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A comparative study of the use of twenty screened and of twenty glassed porches in a selected area of Greensboro, North Carolina, was made to determine the amount of time spent and the kind of activities for which such porches are used. All of the glassed and ten of the screened porch owners preferred glassed porches. Fourteen of the glassed porches had at one time been screened.

The main advantages of glassed porches over the screened were year-round use, cleanliness, all weather use, weather control, and lack of pollen problems. Limited ventilation was the main disadvantage. Screened porch owners indicated that the smell of fresh air and the feeling of air circulation were their main advantages. Disadvantages of screened porches were lack of year-round use, lack of protection from blowing rain, and the necessity of taking plants inside in winter.

According to estimation of owners, glassed and screened porches were used daily an average of 3.28 and 2.24 hours, respectively. June was the month of greatest use with May, July, August, September, and October following closely for both kinds of porches. Screened porches were rarely used in December, January, and February. Most popular activities on both kinds of porches were relaxing, reading, entertaining, and eating.

When linearly correlated, no significant relationship was found to exist between porch use and adjacent location of the kitchen nor between porch use and size of the porch--screened or glassed.

Average daily use and number of persons living at home showed no significant relationship when linearly correlated for the glassed porches. However, when these factors were correlated for the screened porches there was a modest positive correlation. The high average daily use and the wide range of activities indicate the importance of these enclosed porches in the living patterns of the families studied.

1976

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APPROVAL PAGE

USE OF SCREENED AND GLASSED PORCHES

This thesis has been approved by the following committee of the Faculty of the Graduate School at the University of North Carolina at Greensboro,

by

Rose Holley McDonald

A Thesis Submitted to
the Faculty of the Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Master of Science in Home Economics

Greensboro
1976

March 19 1976
Date of Acceptance by Committee

Approved by

Clara Ridder

Thesis Adviser

ACKNOWLEDGMENTS

The author wishes to express deep appreciation and gratitude to Dr. Clara [redacted] adviser, for her

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Thesis Adviser

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Finally, heartfelt thanks to the writer's family-- Leroy, Nancy,

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Bernice M. Deemer

encouragement. Special thanks to [redacted] who served as photographer for this project.

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Grateful appreciation is extended to the forty porch owners who generously shared their time and information and especially to those eight who permitted photographing of their porches for use in this thesis.

Finally, heartfelt thanks to the writer's family--Leroy, Nancy, and David--for their patience, support, and encouragement. Special thanks to husband, Leroy, who served as photographer for this project.

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CHAPTER I

INTRODUCTION AND PURPOSE

The screened or glassed porch is to spring, summer, and autumn as the fireplace is to winter. People gravitate to these attractions. Perhaps it is the brighter light of day on the porch that beckons to people as a flame beckons to the moth. Perhaps it is the sheltered, natural environment in this half inside-half outside living space that they seek.

Most enclosed porches serve as entrances to the home. They are an introduction from outdoors to indoors--a compromised area between inside and outside--a protected, yet open area.

It would be of interest to know the activities that occur, amount of time spent, attitudes of owners, and the physical characteristics of screened and glassed porches. A study of how these two different types of spaces extend the use of the home would be helpful to those in the interior design and homebuilding professions. It would also be useful to those who are considering adding an enclosed porch by helping them to decide if it should be screened or glassed.

Schuler (5:122) implies a trend from screen to glass when he writes of one builder who is pleased to accept terrace-building jobs because this means five years of

remunerative work. The first year he is hired to build the terrace. The second year he roofs it. The third year he encloses it with screen. The fourth year he encloses it with glass and the fifth year he builds another terrace. Apparently the homeowner Schuler refers to is not satisfied until he has a glassed porch and a terrace. It is not known whether the trend is from screen to glass in Greensboro.

Purpose

The purpose of this study was to compare the use of twenty screened porches and of twenty glassed porches in an affluent area of Greensboro, North Carolina. A primary concern of the study was to determine the amount of time spent and the kinds of activities occurring on screened and glassed porches. Another concern was to learn how this use was related to the size of the porch and to the size of the family. Physical characteristics of the forty porches and attitudes of their owners were also sought.

Definition of Terms

Porch--a covered and floored, open area attached to a building, usually serving as an entrance from the exterior to the interior of the building.

Enclosed porch--a porch with exterior walls of screen, glass, or other materials.

Screened porch--a porch with exterior walls of mesh screen and open to breezes and view.

Glassed porch--a porch with exterior walls primarily of glass, open to view, and open to breezes if some of the glass sections are movable.

CHAPTER II
REVIEW OF LITERATURE

History of Porches

Surprisingly little research or writing has been done on porches. This is surprising because porches have been a part of the house since the early days of civilization. Carder (3:45-47,71) relates that thousands of years ago porches were first built onto ancient houses called neqrons. These were one-room houses with an open porch supported by two columns. Having its origin in Crete, the neqron was influential in the development of the peristyle.

If "...ventilation, air, and sunlight produced the Greek peristyle..." (3:85) then these factors also have caused the survival and adaptation throughout history of a similar form that is today most frequently called a porch.

In A Concise History of Western Architecture (4:22) there is a picture of an Egyptian house with a caption below that reads:

Model of an Egyptian house, from the tomb of Nebamun at Thebes (c. 1350 B C). A deep, shady portico with painted papyrus columns looks out on a small walled garden where trees surround a pool; as in all hot climates, water and shade were highly prized.

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fronted by a portico of two columns, it marks a stage in the evolution from house to temple." It looks like a megaron.

Preference and Use of the Farm Porch

The only research that could be located concerning the use of porches was published in 1952 by the United States Department of Agriculture's Bureau of Human Nutrition and Home Economics (10:10-11,50-52,132). This study concerned housing needs and preferences of farm families living in open country. For the study the country was divided into four regions--the Northeast, North Central, Western, and Southern. The results of the Southern region will be considered since this area is geographically most similar to Greensboro, North Carolina.

The findings of the study of the 1,507 Southern farm homes revealed that most of the homes had porches. Most families desired two porches and almost all wanted a back porch.

The report indicated porches will continue to be desirable for work and relaxation and that porches were useful in the farm country most of the time during eight months of the year and part of the time during the remaining months of the year.

Most of the families desiring a front porch wanted them used only for sitting and resting. Of the 1,295 desiring front porches, thirty-seven per cent wanted screened, four per cent wanted glassed, and fifty-nine per cent wanted open porches.

The 1,403 families wanting a back porch wanted it built so that it could be screened or glassed. Of these, eighty per cent wanted screened, seventeen per cent wanted glassed, and three per cent wanted open porches. Food preparation was the most popular activity desired for the back porch. With laundry activities ranking second in proposed use it appeared that the back porch was viewed mostly as a place for family chores by these farm families.

Of the 1,507 families only 282 families wanted a side porch. Of these families, forty-six per cent wanted the side porch screened; thirty-eight per cent wanted it glassed; and sixteen per cent wanted it open. The study showed the higher the socioeconomic status, the greater the desire for a side porch.

Of the 282 families desiring a side porch, ninety-three per cent wanted it for sitting, resting, or sleeping; twelve per cent, for sewing; nine per cent, for household work; and seven per cent, for serving meals. The studies reveal that the use of the side porch would be more like that of the front porch and that the large preference for glass enclosure possibly suggests that these families had in mind what is commonly known as the "sun porch" or "sun parlor."

A North Carolina Study

A housing study geared toward the lower income group in North Carolina has just been completed by Holmes and Humphries (13). Their random sampling was chosen from

three geographical areas of the state--the East, the Piedmont, and the West.

Their data revealed that open and screened porches are much more popular in the Piedmont area among low-income families than in the other two areas of the state. Also it was found that forty-nine per cent of the homes of the low-income families in the Piedmont prefer screened porches while sixty-four per cent now have them. Glassed porches were not included in their study.

No studies could be located relating to desirability and use of porches--enclosed or open--in the metropolitan areas.

Screen for the Enclosure

Schuler (5:112-113) lists five kinds of material used for screening--galvanized steel, bronze, aluminum, fiberglass, and a specialty screen made of aluminum. Of their features he states that galvanized steel is low in cost but rusts out rapidly. Bronze is the most durable but very expensive. Aluminum is durable, fire resistant, and does not rust, but corrodes in coastal and industrial atmospheres. It springs back into shape when hit but is subject to developing a shallow crease when struck with a sharp instrument. Fiberglass is rustproof, corrosionproof, and fireproof but tends to belly. The specialty screen has vertical rows of wires and horizontal rows of tiny slanted louvers. It gives maximum shade and insect protection without seriously reducing

air circulation. The view from inside is inferior to that through conventional screening. However, it offers more privacy because the interior cannot be viewed from the exterior. The Small Homes Council (12:4) suggests this latter type, louvered screening for areas with no other kind of sunshade because it reduces heat from the sun.

Schuler (5:112) recommends an 18 x 16 mesh for maximum protection and an 18 x 14 mesh for slightly better visibility, while the Small Homes Council (12:4) recommends a 16-mesh screen (1/16" openings).

Screening reduces the light and view from windows and porches. In a study by the Small Homes Council (12:4) it is reported that:

...Screens shut out daylight and interfere slightly with view. Full screen on a double-hung window blocks out approximately 50 per cent of the available daylight; half-screens, 15 per cent. Painted screens further reduce the amount of daylight admitted.

According to Stieri (6:54) screened porches should have horizontal meeting rails at chair height to divide the vertical height into panel sizes that are easily handled and to protect the screen from damage.

Screen is available in both light and dark colors. Schuler (5:112) states that dark colors always allow better visibility and that light colors reflect more heat rays, thereby contributing to a cooler porch.

Glass for the Enclosure

There are three basic kinds of windows--the fixed, the swinging, and the sliding window. A glassed porch is

constructed by using one of these three principles. Therefore, information about these kinds of windows is also applicable to glassed porches. A study by the Small Homes Council (8:3-6) revealed that a fixed window provides no ventilation but permits daylight and extended vision. The jalousie swinging windows leak air and should not be used unless ventilation is more desirable than view. Casement swinging windows can scoop air into a room if the sashes are opened in the proper manner. An awning swinging window is best for protection from rain but its surface collects dirt when the window is opened. The Council added that double-hung sliding windows do not offer as much ventilation as swinging windows because half of the window must always be closed and there is no control of breezes.

A popular way of enclosing porches is by using horizontal sliding glass doors with or without fixed window-sections. Schuler (5:125) wrote:

...The most exciting way of enclosing a roofed terrace is to wall it around with sliding glass doors that extend from floor to ceiling. Thus, simply by pushing the doors to the side, you can walk in and out through all the walls. And when you are relaxing inside, you feel one with the world around you. The view out is unobstructed. Heat loss is held to a minimum if the doors have insulating glass. In comparison with jalousies, the only thing you lose is unrestricted ventilation.

The Small Homes Council (12:2) revealed that insulating windows reduce heat loss from indoors in winter and heat gain from outdoors in summer. These windows are made with two layers of glass separated by an air space. As heat

flows through the glass it is retarded by the air space. The Council recommends these insulating windows for locations that reach an average 35° F. or below in January. They are also desirable for air-conditioned homes.

Another advantage of insulating windows given by the Small Homes Council (12:2-3) is that condensation of moisture on the inside glass is lessened because the inside surface is warmer. If there is condensation on this type window the moisture level inside the home is too great and should be reduced before damage possibly occurs within the window unit. Advantages given for sealed double-glazed windows are convenience, easy maintenance, and ease of ventilation.

Storm sash windows are low in cost but require much maintenance. They help to insulate the home and keep it cleaner (12:3).

Combination self-storing screen and storm-sash windows are available for double-hung windows. They contain two glass sections and one screen section, all of which are movable. They are expensive and reduce the light because the screen remains in the window (12:4).

Yorke (7:34,48-51) in 1937 wrote about unusual plate-glass window designs by Mies Van der Rohe and Lois Welzenbacher. These extended the entire length of one end of a room and were designed to disappear below the ground allowing the pleasure of open air areas inside the home.

Color and the Porch

Color plays an important part in the visual appeal and general atmosphere of the porch. Daniels (1:110-113) elaborated on this by saying that since light hues tend to blend into their background, pale color values for the floor and railing lead the eye outward toward the landscape. The less broken up the color scheme, the more effective the outdoor living area will seem. Another way to attract the eye still farther away and to help create a feeling of spaciousness is to install a bird feeder in a tree near the living area.

Daniels added that cool colors--blues, violets, and greens--seem to cool the atmosphere and are good in areas that receive a lot of direct sunlight. Darker values of these hues should not be used for cushions since they tend to absorb the heat of the sun and cause the seating to be uncomfortable. Since these dark colors also have a tendency to fade, it is wise to use them in materials that are fade-proof, such as ceramics, flower containers, or painted furniture framework.

Daniels also suggested that it is also desirable to have a reverse color scheme for those shady, cool times in the outdoor area. Warm yellows, oranges, and reds create a glowing effect and this glow can be intensified by the careful use of complementary accents of sharp green or brilliant blue.

This review of literature indicates that the use of porches--screened and glassed--according to size of porch and size of family needs further study.

CHAPTER III

METHODOLOGY

A comparative study of the use of screened and glassed porches required the development of a questionnaire to be used in a selected area of Greensboro. Mainly information concerning how often and for what purposes the porches were used was sought. Questions concerning structure, furnishings, cleanability and maintenance, weather-effect, atmosphere, and color scheme of the porch were included. A sample of the questionnaire may be found in the Appendix.

A random sample of forty porches was selected from the 27410 postal zone of Greensboro. This area comprises one of the most affluent sections in the city and houses are in the medium-to-high price range. The 27410 postal zone was marked off on a city map and twenty screened and twenty glassed porches randomly selected in the sub-sections of the area. Four porches were selected in Forest Valley, three in Green Valley, two in Westridge Heights, seven in Hamilton Forest, ten in Hamilton Lakes, one in Madison Woods, four in British Woods, three in Hamilton Hills, one in Carriage Hills, and one in Jefferson Gardens. Two porches were selected on Friendly Road, one on Hobbs Road, and one on Westridge Road. These three streets are division lines between sub-sections.

A floor plan of each porch was drawn to scale, locating furnishings, doors to adjoining areas, and lighting and wiring outlets. These floor plans were drawn in order to record the size, shape, traffic circulation, furniture placement, and direction of exposure.

Photographs were taken of some of the porches in order to illustrate particular features.

The data were analyzed and the findings reported by using descriptive, linear correlations, and chi square interpretations of that data.

CHAPTER IV

FINDINGS

Forty enclosed porches--twenty of them screened and twenty of them glassed--were selected at random in an affluent, Northwest section of Greensboro, North Carolina, for the purpose of making a comparative study of the use of these two kinds of enclosed porches.

The owners were interviewed and asked to answer questions from a questionnaire. Knowledge gained from the questionnaire about the structure, furnishings, cleanability and maintenance, effect of weather, atmosphere, color scheme, and owner preferences were reported; first, for the twenty screened porches and second, for the twenty glasses porches. Third, illustrations of the enclosed porches were given. Fourth, findings concerning use and frequency of use were reported for both kinds of porches for comparative purposes using descriptive, linear correlated, and chi square data.

Screened Porches

Structure

In the autumn of 1975 the twenty homes in the study of screened porches ranged in age from two to twenty-one years with an average of ten years. All but three of the twenty porches were built at the time the dwelling was constructed. Of these twenty owners of screened porches, ten preferred glassed porches while ten liked them as they were.

The location of the porches revealed a variety of exposures. They were built mainly onto the rear of the homes without regard for the direction the house faced.

Broken tile flooring was used on eleven of these porches. Seven had cement floors while one had slate and one had treated wood.

Furnishings

There was quite a variety in the furniture of the screened porches. Most popular was the metal furniture which was used on nine of the porches. Usually this metal furniture had glass tops on the tables. Three families had wood furniture and two had wicker-rattan. The others had a mixture with two having wood and metal, two having wicker-rattan and metal, and two having a mixture of all kinds.

Seventeen of the twenty owners purchased the furniture especially for the porch. On three porches all the furniture was handed down from another area. When asked if the homeowner would choose the same furnishings if she were refurnishing the porch, fourteen said that they would choose the same. Six were not that happy with their furnishings and said they would choose another kind. Of the six, five would choose wicker-rattan. One of these presently has redwood, two have a combination of wood and metal, one has metal, and one has a mixture of all kinds. The other homeowner who would choose another kind presently has redwood but would choose metal.

Good features of metal furniture listed at least once were modern, comfortable, durable, pleasing glass tops, usable inside, utilitarian, attractive, practical, washable, and weather resistant. No bad features were listed for metal.

Desirable features of wicker-rattan that were mentioned once or more were durability, ease of cleaning and maintenance, light weight, beautiful, airy in appearance, and pleasant to touch. One also said that dampness was good for rattan. She had varnished her rattan furniture only once in fifteen years. One bad feature was mentioned for wicker-rattan--that it had to be painted every two years.

Good features mentioned for redwood were that it is heavy duty, weather resistant, and functional. Bad features listed for this kind were that it is unattractive, uncomfortable, cats scratch it, and that nicks in wood pick clothes.

Sixteen families leave their furniture on the porch all year while three store theirs and one uses it in another part of the house. Of the sixteen who leave their furniture out, six store their cushions.

Eleven of the twenty have a table that can be used for dining or games on the porch. Of these eleven, one table has an adjustable top.

Plastic was the most popular upholstery or cushion fabric on the screened porch with eight families having this kind. Seven had a combination of cloth and plastic and this was

usually found on reversible cushions with one side of cloth and one side of plastic. Two had cloth and three had no fabric on their furniture. Four homemakers had problems with fabric mildewing and only one had a problem with sunfading.

Nine of the twenty porches had floor coverings--five of the nine having wall-to-wall carpet and four having rugs. Eight of the floor coverings were indoor-outdoor type and were man-made fabric. These eight had no problems with their carpets or rugs. The other rug was an indoor-type made of grass fibers. It was two years old but had gotten wet at some time and was deteriorating. This family now wants it replaced with indoor-outdoor type. The nine floor coverings ranged in age from one to five years with an average age of two and a half years. Of the eleven having no rug or carpet, four wanted it, and seven did not.

Cleanability and Maintenance

When asked their greatest cleaning problems the homeowners listed pollen and floor cleaning most frequently with each mentioned five times. Named almost as often, four times, was keeping the woodwork clean and free of dust and spider webs. Dust or dirt which would involve the floor and woodwork was mentioned two times. Plants shedding, cleaning broken tile, dog hair, and animal fur in the screen were each mentioned once.

When asked, sixteen said they had problems with pollen, ten had problems with moisture condensation, and two had

problems with mildew. In regard to moisture on the floor, one person said that wax prevented it on her floor and one said that her carpet prevented moisture on the porch.

Most of the porch owners, fifteen, said that their furniture had to be refinished only rarely--no more than once in six years. Three had to refinish occasionally--once in three-six years and two had to repaint or refinish often--once every one-two years. Seventeen families had no problem with moisture affecting their furniture, two said that glue joints and wicker wrappings were affected by moisture and one said that metal on the ends of the chair legs rusts and stains the rug.

Twelve of the screened porch owners swept or vacuumed their porches once a week, six cleaned them two to four times a week and two cleaned them every day. Seventeen porches were entered from a hard surface area, such as cement or brick.

Effect of Weather

The screened porch is to some extent exposed to the weather. Fourteen of the twenty owners had at some time encountered a problem with blowing rain. None had a solution to the problem. Three families had at some time been bothered by the sun.

Atmosphere

In a suburban environment privacy can be achieved in many ways. In the area studied fourteen persons felt their

porches were private from neighbors. Methods of accomplishing this privacy in descending order were shrubs and trees, fences, distance, two closed sides on the porch, shades or blinds, angle of house, carport, screening, and a workshop building. Most had a combination of those things mentioned. Three felt their porches were semi-private and three felt their porches were not private.

Eighteen or almost all interviewed regarded the view from the porch as special. The view of trees or woods was mentioned by thirteen; back yard by seven; garden, four; and the patio, two. Mentioned one time each was a pool, shrubs, flowers, bird feeder and bath, and even a view of the suburbs was considered special by one resident. Some had more than one of these views.

The importance of plants was revealed when it was found that all of the twenty families kept plants on their screened porches. All of the owners protected their plants by taking them inside during the winter months.

All but two of those interviewed enjoyed being on their porches when it was gently raining. Four liked to be there during a thunderstorm.

Eighteen families had no music on their porches although some of these could hear music from other areas of the home when on the porch. One of the other two families had an intercom and one had a radio and stereo record player on their porches.

Three of the owners of screened porches had special outdoor lighting. One of these had an umbrella light in a flower garden, one had lights in the swimming pool, and one had a gas light, a lighted fountain on the patio, and lights on a deck over the porch.

Schuler (5:107) stated that:

If you sit on a lighted screened porch at night, the screen wire becomes a barrier between the porch and the world beyond and you feel vaguely uncomfortable, hemmed in. To prevent this, it is necessary to light the yard or garden.

Some questions were asked relating to Schuler's statement to try to determine how the porch owners feel when on their porches under various lighting conditions. When lights were on inside the porch and off outside the porch five people felt the screen became a dark wall. Under these conditions nine felt a lack of privacy and five had feelings of insecurity. Shades solved the problem for one of these families.

When lights were on inside and outside the porch thirteen felt an extension of space, nine felt more security and five felt more privacy. When lights were off on the porch and on outside the porch sixteen felt more privacy and fifteen felt more security.

Sixteen of the twenty felt their porch lighting was adequate for all the activities that occur there. The other four wanted more lighting and some of them occasionally brought out a portable lamp.

One half of the screened porch owners used candles at night to achieve atmosphere. Three believed their hanging baskets or plants were effective. Other ways of creating atmosphere mentioned one time each were kerosene lamps, outside fountain, table decorations, cocktails, and opening the double doors from the porch to the dinette area to achieve a spacious feeling.

Color Scheme

Colors used on the porches including floor, walls, and furnishings were mostly warm on nine porches, mostly cool on eight and balanced on three. In the review of literature it is stated that Daniels (1:110-113) believes that since light hues tend to blend into their background pale color values for the floor and railing lead the eye outward toward the landscape. Questions relating to color of the framing were asked to try to determine popular colors. If a porch had been more than one color, owner attitude toward the colors was sought. Slightly over one half of the porches (eleven) had framing painted white and six of them had framing painted green. The other three were gold, light gray, and cream. All of them were light colors. Of the three porches that had undergone a color change one owner commented that both were light colors, one said that white was more confining and that the gold earthtone extended space, and one said that green seems to make you feel more outdoors and you are not as aware of the supports.

Glassed Porches

Structure

At the time of the study the twenty homes having glassed porches ranged in age from three to twenty-two years with an average age of nine and seven-tenths years. Six of the porches were added after the homes were built and fourteen of the twenty porches had at one time been screened. All of them preferred the glass enclosure.

There were five varieties of glass enclosures in the twenty porches studied. These were fairly evenly divided in frequency of occurrence among the sliding glass door type enclosure with seven, the jalousie type with five, the storm window type with four, and the fixed or stationary type with three. One of the porches was enclosed with fixed plexiglass.

The porches were located mainly at the rear and facing every direction. Their sizes ranged from 135 to 350 square feet with an average size of 204 square feet. The shortest dimension of the twenty porches was six feet and the longest was 27.17 feet and these dimensions were on the same porch, the size of which was 6 x 27.17.

Broken tile, used on twelve porches, was the most frequently used hard surface flooring. Cement was used on seven and plywood on one.

Furnishings

Twelve of the twenty porch owners bought their furniture especially for the porch while seven had furniture handed

down from another area. One had only an old refrigerator on the porch.

Metal was the most popular furniture on the glassed porches with seven porches having this kind. Six had a combination of wood and metal. Two had wicker-rattan; two, wicker and metal; one, a mixture of all kinds; one, wood; and one, the refrigerator. Six of the twenty would buy another kind if they were refurnishing their porches. All of these six said that they would buy wicker-rattan. Of the furniture these six wished to replace three had a combination of wood and metal, two had metal, and one had wood. The homeowner who had only the refrigerator on the porch had no desire for furniture of any kind.

Desirable features of metal furniture mentioned at least one time were durability; sunny, bright, cheerful color; good for plants; comfortable; functional; decorative; and easy to clean. One mentioned that she had owned her furniture thirty years and it had never chipped and never been repainted. Another had owned metal furniture for fifteen years without needing to paint it. A few undesirable features were mentioned one time each. One who had clear glass on table tops said that it scratched and collected fingerprints and therefore she would prefer smoked glass. Another person said that the metal furniture had to be painted and one said her light-weight metal furniture was not sturdy enough for the children and she would prefer it heavier.

Good qualities of wicker-rattan mentioned one time or more were that it was comfortable, easy to keep, easy to live with, very satisfactory, practical, serviceable, and that zipped covers can be drycleaned or ordered if a color change is desired. One person had an unfavorable criticism of wicker. She said that wicker does not hold paint--when it flexes the paint chips off.

The wood furniture on the glassed porches was mainly indoor type furniture. Good qualities named one time each were that it was utilitarian, comfortable, and durable. The bad features mentioned once each were that the high summer sun fades wood, sun ruins good pieces, and redwood was too large for the room and too heavy.

All of the twenty leave the furniture on the porch year-round. Thirteen had a table suitable for dining on the porch and two of these had adjustable tops.

A combination of cloth and plastic used by nine families was the most popular covering for cushions. Six had cloth cushions and three had plastic. The other two had no cushions. Two had problems with fabric sunfading and one had a problem with mildew. One had a problem with plastic covers splitting open and foam bunching up. These covers were on the light-weight, metal furniture.

There were twelve floor coverings on the twenty porches. Seven of these were wall-to-wall carpet, the others were rugs. Nine of the twelve floor coverings were indoor type carpet and three were indoor-outdoor type. Ten of the floor

coverings were made of man-made fibers, one was made of sea-grass, and the other was a braided rug of unknown fiber content. Two of the wall-to-wall carpets were glued to the floor. None of the twelve floor coverings had incurred any problems. The ages of the floor coverings ranged from one to nine years with an average age of three and one half years. Of the eight who had no floor covering only two desired one but one other wanted an area rug only for the winter months.

Cleanability and Maintenance

The greatest cleaning problem for eight families owning glassed porches was keeping the floor clean. For two it was spider webs; for two, window cleaning; for two, plant shedding and plant watering; for one, pollen and dust when the door is left open; for one, dog hair; for one, moisture on plexi-glass; and for one, cleaning around the edges of the rug. Two had no great cleaning problems.

Four owners had a problem with condensation of moisture on the glass and two jalousie glassed porch owners had a problem with moisture on the floor. None had any problems with pollen or mildew.

Of the nineteen who had furniture on their porches, seventeen said the furniture had to be refinished rarely--no more than one time in six years and two said occasionally--no more than one time in three to six years.

Eighteen had no problem with moisture affecting their furnishings but one said that a combination of moisture and

sun causes paint to flake off wicker. One had some mildew on metal.

Thirteen of the homemakers swept or vacuumed their porches about one time each week; five, two to three times each week; and two usually did it every day. Seventeen porches were entered from a hard surface area, such as cement and two were not. One of the porches had no outside entrance.

Effect of Weather

Only two glassed porches had ever had a problem with rain. One of these problems was caused by the leaking of a flat tar-and-gravel roof and one porch gets wet around the door in a hard, blowing rain. Ten said the sun was a problem sometimes--one of these with a North exposure wanted more of it so plants would grow better on the porch.

Nine glassed porches had no climate control, seven of them had year-round central heating and air-conditioning and two were cooled and heated by opening doors to the other rooms. There were four supplementary heaters, one window air-conditioner and one ceiling fan scattered among the twenty porches.

Atmosphere

Thirteen of the porches were considered private by their owners, five were considered not private and two were said to be semi-private. Factors contributing to privacy were shrubs and trees, listed by eleven; fences, listed by nine; distance, by seven; only two exposed sides, five; hanging

baskets, one; sheer draperies, one; angle of the house, one; frosted glass (on a jalousie glassed porch), one; elevation of house next door, one; and thirty-five inch high paneling inside porch, one. Most had more than one of these factors contributing to their privacy.

Fifteen felt they had a special view. They listed these views as woods or trees (nine), garden (six), yard (four), street traffic (two), lake (one), patio (one), and a bird feeder (one). Some had a combination of these views.

All but one of those families interviewed kept plants on their porches. The one who did not was the owner who had no furniture on the porch. One jalousie glassed porch was too hot for plants in the summer and one jalousie was not only too hot for them in summer, but too cold for them in winter as well. This latter porch owner had already taken her plants inside by the first of November, the date of the interview. The rest kept their plants on the porch all year.

All of the nineteen who used their porches for activities liked to be out there when it was gently raining. Eight of them liked to be on the porch during a thunderstorm.

Four families had music on the porch. The source of the music was three intercoms and one stereo AM/FM radio and television.

One home had special outdoor lighting and it was a mushroom light in a flower bed. One had no lights at all outside the porch.

At night when lights were on inside the porch and off outside, four felt the glass became a dark wall. Fifteen either felt it did not, or they had not thought about it. One had no outside light and had no opinion. Under these lighting conditions twelve felt a lack of privacy and eight had a feeling of insecurity. Draperies or other devices solved the problem of lack of privacy and insecurity for five families.

Twelve felt the extension of space when the porch lights and the outside lights were turned on. Ten felt more security and ten felt more privacy under these circumstances. Ten felt more security and ten felt more privacy when lights were on outside, but turned off on the porch. All but one family felt that lighting on their porch was adequate for the activities that occur there.

Nine glassed porch owners achieved atmosphere by using candles at night. Other ways mentioned one time each were the light shining on roses just outside the porch and the sight and sound of a water fountain, opening double doors to the porch exposing a large fireplace in the den in winter-time, Christmas tree on the porch at holiday time, hanging baskets with sun filtering through and changing the light, and the furnishings of the porch that invite people to return.

Color Scheme

Color schemes on the glassed porches were about evenly divided among predominantly warm (seven), predominantly cool

(six), and balanced (seven). Colors of the framing were aluminum (eight), white (five), stained wood (two), green (two), cream (one), sandalwood (one), and brown metal (one). None of the porches had been another color.

Enclosed Porch Illustrations

Photographs were made of some of the porches to show certain different types of enclosures and other interesting features devised by porch owners. Only one of the screened porches is illustrated since the enclosure of all screens is similar.

Screen Enclosure

The owners of the largest screened porch, 326 square feet, might be called screened porch "enthusiasts" for they have no desire for glass enclosure (Figure 1). After many years of screened porch living the couple who lived here had many suggestions for porches. One suggestion was not to cover the backs of the chairs in front of the view. Their wicker chairs have an open, airy feeling and the light coming through them amplifies their texture. The chairs, also, do not seem to block the view.

The owners believe that it is advantageous to have a porch elevated several feet above ground-level to avoid ground-level dampness and to enjoy more air-circulation. They also like the view from a raised-level porch. A swimming pool can be seen on a level about four to five feet below the porch. The cabana and patio are also on this level. Just beyond the



Figure 1.--Type of Enclosure--Screened. Two Views of the Largest Screened Porch in the Study.

pool there is another drop in ground-level and at the back of this area is a vegetable garden.

These people call themselves "outside people" and call the porch "the most relaxing place in the home." They enjoy watching nature and like to sit on the porch and think about how to add beauty and about what to do next. They prefer that the door to the outside not block this view by being located in the center of the porch. They would rather it be located at the side and it is.

Other things these owners liked were an atmosphere with plants and music on the porch and a green carpet that echoes the grass. They like their wicker-rattan furniture because it does not get extremely hot or cold as does metal and is, therefore, more pleasing to the sense of touch.

Fixed Plexiglass Enclosure

The longest and most narrow porch in the study, which has dimensions of six by twenty-seven feet, has a fixed, plexiglass enclosure (Figure 2). The long, glassed porch, overlooking a lake, was longer than necessary for activities. This family took advantage of the extra length by creating an indoor rock garden. Bricks outline a U-shaped area two feet wide on the broken tile floor. Rocks are placed around the base of the potted plants and a fountain at eye level, adding pleasant sounds, becomes the focal point at the end of the porch. The hanging baskets at a higher level carry the eye upward and relate the enclosed area to the outdoors. The



Figure 2.--Type of Enclosure--Fixed Plexiglass. Two Views of a Long and Narrow Porch.

porch has a Southwest exposure and woven, wooden shades protect the area from the afternoon sun.

There have been some problems with condensation of moisture on the plexiglass. Since the plexiglass is of only one layer the moisture is difficult to avoid.

Fixed Double-Glazed Enclosure

One highly used porch has a double-glazed, fixed enclosure (Figure 3). The floor covering is man-made, shag, indoor-outdoor carpeting. In the four years the carpeting has been owned, it has never needed cleaning. This family loves the porch and they eat all of their meals here. There is a mushroom type light in the garden area that helps to blend the indoor and outdoor environments at night.

Sliding Storm Window Enclosure

One porch enclosed with sliding glass storm windows appeared to have a high ceiling since it measured ten feet from floor to ceiling and gave a lofty appearance (Figure 4). Actually it has a lowered floor since at one time the porch had been a sunken patio and was about two feet below ground level. This owner loved plants and the cement floor with a drain pleased her because after working with her plants she could clean the floor easily with a hose. They painted the porch white to bring as much light as possible into the den of this split-level home.

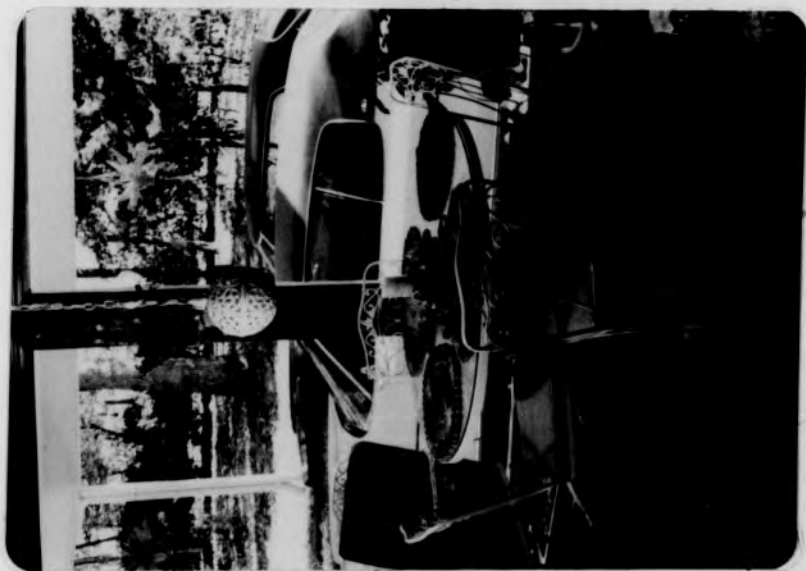


Figure 3.--Type of Enclosure--Fixed Double-Glazed.
Two Views of a Popular Glassed Porch.



Figure 4.--Type of Enclosure--Sliding Storm Window.
Two Views of a Glassed Porch that was Once
a Sunken Patio.

Jalousie Glass Enclosure

One of the most used of all the glassed porches was an eighteen-year-old jalousie enclosed porch (Figure 5). A retired couple lived here and they spent an average of 6.33 hours daily here. In the summer months they used their porch about eleven hours each day. It is the most used social area of their home. According to the owner the porch was so easy to keep and stayed so "nice and clean." She did say, however, that she would prefer the sliding glass door type enclosure because the jalousie windows leak air. There seemed to be several qualities of jalousie windows in the study area. This porch appeared to have the most successful jalousies. They were smooth working, heavy, and of good quality.

Combination Fixed Glass and Sliding Door Enclosure

Some porches in the area were built with fixed glass and several sliding glass doors. One of this type had a tinted glass enclosure with only one layer of glass (Figure 6). The colored glass serves to insulate the porch from the sun. This kind of enclosure has all the advantages of screened and glassed porches because the doors can be opened for fresh air ventilation. Of course, it would have only one-half the fresh air of a screened porch. The metal furniture with glass-topped tables was the most popular kind found on the enclosed porches. The valance over the glassed sections adds a decorative touch.



Figure 5.--Type of Enclosure--Jalousie. Two Views
of One of the Most Used Glassed Porches.



Figure 6.--Type of Enclosure--Combination Fixed Glass and Sliding Door. Popular Metal Furniture with Glassed Topped Tables is Shown Here.

Sliding Glass Door Enclosure With Muntins

One of the porches that was enclosed with sealed, double-glazed, sliding doors had muntins between the two glass sections (Figure 7). The muntins were made of metal and broke up the large glass spaces into pane-like sections. Since the muntins were in the space between the two areas of glass both outside surfaces of the glass were smooth and easy to clean.

This porch had roses outside that were lighted at night. Another view shows a fountain in the garden area just outside the porch. Sounds of the fountain add atmosphere to the porch.

The wicker furniture on the porch has presented a problem--when the wicker flexes the paint chips off. The owner thought this was caused by a combination of moisture and sun.

This was the largest porch in the forty studied with 350 square feet.

Tinted Sliding Glass Door Enclosure With Muntins

The most used of all porches was one enclosed with tinted sliding glass doors (Figure 8). It was the most used social area in the home with an average daily use of 7.33 hours. The doors were double-glazed and had muntins breaking up the large glass sections. These muntins were not made of metal but were etched on the inside of the glass and were made to look like metal.

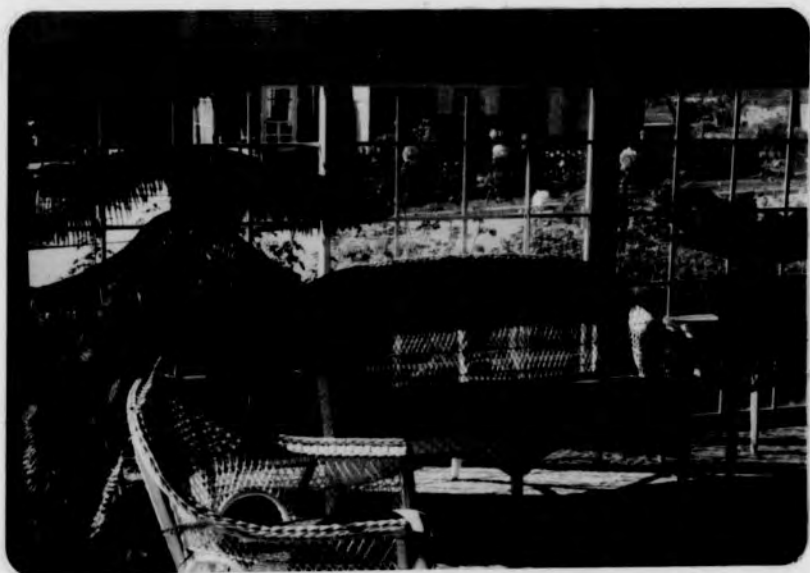


Figure 7.--Type of Enclosure--Sliding Glass Door
with Muntins. Two Views of the Largest
of the Forty Porches in the Study.



Figure 8.--Type of Enclosure--Tinted Sliding Glass Door with Muntins. Two Views of the Most Used of all Porches in the Study.

On this porch were four aquariums. The bubbling of the filters made pleasant sounds like a babbling brook or a fountain. There were many plants on the porch--many of them in hanging baskets. The heaters in the aquariums were set at 80° and consequently there was a lot of water evaporating into the air. The owners felt that the aquariums and the plants complemented each other. The plants were thriving on the moisture from the tanks. This family liked the way the sunlight filtered through the plants in the hanging baskets, changing the light.

Other attractions of the porch were land, hermit crabs in a standing bird cage and a display of sea shells collected from trips to the beach.

Advantages and Disadvantages of Screened and Glassed Porches as Seen by Owners

There were seventeen advantages and five disadvantages of glassed porches over screened porches listed one or more times by the owners of the glassed porches (Table 1). Most frequently mentioned advantages of the glassed porches were year-round use (eight), cleaner (seven), easier to keep (five), all weather use (five), no pollen (four), and weather control (four). Limited ventilation was listed most often as a disadvantage.

Owners of screened porches mentioned six advantages and eight disadvantages of screened porches over glassed porches (Table 2). One-half of the owners felt that the smell of fresh air and feeling of air circulation was the greatest

Table 1.--Advantages and Disadvantages of Glassed Porches
Over Screened as Seen by Owners of Glassed Porches

Advantages	Number of Times Mentioned
Useful Year-Round	8
Cleaner	7
Easier to Keep	5
All Weather Use	5
No Pollen	4
Weather Control	4
Quieter	2
More Private	2
Furnishings Protected from Weather and Outsiders	2
Can Remove Glass and Use Either Way	2
Can Keep Plants Out Year-Round	2
Like Another Room	2
Better View	1
Dry	1
Makes Kitchen and Den Warmer in Winter	1
Room for Pet	1
Use it--Did Not When Screened Because of A/C House	1
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Disadvantages	
Limited Ventilation	2
Cost More to Build	1
Noise Not Absorbed With Crowd in Glass Room	1
Lack of Ventilation With Stationary Glass	1
Furnishings Require More Care	1

Table 2.--Advantages and Disadvantages of Screened Porches
Over Glassed as Seen by Owners of Screened Porches

Advantages	Number of Times Mentioned
Can Smell Fresh Air and Feel Air Circulation	10
Nearest to Outside Without Going Out	2
Back to Nature Feeling	2
Screen Extends House Outdoors	1
Feel Openness That Do Not Feel With Glass	1
Would Not Put Dogs on Glassed Porch	1
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Disadvantages	
<hr/>	
No Year-Round Use	4
No Protection From Blowing Rain	4
Must Move Plants Inside in Winter	4
Pollen	2
Air-Conditioned Home Restricts Use	2
Screen Cuts Down Light	1
Cannot Use as Many Hours Per Day	1
Kind of Furniture Limited	1

advantage. Most often named disadvantages were no year-round use, no protection from blowing rain, and taking plants inside in winter.

Comparison of Use of Screened and Glassed Porches

Estimated Hours Spent on Porches

When porch owners estimated time spent on their porches daily in each month, June was the most popular month of use for both the screened and glassed porches (Table 3). Both kinds of porches were used about four and one-half hours each day of that month. May, July, August, September and October

Table 3.--Estimated Average Hours and Range of Hours Spent Daily on Screened and Glassed Porches

Month	Screened		Glassed	
	Average Hours Daily	Range	Average Hours Daily	Range
January	.05	0-1	1.35	0-5
February	.05	0-1	1.35	0-5
March	.65	0-3	2.55	0-7
April	2.30	0-5	3.35	0-9
May	3.60	1-5	3.85	0-9
June	4.50	1-9	4.45	0-11
July	3.75	0-9	4.40	0-11
August	3.60	0-9	4.40	0-11
September	4.05	0-9	4.25	0-11
October	3.45	0-9	4.15	0-9
November	.65	0-3	3.05	0-9
December	.10	0-1	2.20	0-5

were all popular months on both kinds of porches. The screened porch is used practically none in the winter months of December, January, and February. This is the main reason the daily average use of glassed porches (3.28 hours) averages about one hour (1.04) per day more in use than the average daily use of the screened porches (2.24 hours). The screened porches ranged from 0-9 hours daily use while the glassed porches ranged from 0-11 hours. One glassed porch was not used at all.

Activities--Screened and Glassed Porches

A summary of the activities that occurred on the forty porches showed that thirty-nine families used their porches for relaxation (Table 4). Reading was the next most popular activity. More than half the owners of both kinds of porches relaxed and read on their porches every day. The suburban porch is obviously a place for relaxation and entertainment. Very few chores are listed as activities of the enclosed porch.

Use of Porches in Relation to Other Social Rooms

When the porches were compared to other social rooms in the home they ranked about third in frequency of use (Table 5). The screened porch ranked slightly more than third (3.25) and the glassed porch ranked slightly less than third (2.65) in use when compared to the other rooms.

Frequency of Use When Porch Opens Off the Kitchen

Could there be a difference in the amount of use of the porches if they were adjacent to the kitchen? When averaging

Table 4.--Number of Families Using Screened and Glassed Porches for Specific Purposes and the Frequency of Use

Use of Porches	Number of Families							
	Screened				Glassed			
	Daily	Weekly	Less Than Weekly	Total	Daily	Less Than Weekly	Weekly	Total
Relaxing	14	5	1	20	12	6	1	19
Reading	11	6	2	19	12	4	1	17
Entertaining Adults	1	7	11	19	0	9	3	12
Eating	8	3	4	15	7	4	4	15
Children's Play	6	1	0	7	10	4	1	15
Crafts and Hobbies	1	5	0	6	1	7	0	8
Card Games	1	4	0	5	0	1	3	4
TV Viewing	0	3	0	3	0	4	1	5
Plant Care	1	1	0	2	0	3	0	3
Study and Paper Work	0	1	0	1	1	3	0	4
Napping	1	0	0	1	1	1	0	2
Food Preparation	0	1	0	1	0	1	0	1
Ping Pong	1	0	0	1	0	0	0	0
Folding Clothes	0	0	0	0	0	1	0	1
Pet Keeping				3				4
Wood Storage				3				0
Fruit Storage				0				2

Table 5.--Porch Use in Relation to Other Social Rooms of the Home

Ranking*	Number of Porches	
	Screened	Glassed
1	3	4
2	0	4
3	10	8
4	4	3
5	2	1
6	1	0

*Ranking of 1 is most used, 6 least used

the hours spent daily on the fourteen screened porches that opened off the kitchen an average hourly time of 2.41 hours was found. This is only slightly more (.18) than the 2.23 average hourly time spent on all of the screened porches. The average hourly time spent on the nine glassed porches that opened off the kitchen was 3.11 average hours daily or .17 hours less than the 3.28 average for all twenty glassed porches. It would appear that such small differences would be insignificant and that it makes little difference in use of the porches if the kitchen adjoins them.

Meals Served on the Porches and Their Frequency

Fifteen families dined on their glassed porches and fourteen families dined on their screened porches (Table 6). Breakfasts were served on at least three glassed porches,

Table 6.--Frequency of Serving Meals on the Screened and on the Glassed Porches During Periods of Use

Screened Porches										
Meal	Times Per Week									Total
	7	6	5	4	3	2	1	<1	0	
Breakfast	2	0	1	0	1	1	2	1	12	20
Lunch	5	0	2	0	2	0	1	2	8	20
Dinner	5	0	1	0	2	1	1	1	9	20

Glassed Porches										
Meal	Times Per Week									Total
	7	6	5	4	3	2	1	<1	0	
Breakfast	3	0	0	1	0	2	3	2	9	20
Lunch	5	0	1	0	2	0	0	6	6	20
Dinner	3	0	0	0	2	3	1	3	8	20

lunches on at least five, and dinners on at least three glassed porches daily. During periods of use half the screened porch families ate lunch and dinner on their porches at least once a week. At least seven screened porches had breakfast served there one time weekly during the porch season.

Day and Night Use of Porches

The screened porches were used about equally during the day and at night (Table 7). The glassed porches were used more in the daytime than at night.

Table 7.--Day and Night Use of the Porches by Number of Families

Time of Most Use	Screened	Glassed
Night	6	1
Day	7	10
About the Same	7	9

Linear Correlation of Time Used and Size of Porches and Time Used and Number of Persons Living at Home

Average daily time spent in use of screened and glassed porches is a dependent variable that is influenced by many other variables--both dependent and independent. Two independent variables that might relate to porch use were tested for their significance. These two variables were the size of the porch and the number of persons living at home.

Initially, simple linear correlation was used to determine the relationship of size of the porches to average daily time the screened and glassed porches were used. Next, the number of persons living at home was related to the average daily time spent on both kinds of porches.

The result of the correlation of the average time of use of the screened porches with the size of the porches was $+0.3640$ or a low positive correlation. When the average time of use of the glassed porches was correlated with sizes the result was -0.1417 or a slight negative correlation. The

coefficient of correlation in both the screened and glassed porches was not high enough to say that any linear correlation existed between the average time of daily use and the size of the screened or glassed porches.

When the average daily time spent in use of the glassed porches was correlated with the number of persons living at home the coefficient of correlation was $-.259$ --a low negative correlation. When the average daily hours of use of the screened porches was correlated with the number of persons living at home the coefficient of correlation was $+.530$ --a modest positive correlation. There is therefore reason to assume that a linear correlation exists between the average daily use in hours of the screened porch and the number of persons living at home.

When the daily use in hours is averaged for each size family owning the screened and glassed porches the results support the correlation studies (Table 8). One family with eight persons at home used their screened porch an average of 3.83 hours daily. This extra large size family probably carries a disproportionate weight. It is interesting to see that couples use the glassed porch an average of 4.07 hours daily while couples use the screened porch an average of only 1.80 hours daily. The couples having glassed porches spend an average of .79 hours a day more than the average hours of 3.28 spent on all glassed porches and the couples on the screened porch spend an average of .44 hours daily less than the average of 2.24 hours daily spent on all screened porches.

Table 8.--Average Daily Use of Porches in Hours by Size of Family Living at Home and Frequency of Family Size

Number of Persons Living at Home	Screened Porch		Glassed Porch	
	Frequency	Average Use in Hours	Frequency	Average Use in Hours
2	11	1.80	6	4.07
3	3	1.83	4	2.46
4	5	3.13	7	3.62
5	0	0.00	3	2.00
8	1	3.83	0	0.00

Chi Square Results of Kind of Glass Enclosure and Average Hourly Use of Glassed Porches

The glassed porches were of four basic kinds--the stationary or fixed glass (four), storm window (four), jalousie (five), and sliding glass door (seven). Chi square was used to determine if the average hourly use of these porches was related to the type of glass enclosure. Testing the null hypothesis reveals no significant difference in the average hourly use of any of these different kinds of glass enclosures.

Chi Square Results of Direction of Exposure and Hourly Use of Porches

It was thought that the direction of exposure of the porches might influence the amount of porch use. Chi square was used to test the null hypothesis that the direction of exposure made no significant difference in average hourly

use of the porches. No significant relationship was found to exist between the direction of exposure and hourly use of the screened, glassed, or combined porches in this study.

These findings indicate that both screened and glassed porches are popular and highly used in the area studied. Some of the differences in use and preferences were highlighted and the findings will be summarized in the following chapter.

CHAPTER V
CONCLUSIONS

The suburban enclosed porches were used mainly as a place for relaxation and entertainment. All but one of the forty porch owners used their porches for relaxing. Reading, entertaining, and eating were popular activities on the porches. Some additional activities in these areas were children's play, crafts and hobbies, card games, and television viewing.

Glassed porches were used throughout the year, on the average, 3.28 hours daily and screened porches, on the average, 2.24 hours daily. The average time used was estimated by the owners for all months of the year. June was the most popular month for use of both kinds of porches, with May, July, August, September, and October following closely. The screened porches were used very little during December, January, and February. There was little difference in the amount of use between the screened and glassed porches during the summer months.

Thirty of the forty porch owners said they preferred glassed porches. This included all twenty owners of glassed porches and half of those who owned screened. The most frequently mentioned advantages of the glassed over screened porches were year-round use, cleaner, easier to keep, all

weather use, weather control, and lack of pollen problems. Limited ventilation was the most frequently listed disadvantage of glassed porches. Half of the screened porch owners volunteered that the smell of fresh air and the feeling of air circulation were advantages of screened porches. Most frequently named disadvantages of screened porches were limited winter use, no protection from blowing rain, and need to take plants inside in winter.

Metal furniture was the most prevalent kind of furniture on the enclosed porches and owners of metal furniture listed only advantages of metal. Those who wished to replace their present furniture indicated their choice would be wicker-rattan. This might imply that there is a trend toward wicker-rattan.

Enclosed porches appeared to be an easy-care living area that required little cleaning and maintenance. Keeping the floor clean was the greatest problem for most porch owners. Most owners of both kinds of porches swept or vacuumed their porches no more than once each week. Thirty-two porch owners said that their porch furniture had to be refinished only rarely--no more than once in six years. This indicated that the porches were designed and the furniture was selected with ease of care in mind.

Most owners thought of their porches as private areas. Trees, shrubs, and fences were the factors that contributed most toward owners' feelings of privacy. Most of those

interviewed considered their views from the porch as special. Trees, shrubs, and fences were planned to enhance the view from the porch. Some owners said that hanging baskets added to their privacy. Plants were kept on all of the porches that were used.

There was a modest positive correlation between use of the screened porch and size of family. On the other hand, there was no significant relationship between the use of glassed porches and size of family. It is interesting to note that couples having glassed porches used them an average of 4.07 hours daily while screened porches were used an average of 1.80 hours daily by couples.

No significant statistical relationship was found to exist between the use of porches daily and the adjacent location of the kitchen, nor between daily use and size of porch. Chi square revealed no significant statistical relationship between hourly use and direction of exposure.

This research was limited to one affluent area of Greensboro and is not a representative sampling of the total suburban area. It would be interesting to learn the results of a study using a large random sampling from the entire metropolitan area of Greensboro or any other city. The data collected in this study indicated that the enclosed porch is an important and heavily used living area whether enclosed with screen or with glass.

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APPENDIX

USE OF SCREENED AND GLASSED PORCHES

Questionnaire

Number _____ Date _____

Number of persons living at home _____

I. Structure of Porch

1. Age of porch _____ Age of dwelling _____
2. Screened _____
3. GlasSED _____ Kind of glass enclosure _____
4. Once screened, but now glassED _____
5. Owner's preference--GlasSED _____ ScreenED _____
6. Located on N _____ E _____ S _____ W _____ side of house
7. Rear _____ side _____ location _____
8. Kind of hard surface flooring _____

II. Furnishings of Porch

1. Kind of furniture--wicker-rattan _____, wood _____, metal _____, plastic _____, other _____
2. Furniture was purchased for the porch _____, handed down from another living area _____, other _____
If porch could be refurnished would you choose the same kind of furniture?
_____ If not, what kind would you select? _____

Describe briefly the good and/or bad features of the present furniture. _____

3. Is porch furniture left on the porch year-round? _____, stored in winter? _____ used in another part of the house in winter? _____ or other _____
4. Is there a table suitable for dining or games on the porch? _____ Is the size of the table top adjustable? _____
5. Type fabric used on cushions or upholstery--cloth _____, plastic _____, or other _____
Any problems with fabric mildewing? _____
sunfading? _____ or other? _____

6. Is porch covered with rug? _____ or wall-to-wall carpet? _____ Indoor type? _____ Indoor-outdoor type? _____ Of what material is it made? _____ Is it glued to the floor? _____ Number of years in use? _____ If there have been any problems with the floor covering, please explain: _____

If the porch is not now covered with a rug or carpet do you wish to add one later? _____

III. Cleanability and Maintenance of Porch

1. What is the greatest cleaning problem on your porch? _____
- _____
- _____
2. Is condensation of moisture on glass _____ or floor _____ a problem? _____ Is pollen _____ or mildew _____ a problem? _____ If any of these have been troublesome, give your remedy if you have one. _____
- _____
3. Porch furniture must be refinished or repainted often (every one-two years)? _____ occasionally (every three-six years)? _____ rarely (no more than once in six years)? _____
4. Are furniture glue joints or wicker wrappings affected by moisture? _____ Please list any other problems you have had with moisture: _____
- _____
5. Must the floor surface be swept or vacuumed one _____, two _____, three _____, four _____, five _____, six _____, or seven _____ times a week? Is the porch entered from a hard surface area such as cement or brick? _____

IV. Effect of Weather

1. Is or was blowing rain ever a problem? _____ If so, define the problem and state how it was solved if it has been: _____
- _____
2. Is or was the sun ever a problem? _____ If so, define the problem and state how it was solved if it has been: _____
- _____
- _____

3. Porch has year-round mechanical climate control _____, heat only _____, fan only _____, no mechanical control of climate _____.

V. Atmosphere

1. Is the porch private from neighbors? _____ If so, is this accomplished by fences _____, shrubs and/or trees _____, distance _____, or other? _____
2. Is there a special view from the porch of a garden _____, lake _____, golf course _____, pool _____, or other? _____
3. Are plants kept on the porch during the months the porch is used? _____ If the porch is screened, are the plants taken inside during the winter? _____
4. Do you enjoy being on the porch when it is gently raining? _____ during a thunderstorm? _____
5. Is there music available whenever desired on the porch? _____ If so, what is the source? _____
6. Do you have special outdoor lighting for night-time use? _____ If so, describe briefly: _____

At night when lights are on inside the porch and off outside the porch do you feel that the glass or screen becomes a dark wall? _____ Does this give you a feeling of insecurity? _____ or lack of privacy? _____ Do draperies or other devices solve this problem for you? _____ When lights are on inside the porch and on outside the porch do you have a feeling of the extension of space? _____ more security? _____ more privacy? _____ When lights are off on the porch and on outside the porch do you have a feeling of even more security? _____ and even more privacy? _____ Is the porch lighting adequate for all activities that occur there? _____

7. Please add any other ways your family achieves atmosphere at night or in daytime: _____

VI. Color Scheme

1. Predominantly warm _____, predominantly cool _____, or balanced _____
2. Color of inside screen or glass framing _____
If the framing has been painted more than one time and the color has been changed, have you noticed any difference either of the colors has seemed to make in extending or closing-in the porch space? _____ If so, please give the color or colors and whether they seem to extend or close the space:

VII. Use of Porch

1. Please estimate the number of hours the porch is used daily by your family in each of the months listed by making a check in one square for each month. (Do not count access to house as use.)

Hours/day	0	0-2	2-4	4-6	6-8	8-10	10-12
January							
February							
March							
April							
May							
June							
July							
August							
September							
October							
November							
December							

2. Please check frequency of activities. Add any activities that occur on your porch that are not listed.

	Frequency				
	Daily	Weekly	Monthly	Yearly	Never
Children's Play					
Relaxing					
TV Viewing					
Reading					
Entertaining Adults					
Eating					
Playing Bridge					
Other					

3. (a) In column one please check the rooms your home contains.
 (b) In column two give those rooms checked a ranking order with the room most used ranking one, the next most used two, until all rooms checked are ranked. (Use only the months the porch is used in your ranking.)
 (c) In column three check rooms that open onto the porch.

	1	2	3
Den or family room			
Kitchen-den combination			
Kitchen			
Kitchen-dinette			
Dining room			
Living room			
Living-dining combination			
Study			
Porch			

4. Is the porch used for dining? ____ If it is, please estimate the number of times weekly, monthly, or yearly the following meals are served there.

	Weekly	Monthly	Yearly
Breakfast			
Lunch			
Dinner			

5. Is the porch used more at night? ____ more in daytime? ____ or about equally? ____
6. What are the advantages and/or disadvantages of your porch over the other type? _____

