact on certain proximate neighbors--which was not specifically examined but became clear during the course of the study--was the negative personal feelings toward people with different economic and racial characteristics moving into the neighborhood.

While examined somewhat separately, property values

and indirect services are definitely related. Presumably, any decline in indirect services is limited by the fall in property values plus moving expenses. That is, if a proximate neighbor feels the public housing complex has detracted from the indirect services of his neighborhood, and yet he chooses not to sell, he evidently would rather pay this cost than the cost of moving plus any capital losses.

When asked if they thought their property values were affected in any way by MUPH; thirty-eight respondents said "yes", thirty-eight said "no", and twelve said they "didn't know." Of the thirty-eight responding "yes", only one felt that his property value "probably increased." In terms of dollars, property declines were estimated to have fallen from \$1500 to \$15,000. Two-thirds of those giving dollar amounts estimated the decline in the range of \$2000 to \$4000. These estimates amount to about ten percent of the market value of the housing (\$20,000 to \$40,000).

Forty-seven percent of the respondents felt as though home sales had increased in the neighborhood. However, only twenty percent thought public housing was the cause. Taxes, schools and "less desirable people" were also mentioned as reasons for increased sales. MUPH perhaps influenced these aspects, but this was not always clear. Fourteen percent (4 of 29) of the respondents, who wanted to sell, cited public housing as their reason for wanting to sell.

It is important to note that a fall in property

values is not necessarily a "bad" thing for everybody. For example, a fall in property values would allow relatively lower income families to purchase desired homes. However, there may also be negative costs to people other than owners associated with falling property values. First, a continued fall in property values may lead to dilapidation, abandonment, squalor, disease and other maladies which detract from societal welfare. Second, a perceived decline in property values by proximate neighbors may lead to animosity and dislike which in turn may lead to a poorer "living environment." Third, an expected fall in property values may increase proximate neighbor resistance to multiple unit public housing, forcing the decision maker to choose "less desirable" sites.

Turning to the impact on indirect services, proximate neighbors were asked if the public housing complex had a positive or negative affect on privacy, congestion, noise, aesthetic values and schools. The results are shown in Table 3.8, and for convenience are reproduced below. Essentially all of the proximate neighbor responses implied either a zero or negative cost associated with the perceived impact on indirect services.

With the exception of schools and privacy, the negative responses varied between the three neighborhoods. One neighborhood accounted for approximately fifty percent of the negative responses concerning noise and congestion; while

Table 5.1. The Number and Percent of Proximate Neighbor Responses
Implying an Adverse Impact of MUPH on Indirect Services

Indirect Service	Number of Respondents Implying a Negative Impact	Percent of Total Respondents Implying A Negative Impact
Privacy	35	41
Congestion	40	48
Noise	27	31
Aesthetic Values	35	41
Schools	35	44

another accounted for about fifty percent of the negative responses concerning "aesthetic values." Given some of the observable differences in the neighborhoods and the different percentages of negative responses it is possible to hypothesize testable cause and effect relationships, and suggest various policy alternatives.

Some Input-Output Relationships of Policy Decisions and Proximate Neighbor Responses

Proximate neighbor responses of the impact on noise, congestion and privacy differed between the three neighborhoods examined. This section looks at some of the implied relationships between the location, size and design of the public housing complexes, and the percent of "favorable" proximate neighbor responses to the questions on noise, congestion and privacy. "Favorable" responses are defined as 100 percent of the total responses to the three questions minus the percent of responses which implies MUPH adversely affected noise, privacy and congestion.

Conceptually the relationship may be viewed as an input-output model; where the policy decisions of location, size and design are the inputs, and favorable proximate neighbor responses are the desired output. Favorable proximate neighbor responses to the questions on noise, congestion and privacy were summed for each of the three neighborhoods. The percent of favorable responses for each neighborhood are: Hildebrant 66 percent; La Roy 52 percent; and Mt. Vernon 70 percent.

Figure 5.1 compares the relative degree of geographical separation of the three public housing complexes to the proximate neighbor respondents in their respective neighborhoods. The neighborhoods are ranked ordinally with Hildebrant being the closest (on the average) followed by La Roy and then Mr. Vernon. Ceteris paribus, the percent of favorable responses to the questions of noise, congestion and privacy would be expected to increase as the separation between the public housing complex and proximate neighbors increased. Size was held constant but some of the other project features differed. Of course, one of the objectives of this study is to find out what other features are important so that a ceteris paribus statement can be meaningful. Nevertheless, as shown in Figure 5.1, the favorable responses increased, decreased and then increased again as the seaparation increased. Since there is no a priori reason for such a relationship, the geographical

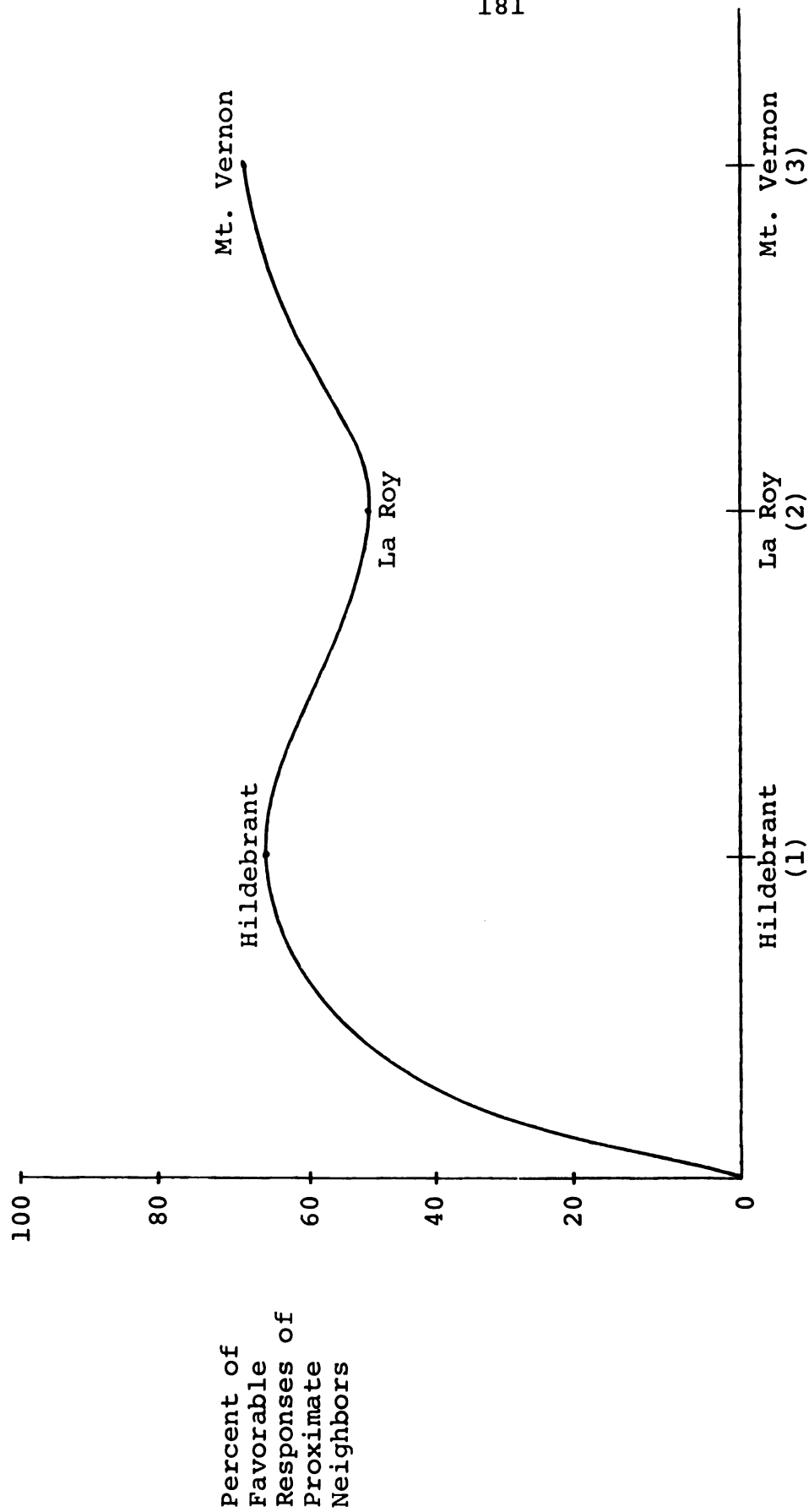


Figure 5.1. Percent of favorable proximate neighbor responses according to geographical location of complex.

separation factor can only partially determine the percent of favorable responses. However, with limited sample size the observations could just be variations around the mean for the given degree of separation.

The size of the public housing project would also be expected to influence the percent of favorable responses. However, the observed complexes each contained 100 units and thus there was no opportunity to test for the effect of size.

Figure 5.2 compares the relative degree of isolation of the complex from the rest of the community, with the percent of favorable proximate neighbor responses. The relative degree of isolation is determined by the average ordinal ranking of the three complexes within four "categories" of isolation of which the previously discussed geographical separation is a part.

Table 5.2 shows that Mt. Vernon is the most isolated from the rest of the community based on the criteria used. Hildebrandt follows, and the La Roy complex is least isolated.

As shown in Figure 5.2, the percent of favorable responses increase as the average degree of isolation increases. Mt. Vernon is more isolated in all respects than the La Roy project and received 18 percent more favorable responses from proximate neighbors in the area of noise, congestion and privacy. The question for the decision maker

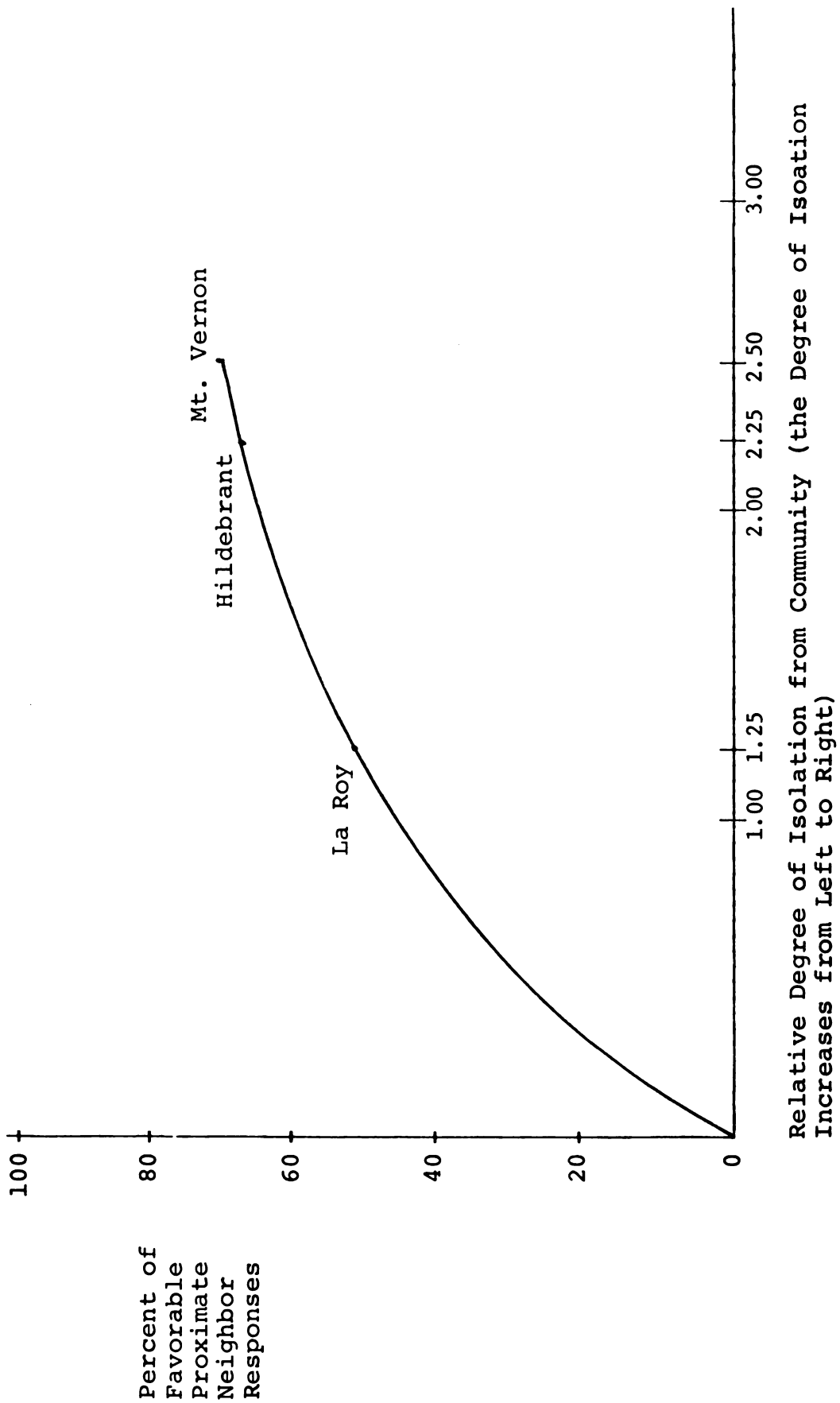


Figure 5.2. Percent of favorable proximate neighbor responses according to index of degree of isolation.

Table 5.2. Ordinal Ranking of Three Public Housing Complexes According to Catagories of Isolation

Catagories of Isolation	Housing Project		
	Hildebrant	La Roy	Mt. Vernon
	-----Ordinal Rank-----		
<u>Geographical Separation</u> (3 is most removed)	1	2	3
<u>Amount Fenced</u> (3 is most fenced)	3	1	2
<u>Street Entrance and Exit</u> (3 is least used by proximate neighbors)	2	1	3
<u>Vegetation (Screening)</u> (3 is most vegetation)	3	1	2
Total	9	5	10
Average Ordinal Ranking	2.25	1.25	2.50

is: Is the additional favorable responses from proximate neighbors worth the cost of increased isolation? For example, if fencing the La Roy project would increase the number of favorable proximate neighbors responses from 52 percent to 65 percent, should the project be fenced? It is this type of decision the decision maker should be concerned with.

Locating the housing project near a major street and providing entrances and exits only on that street may also increase the percent of favorable proximate neighbor responses. However, if the street must be crossed regularly by the occupants there will be an increase in the probability

of accidents. Again the decision maker must weigh the relative benefits and costs.

Decisions of size, location, design, maintenance and management are the inputs of the decision maker. These decisions will produce an output which will likely improve the well-being of certain individuals at the expense of others. In the above example, fencing the project requires additional resources provided by tax dollars and may have undesirable effects on the occupants; however, a higher percent of proximate neighbors may be better off.

An understanding of these "production functions" provides the decision maker with an idea of the rate output changes with regard to changes in inputs. It is the "marginal" changes in the value of output which determine whether or not the changes are worth their cost.

The Economic Impact of MUPH on Public Services

General Considerations of MUPH and Public Service Provision

Any housing project will have an impact on the costs and benefits of public provided services within a specific area. The impact will vary depending on the location, size, design, maintenance and management of the project. The decision maker can alter the magnitude and incidence of costs and benefits on public services by altering one or more of these variables. Of course, his ability to alter these variables is limited by scarce resources, institutional constraints, and other higher valued goals.

When a MUPH project is occupied, the demand for public services may change in two ways. First, individuals from outside of the public service supplying area may move into the complex, thus increasing aggregate demand for public services. Second, as individuals move within the public service supplying area, there will be a change in the composition of demand. Either of these changes in demand may increase the per unit cost of supplying public services in the short-run (assuming a fixed plant operating at lowest unit costs). However, a change in the composition of demand may also work to lower unit cost if excess capacity can be eliminated.

Both of the movements above can also affect the tax base of the public service supplying area. For example, the people who move into public housing normally have relatively low incomes; thus, those who move from outside would contribute less toward a local income tax. But, their use of public services may be no less than "average" use. Also, movement within the community can decrease the tax base from the private housing stock. However, total tax revenue may increase since the public housing complex pays ten percent of receipts in lieu of taxes, which may be greater than revenue generated by private low income housing.³ This assumes a constant or decreasing population in the area, since an increasing population implies that others would likely move into the homes left by public housing occupants.

The above discussion implies that MUPH can affect the costs and benefits of public service provision. It is also implies that other considerations will affect the magnitude and relative importance of MUPH's impact on public services. Included is the population growth rate which affects the utilization of plant capacity and the housing stock. If the population is expected to increase, the decision maker may be more concerned with constructing public housing so as to minimize the cost of providing additional public services. If the population is expected to decrease, the concern may be to match the expected excess capacity of public services with the additional demand created by public housing. Moreover, in order to obtain the most desirable method of financing, an otherwise desirable choice with respect to public services may be precluded. For example, the federal government subsidizes MUPH capital expenditures a greater amount than current expenditures; which may alter the decision maker's choices. Also, federal government expenditures to other public services (e.g. schools) may be directly affected by the decisions made with regard to public housing.

The Impact of MUPH on Elementary Schools in the Lansing School District

The impact on elementary schools is a subsection of the more general section on public services. An attempt is made to empirically examine the actual impact on the four elementary schools involved.

The table below shows the number and percent of children from public housing attending the four schools.

Table 5.3. Elementary Schools Receiving Children from MUPH:
Number of Children in Attendance September 1973
(Total and From Public Housing)

School	Total Attendance	Number From MUPH	Percent of Children From Public Housing
Pleasant View	593	106	18
Gier Park	480	91	19
Cumberland	375	103	27
Northwestern	323	52	16

Most of the impact on the schools from MUPH children occurred within a two year period. From 1967 to 1969, attendance at Pleasant View increased by 231 students or 52.2 percent. During this same period, attendance in the school district increased by 730 students or four percent. The public housing project (La Roy) accounted for about half the increase in attendance at Pleasant View with the other half coming from growth of the community.

Also, during 1969 and 1970, attendance at Gier Park increased by 208 students or 59.8 percent. Again, public housing (the Hildebrant project) accounted for only about half of this increase, the other half coming from the closing of another school. During the same period, attendance in the school district increased by 297 (about 1.6 percent).

The increase in attendance at Cumberland and Northwestern during 1970 and 1971 was 78 (21.3 percent) and 60 (21.4 percent), respectively. The public housing complex (Mt. Vernon) seemingly accounted for the major share of these increases. Attendance in the school district declined by 68 students during the period.

The increase in the number of students at these schools required the hiring of additional teachers due to the state law on maximum student-teacher ratios. During the same time periods discussed above, the number of teachers increased by; seven at Pleasant View; four at Gier Park; three at Cumberland; and two at Northwestern. The hiring of teachers was not uniform throughout the school district. For example, Pleasant View received seven teachers for an additional 278 students from 1967 to 1968. During this period, student attendance in the remaining school district increased by 331, but this increase was accompanied by only one additional teacher.

In terms of capacity utilization, Cumberland, Northwestern, Gier Park and Pleasant View averaged 86 percent, 85 percent, 85 percent and 92 percent from 1967 to 1973, respectively. The school district as a whole operated at 92 percent capacity. Approximately \$619,000 worth of capital additions were added to Gier Park and Pleasant View in 1969 and 1967, respectively. Since sixteen schools operated at greater than 92 percent capacity from 1967 to 1973; and since six of these operated at greater than 100 percent capacity,

it seems reasonable to question the additions at these particular schools. It is possible that MUPH drew attention to these particular schools at the exclusion of others. However, this is conjecture.

The most important impact on schools would presumably be the change (if any) on the quality of education afforded the children. Unfortunately, it was not possible to make such a determination in this study.

Whatever the impact on the schools, it is clear from the study that school officials were not asked, and in fact did not participate in the decision of where and how to locate public housing. In view of the fact that federal money is dispersed among Lansing schools on the basis of ADC, consultation with school officials becomes even more important. Movement of ADC children affects the internal financing of schools, and MUPH typically contains a large percentage of these children. For example, if an additional ten ADC children attended Northwestern, the school would qualify for approximately \$600 per each ADC child. Without consulting with school officials, the public housing decision maker is not able to accurately assess the affects of his actions on the schools. Presumably, working with other public service officials in determining the size, location and design of MUPH would assist in minimizing the impact on public services within the framework of desirable objectives.

Conclusions and Recommendations

This study, like much applied research, supplies many more questions than it answers. Especially since answers to anything except facts can never be held with certainty. Thus, the purpose of this final section is to explore some of the more interesting questions implied by the study.

The section is divided into four subsections. The first is a "general" consideration of certain related problem areas in housing and neighbors. The next three subsections examine researchable areas related to the occupants, proximate neighbors, and public services, respectively.

Related General Areas of Recommended Research

Examination of Other Public Housing

An examination of public housing which varies in size, location, design, management or maintenance would help establish the importance of these policy tools in achieving desired goals. For example, decreasing the size of a project would reduce the impact on, say, schools; however, the impact on proximate neighbors may increase. Similarly, locating a complex several miles from the nearest neighbor would remove the impact on proximate neighbors; however, this may increase the costs of public services provision and forego desirable "living environment" improvements of occupants.

Other studies of different public housing complexes in different neighborhoods will increase the decision maker's

ability to correctly assess the trade-off between alternative policy decisions.

Examination of Other Multiple Unit Housing

It would be interesting to compare the impact on single family proximate neighbors from private multiple unit housing as opposed to multiple unit public housing. Thirty-nine percent of the proximate neighbors in this study felt as if private multiple unit housing would have had a different impact on the neighborhood. The implication being that public housing contained a "less respectable class of people." It may be however, that single family homeowners tend to have certain objections to multiple unit housing irrespective of whether it's public or private. The "public" aspect may simply be an identifiable target of these objections.

Further Research and Recommendations Pertaining to the Occupants of Public Housing

The Goals of Public Housing

As argued in Chapter II, the objectives of a "decent home" and "suitable living environment" at "rents the poor can afford" contained little actual content. Before any decision maker can rationally choose among various alternatives, he must have a clear idea of what is wanted. Moreover, the success of any program is based upon its objectives. What is the purpose of providing a "decent home" and "suitable living environment" at low rents? Is it to improve the

satisfaction or well being of the "poor"? Is it to assist them in becoming more productive citizens in society? Is it simply to improve the satisfaction of society through the feeling of being generous; or, the slum removal of eye sores?

While these questions are not researchable, they are certainly important. If the public housing decision maker is going to "correctly" weigh the expected consequences of various decisions an idea of relative values must be established. For example, what is the trade-off between a "decent home" and a "suitable living environment"?

How Does Public Housing Affect the
Social Decision Making Ability
of Occupants?

When occupants were asked, "Would you rather have enough money per month and find other similar housing accommodations or have this housing at the present rent?" twelve said they would prefer the money, twelve said they preferred their present housing accommodations, and six were indifferent. It would be interesting to examine possible changes in the desire to make independent decisions among different income groups. That is, do people with relatively low incomes tend to feel as though they are "failures" in society, and therefore prefer to have others make a larger number of their decisions?

This question is not only important in itself but directly relates to public housing. For example, the answer

to this question would presumably provide an indication as to whether public housing is a temporary "halfway" house or a permanent way of life. This is particularly important with respect to children. In one public housing complex (not examined in the study) there was a married couple, both of whom had been raised in the same complex. It would be interesting to know if public housing perpetuated or discouraged continued dependence on the state.

The Relationship Between Direct and Indirect Housing Services

When purchasing a home, a person takes into account both the services offered by the house itself (direct housing services), and the services offered by the neighborhood (indirect housing services). Since the house itself provides shelter, a basic necessity, it is expected that the demand for direct housing services would be relatively income inelastic when compared to the demand for indirect housing services. It would be interesting to compare how the demand for direct and indirect housing services change as income increases. The results would perhaps yield some insight into the relative importance of a "decent home" and a "suitable living environment." The hypothesis might be: The price ratio of indirect to direct housing services tends to increase as incomes increase. The price of direct housing services would be the actual cost of construction (including basic furnishings such as stove, refrigerator,

etc.) plus the competitive rate of return to the entrepreneur. The costs of indirect services could perhaps be estimated through the difference between land prices and tax rates. The assumption being that land values and tax rates tend to reflect the relative value of indirect services. Substantiation of the hypothesis would be a significant positive correlation between the price ratio and income. A basic problem in the empirical testing of this hypothesis is the expected rate of return from the investment portion of buying a home; which, may also be related to the price ratio and income.⁴

Some Questions on the Level of Direct Housing Services

Several interesting questions are raised with respect to direct housing services. First, what is the desired level of direct housing services of MUPH? For example, garbage disposals appeared to be broken much of the time and requiring considerable maintenance. Perhaps this is due to the fact that most of the occupants are not familiar with the proper use of garbage disposals. An understanding of the "average" occupant's level of sophistication regarding housing services would allow the decision maker to choose those services which optimize the relationship between initial costs, costs of maintenance, and occupant satisfaction.

In this regard, however, it is important to keep in mind the long term nature of housing. Only including those

services which appear ideal today may decrease the useful life of a project. Assuming incomes increase, the demand for housing services will increase. Thus, an obsolete MUPH project may remain largely vacant even at very low rents.

The lack of laundry services and not owning an automobile may increase the costs of food and laundry services. Several of the occupants argued that it is very difficult to carry more than one or two bags on a bus. Thus, more trips to the laundry and food store would be required--increasing the costs of clean clothes and food. An estimation of the actual cost of obtaining food and laundry services may influence the decisions of decision makers toward the provision of these services.

Management decisions regarding MUPH contain many uncertainties. Part of the uncertainty stems from the lack of well defined objectives. However, some of the uncertainty stems from the lack of knowledge concerning the reactions of occupants toward various policies. For example, one occupant was dissatisfied because of managements' refusal to let her paint the walls of her house. The reasoning was that "these are the government's walls" and she could not change them to suit her taste. The implication being that she was the ward and the government the patron. To the extent that such management decisions cause some occupants to leave and force others to become dependent on the decisions of "superiors", MUPH may be partially defeating its purpose.

There appears to be considerable room for research in the area of management decisions.

Some Questions Concerning Indirect Housing Services

Indirect housing services to a certain extent determine the quality of the "living environment." The question is, what is a "decent living environment"; or, more specifically, what do people look for in determining a "suitable living environment"? A better understanding of the "bads" to be avoided and the "goods" desired in the "living environment" would assist the decision maker in assigning relative priorities. For example, is more congestion a "bad" and, if so, how much of a "bad" relative to, say, the noise level? The point is, there is little known about what indirect services make one neighborhood more or less desirable than another.

The occupants of the study felt as though MUPH was less desirable than their previous neighborhood in the areas of noise, congestion, and privacy. This conclusion seemed to be based on more children and the close proximity of neighbors. However, it is not known how important noise, congestion, and privacy is to a "decent living environment." Therefore, it is impossible to say if MUPH improved or detracted from the "living environment" of the occupants.

Occupants also expressed concern that their children were "behind" other children in the neighborhood in education.

This is an empirical question. While school officials thought children from MUPH often times had special problems, there had been no serious effort to determine the achievement of MUPH children relative to other children. An investigation in this area would: 1) determine if in fact there is a difference in educational attainment; 2) provide insight into what seemed to cause this difference; and, 3) offer suggestions on how to remove the difference.

A related area is that of preschool child care services. Existing research indicates that the years before five years of age are very important in determining a child's social behavior. Time series studies which determine how children from MUPH (or more generally, how children from the lowest income groups) adjust and perform in society, would be extremely useful in evaluating and altering programs for children. If children from MUPH tend to follow in the footsteps of their parents, then such housing may not be accomplishing desirable long term goals.

The area of theft and personal safety also offers some useful research possibilities. For example, is MUPH more or less safe than other neighborhoods? Number of thefts and police calls per capita would illustrate any difference between MUPH and other areas. Such a comparison would provide an assessment of the "absolute" level of safety of MUPH. Of course, different MUPH projects would presumably also differ in theft and safety. A comparison of different

public housing projects may provide some insight into why these differences exist.

Finally, more research in the area of family life, desire and self respect of occupants of MUPH may prove desirable. Some of the occupants said that living in MUPH made them feel "like a welfare case," or that it "crushed their pride." Such feelings may be lessened or removed if public housing were viewed more as a vehicle for improvement of the occupants' ability to lead more productive lives in society (i.e., help them increase their human capital), then perhaps hope and desire would tend to replace hopelessness and failure.

Further Research and Recommendations Concerning Neighbors of MUPH

Externalities Associated with Different "Types" of Housing

As incomes increase and barriers to entry into the market are removed, the economic and racial characteristics of neighbors will continue to change. Presently, there is little understanding about how neighborhoods change or the affects on the individuals involved. Mobility has and will likely continue to destroy the old sense of neighborhoods or community composed of a range of incomes and status, with values toward care and use of property imposed by community pressures. At one time this side and the other side of the tracks was a familiar concept; which, implies disparate

communities with differing values and approaches to housing behavior. Perhaps rules by a manager do not form an adequate substitute for social pressure.

When interviewing proximate neighbors, there were several instances when comments were made about subsidized single family homes (Section 235 housing). Their concern, it seems, was not with the public housing project (which was not viewed as part of their neighborhood but as a separate community); but with the nearby subsidized single family homes. They argued that the subsidized homes were not "taken care of" as well as the other homes in the neighborhood. It may be that single family subsidized homes have a proportionately greater impact on communities than MUPH. Studies of the impact on neighbors from different types of subsidized housing may offer some useful results with respect to neighborhood change. Some studies which cover a five or ten year period may be particularly fruitful.

Neighborhood Property Values

Estimation of the actual impact on neighborhood property values is very difficult because one is always confronted with what would have happened had public housing not located in the area. However, a sufficiently large sample size and "realistic" control groups would reduce the uncertainty. That is, comparing the sale prices of homes of a host of two "similar" neighborhoods, one of which receives public housing, both before and after the locating of MUPH, would

perhaps provide some reliable data. Such a study would not only provide insight into the effect on the sale price of homes; but would yield information on the magnitude of impact on relatively lower and higher priced homes. The hypothesis may read something like: MUPH tends to decrease the sale price of homes in the neighborhood; and, the decrease in price is proportionately greater in neighborhoods with higher priced homes. Because of "panic selling" and the rate of deterioration of the public housing complex, a time series study would presumably provide a more relevant comparison.

It would also be interesting to determine if the impact on property values due to MUPH differs from the impact on property values due to comparable private multiple unit housing.

Further Research on the Impact Indirect Services have on Proximate Neighbors

As with occupants, there is the problem of determining what indirect services are important to proximate neighbors; and what is their relative value. The present study examined privacy, congestion, noise, aesthetic values and schools.

How much MUPH actually changed these services is not known. For example, forty-four percent of the proximate neighbors felt that MUPH had a negative impact on schools; however, it is not known if the quality of education changed or even if the negative impact implied poorer education. In

some cases the increased "friction" between students was cited as a cause for the negative impact.

The answers to the broad question concerning "aesthetic values" implied that proximate neighbors were concerned about the "lower class" of people in their neighborhood. "Lower class" referring at different times to income level, race, and different values. It would be useful to determine specifically what it is about public housing occupants that proximate neighbors often times oppose; or if it is really the occupants or the multiple unit housing. With this knowledge, the decision maker would be in a better position to choose between alternative neighborhoods.

The problem of privacy and trespassing also needs additional study. While fencing the project is perhaps one alternative, it is not clear how fencing tends to isolate and perhaps alienate the occupants. Other means, such as location near direct public routes, may discourage trespassing.

Studies in changes in the crime rate of a neighborhood after a public housing complex enters would also prove useful. Proximate neighbors often times expressed a fear of increased thefts. It would be desirable to determine; 1) if in fact there was an increase in crime in the area; 2) how much theft increased; and, 3) ways of reducing theft.

The multiple variables which seem to have an influence on proximate neighbors suggest the necessity of a larger sample size. For example, assume the decision maker wants to reduce neighborhood objections from 40 percent to 20 percent. He may achieve his objective through changing the size, the degree of geographical separation, the amount of fencing, the placement or screening of the project. Which one of these or which combination should be chosen? In order to answer this question, a larger sample size which permits valid use of a "ceteris paribus" assumption is required. An examination of a large number of projects which were "similar" in all important respects except size would allow the researcher to estimate the impact from size alone. This study suggests that "other important respects" include; the degree of geographical separation; the amount of fencing; the amount of vegetation; the location of automobile entrances; and, the placement with respect to often frequented locations (particularly schools).⁵

Further Research and Recommendations Concerning the Impact on Public Services

Perhaps the obvious finding in the area of public service provision is the seemingly almost total lack of coordination between the various decision makers. Certainly in the area of schools there was no effort to determine the expected impact of MUPH which included discussions with the schools' officials. Part of the lack of coordination is

probably due to the lack of understanding of various inter-relationships involved. For example, altering the location of children receiving ADC changes the internal financing of schools in the Lansing school district. There is nothing to suggest the housing officials are even aware of this. Therefore, a greater understanding of the interrelationship of government programs would be desirable.

Part of the lack of coordination may stem from the belief that additional costs will not be forthcoming; or, that any additional costs are not worthy of consideration. This could well be an untenable assumption. Thus, a better understanding of the costs of "incorrect" planning would also be of value.

As previously discussed, however, the transactions cost in making "coordinated" decisions may be quite high. If the transactions cost exceeds the value to be gained from decisions made by coordinated effort, then a coordinated effort should probably not be made. Of course, this depends on who's judging the cost and value as well as their measured magnitudes. Much interesting research could be conducted on both of these problems.

A study which examines the impact on the neighborhoods from which the occupants moved would also provide additional knowledge of the impact on public service provision. For example, what happens to a neighborhood when, say, twenty percent of the families leave to live in public housing?

Are certain public services curtailed? Does the neighborhood tend to deteriorate more rapidly? These questions are important if one is concerned with the total impact of public housing on the community.⁶

As previously mentioned, much work needs to be done in the area of education. A primary measure of the impact of MUPH on schools would presumably be the change in the quality of educational services received. A study on the average achievement of children in the school before and after MUPH would yield some insight into whether or not the MUPH children are "behind" other children in the neighborhood. Some insight may also be gained in determining whether or not schools reduce requirements when children who are "behind" enter. Finally, it would be desirable to know if being "behind" was a temporary phenomenon which decreased as the children adjusted to the new situation.

FOOTNOTES

¹There are several interesting models which attempt to explain the impact of new housing on the community. See, for example, Keith Moyer and William Bradford, "How to Find What a House Costs Your Community," Research Paper of the College of Agricultural and Life Sciences, University of Wisconsin, Madison (No Date).

The Michigan State Housing Development Authority has an operational computer model concerning the community impact of housing.

²Bish, Robert L. and Nourse, Hugh O. op. cit., p. 230.

³See, for example, Stanley Scott and Harriet Nathan, "Public Referenda: A Critical Reappraisal," Reprint No. 35, Institute of Governmental Studies, University of California, pp. 319-320. Reprinted from Urban Affairs Quarterly, Vol. 5, No. 3, (March 1970).

⁴For example, a person with relatively low income may be more concerned about the basic services a home provides, whereas a person with a relatively high income may attach proportionately more importance on the investment value of a home.

⁵The many "inputs" which affect the "output" of MUPH suggests the need for observing a very large sample size. The very costs of obtaining sufficient useful knowledge to desirably alter MUPH, increases the cost of this type of income transfer relative to other types of income transfers.

For a discussion of different types of income transfers see, M. Schmundt, E. Smolensky and L. Steifel, "The Evaluation by Recipients of In-Kind Transfer," Institute for Research on Poverty: Discussion Papers 137 (University of Wisconsin, Madison: 1972).

⁶Prescott, op. cit., pp. 51-65.

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APPENDICES

APPENDIX I
QUESTIONNAIRES USED IN STUDY

APPENDIX I

QUESTIONNAIRES USED IN STUDY

Questionnaire for Directors of Public Housing

- 1) When were contracts let for this (these) public housing project(s)?

Name	Month	Year
a)	_____	_____
b)	_____	_____
c)	_____	_____
d)	_____	_____

- 2) When was (were) the complex(es) first occupied?

Name	Month	Year
a)	_____	_____
b)	_____	_____
c)	_____	_____
d)	_____	_____

- 3) When was (were) the complex(es) essentially full?

Name	Month	Year
a)	_____	_____
b)	_____	_____
c)	_____	_____
d)	_____	_____

- 4) Who was (were) the contractor(s)?

Name	Month	Year
a)	_____	_____
b)	_____	_____
c)	_____	_____
d)	_____	_____

- 5) What was the total cost of this (these) housing project(s) with respect to:

Name	Site Land Cost	Construction Cost	Finance Cost	Eq. Cost	Other Cost*	Total
a)	_____	_____	_____	_____	_____	_____
b)	_____	_____	_____	_____	_____	_____
c)	_____	_____	_____	_____	_____	_____
d)	_____	_____	_____	_____	_____	_____

*Other includes: brokerage, lawyer, furnishings, equipment.

- 6) What has been the operating costs (ask for definition) of the project(s) per year since its (their) beginning?

Name	Year					
	1	2	3	4	5	6
a)	_____	_____	_____	_____	_____	_____
b)	_____	_____	_____	_____	_____	_____
c)	_____	_____	_____	_____	_____	_____
d)	_____	_____	_____	_____	_____	_____

- 7) What amount or percentage of operating costs goes for:

Name	Cost	Year				
		1	2	3	4	5
a)	1) Maintenance	_____	_____	_____	_____	_____
	2) Administration	_____	_____	_____	_____	_____
	3) Repairs	_____	_____	_____	_____	_____
	4) Taxes	_____	_____	_____	_____	_____
b)	1) Maintenance	_____	_____	_____	_____	_____
	2) Administration	_____	_____	_____	_____	_____
	3) Repairs	_____	_____	_____	_____	_____
	4) Taxes	_____	_____	_____	_____	_____
c)	1) Maintenance	_____	_____	_____	_____	_____
	2) Administration	_____	_____	_____	_____	_____
	3) Repairs	_____	_____	_____	_____	_____
	4) Taxes	_____	_____	_____	_____	_____
d)	1) Maintenance	_____	_____	_____	_____	_____
	2) Administration	_____	_____	_____	_____	_____
	3) Repairs	_____	_____	_____	_____	_____
	4) Taxes	_____	_____	_____	_____	_____

- 8) How much does (d0) this (these) complex(es) pay for schools per year?

Name	Amount
------	--------

- a)
b)
c)
d)

- 9) How is the amount of this payment determined?

- 10) What has been the total receipts (per year) paid by the occupants each year since the project was built?

Name	Year				
	1	2	3	4	5

- a)
b)
c)
d)

- 11) Has the occupancy rate changed during that time?

Name	Yes	No
------	-----	----

- a)
b)
c)
d)

- 12) If yes to 11) - 12) What number of units were occupied?

Name	Year				
	1	2	3	4	5

- a)
b)
c)
d)

- 13) What has been the HUD reimbursement per project per year?

Name	Year				
	1	2	3	4	5

- a)
b)
c)
d)

- 14) What is the total number of units? a) ____ b) ____ c) ____
d) ____

Name 1 bedroom 2 bedroom 3 bedroom 4 bedroom Other

- a)
b)
c)
d)

- 15) How many square foot per unit?

Name 1 bedroom 2 bedroom 3 bedroom 4 bedroom Other

- a)
b)
c)
d)

- 16) Do you believe that the income mix, i.e. the variation of income, of the occupants affects maintenance costs or community attitudes?

- 17) Do you feel that public housing is a solution to some of society's problems?

- a) What are the good points about public housing?

b) What are the shortcomings?

- 18) How was the area zoned before the public housing complex(es) was (were) proposed?

Name Zoning Single Multiple

- a)
b)
c)
d)

- 19) Is a day care center available in the complex(es)--in the area?

Name Cost to user/child Headstart

- a)
b)
c)
d)

- 20) Has the day care service aided ADC mothers in obtaining a job? Other parents?

ADC --

Other --

- 21) What are the main reasons people use the day care center? (work, look for work, get away for awhile, allow children to benefit from service)

- 22) Are counseling services available in the complex?

Name	Costs to User	Cost to Public Housing
------	---------------	------------------------

- a)
- b)
- c)
- d)

- 22A) Who can see counselors? What services are offered?
Comments

- 23) Is an adult educational program offered at complex?

Name	No. of regular users	Cost-Individual -Housing
------	----------------------	--------------------------

- a)
- b)
- c)
- d)

Ask to see records for remaining questions.

- 24) What is the average income per family or occupied unit?

Name	Income
------	--------

- a)
- b)
- c)
- d)

25) What is the family per capita income per year? What number between:

- 1) 0-249 2) 250-499 3) 500-749 4) 750-999

- | | | | |
|----|----|----|----|
| a) | a) | a) | a) |
| b) | b) | b) | b) |
| c) | c) | c) | c) |
| d) | d) | d) | d) |

- 5) 1000-1249 6) 1250-1499 7) 1500-1749 8) 1750-1999

- | | | | |
|----|----|----|----|
| a) | a) | a) | a) |
| b) | b) | b) | b) |
| c) | c) | c) | c) |
| d) | d) | d) | d) |

26) How many of the occupants are on ADC or welfare?

Name

No. on Welfare

- a)
b)
c)
d)

27) How many families have a permanent male head of household?

Name

- a)
b)
c)
d)

28) How many children are living within the complex?

Name

No. of Units with Children

No. of Children

- a)
b)
c)
d)

29) What number or percent of the occupants are employed?

Name

Number Employed

- a)
b)
c)
d)

30) What number or percent of the people in the complex come from this city?

Name	Number
a)	
b)	
c)	
d)	

31) How many occupants are paying "full" rent?

Name	Number
a)	
b)	
c)	
d)	

32) How are the units equipped?

1) appliances	4) number of bathrooms (size of apt.)
a)	a)
b)	b)
c)	c)
d)	d)
2) furniture	5) garbage disposals
a)	a)
b)	b)
c)	c)
d)	d)
3) carpet	
a)	
b)	
c)	
d)	

33) What management options do you now have?

33A) What one have you chosen and why?

- 34) Would you change the size, location and/or design of the complex(es) if it were going to be rebuilt?

What would you implement?

How would it affect performance and why?

Questionnaire for Occupants of Public Housing

- 1) How far was your previous residence from here?
0-5 miles _____; >5, < 10 _____; >10 _____
- 2) How many years were you at your previous location?
<1 _____; 1-5 _____; >5- < 10 _____; > 10 _____
- 3) Why did you decide to move here?
Lower rent _____; better neighborhood _____; better housing _____; other reasons, explain. _____
- 4) Did you leave your old location because of:
Government action (urban renewal, highways, etc.)? _____
Availability of this complex? _____
Other reasons? _____
- 5) If this same housing at the same price were available in your old neighborhood, would you prefer to live there rather than here?
- 6) Would you rather have either (e.g. \$100) per month and find other housing accommodations or have this apartment at the present rent?
a) Money b) Apartment
- 7) What was the approximate cost per month of your previous house or apartment?
- 8) Where do you work?
Your spouse?
Approximately how far is your job from here? _____
Spouse? _____
- 9) Do you own a car? _____ If yes 9a) what make? _____
year? _____
Previously? _____ Spouse? _____

- 10) Do you still have close ties (friendly, business, relatives) in your old neighborhood?
- 11) Do you do your shopping (washing) in your old neighborhood? If yes why?
- 12) Do you associate socially with any people living outside of the complex but nearby?

If yes: 12A) Approximately how many?

12B) How many are close friends?

- 13) Would you say that people in the neighborhood--outside this complex--are friendly?

- 14) Do you find the people in the complexes to be friendly?
Yes _____ No _____

14A) Do many of your friends live here?

Yes _____ No _____

- 15) Would you compare this house and neighborhood with your previous house (or apartment) and neighborhood in terms of:

a) Size and condition of house--age, number of rooms.

Old

New

b) Plumbing and bathroom(s) (repairs, private)

Old

New

c) Major household appliances--1) refrigerator, 2) stove, 3) laundry facilities, 4) garbage disposal(s), 5) food storage

Old 1)

2)

3)

4)

5)

New 1)

2)

3)

4)

5)

- d) Furniture (quality, quantity)

Old
New

- e) Schools (quality, child's interest)

Old
New

- f) Parks (distance, size, facilities)

Old
New

- g) Neighbors

Old
New

- h) Day care and/or babysitting facilities

Old
New

Why do you use the day care center? (work, social, child interest, other)

- i) Car pool, bus service

Old
New

Why do you use the car pool? (work, shopping, other)

- j) Congestion (1) nearness and no. of neighbors, 2) roads

<u>Old</u>	1. _____	2. _____
<u>New</u>	1. _____	2. _____

- k) Noise

Old
New

- l) Garbage (collection, storage)

Old
New

- m) Theft and personal safety (actual, fear of)

Old
New

n) Privacy (1) neighbors, (2) family

Old	1. _____	2. _____
New	1. _____	2. _____

o) Health (1) food preparation, (2) heat, (3) ventilation

Old	1. _____	2. _____	3. _____
New	1. _____	2. _____	3. _____

p) Any other comments

16) Do you see a counselor?

If yes, 16A) Did you before you came here?

17) Do you attend the adult education program?

If yes, 17A) Did you before you came here?

18) How do you feel about the management of the complex?

19) Do you feel that you have a voice in the decision making process of the complex?

20) Do you feel that this house compared to your old house has had any affect on your: [careful to remove neighborhood]

a) family life (harmonious)

b) person (desire, self respect, etc.)

21) How many children live here?

boys _____ girls _____

ages: 1. 2. 3. 4. 5.

22) Approximately how much is your monthly rent?

23) Approximately what is your annual family income?

Questionnaire for School Officials

- 1) How many students is the school designed to handle? _____
- 2) How many students are presently attending this school?

- 3) What has been the enrollment trend for the past ten years? _____
- 4) How many students are from the public housing complex?

- 5) Have district boundaries changed this period? _____
- 6) What grades are being taught at this school? _____
- 7) Did the entry of students from the public housing complex create any addition or modification to the school in the form of:
 - a) The school building itself?
 - If yes, 1) What was the addition or modification?
 - 2) What was the cost of the addition or modification?
 - b) The number of teachers?
 - If yes, 1) How many? _____
 - 2) What was the additional cost? _____
 - c) The number of grades being taught at the school?
 - If yes, 1) What was the change?
 - d) The average number of students per teacher?
 - If yes, 1) What was the approximate change?
 - e) The number of buses and/or bus drivers?
 - If yes, 1) How many?
 - f) The cost of bus service?
 - If yes, 1) The number of stops?
 - 2) The total mileage?

- 8) Do children from the public housing complex have more or different problems than those of other students in this school?

If yes, what are they?

- a) disciplinary
- b) relationship with children outside the complex
- c) performance

- 9) Did the parents of children enrolled in the school before the public housing complex was built believe that the quality of schooling would be changed as a result of the entry of public housing students?

- a) In what way?
- b) Why?

- 10) Were you or some other school official notified that a public housing complex was going to be built in this area?

If yes, 1) By whom?
2) When?

- 11) Were you asked if the entry of students from the public housing complex was going to impose any additional costs to the school?

If yes, by whom?

- 12) If the additional costs due to new students from a public housing complex were going to be substantial to the school, who would you notify that this was the case so that perhaps they could make different arrangements?

- 13) What is current enrollment of total school system?

- a) Elementary
- b) Middle
- c) High School

- 14) What is the capacity of the total school system? _____

- a) Elementary
- b) Middle
- c) High School

Questionnaire for Proximate Neighbors

- 1) Does the location of public housing affect you or your family in any way? Yes _____ No _____

a) not at all b) some c) a lot d) no opinion

If yes, how?

- 2) Do you think the value of your property was affected in any way? Yes _____ No _____

If yes, up or down and by approximately how much?

- 3) Do you think there has been a change in home sales in this area? Yes _____ No _____ Can you tell me which homes have been sold since _____ (date when complex was started)

Why sold?

- 4) Do you or have you recently planned to sell your house? Yes _____ No _____. What are or were your reasons for wanting to sell? Why did you not sell?

- 5) Do you know anybody who lives in the public housing complex? Yes _____ No _____

If yes, how many?

How many do you know well?

- 6) Do you ever attend any meeting or social functions in the project center? Yes _____ No _____

- 7) Do you think public housing in general is desirable?

a) not at all b) some c) very much d) no opinion

- 8) Do you feel that there has been a change in:

- a) congestion of roads since the public housing complex was occupied?

not at all some much no opinion

- b) Noise?

not at all some much no opinion

Question 8 continued

c) The aesthetic value of the neighborhood?

not at all some much no opinion

9) Do you feel that your privacy has been affected due to the public housing? Yes _____ No _____

If yes, how?

10) Do you feel that the public housing complex affects the schools your children attend? Yes _____ No _____

Has it made them better, or made them worse?

How?

11) Has the neighborhood improved or deteriorated in the last _____ years? In what way?

12) If a multi-unit housing complex of the same size which was not public housing had been built in the same location do you think the affect on you, your family, or your property would have been any different?

Yes _____ No _____ If yes, how?

13) How long have you lived in this house? Years _____

14) Are you married? Yes _____ No _____

15) How many children do you have and what are their ages?

16) Where is husband employed?

What type of work does husband do?

a) blue collar b) white collar c) unemployed

17) Is wife employed outside of the home?

What type of work does she do?

a) blue collar b) white collar c) unemployed

18) What is your total annual family income? _____

<5000 5,000-10,000 10,000-15,000 15,000-20,000

>20,000

APPENDIX II-1

**A DESCRIPTION OF THE THREE NEIGHBORHOODS
DISCUSSED IN CHAPTER III**

APPENDIX II-1
A DESCRIPTION OF THE THREE NEIGHBORHOODS
DISCUSSED IN CHAPTER III

The neighborhoods are identified by the name of the public housing complex located therein. The three neighborhoods are thus called Hildebrand (HN), La Roy (LRN) and Mt. Vernon (MVN).

Respondents from each neighborhood were randomly selected, obtaining thirty-one respondents from HN and LRN; and twenty-eight from MVN. These respondents supplied the information cited in Chapter III.

Contracts were let for the public housing complexes on: September 22, 1967 for La Roy; March 13, 1968 for Hildebrand; and April 9, 1969 for Mt. Vernon. The projects were completed and essentially full eighteen months following the above dates.

The following characteristics illustrates some of the similarities and differences between the neighborhoods.

Locational Setting

Hildebrand

This project contains 100 units and is completely and closely surrounded by single family homes. With the exception of the entrance the project is fenced; and, on three sides

is further enclosed by trees and vegetation. The remaining side faces Turner Street (a fairly well traveled street) from which one enters and exits the project.

La Roy

Also containing 100 units, this project is faced by single family homes on three sides. The remaining side (to the north) is a large open treeless park. Immediately north of the park is other multiple unit housing mixed with single family homes. The project is not fenced and grass is the only vegetation. The landscape of the project itself is primarily asphalt, sidewalks and buildings rather closely situated. While not being in as close proximity to as many neighbors as Hildebrant, the only "buffer" is one or two blocks of cleared land.

Mt. Vernon

This project contains 100 units of family public housing and 40 units of elderly public housing. It faces Waverly Road to the North from which one enters and exits. Waverly is a four-laned well traveled street. North of Waverly is primarily vacant land. To the West is a rather large Section 236 (multiple unit) housing project (it should be noted that some respondents did not distinguish between this project and Mt. Vernon Park). West of the Section 236 project and continuing South in an arch are single family homes. Across a small area of vacant land, the project is

boardered by Grand River Avenue (a major highway) to the East.

Income and Employment

The neighborhoods differed somewhat in income and employment. The Mt. Vernon areas being a higher income, white collar neighborhood relative to the others. Tables A2.1.1 and A2.1.2 provide the respondents answers to questions concerning income and employment.

Table A2.1.1. Income of Proximate Neighbors by Neighborhood

Annual Income (Dollars)	Neighborhood			
	Hildebrant	La Roy	Mt. Vernon	Total
	-----Number-----			
Less than 5,000	4	5	1	10
5,000 less than 10,000	11	5	3	19
10,000 less than 15,000	8	15	8	31
15,000 less than 20,000	5	4	11	20
20,000 or more	1	1	5	7
Total Responding	20	30	28	87

Table A2.1.2. Employment of Proximate Neighbors by Neighborhood

Type of Employment	Hildebrant	La Roy	Mt. Vernon	Total
	-----Number-----			
Blue Collar	21	20	9	50
White Collar	4	3	14	21
Unemployed	3	5	2	10
Retired	2	3	3	8
Total Responding	30	31	28	89

Number of Children

The respondents were also asked how many children they had. The Hildebrant respondents had the highest average of 1.53 children per respondent. La Roy was second with an average of 1.32, followed by 1.29 for Mt. Vernon.

Minority Groups

Visual observation indicated the the La Roy neighborhood contained the largest number of blacks. It was the only neighborhood that could be called "mixed." One Mt. Vernon respondent was black and two respondents from the Hildebrant neighborhood were Mexican-American. Since approximately half of the interviews were conducted by phone, it was impossible to obtain exact numbers.

APPENDIX II-2
RESPONSES OF PROXIMATE NEIGHBORS
ACCORDING TO INCOME, EMPLOYMENT,
LOCATION AND PARENTAL STATUS

APPENDIX II-2

RESPONSES OF PROXIMATE NEIGHBORS ACCORDING TO INCOME, EMPLOYMENT, LOCATION AND PARENTAL STATUS

The decision maker may be interested in the question, "Within which neighborhood, or 'type' of neighborhood, will multiple unit public housing be most likely to 'fit-in'?" A valid question in that some neighborhoods will presumably be more receptive to multiple unit public housing than others. Implying, ceteris paribus, that less friction would be generated in the more receptive neighborhoods.

Since the proximate neighbors of only three neighborhoods are examined in the study, no categorical answers to the above question can be supplied. However, an attempt is made to determine if proximate neighbors of different employment, income and parental groups responded differently to questions concerning the public housing complex. Each of these "groups" and their responses are considered below.

Employment

Proximate neighbors were asked if the primary family wage earner was blue collar, white collar, retired or unemployed. Fifty indicated blue collar, twenty-one said white collar; while eight and ten replied retired and

unemployed, respectively. Table A2.2.1 shows the responses of those employment types with respect to the questions examined in Chapter III.

As Table A2.2.1 shows, white collar respondents were generally least affected by the housing complex, followed by blue collar and retired, with the unemployed group being most affected. The relatively high proportion of unemployed disturbed by the complexes may have several explanations. First, being unemployed they may be more sensitive to possible decreases in property values. Second, not going to work five days a week allows for more interaction and observation of the complex and its occupants. Third, they may feel a greater personal cost of their tax dollars (previous to being unemployed) going to the construction and operation of the complex. Several of the unemployed respondents indicated resentment over the belief that occupants of MUPH with higher incomes than themselves were provided low cost housing.

It is perhaps somewhat surprising that those who most felt public housing undesirable stood the greatest likelihood of future benefits from such housing. When asked if other multiple unit housing of the same size and location which was not public housing would have had a different impact; seventy-eight percent (7) of the unemployed respondents replied "yes". This compares to only twenty-four percent (5) of the white collar group and forty-five (19)

Table A2.2.1¹ The Percent and Number of Proximate Neighbor Responses (by Employment Group) to the Question, "Does MUPH Adversely Affect":

Question	Employment Type							
	Blue Collar		White Collar		Retired		Unemployed	
	Percent	Number	Percent	Number	Percent	Number	Percent	Number
Property Value								
Yes	49	20	39	7	43	3	67	6
No	51	21	61	11	57	4	33	3
Privacy								
Yes	40	19	30	6	50	4	60	6
No	60	28	70	14	50	4	40	4
Neighbor-hood Congestion								
Yes	52	25	32	6	12	1	60	6
No	48	23	68	13	88	7	40	4
Neighbor-hood Noise								
Yes	33	16	10	2	50	4	70	7
No	67	33	90	19	50	4	30	3
Aesthetic Value								
Yes	41	19	14	3	62	5	60	6
No	59	27	86	18	38	3	40	4
Schools								
Yes	62	21	50	3	50	1	40	2
No	38	13	50	3	50	1	60	3
Total								
Yes	45	120	26	27	44	18	61	33
No	55	145	74	78	56	23	39	21

¹Table A2.2.1, as well as Tables A2.2.2 and A2.2.3 contain information derived from Chapter III. That is the questions were not asked exactly as listed in this appendix; and, the "not at all", "some", and "a lot" responses are condensed to "yes" - "no" responses; with "no" being equivalent to "not at all" and "yes" being either "some" or "a lot".

and fifty (4) percent, respectively, of the blue collar and retired groups.

Income

The respondents were also divided into two income groups--those with less than \$10,000 annual income and those whose annual income was equal to or greater than \$10,000. Twenty-nine respondents reported they received less than \$10,000, and fifty-eight received more.

The responses of these two groups are shown in Table A2.2. 2.

The results of Table A2.2.2 show that there is little difference between the two income groups. Forty-seven of the less than \$10,000 income responses, and forty-two percent of the equal or greater than \$10,000 responses, felt the public housing complex had adverse affects.

While the two groups rather closely agreed with each other as to the adverse impact on the complex, they differed considerably on the opinion regarding the desirability of public housing. When asked, "Do you think public housing in general is desirable?"--fifty-seven percent of the less than \$10,000 income group said "no"; and only thirty percent of the higher income group replied "no". (It should be remembered that many respondents, when asked if they thought MUPH was desirable, replied that it was a necessity and, therefore, somewhat desirable.)

Table A2.2.2. The Percent and Number of Proximate Neighbor Responses (by Income Group) to the Question, "Does MUPH Adversely Affect":

Question	Less Than \$10,000 Annual Income		Equal to or Greater Than \$10,000 Annual Income	
	Percent	Number	Percent	Number
Property Value				
Yes	55	12	46	23
No	45	10	54	27
Privacy				
Yes	52	13	40	23
No	48	12	60	34
Neighborhood Congestion				
Yes	41	11	50	28
No	59	16	50	28
Neighborhood Noise				
Yes	39	11	28	16
No	61	17	72	42
Aesthetic Value				
Yes	50	13	37	21
No	50	13	63	36
Schools				
Yes	50	7	65	20
No	50	7	35	11
Total Responses				
Yes	47	67	42	131
No	53	75	58	178

The divergence of opinion regarding the desirability of public housing may stem from the fact that the individuals in the relatively low income group do not perceive themselves to be financially much better off than the occupants of the complex. Yet, they pay taxes to help support these individuals. This combination could create a certain amount of animosity from relatively low income families toward public housing in general.

It is interesting to note that a smaller percentage of the higher income group (when compared to the lower group) felt the housing complex had detracted from the "aesthetic value" of the neighborhood. However, a larger percentage of the higher income group felt the schools were adversely affected.

The results indicate there is no major divergence of opinion between the two income groups regarding the impact of the public housing complex.

Parental Status

The importance of children in proximate neighbor responses provided the incentive to examine the possibility of differences in opinion of respondents with school age children living at home, and those without. The results of this dicotomy are shown in Table A2.2.3.

The results in Table A2.2.3 imply very little difference between the impact voiced by respondents with children and those without. While there are many reasons why individuals

Table A2.2.3 The Percent and Number of Proximate Neighbor Responses (by Parental Status) to the Question, "Does MUPH Adversely Affect":

Question	Responses by Parental Status			
	With School Age Children at Home		Without School Age Children At Home	
	Percent	Number	Percent	Number
Property Values				
Yes	51	20	44	16
No	49	19	56	20
Privacy				
Yes	36	16	48	19
No	64	29	52	21
Neighborhood Congestion				
Yes	52	23	41	17
No	48	21	59	24
Neighborhood Noise				
Yes	34	16	27	11
No	66	31	73	30
Aesthetic Value				
Yes	41	18	41	17
No	59	26	59	24
Schools				
Yes	54	20	70	7
No	46	17	30	3
Total Responses				
Yes	44	113	42	87
No	56	143	58	122

with children may be affected differently by the location of a MUPH complex in their neighborhood, the results do not bear this out. Perhaps surprisingly, a smaller percentage of respondents with children perceived a negative impact on schools than respondents without children.

Since there were children in the neighborhood prior to public housing, those without children were probably used to children. Thus, locating the complex in the neighborhood did not change the neighborhood from a "no children" community to a "children" community.

Intuitively, it seems that locating a public housing complex (with many children) in a neighborhood previously without children would have a greater impact on proximate neighbors than locating the complex in a neighborhood with children (although this is not certain). It is not known how many children are necessary in order for the people in the community to be used to children (i.e. what is a "children" or "no children" community). Presumably the neighborhoods examined contained a sufficient number such that the impact on childless individuals did not differ substantially from the impact on those with children.

Location

It is argued in Chapter III that the locational position of MUPH with respect to proximate neighbors may be a useful policy tool for the decision makers. Thus the responses of proximate neighbors are examined on the basis

of where the respondents are located relative to the housing complex.

The data are divided into those which are "relatively close" to the complex and those "relatively far". The terms "relatively close" and "relatively far" are necessarily inexact. Those "relatively close", are either adjacent to the project or separated from the project by no more than two occupied lots. Geographical distance played a part in the determination of whether the respondent was "relatively close" or "relatively far." For example, if the nearest respondent to the north was four blocks removed, the respondent would be "relatively close." Those five blocks removed to the north would be "relatively far." Conversely, if the nearest respondent to the south is "just across the street," then both he and possibly the respondents two blocks south of him would be "relatively close." The asymmetrical shape of the lots, vacant lots, major streets and geographical distance all played a part in the determination of whether a respondent was "relatively close" or "relatively far."

Admittedly, such a criteria leaves considerable room for judgment. However, the intent of examining physical separation is not to develop a sound criteria of what is near and what is far; but merely to identify two groups, which on the average, differ in their separation from the complex. These groups are identified in Table A2.2.4 with a listing of their responses. Forty-nine of the respondents

are defined as being "relatively close" and forty-one as being "relatively far".

As Table A2.2.4 shows, a greater proportion of those considered "relatively close" felt in every case that MUPH had "more" adverse effects. Approximately fifty percent of the total responses from those proximate neighbors considered "relatively close" felt the complex had adverse effects. Only thirty-three percent of the total responses from those considered "relatively far" felt the complex had adverse effects.

As expected, the farther away respondents are (on the average) from the complex, the less impact. However, unless the decision maker is considering physical separation of the complex, the phrase "on the average" must be considered. For example, a respondent six blocks removed may be more affected than one adjacent to the complex if the former's yard affords an excellent trail to school and the latter's does not.

Table A2.2.4 The Percent and Number of Proximate Neighbor Responses (by Relative Location) to the Question, "Does MUPH Adversely Affect":

Question	"Relatively Close"		"Relatively Far"	
	Percent	Number	Percent	Number
Property Values				
Yes	57	24	36	12
No	43	18	64	21
Privacy				
Yes	45	21	37	14
No	55	26	63	24
Neighborhood Congestion				
Yes	59	27	33	13
No	41	19	67	26
Neighborhood Noise				
Yes	39	19	21	8
No	61	30	79	31
Aesthetic Values				
Yes	48	22	33	13
No	52	24	67	26
Schools				
Yes	60	18	50	8
No	30	12	50	8
Total Responses				
Yes	50	131	33	68
No	50	129	67	136

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