PROGRESSION AS AN ELEMENT IN EXTERIOR/INTERIOR LANDSCAPE ARCHITECTURE

Ву

WILLIAM JOHN BEITZ

Bachelor of Science

Oklahoma State University

Stillwater, Oklahoma

1973

Submitted to the Faculty of the Graduate College
of the Oklahoma State University
in partial fulfillment of the requirements
for the Degree of
MASTER OF SCIENCE
May, 1977

Thesis 1977 B423p Cop.2



PROGRESSION AS AN ELEMENT IN EXTERIOR/INTERIOR LANDSCAPE ARCHITECTURE

Thesis Adviser

Dean of the Graduate College

Thesis Approved:

977022

ACKNOWLEDGEMENTS

Opportunities for advancement in a new design field are infrequent at best. Interior landscaping is a new field that needs designers who will accept the challenge to be among the first to actively pursue this direction. This field can be a major force in uniting landscape designers, architects and interior designers into a body of professionals who work together for total design and better design relationships.

Deepest gratitude is extended to Christine Salmon for her challenge to "do it." Her patience and guidance provided the inspiration to accept the challenge. Sincere thanks is also extended to Kay Stewart and Steve Ownby who provided not only encouragement but opportunities to speak with design students, and hence to learn about and become committed to the area of design known as interior landscaping.

TABLE OF CONTENTS

Chapter																		Page
I.	INTRODUCTION .	• • • •	•					•			•				•			1
	Methodolog	у		•		•	•	•	• ,		•				•			2
II.	PROGRESSION		•		•			•	•		•		•	•	•	•	•.	3
	An Element	in Our Li	ves								•		•	•	•			3
	Natural Pr	ogression	•									. , .						4
	Opportunit	ies for Mo	veme	ent		•	•											8
		e Movement																9
		lovement .																9
		sure																13
																		14
		ns																14
		es in Leve																16
		hment																16
		Space																16
		h Interior																20
III.	SUMMARY AND IMP	LICATIONS					•	•	•	•						•		23
A SELEC	FED RIRLINGRAPH	V.				-												24

LIST OF FIGURES

Figu	re							Page
1.	Progression Between Exterior/Interior Space	•		•	•			5
2.	A Climate for Progression		•		•	•		6
3.	Providing for Individual Movement	•			•		•	10
4.	Providing for Individual and Vehicular Movement			•		•		11
5.	Providing for Lack of Movement	•		•				12
6.	Wall Heights in Progression							15
7.	Changes in Level			•				1.7
8.	Glass Emits Angle of Sunlight as It Passes Through the Day				•			19

CHAPTER I

INTRODUCTION

In recent years, plants have gained universal appeal in the interiors of the business and domestic world, and have created a demand for design professionals who have a background in both landscape architecture and interior design. Interior landscaping may be approached as an extension of landscape architecture that relies on a strong working knowledge of the elements of interior design. Landscape architecture is the design field that helps us to relate the building to the site, while providing an opportunity for an intimate relationship with that which is natural. When natural elements are evident both inside and outside a structure, a continuum with nature will be established which keeps people involved even when they are enclosed.

A landscape which moves freely into and out of a structure, or a number of structures, becomes a dominant element in movement into and out of structures. This movement might be termed "progression"—or "progression between spaces." That is, the careful ordering of design elements in the areas inside and outside of buildings. Our progression between exterior/interior space may be directly affected by what we see and feel along the way.

To provide for an orderly, meaningful progression, it is necessary to examine and consider the elements that contribute to spatial order both outside and inside the structure. The fundamental drawing point

is the realization that all living things are in a natural progression—living—and are comprised of many movement systems, respiration systems, nervous systems, and fluid movement systems.

Ian McHarg (1969, p. 123) says, "All creatures are seen in terms of succession." That is, they progress through a life cycle that is a series of successions. The more evident this relationship becomes, the more meaningful will be the experiences felt in a successful progression. The purpose of this study is to examine the design elements that contribute to progression between exterior/interior spaces.

Methodology

The methodology for this study included an examination of the literature concerning general design principles as they apply to land-scape architecture, a synthesis of this literature with the author's design knowledge and work experiences in landscape architecture and interior design, and illustrations of progression in exterior/interior landscape architecture.

CHAPTER II

PROGRESSION

An Element in Our Lives

Progression through space is an aspect of our lives that too often consists of a series of experiences with little or no relationship to one another. A movement system between exterior and interior that uses landscape architecture as its major relating element makes the moment of transfer between spaces as effortless as possible. Without a successful progression, the relationship between exterior and interior will never be firmly established.

Since most people remain at any one time relatively unaware of their place in a progression, the visual aspects of the design become most important. These consist of ordered design elements which begin to provide the proper scale, and a relating point that can give the user a sense of belonging. While people may be hurrying about on their daily activities, their eyes will reflect the whole, and in a good design, subtly acknowledge the order of the progression. Once a sense of security is established, the transition becomes a natural exercise in movement.

Movement systems form the basis for any successful progression.

The movement system has as its core an axis. Simonds (1969, p. 123)

defines an axis as ". . . a linear plan element connecting two or more points." He goes on to state that an axis introduced into a landscape

generally will become the dominant feature. In terms of progression between exterior/interior space, then, the axis can be the means by which we physically connect space. The axis must consider all elements involved in the design, serve as the dominant relating force between the exterior and interior, and it must have an order about it to be a satisfying means of progression.

Of primary importance to a successful progression is the ordering of space along the axis. Traditionally, in landscape design the axis is a system that orients one to the door or other entrance point.

Now, in the context of total progression, must be added yet another spatial dimension to the axis, that of interior space. See Figure 1.

Natural Progression

In order to fully appreciate the various elements that must be involved in the spatial order, one must look at progression in its most bold sense. Progression in nature is the basis of life. All living things progress and are in fact comprised of many progressions. They contain movement systems that circulate food, blood, air and energy. So, we must consider in general terms the climate of progression that is already established by the natural physical world. See Figure 2. Designers must strive to draw from this a sense of natural materials, scale, colors, climate and other physical features. It is at this point, too, that a sense for the use and the user must begin.

The designer is in many cases the only person to see, feel and touch the progression, piece by piece. The design has its impact as a whole, and unless specific focal points are provided, those experiencing the progression will view, and be affected, only by the whole.

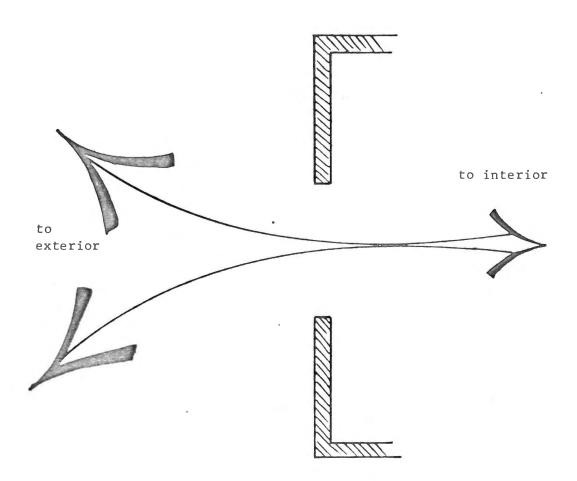


Figure 1. Progression Between Exterior/Interior Space

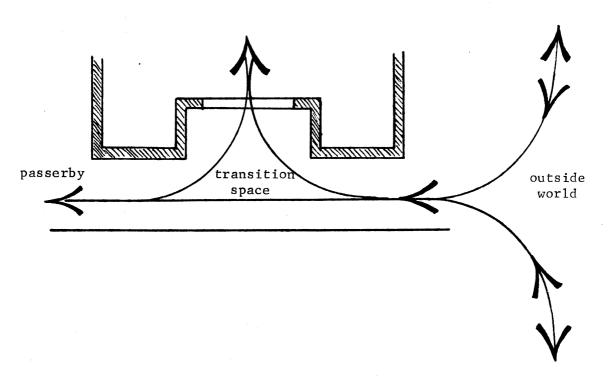


Figure 2. A Climate for Progression

This does not mean that one should eliminate all of the subtle and intricate elements of design—for these are what make the design unique, what make it 'fit' and what help unite the design into a whole. What it does mean is that the designer must be cognizant of how his designs are received by the user, and that he must strive to provide a meaningful experience for those who are not consciously aware of good design.

As participants, we are not suddenly in a progression between exterior/interior space. According to Bacon (1967, p. 5), we are in progression from the moment we rise and begin the day. In fact, states Stephen A. Kliment (1966, pp. 17-18), the buildings we live and work in are in motion with electricity, water, heat and air being just some of the examples.

So, we enter an exterior/interior movement system by progression. And by a means of arrival. At some point in the natural progression must be established an arbitrary disembarking point from wherever participants are arriving. This begins the progression between exterior/interior space. This point will reflect the axis that has been established. A strong direct approach will use the axis directly at the path of movement. A leisurely progression might use the axis simply as a reference point to orient users to the order of progression (Simonds, 1961, p. 123).

It is at this point that one must consciously begin designing the movement system toward the interior. If one is aware early in the progression of direction of movement, movement is anticipated and therefore more natural.

Opportunities for Movement

The needs to be met in a movement system will, of course, depend on the function of the whole design. The needs of an office complex are obviously different than those of a home. Yet there are basic design criteria evident in both.

Of primary importance is the means by which the user is introduced into the progression. Each individual approaches a movement system by some means of transportation, including walking. Once the means are determined, the proper method to introduce the movement system can be identified.

The movement system should strive to make itself felt at the earliest possible opportunity. Especially in the city, the entire progression between exterior/interior space may have to be completed in only the space immediately adjacent to or in front of the building. None the less, the opportunity for a complete progression is always there.

Progression presents many opportunities to the designer. The central movement system, as an axis, provides a direct approach between spaces. It will be used directly to facilitate movement where masses of people are involved. Pushkarev and Zupan (1975, pp. 77-91) discuss ways in which space and flow are related. They provide highly detailed tables and discussion on the space available for pedestrians and the flow characteristics of different size spaces. The parts of the progression that are not directly concerned with movement need to be placed so that they do not cause broken movement.

In Figure 3, a broad, wide path can encourage rapid mass movement, with a narrow path alongside for slower and transition movement. Fast direct access is provided while recognizing, and beginning to provide for, a more leisurely progression and indirect route. Perhaps, in a more urban setting, an additional green buffer, or pavement level change, may be provided to separate pedestrian and vehicular movement. (See Figure 4.)

Mass of the Movement

Movement is not necessarily a totally programable thing. Movement is regulated by the mass, or lack of mass. Ambasz (1972, p. 244) states, "As with fluids the movement of one part affects the movement of the whole." It is extremely difficult to move at a leisurely pace in a rush hour progression. Similarly, it is difficult to move rapidly in a space filled with plants, benches and other enrichment objects.

If necessary, it is possible, and desirable, to provide for all types of movement that an exterior/interior progression might require. If movement between spaces is facilitated, the transition between exterior/interior will be simply a threshold crossed. According to Ambasz (1972, p. 244), "The membrane dividing exterior/interior becomes increasingly tenuous"

Altering Movement

When movement needs are established, the designer must concentrate on directing movement, altering the pace of movement, or providing for the lack of movement (see Figure 5). The direction of movement may be accomplished by enclosure, changes in level, changes in function,

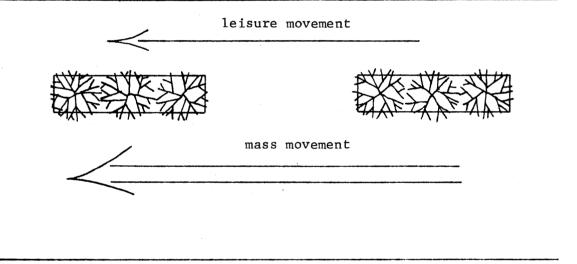


Figure 3. Providing for Individual Movement

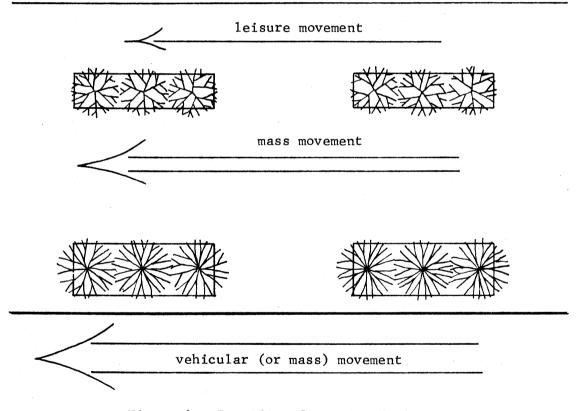


Figure 4. Providing for Individual and Vehicular Movement

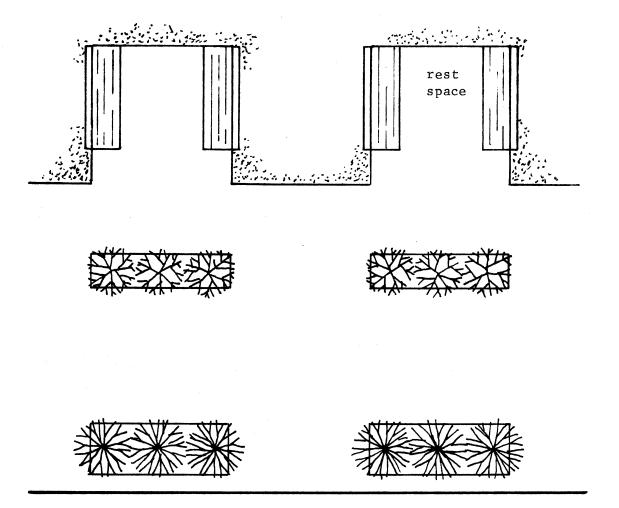


Figure 5. Providing for Lack of Movement

focal points and enrichment objects.

In addition to movement, progression often provides space for rest or play; hence the term "plaza space." Plaza space came about because of a recognized need to show concern for building arrangements and the resulting pedestrian spaces. This in turn led to incentives in building codes permitting more floors above ground level in exchange for space around and under buildings (Pushkarev and Zupan, 1975, p. 18).

Plaza space is now so successful that forecourts to many major and not so major buildings include some type of people space even when located in low density areas. The use such space receives will be a function of the total design.

Plaza space, in terms of exterior/interior progression, is usually the space immediately adjacent to the building. It is here that the greatest opportunity to secure the relationship between exterior/interior exists. Plaza space can become transition space that is a design statement containing both pure exterior and pure interior space.

Enclosure

The first evidence of enclosure must begin in the order preceding the actual enclosure. Evans (1973, p. 353) states that ". . . enclosure provides a scale more closely related to his (man's) human dimensions."

While in progression in the open, one is aware only of nature and the natural order. These things provide a balance, a relating point. When approaching buildings, particularly large ones, people may feel overpowered—small and insignificant. The relationship is not a natural one. If enclosure is felt before actually entering the door,

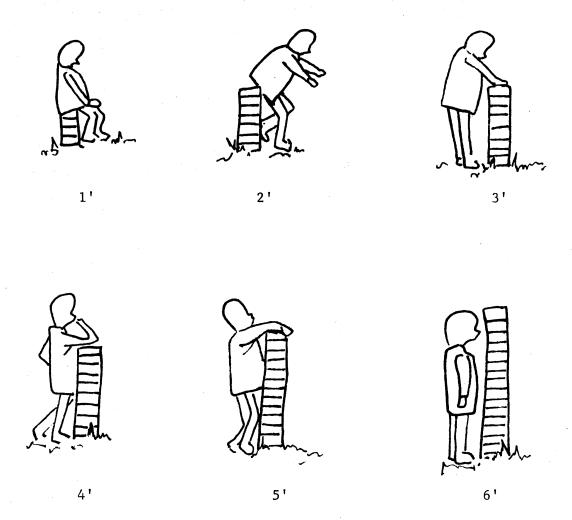
the act of entering will be a natural refinement of the order that preceded it. Enclosure may make its appearance through plants, walls, canopies, screens and other design tools in any combination.

Walls

Walls may vary in design and materials. Plants used as walls in the movement system need be tolerant of traffic, especially inside where available space may be at a minimum. At the same time, thorned or stickered plants need be removed to areas where the likelihood of contact is eliminated -- unless an ominous and impenetrable natural barrier is called for. Walls may be straight, right angled, and direct. They may flow freely and informally in a gracious manner. Walls may be tall and obscuring, or they may be low and inviting for a sunny seat. They may enclose water, plants or people. the space and of the progression will help determine materials and appropriate heights. According to Ashihara (1970, p. 81), walls to two feet tall have little enclosing power. But they function well as seating, dividers, or a relating element. When a wall approaches four feet in height it begins to directly affect the eye and therefore becomes a major enclosing force. It conceals the body while maintaining visual continuity. Taller walls are obscuring and provide a more complete sense of enclosure. (See Figure 6.)

Screens

Screens may perhaps need more attention in exterior use. Inside they have functioned well as light, movable, even accoustical space definers. Screens may function even more effectively outside since



Source: Yoshinobu Ashihara, Exterior Design in Architecture (1970, p. 81).

Figure 6. Wall Heights in Progression

they could be a major means of providing a changeable directive or enclosing element. In addition they may serve as color statements and billboards. Materials for screens might include plants, wood, masonry, plastic and glass, fabric, in any combination.

Changes in Level

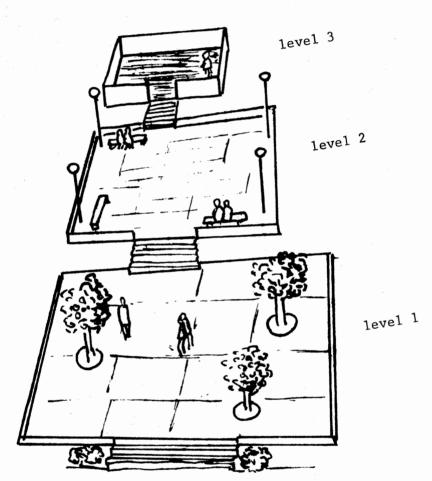
Changes in level are a part of almost any exterior/interior progression, since virtually every building has some step or ramp at or near the transition point. As a person changes levels his whole conception of the approaching space comes into view. Ashihara (1970, p. 107) suggests that if a focal point or other reference object is provided ahead of the viewer, a continuum will be seen throughout. A change in level is also a natural opportunity to introduce a new function in a progression, such as seating. (See Figure 7.)

Enrichment

Enrichment objects in a movement system should be visible, perhaps in glimpses, from several points in the progression. They can then provide focal or reference points that are viewed by all in the progression, and therefore can serve the added purpose of being the element that orients one to the order of the progression (Simonds, p. 128).

Transition Space

As the progression approaches the "tenuous membrane," which divides the exterior and interior, the succeeding order is interior space. Plant materials and other desirable landscape features become



Yoshinobu Ashihara, <u>Exterior Design</u>
<u>in Architecture</u> (1970, p. 83). Source:

Figure 7. Changes in Level

increasingly important, both as relating elements between structure and environment, and as asthetic organizing elements.

The directive abilities of plants increase. The visual appeal of plants is altered from forms in a distance to individual detailed specimens. They become an active rather than passive part of progression.

Through glass, opportunity exists for a pure relationship between exterior/interior—a floating space of plants, free to change with the light (see Figure 8).

It is at this point, too, that the use of proper materials must be considered. Textures, colors, lines, and forms used outside relate to the outside. At some point they must be altered sufficiently so that they begin to show evidence of the next ordered space. That is, coarse textures may become finer, soft earth colors may become more bold and vibrant to reflect those used inside, and lines and forms may become obviously directive as the transition approaches. These design elements should be chosen so that in the transition space they are reflected both inside and out, to help establish a visual continuity that will assist in physical movement through space.

Plants located near glass both inside and outside make a major visual contribution to the relationship between the two spaces. If the user can gain a visual perspective of plant material moving freely into and out of a structure, his movement becomes more natural to a point where the transition is merely a threshold crossed.

A forecourt or building entrance that contains a landscaped atrium or other indoor/outdoor area automatically establishes a mood for movement—of people, plants and light—that facilitates movement.

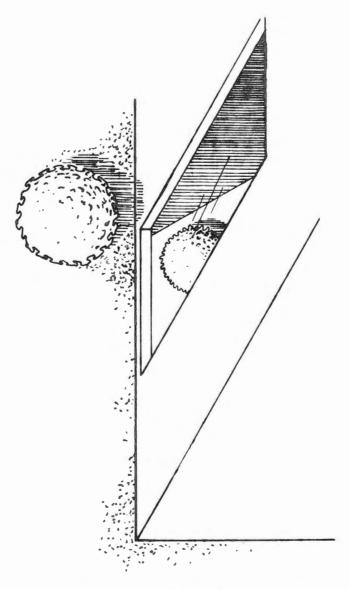


Figure 8. Glass Emits Angle of Sunlight as It Passes Through the Day

The area immediately adjacent to the interior of the entrance takes on the dimension of a prospective high use space. It may function as a reception area, a rest area, waiting area, or multi-use area. It may, with the continued growth of interior landscaping, be a space for plants and people, alive with activities of progression rather than a space for mere thermal transition. At any rate, it is a dispersal point to the rest of the interior and it is here that the greatest need exists for evidence of a continuum of materials used throughout the progression. The relationship may be an elaborate landscape statement, or it may be confined to the simplest—a street tree relating to a similar container plant just inside the doorway.

Design With Interior Plants

Once the transition between exterior/interior space has been made, plant material can take on a different character from that which was evident on the outside. Exterior plants in progression are often a background design tool that helps to passively soften, blend, or accentuate. Inside, plants are most often maintained in containers and become an active feature of the space. Maintenance increases and becomes an almost daily activity. This activity concerning interior plants is largely a result of the fact that these plants are being grown and used outside of their natural habitat—their natural progression. They are expected to grow and look attractive and healthy under other than ideal circumstances, often 'marginal at best.' Care becomes a function of available light, proper water, fertilizer and pest control, all of which must be carried out on a vigorous schedule. Interior plants, then, are most frequently evident in decorative

containers or sunken double pots that facilitate the care required.

An obvious plus to the stepped up maintenance is the mobility of container plants. They may be moved or rearranged easily to facilitate or alter movement. In fact, since light is the most critical element to the maintenance and growth of tropical plants, containers provide for interchangeability so that the plants can be removed for care and look attractive at all times.

Careful selection of plant materials will, in large part, determine the success of the design. Whenever possible, and especially in the entrance area itself, "borderline" plants should be used, that is, plant material which can function seasonally both outside and inside. These types of plants will, of course, have to be carefully selected according to the climatic conditions of an area. They provide a definite plus in the need for an effortless transition since they can be seen both inside and out to give the user a definite interrelationship to draw on. With the controls available for modifying climate on the interior and exterior, transition space might even allow pure exterior plants to function successfully inside. Such is the case in the interior garden of the Ford Foundation building in New York, where Southern Magnolia, unsuited that far north, functions admirably well alongside purely sub-tropical plants as Laurel Figs.

As plant materials move to the interior, containers or planters increase in evidence. These may be designed to provide a complete interior garden with plants sunk below floor level. Often such gardens are located in interior spaces with no physical connection to the exterior. At such a point, the users' memory may be the only tool available to establish the relationship. Skylights, perhaps with a

paving material below, identical to one used outdoors, would make a gentle recalling statement about the relationship between exterior/interior.

If individual containers are used, they should be carefully selected so that the proper relationship between plant and container can be established. At times, containers may be as showy as the plant material. They come in a variety of colors and materials. When the plant is the dominant feature, the container material and color should be chosen so that the container is understated, absorbed into the flooring or wall material.

Generally, when plants are introduced into an existing interior, their proper placement is perhaps best determined by those actively using or working in the space. Many interior plants are not effective barriers to movement. They are easily damaged or affected by too frequent contact and placement should be made to visually, not physically, affect movement. The effective design tool is the mobility of the container plants, coupled with the established movement pattern of persons most closely connected to the movement system of the space involved.

Part of the appeal of interior plants stems from the ability to lend a beautiful living form to what may often be a routine living or working space. Plants on the interior soften, blend, and as outside, help to relate the design into an integrated whole. They may be used singly as an accent or specimen plant that can have all the impact of a fine piece of sculpture. Or, they may be part of an elaborate interior garden that takes those involved into the midst of a tropical forest.

CHAPTER III

SUMMARY AND IMPLICATIONS

The use of interior plant material has become an accepted, widely practiced part of interior design. Through the natural relationships evident in plant materials and other elements involved in exterior/interior design, these spaces can become areas that flow freely between exterior/interior. When materials move easily in a natural, progressive manner, the people participating also move more freely throughout the progression.

All of the spaces involved in the movement system must be considered in terms of the whole progression. Throughout the progression, evidence must be given that helps the participants to move into the next ordered space. When practiced successfully, progression between exterior/interior space is simply a natural experience in movement, the end result of which is a satisfying design experience.

Opportunities for further study include careful examination of the individual elements involved both inside and outside, their relationships, and the resulting transition space and its relationship. In addition, as interior landscaping becomes firmly established as a design discipline, one might consider the expanded use of an indoor/outdoor entry space or entry system which can serve as the major uniting element in exterior/interior landscape architecture.

A SELECTED BIBLIOGRAPHY

- Ambasz, Emilio, ed. <u>Italy: The New Domestic Landscape</u>. New York: The Museum of Modern Art in Collaboration with Centro Di, Florence, 1972.
- Ashihara, Yoshinobu. Exterior Design in Architecture. New York: Van Nostrand Reinhold Co., 1970.
- Bacon, Edmund N. Design of Cities. New York: Viking Press, 1967.
- Evans, Helen Marie. Man the Designer. London: McMillan Press, 1973.
- Graf, A. B. Exotic House Plants. New Jersey: Roehrs Co., 1973.
- Kliment, Stephen A. "The Architecture of Motion and the Motion of Architecture." Architectural and Engineering News (August, 1966), Vol. 8, No. 8, pp. 17-24.
- McHarg, Ian. <u>Design With Nature</u>. Garden City, N. Y.: The Natural History Press, 1969.
- Orans, Muriel. Houseplants and Indoor Landscaping. Illinois: Barrington Press, A. B. Morse Countryside Publication, 1973.
- Pushkarev, Boris, and Zupan, Jeffery M. <u>Urban Space for Pedestrians</u>. Cambridge, Mass.: M.I.T. Press, 1975.
- Simonds, John Ormsbee. Landscape Architecture: New York: F. W. Dodge Corp., 1961.

VITA

William John Beitz

Candidate for the Degree of

Master of Science

Thesis: PROGRESSION AS AN ELEMENT IN EXTERIOR/INTERIOR LANDSCAPE ARCHITECTURE

Major Field: Housing, Design and Consumer Resources

Biographical:

Personal Data: Born in Piscataway, New Jersey, May 12, 1950, the son of Clemenz and Joyce Beitz.

Education: Graduated from Piscataway High School, Piscataway, New Jersey, in June, 1968. Received Bachelor of Science degree in Agricultural Science from Oklahoma State University in May, 1973. Completed requirements for the Master of Science degree in May, 1977.

Professional Experience: Designer and contractor for Steve's Landscape Service, Whitehouse Station, New Jersey, 1973-1975. Owner/operator of William J. Beitz Associates, Landscape Architects, Stillwater, Oklahoma, 1976-present.