

A PHILOSOPHICAL DESIGN APPROACH
FOR AN ALTERNATIVE CONCEPT FOR THE URBAN PARKING GARAGE

By

LEUNG YEN CHOW

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Department of ARCHITECTURE

The University of British Columbia
Vancouver, Canada

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ABSTRACT

This thesis proposes an expanded conceptualization of traditional parking garages. It is of contemporary design practice to separate the activity of parking from that of adjacent buildings and places. Doing so results in parking structures being exclusive and without positive urban context. As a consequence, barren and often, hostile environs are created within these garages. The thesis identifies this practice as a contributor to a discontinuity of urban movement and activity. The thesis also identifies the contradictory nature and ineffectiveness of facade decoration.

Through four propositions developed from a philosophical design approach, which draws primarily from the work of Heidegger, the thesis proposes to engage human awareness so as to supplement the utilitarian nature of the traditional garage concept. It is suggested that doing so allows a positive environmental consciousness, and that active user participation can be elicited. It is also suggested that these propositions can potentially promote an integrity of construction and detailing, and that by overcoming the barren and hostile environs, a sense of civility and security can elevate the garage to a state of integrated function. Integrating the function of garages with those of other buildings can

lead to a holistic use of site by facilitating urban continuity and, an architecture for garages richer in meaning than facade decoration.

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INTRODUCTION

The doing of architecture is predicated on the premise that architecture is to address both the physical and psychological needs of human beings. Detail, finish, light, mood, metaphor, and symbolism must be considered in conjunction with practical requirements. In this way, the usability of a building can be both subjective and objective simultaneously. It is this coexistence of the subjective/objective which distances architecture from both construction and pure art. This intrinsic state of architecture though difficult to achieve possesses one identifiable goal: the construction of a building for a practical purpose, although a building rich in meaning so as to engage the imagination of anyone who might use it. For most urban building typologies, this is so. In view of this, it is odd that there exists one very basic and ubiquitous building typology in which this is not the case. That building type is the garage.

Parking garages are necessary buildings in urban areas. The reason is twofold: first, the vast majority of people commute by automobile which creates a high demand for parking space, and two, the stacking of parking layers is the most economically attractive to investors due to high land prices. Thus, to maximize the return on investment and to

accommodate the demand for parking, multi-storey parking structures have proliferated. Economic criteria remains the dominant influence and the standardization of form, materials, and plan in their construction has ensued. Consequently, many garages look and function alike and their concept is one associated only with storage.

These economic storage buildings are designed for maximum space efficiency. Being thus, garages do not attend to the psychological needs of the people using them and any consideration beyond the scope of life support and basic safety are not priorities. In garages, the extent to which their users can participate is limited to following directional signs to parking spaces.

This thesis proposes to improve the quality of garage user participation. To attempt this requires that architectural deliberations be granted to garages in the same intensity as they would be to other building typologies. This intensity could result in richer interpretations of garages and could stimulate a higher level of urban awareness for their users. Garages are worthy of such deliberations because they are public places that should serve as transitory connections between streets and the structures that garages serve.

The thesis contests the priority set on pragmatism in garage design. Pragmatism, by definition, is not concerned with theory or ideas to which something like symbolism

belongs. Yet the seizing of pragmatism as *the* priority in garage design has unwittingly resulted in a very symbolic typology by default; contemporary garages symbolize structures devoid of interest whose urban contribution is limited to being ancillary storage bins for cars. The result has been what the thesis refers to as a *fracture of urban continuity*. The thesis suggests that this as an unacceptable condition and proposes an alternate way of conceptualizing garages.

A philosophical design approach which draws primarily from the work of Martin Heidegger is developed. This approach uses human experience to set in motion a building/user dialogue. Heidegger's phenomenological insights have already informed various architectural theorists such as Kenneth Frampton, and have influenced urban planning theorists such as Kevin Lynch, and artists such as Robert Irwin. Heidegger's views have also influenced the practicing profession as is evident in the current work of Phau/Jones - Holt/Hinshaw, and as can be seen in the *haptic* architecture of Charles Moore. Heidegger's sensitivity of *thinking* about *building*, and how *technology* is engaged in a phenomenal relationship under the domain of *dwelling* has provided a general philosophical position from which various architects, artists, and other individuals have based their designs of built forms. As Heidegger's insights offer a general philosophy from which the design of *any* building can be conceptualized, this thesis has adopted his

philosophy as the starting point for an alternative conceptualization of the urban parking garage.

The position recognizes the importance and necessity of practicality with regards to garages, but puts emphasis on the quality of human experience. This allows the incorporation of parking into a higher level of participation in which an environmental consciousness and an urban connection can be made in a positive way. Physical elements such as site and climate, and non-physical components such as history (indicating traditional use of site) and symbolism, must interact cohesively to establish a sense of permanence for the garage so that it can serve as a place of transition and thus facilitate urban continuity. It is not the intent of the thesis to glorify the car, but to integrate the experience of the driver into architectural strategies - strategies that can supplement the process of parking. With these supplements, the garage typology can do more than merely provide ancillary concrete buildings for the storing of cars.

From the philosophical position, the thesis generates propositions that, although not overtly prescriptive, are generative. They do not prescribe an exacting solution, but rather, they embody architectural goals which are developed from Heidegger's philosophy. They also reflect the views of various architects, theorists, and artists who have applied Heidegger's philosophy to built forms. As such, the propositions involve

theory concerning human experience as a *whole* phenomenon. Being so, they belong to a realm in which the subjective is the necessary compliment for the objective.

Most literature on parking structures is of a practical ilk, dealing with program, engineering, and maintenance. This has been discussed in the volumes of literature concerning practical requirements - stall design, turning radii, clearances, atmospheric control, and the economics of their construction, and will not be repeated here. Alone, they cannot bring about an architecture of garages; they require additional attributes that carry meaning and interpretation beyond *operation*. There is a scarcity of work addressing such attributes hence, the contribution of this thesis.

The spirit of the usage of *place* in this thesis is meant to be associated with positive dialogue and a conscious environmental awareness. Garages are in fact, "places," but ones which currently possess negative association.

Except where indicated, the illustrations within the thesis are by the author.

Chapter One

AUTOMOBILES AND TRADITIONAL GARAGES: URBAN IMPACT AND REACTION

The opening chapter is divided into four major parts: automobiles, utility as a design priority, urban impact, and community reaction.

Automobiles

To understand the necessity and importance of the garage, a brief discussion of the automobile is useful.

Although the birthplace of the automobile is Europe, by the late twenties, there were over twenty six million cars registered in the United States, one for nearly every five people.¹ During this time eighty percent of the world's motorized vehicles were in the U.S., largely because of Henry Ford's assembly line technique of automobile production. In 1915 Ford's Highland Park factory (Detroit) could produce one thousand Model Ts per day at a cost to the consumer of a modest \$360.² By the mid-to-late twenties, fifteen million Ford Model T's had been built, one every ten seconds from the assembly line and in 1926 were

selling for \$290.³ As early as the first quarter of this century, cars became so ubiquitous that in 1937 Robert and Helen Lynd would write in their *Middletown in Transition*, "ownership of an automobile has now reached the point of being an essential part of normal living."⁴

In this regard, the role of the automobile has not changed for sixty years. For the average person, the automobile represents the largest monetary investment second only to the cost of accommodation. The proliferation of the car since its advent has spurred the construction of interstate highway systems, increasing the magnitude of any individual's mobility. The car is the vehicle from which the vast majority of the population experience their environment. Henri LeFebvre states:

"traffic circulation is one of the main functions of a society and, as such, involves the priority of parking spaces, adequate streets and roadways...it is a fact that for many people the car is perhaps the most substantial part of their living conditions."⁵

With the advent of private automobiles came a fundamentally different mode of environmental perception. Accompanied by a new dimension of personal independence, the geographic horizons of any individual using a car were increased dramatically. No

longer were one's social contacts restricted to a single neighborhood, and this independence from transit schedules meant new routes and adventure. In this way, its practical use has become completely integrated into contemporary living and there can be no denying the necessity for automobiles in North American lifestyles.

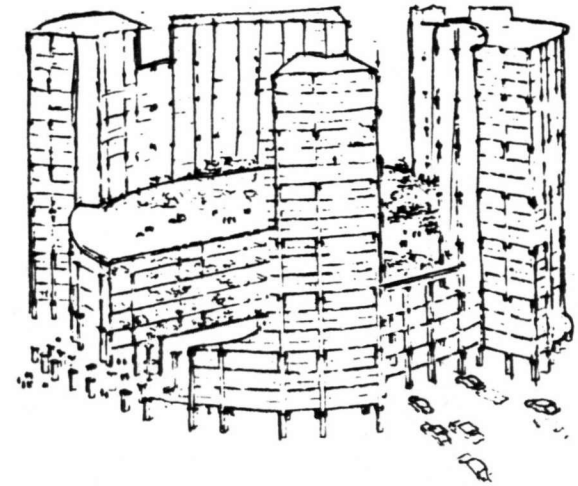
With the advantages grew disadvantages. The increasing number of cars on roadways and city streets led to traffic congestion and pollution. Traditional neighborhoods were fractured and lost by a frenzied momentum of indiscriminate road construction during the Urban Renewal of the fifties and sixties. It was not that these traditional neighborhoods were of no use; the demand for unrestricted mobility and the euphoric liberative state of mind of which the car provided, simply outweighed any associated drawbacks. As a result, indiscriminate road construction was tolerated because of the expanded commuting range made possible by the car. A consequence of this expanded range was the deterioration of life in city cores. Suburban shopping centers proliferated, drawing business and activity away from the downtown sector.

"The elevated superhighway systems, the most important legacy of visionary city planners to the postwar built environment, were conceived initially as a solution to traffic congestion on local roads and urban streets, though many highways and freeways produced adverse economic effects

on the quality of life in bypassed neighborhoods and small town centers. Many superhighway systems built in the late forties, fifties, and sixties are now considered to have had a dehumanizing effect, a sentiment that has catalyzed a resurgence of interest in the random, small-scale vernacular architecture on countless small-town strips, and roadsides."⁶

In architectural circles, Louis Kahn envisioned entire cities whose form and organization were dictated by the circulation of automobiles and submitted a design for Philadelphia indicating such. I suspect his intention was to create efficient movement patterns, but one could also misinterpret his design as a car-as-master concession; an environment where the people in cities are subordinated to efficient traffic flow. Other architects of this futuristic vision (Frank Lloyd Wright, Le Corbusier, and Richard Neutra for example), like Kahn, envisioned entire cities and the utopian planning of transportation systems in their respective designs, *Project of City of the Future*, 1925, *Contemporary City for Three Million People*, 1921-22, and *Rush City Reformed*, 1920s-30s. The scale of these projects is staggering by contemporary standards and the garage systems of these designs appear no more human than those of traditional design.

Negative associations did not stem from only the use of the automobile; maintenance has been an inconvenience for car owners since the car's inception into society. Fuels and



Kahn's proposal for an automobile city, Philadelphia. Source: Architectural Review, August, 1960: 135.

lubricants are messy necessities, adding to the perception that the maintenance of a car is something dirty, involving dripping oil and emitting noxious fumes. Further, to anyone not mechanically inclined, the car is something mysterious, to be expensively repaired only by experts. Body repair expense is a major factor in exorbitant automobile insurance premiums.

After an explosive emergence into society, "the wholehearted approval and celebration of the motorcar gave way to more sober, critical, and negative assessments of its impact."⁷

I suspect that one resulting phenomenon of these negative associations is that the use of an automobile is accepted as a necessary condition, but the automobile itself is regarded as a space and money consuming object, often dangerous, and to be hidden in pedestrian sensitive areas. I also suspect it is these negative associations which contribute to the practical design of garages.

Utility as the Design Priority in Practical Garages

North American garages up to the early Seventies reflected the negative associations mentioned above. Conceived as buildings to store necessary but cumbersome objects, their architectural expression and execution were sterile. Their facades were insensitive to

neighborhood context and their interiors barren. This tendency has persisted reflecting our recognition of only the practical uses of garages and cars. As a consequence of a society whose tendency is to measure an object by its usefulness, utility has been a strong influence in the design of parking structures. To propose an alternate way of conceptualizing garages, it is first necessary to discuss the impact brought on by the shortcomings of traditional garage design.

Utility often precludes amenity. Such is the case with traditional parking structures, which are depressing and which suppress any interesting dialogue between garages and their users. Space within them is maximized for economic efficiency, and aside from affording basic life support and safety, little is provided. This is not to condemn pragmatic design; garages must store cars and we clearly require the basics for life support and safety. But with these as the only criteria in design, the idea of a positive environmental consciousness becomes impotent, and the possibility for an interesting interpretation of the building is suppressed. Moreover, some safety concerns (fire regulations, for example) are so prioritized that the already bleak character of garage environments can change from lifeless to hostile. Completely enclosed concrete stairwells (a response to fire codes), many with narrow passage, are perceived as potentially dangerous areas for personal safety and are not welcoming.

As storage places, garages are dissociated with any specific place. That is, most parkades look and function alike giving them the characteristic of being interchangeable and neutral. This is anti-architectural according to a philosophical assumption which understands architecture to be the revelation of *place*, and which implies some degree of uniqueness brought about by a surrounding context. A basic premise of architecture is to facilitate a dialogue between person and building, by response to site, and by using procession, symbolism, interpretation, deliberation, and civility. A further assumption of architecture can be thus stated: architecture's innate quality is to elicit participation so that people may interact with their immediate environment without being completely separated from their other urban or rural surroundings. In garages, this separation is blatant and quality of user participation has been reduced to following directional signage. The result is the experience of exclusion, a feeling that garages seem lacking. Rudolf Arnheim provides an accurate explanation:

"...the environment is complete without him, nothing refers to him, needs him, calls him, or responds to him. This lack of external definition destroys the internal sense of identity, because a person defines the nature of his own being largely by his place in a network of personal relations."⁸

Arnheim describes this general condition as *empty* and *forlorn*. The parking garage at Sun Wah Market in Vancouver's Chinatown has this emptiness. The parking is located above the street on levels five through eight. The lack of an exterior pedestrian access to the parking levels clearly separates the driver from street level activity. Access is permitted through interior stairs and elevators only. This condition of *abandonment* is a consequence of excluding the users from the scheme of events, or of including the users only to the point where their actions are completely determined by a preconceived intention, that is, parking. At this point, the users are *processed* by an operation, the operation being "performed in a specified sequence and in accordance with specific rules."⁹ With this processing, Robert Yudell states that in such instance, the user "is now the object of an operation, not the subject of an action."¹⁰



A sense of abandonment at Sun Wah Market, Chinatown, Vancouver.

A condition of contemporary society is to believe that garages are where we rid ourselves of cars, and as such these storage buildings require no amenities. This wholesale dismissal corresponds to Oswald Spengler's second necessary phase of life in civilization, a phase where creativity is given up for the organization and rigid processes of a mechanized dictum. Mumford, assessing Spengler's "universal" explanation, refutes its correctness:

"Those who took Spengler's thesis seriously - and many who never heard of it accepted it in practice - were in effect preparing to commit suicide;

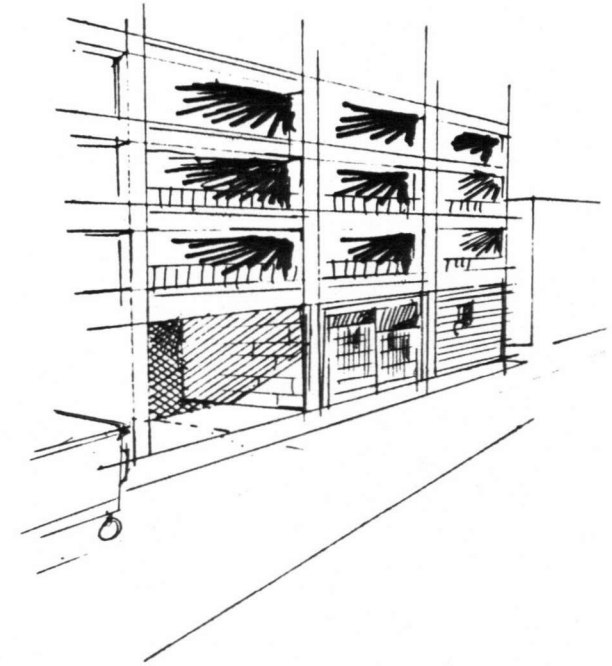
for they were transferring meaning and value to only one part of the environment, to only one process and function, to only one aspect of the human personality. That part, [pragmatic] no matter how vastly one magnifies it or energizes it, can never become an adequate substitute for the whole. If technical achievements were alone capable of absorbing human interest and manifesting creativity, if the machine were in fact the only reputable source of value for modern man, that would mean that his biological and social and personal activities would all shrink and shrivel."¹¹

It is of human nature to resist standardization which suppresses the potential for personal interpretation. Utility, with the maximization of efficiency as a premise, standardizes procedures and means. Utility alone therefore, is in conflict with the very essence of human nature. In architecture this pragmatic *end* is de-humanizing and opposes the premise of architecture whose end is to attend to the nature of the human being. Hence, utility has an originary lack and as Hannah Arendt has suggested in *The Human Condition*, "utility established as meaning generates meaninglessness."¹² The garage, designed in this way can only be perceived as something usable, temporary, and ancillary to the point

of exclusion:

"As Adorno has indicated, once under these demands of pure functionality, technology can no longer be experienced, only operated - resulting in our gestures becoming brutal and precise, without deliberation or civility...Irregular sites are flattened by the bulldozer, eliminating all traces of the particular characteristics of the place, in order that it may efficiently accommodate a maximized volume of universal space."¹³

To avoid this undesirable state of architecture, whose equivalent in physics might be entropy zero, a supplement for utility is needed. This supplement in architecture can be attained by the use of metaphor, history, analogy, and expanded program, all of which place *practical use* in a milieu of richer interpretations. This supplement is not inessential, or superfluous: it is the necessary compliment to practicality in buildings because buildings, being to the service of human beings, must accommodate the human will to resist universal standardization. In architecture, this concept of supplement is the means by which the idea of the building itself is appropriated, read, which in turn establishes *significance* and the feeling of place. The seemingly exclusive roles of art and utility are in fact, symbiotic in architecture because architecture is to embody shelter in the widest sense: it protects us from the elements (physical refuge), but also gives us a reading filled



Alley entrance, stained canister doors, garbage dumpster, dark recesses, all contribute to brutal ambience at U.S. Bank garage, 1st & Cherry, Seattle.

with personal identity and meaning that can also provide us with psychological sanctuary and imaginative journey. Implicitly, an architecture of the garage is only possible if its design extends beyond the precise measure of economic efficiency.

Impact on Urban Continuity

The need for parking space has resulted in the establishment of the parking garage as a major urban building type. However, to meet the enormous demand for storage space, investors have chosen to develop parking garages with maximized efficiency and economy. The ensuing impact that traditional parking garages have had on the city environment can be described as a *fracturing of urban continuity*. Urban areas are networks of destinations and connections - connections where transition between destinations occur. And although the destinations themselves may have quite differing characteristics, the context in which they are situated and connected to each other, possesses a felt and understandable coherence. The context or coherence, might be qualified as *global, holistic*, or at a more urban level, *civic*. These destinations and connections are of differing scales, ranging from corridors between rooms, pathways between buildings, and streets between neighborhoods. In many cases, the connections

are simply the overlapping zones of adjacent places. Lynch describes this phenomenon:

[City] "elements are connected through an immense and intricate network, which can be understood only as a series of overlapping local systems, never rigidly or instantaneously linked, and yet part of a fabric without edges. Each part has a history and a context, and that history and context shift as we move from part to part. In a peculiar way, each part contains information about its local context, and thus, by extension, about the whole."¹⁴

Parking garages as they have been designed traditionally interrupt the *continuum* of which Lynch's passage implicitly refers. The *overlap* is non-existent. We do not enter garages for the explicit *end* of being processed into a parking spot. True, this is part of the inherent *function* of garages, but our goal or intended destination is not a oil-stained patch of concrete 2.4m wide by 5.5m long bounded by painted lines. The destination may be an office, apartment, shopping center, a medical facility. As people move towards their intended destination, I suggest a mental image is created of what the place will look like upon arriving; and yet, the traditional design strategy for the garage inevitably causes an interruption of this image. Instead of arriving at the place previously visualized, arrival occurs via an ancillary concrete maze.

To illustrate the counterpoint, consider a vestibule. A vestibule is an integral part of a building, that is, the vestibule can introduce the building to anyone who walks through it by revealing materials, construction, and history. Thus, by walking through a vestibule, a visitor has already embarked upon his destination. If designed sensitively, vestibules can contain what Lynch terms is "information about its local context, and thus, by extension, about the whole." That is, the vestibule is an architectural connection which *joins the sidewalk with the building*; its integrity is born from its role as a transition area within a larger continuum, that is, the immediate locale involving the street system and the building. Parkades and garages are currently devoid of this architectural joining as they are spaces *deliberately separated* from the buildings they serve. They are designed as ancillary buildings with no overlapping qualities that would give to them a transitional capacity; *they do not respond to site*. And yet, they are the *first* spaces a commuter by car will experience when arriving at a destination.

A sensitive response to site can achieve a number of qualities: one, it can root the garage to *place*; two, it can create a specific sense of place for the car and driver; three, it can integrate the activities of the garage with those of other buildings on the site; and four, it can reveal to the driver the organization of the site, and where important features may be. An interesting example of this is Fraser Parkade on UBC campus. The garage is situated in

a stand of evergreens and faces the gardens of the Asian Center. Respecting the lush vegetation, the garage has a low profile, emphasized by horizontal bands of concrete, stretching its width. Moreover, these bands have shelves on them where vegetation is allowed to hang over the face of the concrete. One of these bands is a pedestrian walkway which connects the second level of parking with the West Mall. During the day, its low profile and vegetated setting *complement* the dark shadow recesses characteristic to garage facades during the day. During the evening, the fluorescent glow filtering through the stand of trees gives the place a sense of warmth; it is somewhat reminiscent of the glow emitted from lumber mills of mountainous regions, or hydro-electric dams along the Columbia River in the dead of night. Fluorescent lighting and daytime dark shadows are two characteristics that make city garages uninviting, but by responding to site, Fraser Parkade has taken full advantage of them.



Sensitive response to site has taken full advantage of shadows and fluorescent lighting, two otherwise negative garage characteristics, Fraser Parkade, UBC, Vancouver.

In a society that considers parking a necessary inconvenience, it is easy to ignore the considerable presence of urban parking garages. Therefore, a brief statistical diversion is in order. In Vancouver, a 1984 survey indicates that 50 per cent of all downtown commuters use cars during peak hours.¹⁵ The same survey indicates that transit was not keeping pace with demand, and forecasts for the effect that the Light Rail Transit system will have, indicated still, a deficiency in transit supply. Thus, as traffic volumes increase,

the increase will be in the number of automobiles circulating in the core. Curb space is heavily used during the day and saturated during the evening. The modal split of the transit/automobile ratio increases during the evening in favor of the car (approaching 25/75), and since in several locations curb occupancy reaches 100 per cent,¹⁶ the remaining cars are forced to use parkades. However, there is a more important statistic. In the survey, a parking inventory was performed whose numbers have great implication. In the survey zone (comprised chiefly of the financial core, Gastown, Chinatown, Robsonstrasse, and immediate peripheral areas) a count of 43387 parking spaces was recorded.¹⁷ Of these, 23873 spaces were spaces in parkades. Using a conservative allowance of 325¹⁸ square feet per automobile (due to garage efficiency), the result is close to 7.6 million square feet of parking - which does not include curb or surface lot parking. This figure, compared to the 16.5 million square feet of office/commercial space, results in a staggering 32 per cent of that built space being occupied by parking - 32 per cent delegated to an area of non-descript and non-transitional space in an area where urban vitality is perceived to be most intense. These figures indicate the importance of more deliberating design. Receptive and integrated functions must be designed into parkades because the parking garage is where a natural transition should take place between street and building. And as the numbers indicate, their potential to strengthen or interrupt the continuity and activity of the urban environment cannot be ignored.

Community and Architectural Reaction to Practical Parking Garages

Architectural development of the garage has been slow to evolve for three major reasons: the post war boom, the persistence of the negative or utilitarian associations with the car in the minds of planners and the public, and the oversight of the garage as a potential urban contributor.

Construction of parking garages increased sharply during the years following World War II. Optimism and increased consumer purchasing power led to a high production rate of automobiles creating a large demand for parking space within cities. To accommodate the growing demand, simple concrete parkades afforded investors a means by which to capitalize on parking revenue. Garage design became an exercise in maximizing spatial and economic efficiency. It is apparent that the demand for parking space took precedence over any concern for what the building looked like and what impact it would have on its surrounding areas.

Another reason for the slow response to the architectural development of garages is the "gradual [my emphasis] rise of the automobile as a respectable cultural by-product [that] has been quietly happening for over a century,"¹⁹ as observed by Angelo Tito Anselmi, contributor to *Automobile and Culture*. The negative, sober assessments of the early

impact of the automobile have had a tenacious influence on planners and many architects. Ebenezer Howard's Garden Cities clearly subordinate the activity of motorists, much like Radburn does with its separation of the car from the pedestrian zones. Despite the necessity of and the benefits derived from the automobile, the inconvenience of its storage and maintenance has left a negative impression that has rarely motivated an architectural response to the development of garages.

Perhaps a more important reason for a slow response to the garage is that its potential for urban contribution has been overlooked. This has allowed the construction of generic and bleak garages to proliferate. In response, (due partly to the recognized necessity of the car in North American lifestyles), a growing number of communities are exercising ordinances which govern the contextual fit of garages, communities of which New Haven, Connecticut is the probable leader in this regard. The philosophy of New Haven City Council has been to *encourage* high-style garage design and construction in the city core. Their rationale assumes that providing attractive and accessible parking space downtown will draw commuters into the core, revitalizing it by increasing shopping and entertainment activity.²⁰ What is important from their philosophy is that it includes the garage as a contributor to vital urban activity.

The momentum brought about by a more sensitive garage context has had an encouraging effect. At a symposium at the University of Texas at Austin (April, 1986) a selective group of architects recognized the need to address the design of garages. Among the architects were Robert Stern, Sinclair Black, and Elizabeth Plater-Zyberk. They were all in agreement: "The parking garage has to cease being a minimal function building."²¹ Architects Kevin Roche, Stanley Tigerman, and HKS Architects, realizing the potential of garages, have addressed context and have explored ways of making the typology of garages recognizable while acknowledging their visual impact. Of these, Tigerman's is the most literal in metaphor; the facade of his 60 East Lake Street Garage in Chicago resembles the grill of a Rolls Royce, complete with hood ornament. A definition of the function and concept of the garage itself has not been the impetus; the issue with which the architectural practicing profession seems more concerned is *packaging*, and what it is to look like.

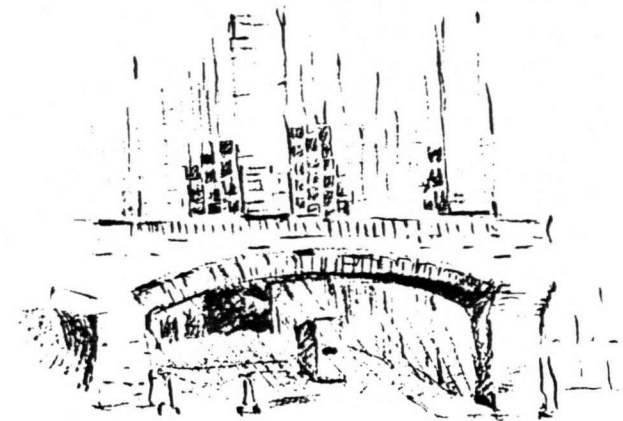
On this point, the profession has been split and three distinct directions have emerged in the construction of garages. One strategy is to make the garage look like some other type of building with only the entrance to indicate its use. A second strategy is to make the garage look like a place to park a car while at the same time dignifying its banality. And yet another strategy is to mix uses. All are attempts to beautify, and perhaps the



Tigerman's Rolls Royce metaphor, 60 East Lake Street, Chicago. Source: Progressive Architecture, November, 1987: 109.

latter two are more honest, but neither puts emphasis on the fact that these structures ought to be designed for the arrival of people who use cars.

Current architectural strategies for parking garages can be categorized as: one, facade decoration and two, the mixed-use concept. Facade decoration came as a response to the criticism of garages as *ugly*. It is the strategy adopted by New Haven, in response to its desire that a garage not negatively stick out in a setting of offices, historic areas, and waterfronts. Although a step towards sensitive design, facade decoration has been criticized as being "window dressing" by Clovis Heimsath, author of *Behavioral Architecture* and is suspect for two distinct reasons: one, facadism does not alter the inner workings of garages and can be thus recognized for what it is, and secondly, decoration approaches contradiction on structures whose design concept is pragmatic. On decorated garage facades, a visual effect is fabricated so that the building appears to *belong*, but its internal activity is disassociated with the building's outer appearance, breaking the integrity between activity and expression. The parking garage at 160 Water Street in Vancouver's Gastown district is such an example. Arched brick-work on the entrances and pilasters are used in an effort to blend the facade of the garage with the historic buildings in the area. The interior is much the same as any other standard garage. This is where the problem occurs: the facade is clearly an attempt to hide the presence of



Facade decoration. 160 Water Street, Vancouver.

a garage. Despite the effort, the garage remains plainly recognizable (as it must do), and the perception of it remains a perception closely associated with utility. As a result, the facade becomes dissociated with the internal activity of the garage and its integrity lies solely in its decorative capacity.

The strategy of mixing uses has provided a means to recover more return on investment for garage owners by supplementing parking revenue with other leasing revenue (office space, retail, etc.). This strategy only camouflages the existence of garages. That is, by limiting the volume of parking and mixing in other uses, the idea of automobile storage becomes less obvious. Unlike the facade decoration of parkades, facade treatment in the case of mixed-use carries more integrity simply because the facade detailing can add to the interpretation of what some of the activities within the building may be. Thus, the building can be more contextual via a more honest relation to other buildings.

Both categories, facade decoration and mixed-use, do not alter the traditional concept of the garage. Even within mixed-use structures, the garage part of the building is conceived as storage space. Herein lies the weakness of most garages - their initial concept. Storage as *the* priority fails as a concept for garages for two distinct reasons: *people occupy* these buildings, indicating the need for amenities and, exclusively pragmatic garages interrupt the continuum of urban activity and movement. A major misconception

is the thought that garages and parkades serve only to store automobiles. These limited assumptions can only lead to an increasing number of problematic garages and with them, an increase in the interruption of the continuum Lynch describes. A shift is needed: a shift in architectural thinking that includes people and human participation in the concept of garages. As the parking garage has asserted itself as a major urban building typology, an alternate way of conceptualizing garages is needed.

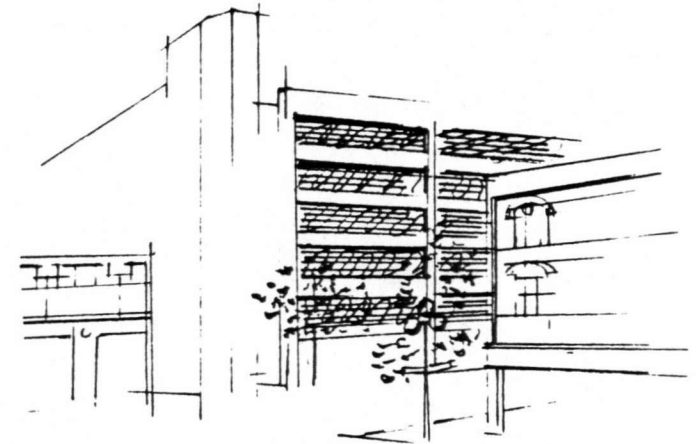
"In potential, the access system is a prime piece of educational equipment. It enlarges an individual's reach, but in addition the act of moving through a city can in itself be an enlightenment. Taking advantage of that possibility means opening up the transport system,...treating it seriously as an educational opportunity. Travel can be a pleasure, if we pay attention to the human experience: the visual sequences, the opportunities to learn..."²²

Chapter Two

EXPANDING THE CONCEPT OF GARAGES

Circulation and storage are intrinsic to garages, but an approach that synthesizes these characteristics with other simultaneous needs should be explored. The need to explore such an approach is twofold: one, the physical mass and size of parking garages cannot be ignored, and this precludes any immediate dismissal of aesthetics and two, using pragmatism as the only motive to accommodate cars severely limits the relationship that can occur between buildings and visitors and is disrespectful to the people who arrive by cars. Further, according to Parking Market Research Company, 8.5 billion dollars will be spent in the U.S. between 1986 and 1989 on garage design and construction.¹ This projection, that does not include land acquisitions, clearly establishes garages as major urban buildings. Moreover, as suggested earlier, insensitive design is less tolerated than before, indicating that parking structures can no longer be designed as generic storage places for cars.

To break away from this *neutrality*, garage design strategy should be altered to incorporate the human experience and not only the service of cars. If altered, concepts such as arrival

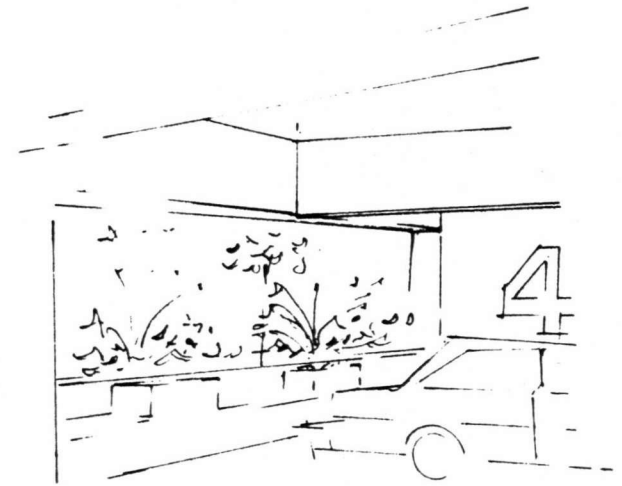


Civic scale necessitates aesthetic consideration, U.S. Bank garage, 1st & Cherry, Seattle.

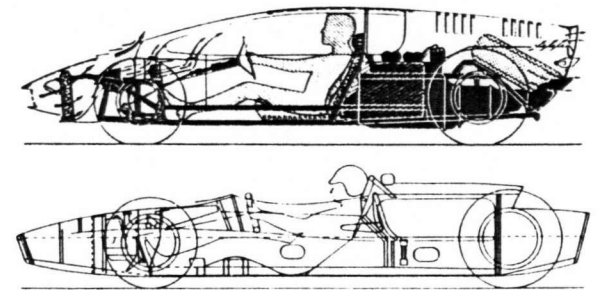
and departure, issues such as orientation and detailing and goals such as transition and reception make themselves apparent. No doubt intuitively, people recognize that some parking garages address these variables with more positive results than others. At Oakridge Center in Vancouver for example, light wells and planters are used in conjunction with white ceiling paint in the upper level parkade. This gives the parking area a lighter and brighter feel. The entrance to the mall at this level is in direct sight from most points within the parkade, and the north and south facades are completely open, allowing natural light to spill in either end.

To fully appreciate the possibility of an alternate way of conceptualizing garages, we should first recognize the essence of the car/driver symbiosis; it is the *movement of a human being* using a mechanical means rather than his/her own two legs for locomotion. That is, it is a person mechanically mobilized that is the essence of a moving automobile. Cars moving through garages are not merely machines circulating in a structure - they are *operated by people* who are engaged in perceiving their surroundings while arriving at their destination.

An expanded concept for garages is twofold and addresses the needs of drivers and passengers. The first component is concerned with the protective tendency owners display about their cars; cars are sometimes held as *treasured objects* and their owners



Surprising detail and civility with light wells complemented by greenery is found in the upper covered parking area at Oakridge Center, Vancouver.



The essence of moving cars; humans using mechanical means. Source: J. Fenton, Vehicle Body Layout & Analysis, 1980: 32.

would like a *decent* or *good* place to display or protect their investment. The second is more general than the first and deals with the quality of driver/passenger participation that is possible during the process of parking; the emphasis is on enhancing awareness of place, time, and purpose.

Treasured Objects and the Expression of Personal Identity

Although the second aspect of the expanded concept is wider in scope than the first, it is beneficial to first discuss the car, as it is the object for which traditional garages have been designed.

As mentioned earlier, the euphoria brought on by the advent of the automobile gave way to skepticism. Contrary to the skeptics were those who assessed the car as a liberative device. "Because it offered instant mobility and possible adventure, the car symbolized a *freedom* - political, social, cultural, and economic - that had been cramped and threatened by war and economic deprivation."² That is, in the post war years, the mobility, expression, confidence, and social gregariousness that the car provided catalyzed a regal picture of cars. Those who held their cars in this esteem, sought places where they could partake in a range of activities that did not separate them from their cars.

In response, the fifties and sixties saw the emergence of strip architecture as the car tenaciously pervaded North American lifestyles. The strip is where a mix of people can go and "allows almost complete freedom of conduct and dress."³ The strip is where the expression of identity became so prominent; the way a car was driven, worked on, decorated, maintained, and what model it may have been, all expressed an intimate part of its owner's identity. Henri Lefebvre described the automobile as "the sum of everyday compulsions," and would write in 1971:

"...the practical significance of the motor-car, as an instrument of road communication and transport, is only part of its social significance.. This highly privileged object has a second, intenser significance, more ambiguous than the first, real and symbolic...a status symbol, it stands for comfort, power, authority and speed, it is *consumed as a sign* in addition to its practical use, it is something magic, a denizen from the land of make-believe."⁴

As treasured objects expressing personal identities, the car gave rise to concern for its storage place. The more integrated the parking was to a place, the more popular it was.

J.B. Jackson in 1970 speculated on this phenomenon:

"The chief reason for the popularity of the strip, however, is that it is entirely adjusted to the automobile; it does not try to separate the automobile from its driver."⁵

Although Jackson's passage references the strip, his reasoning pinpoints the major cause of the reluctance to use garages; garages are clearly separated from the buildings they serve. Consequently, a physical and psychological separation occurs when commuters leave the garage for their intended activity. The psychological separation occurs because no other activity save parking happens in garages and thus, garage users are alienated from their relation to the city. Conversely, parking on the street occurs within a milieu of activities; other people are constantly in motion - by foot, car, and assorted other modes; different buildings with different purposes set against a context of landscape and changing places elicit a collage of thoughts and emotions. Here people can feel the vitality of their personal identity and how they exist in a network of urban relations. They feel connected:

"It is characteristic of this generation to use not only the environment to create its identity but to use objects as well; and one the most useful objects from this point of view is the automobile."⁶

From this, it can be inferred that the automobile needs to be set in a context of other urban activities and their associated surroundings. It is because people communicate in two fundamental ways (physical and social) via the car that this context is needed.

The architecture of the drive-in culture, "coffee shop architecture" and more recently, drive-through architecture, (fast food, for example) are set within this context. The general idea of these places is to welcome visitors and to accommodate them. This is crucial: people arriving by cars are anticipated to occupy these places, if only for a brief period of time. Temporary occupation implies inhabitation, and albeit temporary inhabitation, amenities are necessary. MacDonaldis is an example of this where *walls facing the cars* are well finished, hedges are used as screens, and in some of them, playgrounds and patio areas complemented by small trees and shrubs are in direct sight and proximity to parking. The activity of the automobile zone is directly associated (by sight, proximity, and function) with the internal activity of the restaurant. There is an uninterrupted coherence, a continuum of integrated activity and movement which unites the entire site.

Parking garages too, are drive-through places that are temporarily occupied by people. Their activities are not however, integrated with those of other buildings of a site. There is scarcity of amenity and finishes are often no more than the removal of the form-work

for the structural concrete. Even with fifty percent wall opening, (a device employed for ventilation of toxic fumes), the interiors of parkades are often dark and somber. Conceding that people are concerned where they park their treasured objects, garage environments should possess amenity and security.

The above discussion deals with the car as an object of status and one of social communication. Two years after LeFebvre identified the symbolic power of the car, Roland Barthes (1972) was suggesting that the car was losing its symbolic significance of speed, power, and authority. Jean Baudrillard later (1983) in support of Barthes states:

"... it's all over with speed - I drive more and consume less... No more expenditure, consumption, performance, but instead regulation, well tempered functionality..."⁷

This is only partially completely correct. In view of the many different manufacturers using *performance* as a marketable feature in cars, witnessed by the market durability of the exotic cars, (which epitomize performance in automobiles), it is clear that it is *not* all over with speed and power. Consider the car ads that feature family cars being tested on race tracks, or Honda's introduction of four-wheel steering on their Prelude series. Hence, the last decade has shown that it has not been the complete sacrifice of "performance" for

fuel economy, but more a maximization of efficiency that cars have undergone. Speed, power, and handling have not been discounted - only a premium has been put on them

Although Baudrillard may not be completely correct in antiquating *performance*, his assessment correctly suggests that moving away from the "performance" symbolism of the seventies to the ecological symbolism of the efficient computerized cars of the eighties has altered the relationship of driver/car:

"...no more fantasies of power, speed and appropriation linked to the object itself, but instead a tactic of potentialities linked to usage: mastery, control, command, an optimization of the play of possibilities offered by the car as vector and vehicle, and no longer as an object of psychological sanctuary."⁸

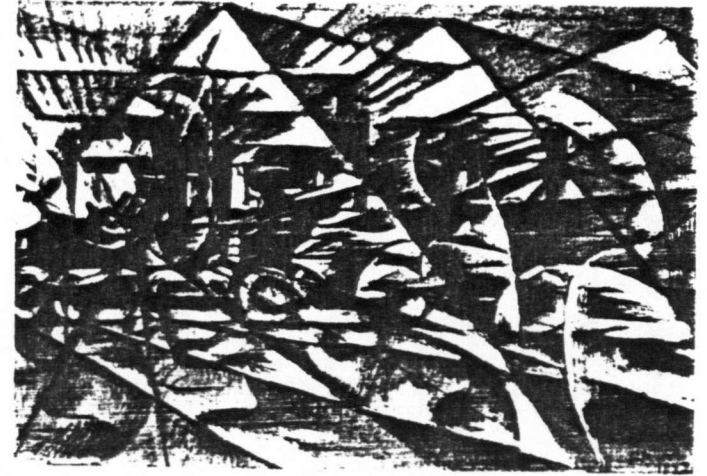
Interesting is Baudrillard's shifting of the emphasis from the car, that is, "fantasies linked to the object itself" to the driver, that is, the "tactic of potentialities linked to usage: mastery, control, command..." This puts the impetus on human perception and illustrates the symbiosis of car and driver; it indicates the high degree of *transparency* evident between driving and environmental perception.

Driver Perception and the Quality of Garage User Participation

Early in the century Giacomo Balla and Luigi Russolo, both major Italian Futurist artists, celebrated the change in environmental perception brought about by the car in their works *Speeding Automobile* (c.1913) and *Dynamism of an Automobile* (1911). Inherent in their preference for using the car as a modern subject was the idea of motion and simultaneity. Gino Severini, another Futurist, graphically expressed movement and changing viewpoints in *The Autobus* (c. 1912). However, it was Henri Matisse with his *Through the Windshield* (c.1917), Stuart Davis in his paintings *Garage Lights* and *Windshield Mirror* (c. 1931 & 1932), and John Marin in his *Street Movement* (c.1934) who illustrated quite clearly the appropriation of the urban landscape from within an automobile. Although their medium was two dimensional, their experiments would have an effect on architects and their architecture.

Le Corbusier was among those affected and, acknowledging the impact the car was having, designed for the automobile in some of his projects. Le Corbusier's Villa Savoie has a ground floor plan set back which

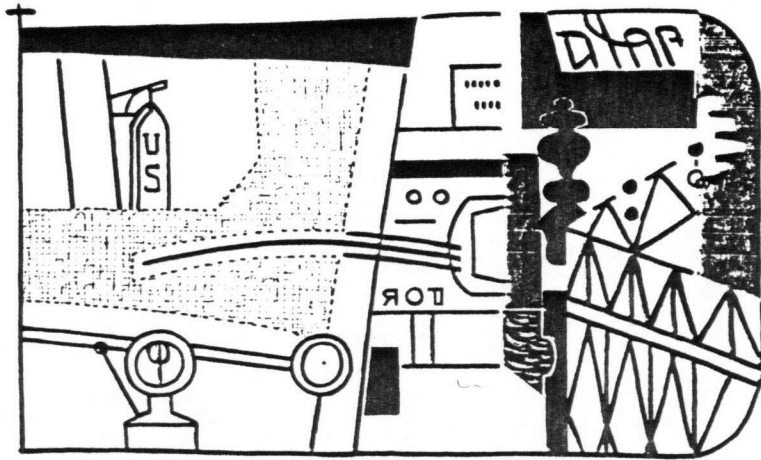
"leaves room for a motor-car to pass between the wall and the pilotis supporting the floor above; the curve of this wall on the side away from



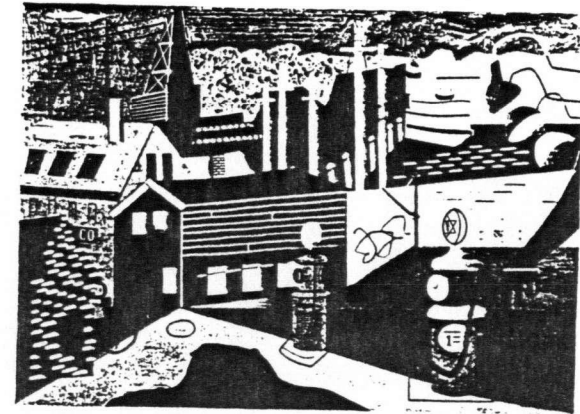
Giacomo Balla, *Speeding Automobile*, 1913.
Source: R. Hughes, *Shock of the New*, 1982;
25.



Henri Matisse, *Through the Windshield*, 1917.
Source: R. Silk, *Automobile and Culture*, 1984;
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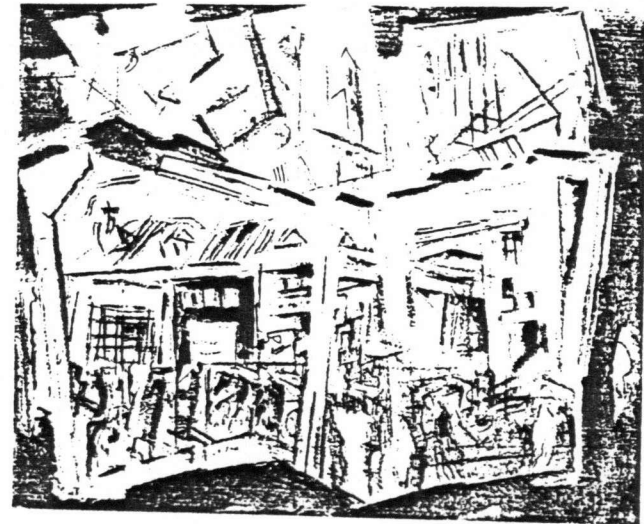


Stuart Davis, *Windshield Mirror*, 1932. Source: R. Silk, *Automobile and Culture*, 1984; 74.



Stuart Davis, *Garage Lights*, 1931. Source: R. Silk, *Automobile and Culture*, 1984; 74.

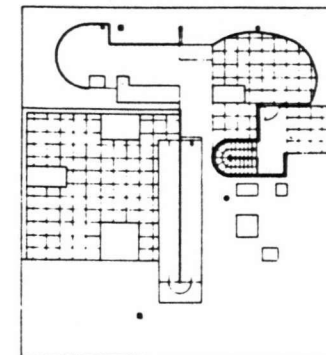
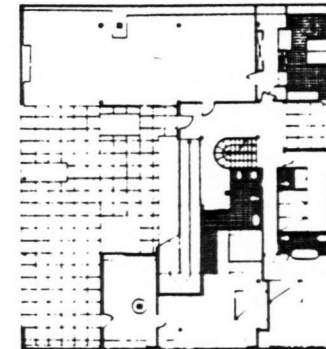
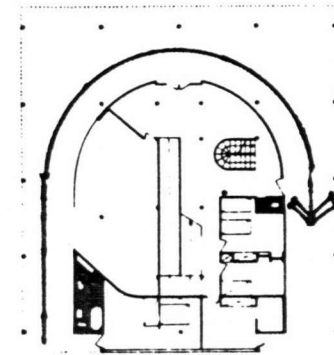
John Marin, *Street Movement*, 1934. Source: R. Silk, *Automobile and Culture*, 1984; 72.



the road was, Le Corbusier claims, dictated by the minimum turning circle of a car. A car, having set down its passengers at the main entrance on the apex of this curve, could pass down the other side of the building, still under the cover of the floor above, and return to the main road along a drive parallel to that on which it had approached the house."⁹

Le Corbusier exceeded the scope of the Futurists by applying the new way of environmental perception to built form. The function of the circulation route at Villa Savoie was *integrated*. It allowed immediate access for car passengers, oriented them to the structure and approximate organization of the house, and gave expression to the architectural relationship of motion (automobiles and people) and stasis (buildings). In Villa Savoie, Corbusier's sympathetic understanding of the role the automobile resulted in a design where activity and movement was not interrupted between the street system and the building. However, the Savoie residence was an infrequent example of an intimate and positive architectural response to the automobile.

It was only after Venturi's pioneering study of Las Vegas, that the intimate experience of driving a car and how the urban structure related itself to the driver became a growing concern for the architectural community at large. Venturi extensively discussed the phenomenal emergence of strip architecture and with it, the whole drive-in culture. He



Integration of automobile circulation at Le Corbusier's, Villa Savoie, Source: K. Bloomer and C. Moore, Body, Memory, and Architecture, 1977: 68.

identified an intensity, richness and structure that strips possess. Salient is his observation that the architecture of the strip responds to the perceptual experiences of drivers. Venturi's work indicates the importance of the continuity of urban stimuli for a conscious environmental awareness.

It is this high level of awareness that could allow the active participation of parking garage users. Already mentioned above are the benefits of site and building orientation. A sense of coordinates or bearings can be established; a feeling of scale, limits and bounds can also materialize if the site and building are in a general sense, comprehensible. Inviting the participation of the people using garages can bring about in them a consciousness of their built environment, a sense of active decision and manipulation, a sense of imaginative journey and interpretation, and a sense of identity and well-being. Engaging people by the use of metaphor, history, and orientation techniques can supplement the prosaic routine of parking. Parking a car for a driver is inevitable and the thesis does not contend otherwise, but it can be collaged with other activities and functions for a positive dialogue between buildings and the people using them.

The Inclusion of Drivers/Cars into Architectural Design

This brings us to why garages should be included into architectural design. There are four major reasons to do so.

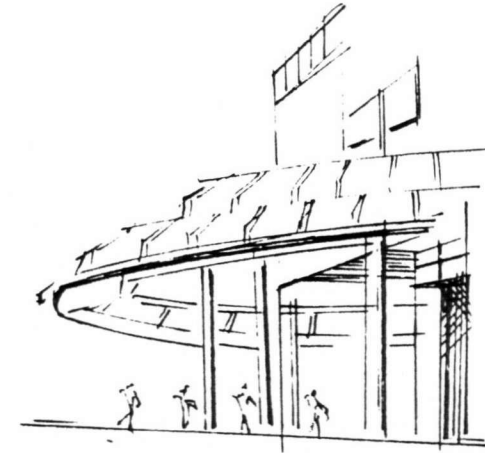
First, the experiences derived from driving cars has become rooted in contemporary society, and traditional garage design interrupts the continuity of urban inter-relations. The perception of urban areas is brought about by a *continuum* of destinations, connections, and transitions; each has traces of the others to generate a holistic interactive relationship between changing places and activities. No one part exists as an entity in itself. Traditional garage design with storage as its *singular* purpose is antithetical to the *multi*-faceted collage of urban spaces.

A second reason to include the car/driver into architectural design is that the car is a culturally loaded urban artifact. The car connects people to a city by function (mobility) and by being an object of social communication (personal identity). Cars are objects that embody the context of city life. In this way they are necessary components in urban settings. As such, cars are essential for personal mobility and are necessary for urban perception, that is, people get to know their cities by driving around in them. To remove

cars from this role of *communication*, (as traditional garage design does), disorients their users from their urban associations.

Third, garages are occupied by people. That is, drivers are cognizant of their surroundings and possibilities; the garage is not exclusively an automobile area - *people must use them*. Cars do not isolate their occupants, but they do encapsulate them; perception is altered from that of a pedestrian, but value judgments of what is a receptive place to arrive at, and what is not, is consistent. Limiting the potential for positive participation is a condition of traditional parking garages and is disrespectful to those having to use these structures. Changes in smells, air movement, light, noise, road surface, and moods can be easily sensed from within a car. Implicated then are detail, finish, air and light quality, symbolism and concept. As pedestrians move and are cognitive of the possibilities presented to them, so are drivers.

Fourth, including the car/driver in design would allow garages to express themselves with architectural integrity. The *packaging* of parking garages is, in many cases, architecturally dishonest. Decoration and masking are not only superficial, but are recognized as such. One premise of architecture is that it is concerned with human ends, and if there is an architecture for garages, then it must embody in its form and expression human endeavor and activity. The detailing of the facade can contribute to an individual interpretation



Porte-cochere at Canada Place, Vancouver, in an architecturally welcoming gesture.



By contrast, garage entrances are often brutal and uninviting. Lonsdale Quay garage entrance, North Vancouver.

about the whole building and its purpose, as opposed to only its facadal packaging. A plan integrated with other locales and activities can overlay *use* (practical storage) with human participation, enhancing awareness, and fostering a sense of well-being. Moreover, the physical mass and size of garages exist at a scale that cannot be ignored by the public. It follows that the internal function and finish should be architecturally considered in context with the exterior facades and surrounding areas since clearly, both the inside and the outside of garages are public realms.

The four above reasons I believe are sufficient cause for considering an alternative way of conceptualizing parking garage design. A theory to initiate this new conceptualization is what the thesis refers to as *integrated function*.

Chapter Three

INTEGRATED FUNCTION: PROGRAM EXPANSION AND TACTILITY

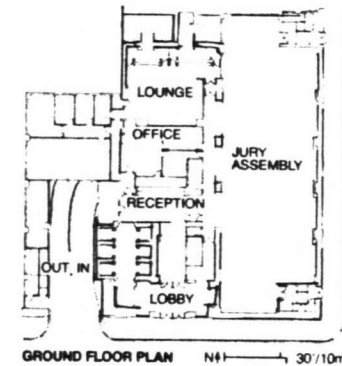
A Philosophical design approach for an alternate conceptualization of parking garages

INTEGRATED FUNCTION

A strategy that can transform the role of a garage and supplement its pragmatic tendency is to integrate its function with those of other buildings and places. In this way the garage can no longer be exclusive. However, careful consideration should be given to what this *integration* involves. The word *function* is not to be confused or misinterpreted as purely utilitarian. A function indicates a relationship between objects and events, thus symbolism is part of a functional relationship. Moreover, the manner and closeness in which these things are related depend on the significance of their functioning together. That is, the significance of a garage depends on the extent to which it is included with the other buildings and activities of the site. In this light, it is essential to note that *integrated function* with respect to garages does not limit itself to programmatic concerns. The design of clearance requirements and traffic allowances are relevant to integrated function,

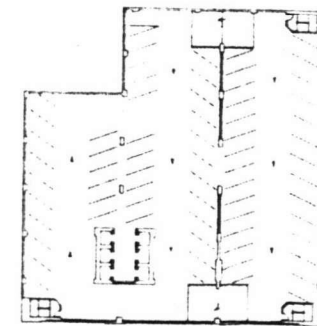
but the scope of integrated function includes dimensions such as finishes and detailing as these considerations also affect the relationship between garage and place.

There are two means of achieving a state of integrated function: one, expand the program of garages to include more than parking alone, and; two, provide some form of *tactile* reading that can be associated with the particular place and purpose of which the garage is a part. Both acknowledge the necessity of *practicality*, but supplement it to offset its inherent deficiency. Program expansion would include such things as site/building organization, having direct implications on the layout of circulation routes. This has implications on what garages can facilitate with regard to activity and use. *Tactility* involves factors that affect both the mental and physiological perceptions of the human body; symbolism and analogy as examples of those affecting the mental capacities, and ground surface and ramp grades as examples of those affecting the physiological ones.



EXPANDED PROGRAM

An example of the expanded program is the mixed-use concept as used in the design of Congress Plaza, in Houston, by Morris Architects.¹ Although the program of the building (formerly a garage, now a hybrid structure accommodating parking and other activities)



GARAGE FLOOR PLAN

Mixed-use concept, Congress Plaza, Houston.
Source: *Progressive Architecture*, November, 1987; 110.

has been expanded, the function of the garage part of the building has not changed. Its functional relation to the rest of the building is still one of auxiliary service. In other words, despite the mixing of uses, the function of the garage was not integrated with the rest of the building's activities: parking remains an exclusive activity, less obvious perhaps, but clearly separated.

Now consider another contemporary example. Outdoor urban squares have been criticized for their low use. One reason posited by Mark Chidister is that these squares use design criteria that originate from medieval squares, and these antiquated criteria do not fit the lifestyles of contemporary society.² Chidister, an assistant professor of landscape architecture in the College of Design at Iowa State University, cites Robert Jensen, author of *Dreaming of Urban Plazas*, who suggests that although the medieval inspired urban squares are limited in their practical application at present, their function of providing public experience is necessary:

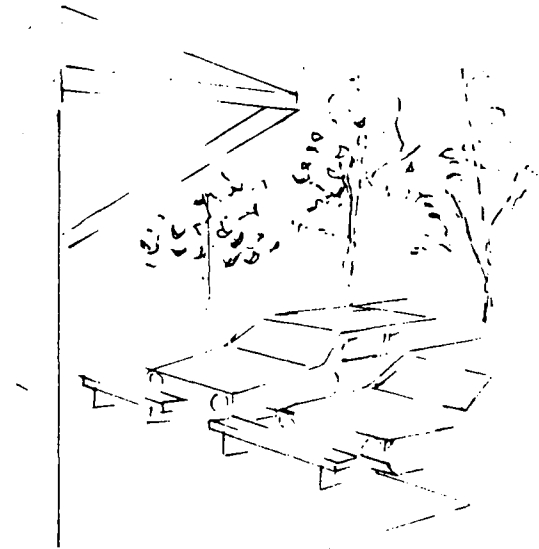
"Our plaza problem is cultural, technological and endemic, anchored in the way we live and not amenable to easy solutions...Concealed in the way we live, implied by even the briefest description of what causes us not to use urban plazas, is a sense of alienation from public experience. Because we have lost part of this pleasure, our need to reclaim it is all the

more real. New urban plazas embody our dreams of overcoming the loss."³

Chidister concurs with Jensen but adds that public experience is possible in places such as sporting arenas, auditoriums, zoos, campuses, transit connections, and shopping malls. Interestingly, he singles one out:

"While public plazas incorporated into the designs of these settings are frequently used, only the shopping mall can be considered a regular part of daily life rather than an event."⁴

Now suppose that the huge expanses of surface parking that most large shopping centers have were integrated with another function, say of a public market. Imagine that market stalls could be placed either at random (depending on the needs of the merchant) or within a regimented but flexible structure. This spontaneity of arrangement in a place of daily focal gathering is similar to that of medieval squares. The parking lot could change from being a flat expanse of concrete to being in itself part of a larger activity. That is, driving through the parking lot could not only allow a visitor to park, but because the lot has been integrated, driving through the lot could also be arriving at a destination. Granville Island has this quality; circulation throughout the Island, especially in the North

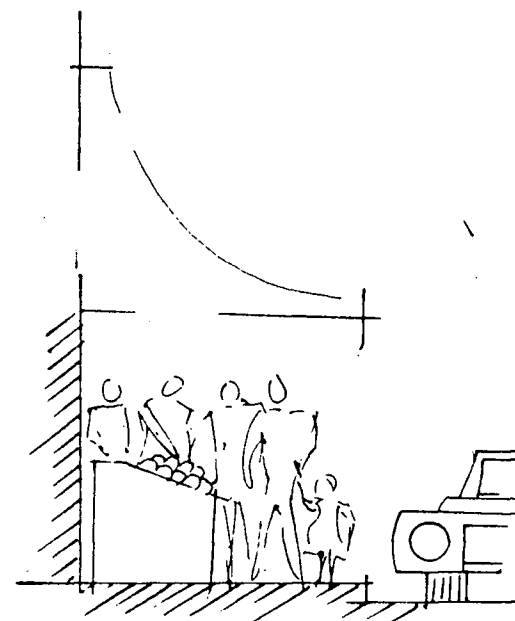


Parking in North end of Granville Island is in close proximity to store fronts, and is landscaped.

retail section, reveals to drivers a sense of the time, place, and history while they may be searching for parking. The parking is not separated from other activities, and indeed, at Granville Island, vitality of the pavement activity depends largely on the circulation of drivers.

The contribution of circulating drivers and their cars to a local vitality can also be observed in Vancouver's Chinatown district. The market atmosphere is intense and the circulation of traffic is a major part of the overall activity. The sidewalk area between the curb and the storefronts teems with activity. To encourage this activity and to integrate the street system with the sidewalk system, awnings often reach to the curb, protecting the area between buildings and parked cars. This concentration of human activity is not brought about by an event, such as would be brought about by a sporting event; shopping in Chinatown for many is a daily activity. Shopping malls also are places of ordinary routine. I suggest there exists potential for the shopping mall parking lot to facilitate the functions and values that Jensen deems still necessary, but unattainable in contemporary urban squares.

The latter hypothetical situation involves practical usability (parking) and a supplement (shopping) in the same bounded area (the parking lot surface). It's intent is to show the impact of supplementing utility by integrating it with local activities. By using the concept



Chinatown sidewalk activity is protected in many places by awnings reaching to curbs.

of integrated function, an engaging experience is possible for the visitor because with this supplement, there is room for personal awareness, choice (orientation via circulation routes, for example) and interpretation (of the architectural gestures originating from the building). Giving users an opportunity to choose, to take the place and manipulate it in their own way, allows a sense of personal belonging to be established.

Dwelling and the Question Concerning Technology

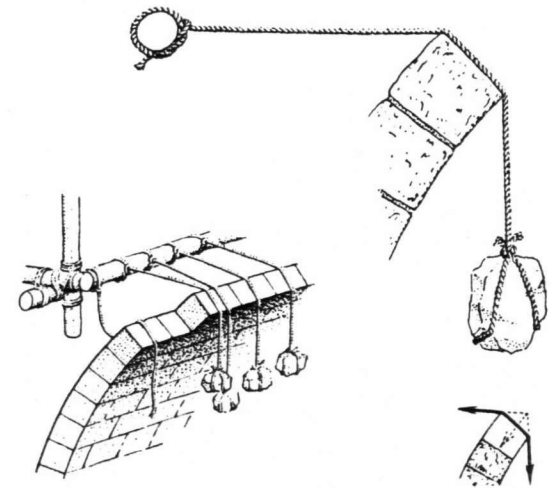
At this point, it would be best to discuss Heidegger's analysis of the intent of technology. This discussion is necessary to set the groundwork for *tactility*.

If we can consider Heidegger's usage of the Greek word *techne*, we find that *techne* is a word which refers to the coexistence between utility and art, and further, that in the case of *techne*, both are mutually dependent:

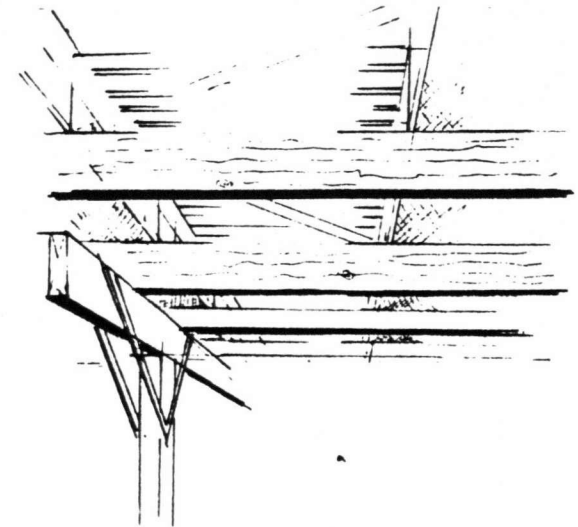
"...*techne* is the name not only for the activities and skills of the craftsman, but also for the arts of the mind and the fine arts. *Techne* belongs to bringing-forth, to *poiesis*; it is something poetic...*techne* is linked with the word *episteme*. Both words are terms for knowing in the widest sense."⁵

It is this simultaneous existence which is the quality of architecture. It is precisely this where the potential is so great in the design of garages. The fact that garages have certain limitations (based on storage requirements) is not an obstacle. Conceivably it is the opposite: the limitations, by keeping the structure recognizable, provide a starting point for the task of reaching a state of *techne*. *Grafted* decoration, by Heidegger's analysis, merely reinforces the exclusive roles of decoration and utility and is not true to the idea of *techne* and architectural integrity.

Consider an example. Bridges are capable of being interesting and engaging without grafted decoration. Their arcing decks and cables in taut resistance indicate a human awareness of gravitational forces. Much of the interest is born from what story the bridge can tell; how the structural members were made and assembled can stir the imagination, imagination which can produce images of human activity in the making of the bridge. History, purpose, and human endeavor are characteristics of many bridges. Images of cranes, trucks, and steelworkers come to mind. And yet, bridges are the epitome of usability. Their connection of opposing banks so that people may pass is the reason that they exist. The Lion's Gate Bridge and the Burrard Bridge in Vancouver, and even the swinging pedestrian bridge at Lynn Valley, are examples of bridges that approach the rich simultaneous state which Heidegger refers to as *techne*.



Construction and the understanding of gravitational forces can evoke imaginative interpretations. Source: J. Fitchen, Building Construction Before Mechanization, 1986: 114.



Roof support system at Granville Island, Vancouver.

One may initially consider bridges as singular in purpose, and therefore invalid as examples for a multi-use argument. It is the opposite; bridges clearly illustrate a richness of interpretation that can be born from a structure whose reason for being *is* singular. The reason is twofold; bridges express human endeavor, and bridges, because they connect, are set in a context of use and landscape. Because they are not exclusive of the urban continuity, bridges are *places* that are rooted and that have significance. Heidegger elucidates this importance of the human connection and the subtlety of *dwelling*:

"Bridges and hangars, stadiums and power stations are buildings but not dwellings; railway stations and highways, dams and market halls are built, but they are not dwelling places. Even so, these buildings are in the domain of our dwelling...the working woman is at home in the spinning mill, but does not have her dwelling place there; the chief engineer is at home in the power station, but he does not dwell there. These buildings house man. He inhabits them and yet does not dwell in them,...Yet those buildings that are not dwelling places remain in turn determined by dwelling insofar as they serve man's dwelling. Thus dwelling would in any case be the end that presides over all building."⁶

Heidegger correctly identifies the realm to which garages must belong - "man's dwelling." As such, they must be capable of human inhabitation because man "inhabits them and yet does not dwell in them". Details, finishes, daylighting, and other amenities are not luxuries, but are necessities for human inhabitation. Further, garages designed to be 'no-places' cannot exist, even if the wish is to hide them. Again from Heidegger:

"Before the bridge stands, there are of course many spots along the stream that can be occupied by something. One of them proves to be a location, and does so *because of the bridge*. Thus the bridge does not first come to a location to stand in it; rather, a location comes into existence only by virtue of the bridge. Only things that are locations in this manner allow for spaces...A space is something that has been made room for, something that is cleared and free, namely, within a boundary,...A boundary is not that at which something stops but, that from which something *begins its essential unfolding*. Accordingly, spaces receive their essential being from locations and not from 'space.'"⁷

David Leatherbarrow, professor of architecture at the University of Pennsylvania, discusses an interesting point that follows Heidegger's theme. Leatherbarrow uses *Janus*, the Roman demi-god to describe the union of seemingly opposite spaces, that is, inside and

outside.⁸ In short, Janus exists at every threshold, every doorway, every boundary to which subdivided spaces meet. His two or four faces were situated on one head and one neck, looking in opposite directions, indicating his presence as a connection, not a separation:

"...Janus fixed spatial relationships, it was a knot which bound places together, or joint that located an indivisible and untransferable 'here.'"⁹

This view falls in accord with that of Heidegger's. Both point out that the strength of spaces, that is, their sense of place and purpose, is born from *location*. In Leatherbarrow's terms, the garage is the "here" where Janus exists. He joins the street and the building, the moving and the static, the outside and the inside. In this way, he can preserve the urban continuum mentioned earlier. By both Heidegger's and Leatherbarrow's analyses, garages must be places that *unfold* their context, origins, and functions; they simply cannot be generically designed because *location* establishes their existence. Therefore, the placement of the garage, regardless of locale, will bring about a place-ness that cannot be denied. Acknowledging the specificity of the location by responding to it, will give to the garage a positive sense by which the users can feel at ease.

Having established garages as buildings that are "determined by dwelling insofar as they serve man's dwelling," the issue now becomes with what intent technology is employed to construct garages. In current practices of construction, it is too easy to measure a design element by its practicality, hence the nature of contemporary garages. However, it is this one-sided decision making process that contributes to the loss of the architectonic. Practical usability is one condition of architecture, but it cannot exist as an architectural determinant; this would lead to every building and every tool according to use being the same. "This attempt to establish the precedence of either utility or art is condemned to the ambiguity that plagues origin in general: assigning absolute priority to an entity always admits the paradox of the endless deferral of priority."¹⁰ In other words, with architecture, *utility and art must coincide*. A similar sentiment is found in Heidegger's questioning of technology:

"Thus questioning, we bear witness to the crisis that in our sheer preoccupation with technology we do not yet experience the coming to presence of technology, that in our sheer aesthetic-mindedness we no longer guard and preserve the coming to presence of art. Yet the more questioningly we ponder the essence of technology, the more mysterious the essence of art becomes."¹¹

That is, in an effort to sway the other, the other's validity is too easily dismissed, and by being so fixed on one criterion, we lose sight of how it must exist in a relational network of others. Heidegger's mention of "sheer occupation with technology" can be interpreted to describe contemporary society's urge to maximize *efficiency* of production and resources: obtaining the most use at the least expense. It is clear that this tendency exists in the design of parking garages, with efficiency interpreted as maximum number of parking stalls per unit area. An expanded program can add to the practical use of garages by integrating its function with the entire site. It can become an aspect that loses its current opaqueness and exclusiveness. An interesting and rewarding awareness can be born from the working relation between objects and events, and is not limited to the esoteric of high art. Too easily is the idea of imagination with regard to garages labelled superfluous and dismissed for the seeming lack of economic usefulness. Conceivably it is the reverse: the *seemingly uselessness* of objects leaves room for interpretation and interest.

As *practical usability* is de-centered as the central determinant for building, the 'excess' is referred to the realm of the subjective.¹² A different dimension of *function* reveals itself as *uselessness* makes a presence. Here we have an interesting point: upon the moment of articulating efficiency, economic optimization is diminished. Articulation is the

counterpart of pragmatism. By articulation, the building can be interpreted as more than utilitarian, and Mumford suggests that subjective counterpoint to objective operation is necessary for a complete human existence. Mumford contends that organic creativity exists with utility at every stage of life. Being so, people cannot help but feel that without this simultaneity, buildings devoted entirely to practical use, are somehow lacking and hence, attempts to beautify the mundane. By this, garages should be expressive of their function and articulated in their construction.

Heidegger tells us that *techne* is a *revealing* and a *bringing forth*. This adds additional light to a strategy of integration. When something reveals itself to people, its objective nature is meshed with *discovery* and reflection. People do not preconceive its revelation. They come upon it, a natural occurrence not ordered in advance. No manipulation is needed; it is brought forth by its own presence. The discoverers place themselves in the context of the event by reflecting on origins, immediate opportunities, future implications, or merely the wonder of it all. They are engaged, and participate in a complete experience. The *opening up* of a site, as it unfolds and reveals itself to visitors (by carefully designed circulation routes) can do much the same.

Heidegger also tells us that the man-ordering of the maximization of efficiency and resources is also a revealing. But this type of revealing is a challenge set in motion by an

economizing intention and as such is an *enframing*. His usage of *enframing* refers to a condition of optimization in which everything is predictable; no discovery, no dialogue, only process. The revealing by *enframing* orders potential to be immediately available to whomever might desire it. Heidegger refers to this as *standing-reserve*.¹³ In other words, the optimization with economy and practicality as priorities leaves no room for interpretation and alienates man from the environment. Traditional garage design and its relation to site falls under this criticism; always at the ready to *process* the maximum number of cars for parking and nothing more. Heidegger further points out that *enframing* blocks the revealing whose sense is *poiesis*, a bringing-forth of the object's fundamental characteristics.¹⁴ *Poiesis* is a fundamental condition of *techne*, the coexistence between art and utility, which in Heidegger's terms, is manifested in architecture. If so, traditional garage design must be altered to one where the revelation of the site and the garage's *fundamental* role are made perceptible to visitors in positive associations.

The *engaging* interpretation must originate from the architectural experience of the building itself. It is not the appliques that carry a stirring presence, because they can be seen as grafted, borrowed, temporary, and certainly it is not the docile operation of a garage that moves us. More, it is how the necessary function required of garages can be

integrated into places to elicit positive responses from their users that is potentially so interesting.

TACTILE DESIGN

So far, the discussion has indicated the possibilities of *expanded program* as a supplement to the utility of garages. What follows is a design approach which focuses on the perception capacities of the human being. It is presented as *tactile design*.

The premise of tactile design acknowledges the capacity of the human body to perceive its surroundings in terms other than those of sight alone. Consequently, not only are visual cues relevant, but cues that affect other physiological responses are to be considered. Moreover, Ittelson points out that a sharp division between cognitive ability and physiological reaction:

"Perceiving is both phenomenal experience and directive for action. Both aspects are crucial...perceiving is actually a much more complex process (than the conscious experience of sensory input)...stimulus considered as a source of information, is quite a different proposition from the stimulus

considered as a source of stimulation. For one thing, stimulation can be understood in the immediate context of physical and physiological reactions: Information refers to a much larger context."¹⁵

From Ittelson's analysis, cognitive abilities that perceive such things as symbolism cannot be exclusively separated from physiological reactions, and thus, the tactile involves the use of analogy and metaphor as well.

For garages, this would have implications for the manner in which we move through them, and also for what we gather from this movement as a consequence. For example, what a person can gather from a garage that is concerned only with parking can be quite limited in comparison to that which orients the user to a specific site by incorporating, for example, the notion of embarkation. The former serves only to store vehicles, the latter is concerned with personal engagement.

One generative point need only be remembered should this concept of engaging people be chosen: acknowledging that the garage is to serve people and is not only to store cars, necessitates that the garage be in dialogue with the user in a manner which involves human experience.

Since the word 'experience' is rather ambiguous, clarification is in order. Experience, in its usage in this thesis, is intended to refer to the capacity of the *body* (therefore more encompassing than the capacity of vision alone) to perceive the environment.

So far, the discussion has been critical of facade treatment alone as being ancillary. This criticism is born from the fact that decoration of a garage depends primarily on vision to have any effect on a user or passerby, and does not contribute to integrating its function. This limitation suppresses the other senses and reduces the intensity of the experience. *Visual information*, the only way in which the decoration of a garage can be appropriated, is responsible for some form of experience, but this experience is emaciated; emaciated because it does not motivate active participation. Buildings with architectural integrity have implications on the bodily movement of people through them and, this unison of the physiological and psychological responses, makes the experience *immediate*. It is this cognizance and the use of this type of experience (characterized by its immediacy) that can offer a strategy for the *tactile* design of engaging garages.

Of Kenneth Frampton's *Six Points for an Architecture of Resistance*,¹⁶ point six is entitled *The Visual Verses the Tactile*. Frampton, being critical of the gravitation of architecture towards commodity is critical of pure scenography, or that which merely *masks* or *packages*. Implicit in his discussion is the notion that visual information as the only source

of stimulus distances the observer from the object displaying this information, and denies the possibility for a complete experience. Hence:

"It is symptomatic of the priority given to sight that we find it necessary to remind ourselves that the tactile is an important dimension in the perception of built form."¹⁷

Frampton goes on to discuss the importance of hearing, smell, the sensing of temperature, and kinetic movement (haptics). To him, these sensory capacities can be included in design decisions to create an overall perception at a level of directness which cannot be attained by considering vision alone. This is not to say that the importance of sight is to be jettisoned in architectural design. Frampton only separates sight from the rest to reveal its shortcomings as a single priority (as is apparent in garage beautification). His argument acknowledges the western tendency to prioritize sight, but suggests that this "normative visual experience" be complimented by "readdressing the tactile range of human perceptions."¹⁸ In addressing the tactile, Frampton underscores its fundamental condition :

"...it is clear that the liberative importance of the tactile resides in the fact that it can only be decoded in terms of *experience* itself: it cannot be

reduced to mere information, to representation or to the simple evocation of a simulacrum substituting for absent presences."¹⁹

In other words, human experience used in balance with the constructing of buildings, results in an inherent dialogue between building and user in terms other than those that can be generated by sight alone. Thus, the limitations of garage decoration can be greatly expanded to make the appropriation of the building more *immediate*. This immediacy elicits a higher state of consciousness from the visitor and thus, makes the place memorable. And memorable places, by being rooted to a specific locale and cultural purpose, acquire permanence, which innately resists the temporariness associated with fashion, a temporariness from which garage decoration follows.

Frampton is not alone in his summations. Charles Moore, with Kent Bloomer and Robert Yudell in 1977 wrote *Body, Memory, and Architecture* which concurs with this theme. As the title indicates, the book elucidates the significance of the connection of mind/body to built forms. Throughout the entire book, a call is made to bring human participation (mind and body) back into design. Consequently, the call is for an architecture that communicates directly with human experience. Identified by Moore as missing in contemporary structures "are the potential transactions between body, imagination, and environment" and after a brief condemnation of *meaningless* building, Moore sums up the

present state of architecture (1977) as "homogeneous environments [that] require little of us, and [that] give little in return besides the shelter of a cubical cocoon."²⁰ Moore's observation might aptly be applied to a description of a parking structure.

Moreover, Clovis Heimsath, author of *Behavioral Architecture* has pointed out that despite a parking garage's safety or visual context, people still find the buildings' cave-like entrances and interiors forbidding. She further goes on to state:

"Until you make that sequence of entering a sequence to be looked forward to, a sequence that will be thoroughly benign, until you subtract the negative...until that is addressed, all the rest is window dressing."²¹

One approach to the sequence to which Heimsath refers is to design for reception and participation in garages. A prerequisite for participation is experience. Robert Irwin, a contemporary Los Angeles artist, discusses at length this close relationship of experience and participation. Irwin argues for the independent validity of subjective perceptions and suggests that the power of our perceptive systems is immense, and to consciously be aware of their operation leads to a phenomenal and responsive art. If only that can be realized, a positive environmental consciousness can be designed for, and Irwin's notion

of *being and circumstance* can be directly applicable:

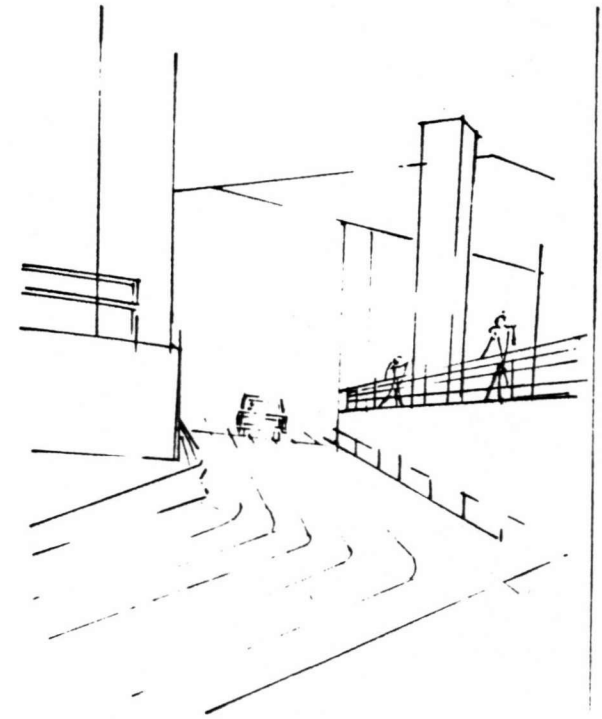
"*Being and circumstance*, then, constitute the operative frame of reference for an extended (phenomenal) art activity, which becomes a process of reasoning between our mediated culture (being) and our immediate presence (circumstance). *Being* embodies in you the observer, participant, or user, your complete genetic, cultural, and personal histories as "subsidiary" cues bearing on your "focal" attending (experiencing) of your circumstances... There is in any set of circumstances and your being in them the dynamic of a past and future, what was, how it came to be, what it is, and what it may come to be."²²

In other words, recognition of familiar objects and events, and reasons for their being constitute only part of an experience. Irwin suggests that to complete an aesthetic experience requires that we *partake* in the setting or as he puts it, *attend focally on our set of circumstances*. This supports the notion that garages must allow their sites to reveal themselves to visitors so that the visitors may partake in positive and complete experiences. Traditional garages deny the taking of them or their sites in the way that people do when visiting other places; barns, industrial warehouses, and factories have such potential, the parking garages on Granville Island (re-adapted machine shops and

warehouses) being an example. Without this dialogue, a fundamental condition of architecture itself is missing. Moreover, Irwin asserts that to know some thing for what it is (as opposed to what it may outwardly look like) "requires our immediate presence, which if effect puts individual experience at the root of our understanding."²³ Therefore, if garages are to affect and engage people in a positive way, they must break away from the trap of processing and restricting the action of people using them, and embody human experience and allow for active participation.

Haptic Perception and a Human/Mechanical Dialogue

As tactile perception assumes appropriation via the body, Moore's discussion on the *haptic* system is related. The haptic system is Aristotle's definition of touch reconsidered to include the entire body in addition to the instruments of touch, that is, the hands. As a perceptual system, pressure, temperature, pain, and kinesthetics are incorporated.²⁴ Specifically, it is the kinesthetics of the haptic system that has potential in garage design. No other perceptual system involves *feeling* and *doing* simultaneously.²⁵ Hence, experience and awareness are inherently involved. Irwin refers this type of phenomenon as *knowing in action*²⁶ which in itself describes the immediacy of the action/reaction of the haptic system. Ramp grades, turning radii, and speed, three major concerns in



Ramp grades at Canada Place offer memorable kinesthetics via haptic perception.

garages, can intensify the experience through kinesthetics, or the perception of body movement. This movement can help establish a sense of on-site bearings. The texture of the paving surface itself can be haptically felt from within cars. Occupants of cars are *not* isolated from their surroundings, therefore, the haptic system can be used in tactile design to affect drivers/passengers.

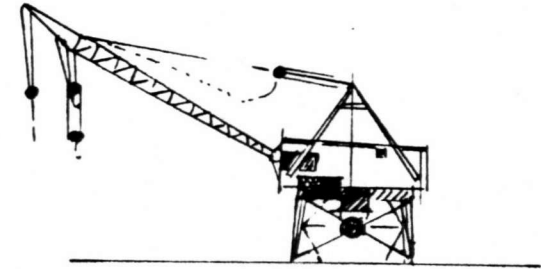
One characteristic of haptic perception is that it is linked to the *mechanical* movement of the human body or parts thereof. The human body and its component parts are subject to the forces of gravity. It is the sensation of gravity and its immediate understanding via the body that allows the structuring and construction of buildings. The "physical" sciences describe gravity in terms of *Newtons* and *meters per second squared*, but this is just a description using an abstract logic that can not explain anything but its own formalism. Conversely, movement and connections which are termed *mechanical* are embedded in the human perception of the environment. The understanding of mechanical movement is through bodily experience (for example, we understand leverage because we possess levers within our bodies), and requires no abstract description as it is immediately appropriated.

Because of this mechanical understanding, and the cognizance of gravity, humans have a close affinity for mechanical objects. The number of mechanical objects used in daily

routine by any individual is testimony to this. The interesting point of this affinity is that the machine has potential for inspiring the incorporation of the human experience in the design of garages. The thesis refers to this affinity as *human/mechanical dialogue*.

Human/mechanical dialogue describes the connection discernible between the realm of mechanical objects and the human being. This connection makes itself felt in buildings such as factories, warehouses, service garages, and in structures such as cranes, bridges and earlier forms of machinery. Waterfront industrial areas are rich in this dialogue, and places such as Granville Island and Lonsdale Quay, both of Vancouver, and Pike Place Market in Seattle have used this dialogue to enhance retail development. It is not however, restricted to industrial typologies as it is also recognizable in boats, and in mechanical detailing in certain other building types. For example, stairways that pull down from attics, exposed elevators, panic hardware on fire doors, welded wire mesh, revolving lights, all have a *construction* quality about them which alludes to this affinity for the machine.

Robert McCarter has recently brought to light an interesting connection between building and early machines. He has chosen early machines as a source of forms which might resist the temporariness of contemporary architecture. This is interesting because the gestural movements of early machines are perceived in a state of immediacy, that is, in a

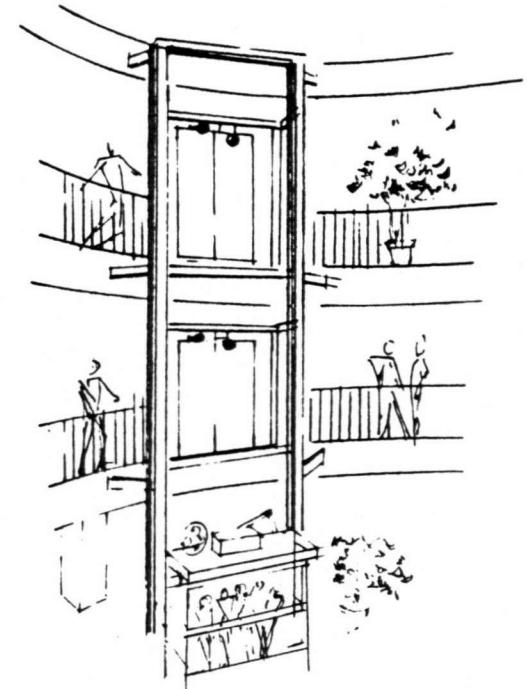


Crane in shipyard adjacent Lonsdale Quay has human/mechanical expression.

tactile way, and it is *tactility* that has possibilities for garages. McCarter has correctly identified early machine forms as experimental in nature "having to do with human experience and the discovery of the world."²⁷ Implicit in his allusion is the notion that technology was a human endeavor at the time of these machines. This is important because by being a human endeavor, the end to which technology was used was human related, not function related. True to Heidegger's usage of *techne*, McCarter elucidates the difference between these early machines and contemporary ones:

"...technology has since lost its nature of being an experiment: a calculating, optimizing, economizing intention has taken over...This contemporary technology and the machines it produces are unrelated to the human values that motivated the early inventors."²⁸

It is because these now archaic machines were experimental, embodying technology as a human activity to the service of human beings, that McCarter makes the suggestion of drawing inspiration from them. According to McCarter, the machine can be assessed by values other than those associated with optimization, and it is these other values that offer the means of supplementing utility. These experimental machines embodied the inquisitive and explorative human mind, giving sustenance to human action. Risk and



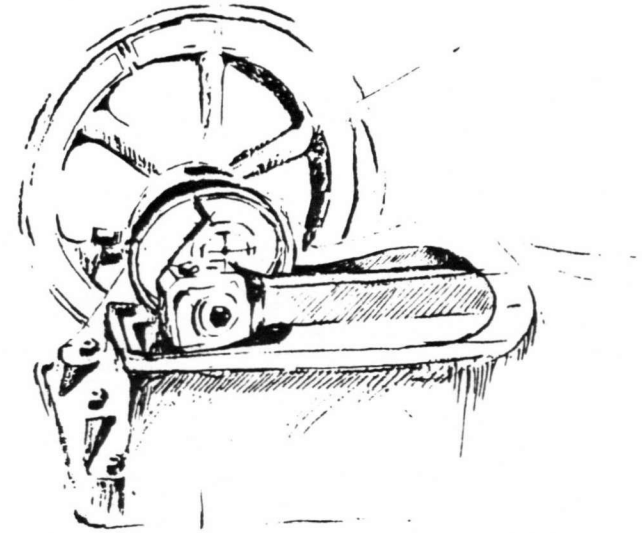
Elevator at Lonsdale Quay expressing motion and stasis by mechanical forms.

reward, the playing out of life itself, are why these "technological dinosaurs, these extinct species of invention, remain so alive to artistic development."²⁹

However, this use of technology with human ends evident in the machine is not the only attribute from which garage design can draw. The machine is a mechanical object with interconnecting parts that *move*. They epitomize the meeting of the *moving* and the *static*. Even at rest, machines physiognomically imply their movement. To emphasize this paradoxical and yet transparent relationship of motion/stasis is appropriate in a place where the moving (automobiles and people) encounter the static (buildings). It is of use therefore to identify the innate qualities of the machine so that they might be used in garage design.

The qualities of archaic machinery are at once romantic and topical. Romanticism has its limitations regarding machinery as it is skeptical of future development and aspires to unattainable conditions antiquated by time. Therefore, as preconceived aging, the romantic dimension of robust machinery should not be misused or confused as the human association with mechanical objects.

Also, it is important to note what kind of machinery we are referring to. McCarter uses archaic machinery as opposed to contemporary ones. The resonant quality of these



Ingersoll-Rand pump at Gasworks Park, Seattle. Interconnecting parts that move rationalize their interdependence. A very definite gestural quality is expressed.

machines is their inherent connection to human beings. This connection is brought about by the *gestural* qualities innate to *mechanical movement*. Moreover, these older machines possessed something of human scale, making the association between humans and machines even greater. The connection is close to being transparent:

"Man made the machine in his own image. She has limbs which act; lungs which breathe; a heart which beats; a nervous system through which runs electricity...After making the machine in his own image, he has made his human ideal machinomorphic..."³⁰

Implicit in his choice of machines is McCarter's preference for the integrity of mechanical expression. The counterpoint to this would be a machine which reveals little of its working and logic. Consider an example of timepieces. With the coming of quartz crystals, watches took on two fundamentally different modes of expression, one mechanical and one electronic. The watch faces themselves identify each mode with the mechanical analog using metal *hands* that *point*, and the electronic quartz watch using LCD or LED read-outs. The biggest difference can be observed upon removing the backs of the timepieces. The analog with all its gears, springs, wheels, screws, jewels, pins,

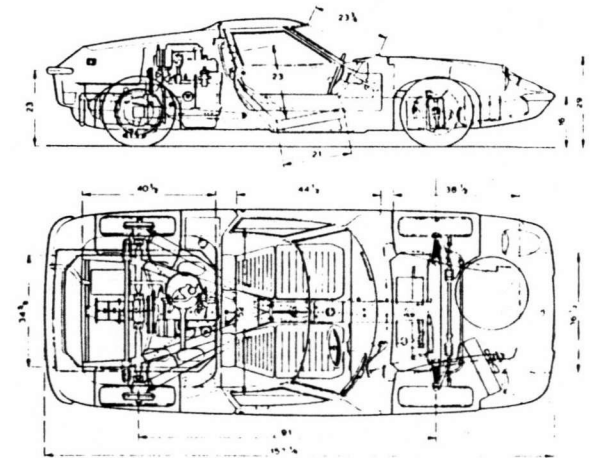
rods, and plates have a curiously human inference. Part of the reason may be its mechanical expression and part may be that the screws and fasteners, and crafting of parts, imply hand-tools which gives the watch the attribute of being recognized as a human artifact. Whatever the reason, its ability to be *immediate* surpasses that of quartz-run timepieces. In motion, the mechanics of the analog rationalize the movement of the hands. The exposed innards of a quartz watch reveal very little in addition to its face expression that could make the working and human connection of the piece understandable. The potency of its power source cannot be witnessed. The flow of electrons is comprehensible by abstraction and is not physically perceivable. Aside from the blinking of the colon and the periodic change of numerals on its face, the quartz timepiece is expressively an inert object in comparison to the mechanical analog. It is this revealing of origin, power source, and mechanical working that archaic machines possess.

Merleau-Ponty suggests, "Prior to and independently of other people, the thing achieves that miracle of expression: an inner reality which reveals itself externally [and] expression is the language of the thing itself and springs from its configuration."³¹ The gears and plates, levers and springs, screws and pins, are all *configured* by human designers. Moreover, the mechanical/human expression of the watch parts is unavoidable and Norberg-Schulz asserts "Expression, thus, is basically physiognomic, regardless of the

nature of the thing, and identification therefore comprises a *rapport* between man's own body and the bodily form of the object."³² All of these reasons are why archaic machines have an integrity of mechanical expression which is topical and relevant to current design strategies.

The car, despite the packaging of its mechanical expression, is still perceived chiefly as a mechanical object by which we physically move. Unlike the telephone or television that communicate via electricity, the communicative ability of the car resides in its *mechanical* mode of locomotion. Its magnitude of movement is physical, both visibly and kinesthetically perceivable. The car is intimately human in scale and we can make the car move where we wish at the speed of our reflexes (given good road conditions) making the connection more immediate. In this way, *mechanical movement is directly connected with human experience*, and thus, it can be used in *tactile* design.

Hence, two things are important in human/mechanical dialogue: one, mechanical movement actual or implied is immediately understandable because human bodies move by mechanical movement, and two, machines express their human origins because their component parts are designed and crafted using human experience. Both are directly applicable to *tactile* design. The potential for garage design lies in the machine's innate condition of motion/stasis. As there is such a close human identification with mechanical

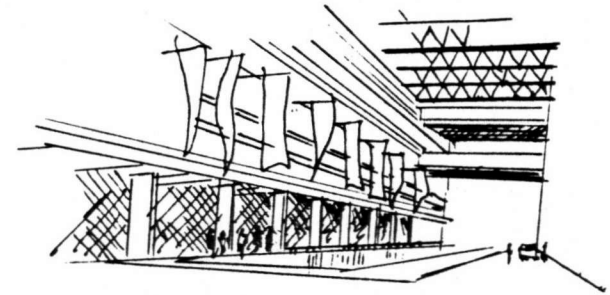


Although its mechanical expression is packaged, the car remains to be perceived chiefly as a mechanical object. Source: J. Fenton, *Vehicle Body Layout & Analysis*, 1980: 30.

machines, establishing this association in a place of cars and people would give that place a sense of human belonging. And this goal is precisely the goal that can transform the traditional design of garages.

Like the space in factories, mills, and warehouses, the space in garages must accommodate the needs of moving equipment and moving people. When the machine operators have left, factories, mills, and warehouses are recognizable as places of human activity. It is the remaining machinery in the machine-shops, implying their connection to human operators (by knobs, levers, and pedals), that makes this recognition possible. Scale of passageways, windows, and overhead clearances, all leave a residual idea of human activity in a place involving machinery. What traces, or nuances can be left behind, or more importantly, what end can the garage serve that makes the garage a place for human activity? This question is all important. The answer lies in creating a machine expression (that communicates human involvement) with static forms. Sundials have this movement/stasis condition. They are intensely human related and can be easily recognized as human artifacts. Moreover, they are latitude-specific, their gnomons being angled to parallel the Earth's rotational axis. In Heidegger's terms, sundials reveal by *poiesis*, they reveal the specific site, and they do not exist as standing-reserve. They are human in scale, reveal the presence of human influence, and stir the imagination.

Train stations and airports too are places involving moving (transport) equipment and people. Unlike garages, they are concerned with a positive and connected environment for embarking/debarking. Train stations may be stronger in this association because of the relatively closer proximity of the pedestrian platform to incoming/outgoing passenger carriers. Nonetheless, this arrival/departure idea can be used in a place for cars and people in a similar manner. At McCarran International Airport in Las Vegas, parking is part of the terminal with elevators providing access. The open perimeter of the garage allows a visual connection to the ground, although the scale is one of mega-structure. More interesting is Quincy Adams Station in Quincy, Massachusetts. Bus and commuter train staging areas make up part of the 2200-car-parking complex. Although the scale is similar to McCarran Airport, the mixing of activities and the moving machinery in a building whose structure is exposed, gives Quincy station an immediate vitality.



Quincy Adams Station, Quincy, Mass. Platform close to carrier dock, mixing activities and movement.

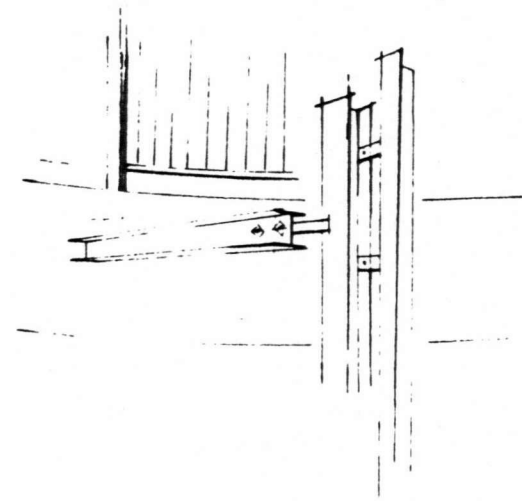
Human/mechanical dialogue is potentially a design approach that can alter the traditional concept of garages. It is not the intent of the dialogue to glorify the machine, but more to explore a relationship between people and the mechanical objects approximating a human scale. It is because garages must accommodate both people and machines that

this notion has potential.

"The frame we place around external reality in order to subject(ify) it, to cast it as a projection of ourselves, is mechanical...It is in the machine that use finds expression and is elevated through this necessary excess into cognition as significance...Due to its historic and psychological depth, a machine architecture is not gesture of futurism but an archaeology of common understanding."³³

Material Joints

Much of the expression that archaic machines possess originates from the joints between component parts. They rationalize each part's reason for being and reveal their mutual dependence. Marco Frascari, a professor of architecture at the University of Pennsylvania in an essay on detailing suggests that what we traditionally refer to as details can be used as generators by which a total architecture can be perceived. That is, by looking at, or touching, and understanding the structure of a *fertile detail*,³⁴ a sense of the wholeness of the place can be appropriated. Frascari then points out that the traditional definition of detail cannot be properly used in architecture since some elements of architecture are in

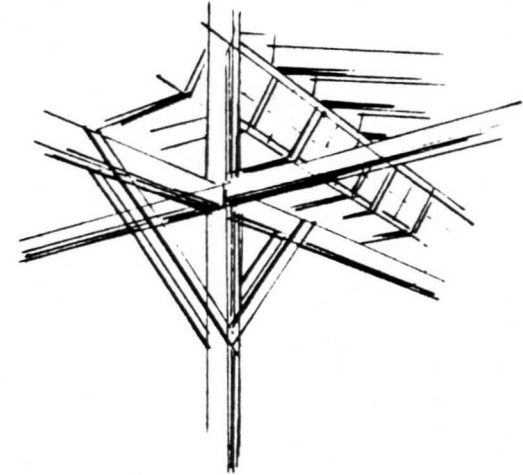


Material joint, expressing stability of exposed elevator, Lonsdale Quay, Vancouver.

themselves whole pieces but at the same time parts of larger wholes. He uses the lantern atop Brunelleschi's Duomo to illustrate this. To better describe this situation, Frascari uses the word *joint*:

"...it is possible to observe that any architectural element defined as detail is always a joint. Details can be "material joints," as in the case of a capital, which is the connection between a column shaft and an architrave, or they can be "formal joints," as in the case of a porch, which is the connection between an interior and an exterior space."³⁵

The exposure of joints intrinsic to economic construction practices found in contemporary parking structures is not developed; the joints by being exposed already have expressive potential, but because they are direct results of engineering and economic 'finishing,' they are perceived as subordinate elements. Their potential to be an expression of technology, and with it the ability to embody the local sense of place goes largely untapped. An example is the use of corner windows in Vancouver residences. To obtain view and light, many residences glaze intersecting exterior corners, some with no more than a silicon bead to reveal the intersection. This use of glazing is in a general way, location specific. Frascari, in summary suggests "The joint, that is the fertile detail, is the place where both the construction and the construing of architecture takes place."³⁶



Roof system at Granville Island covered parking has integrity of function and expression.

Developing this two-sided idea of joint in garages can give to them an authenticity and permanence, as does the detailing on Granville Island. The revealed joints in construction, particularly in the roof support systems, communicate a time, place, and purpose. They possess an integrity of function and expression, giving them authenticity and permanence. Joints in more current construction involve nuts and bolts, or screws (implying hand tools), welded steel plates, angle iron and I-beam sections. What is so engaging in Frascari's argument is that it argues for architectural integrity. This integrity has much potential in parking structures.

The reason for this potential is three-fold: parkades are not meant to be places of prolonged inhabitation, which allows for a more robust and revealed execution of finishes and joinery; two, parking structures are not limited by climate control and noise level criteria to the extent that residences, or places of work are, which allows spatial development and expression; and three, the garage is the point along the schema of movement where a joining of street and building is necessary.

The articulation of joints, and the recognition of a human/mechanical dialogue, has potential to elevate the function of the parking garage to its more appropriate twofold capacity; a staging place where the activity of embarking and debarking is positively manifested and, a transitional place that joins the street system with the building.

THEORETICAL SUMMARY

This chapter has been devoted to a philosophical design approach developed from position which adopts the phenomenological views of Heidegger. Its intent is to elevate the function of garages in urban settings. The approach embodies a strategy termed *integrated function* which involves making design decisions directly connected to tactile human experience. The aim of *integrated function* is to engage users of garages in ways other than those associated with sight alone via *tactility*, and in ways other than those associated with utility alone via *expanded program*. The contention is that the concept of garages cannot exist on the singular premise of pragmatism. If expanded to incorporate the allowance for a conscious and positive environmental perception, the concept for garages can integrate the presently exclusive process of parking with other activities, allowing a cohesive use and perception of site. In this way an urban continuum of movement and activity can be preserved.

Chapter Four

GOALS AND PROPOSITIONS

Established by the philosophical position discussed above is the need for an expanded concept of parking garages. Their fundamental capacity should be twofold; one, to facilitate the circulation and storage of automobiles and two, promote a conscious and positive environmental awareness to elicit active participation from their users. The achieving of these two functions allows an ultimate goal to be reached; they allow parking garages to assume a role whose transitional position between streets and buildings is coherent and contextual enough to preserve the continuity of movement of people through urban places.

The thesis suggests that to achieve this state of *integrated function*, the general amenities of *respect* and *civility* towards garage users must be used in conceptualizing an expanded concept for garages. In order that the garage should constitute a place of vital activity and purpose (urban connection), these general qualities of *respect* and *civility* are required.

One specific criterion regarding the civility of garages is security. As mentioned above, garages are often hostile. To counter this, security must be clearly discernible by the

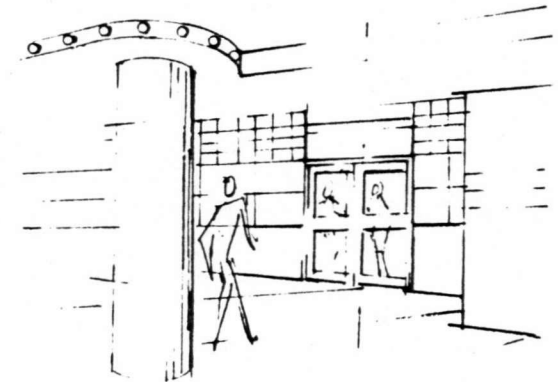
building users. G. S. Shaffer and L. M. Anderson released a research study in 1985 on the perceived security and attractiveness of urban parking lots.¹ User security is a major issue in the design of garages and the study indicates certain physical variables can be responsible for a higher or lower rating in both security and attractiveness. More interesting is the overall implication from the study; amenity in garage design is not superfluous and can conceivably contribute to user volume.

Some of the results are as follows:

Security tended to be greater for scenes having high apparent property value. By using careful detailing practices and high standard finishes, not only is respect granted to the user, but a sense of security is encouraged as well. Pan Pacific Hotel at the Cruise Ship level is an example.

Frontal as opposed to rear views of structures were preferred. This is interesting because many contemporary garage entrances are located on elevations other than the frontal one, as is the case where the garage is part of a larger complex.

Ease of access and entrance location corresponded to security perception. This indicates the dual advantage of strategic entrance location. Pronounced entrances facing the major streets were scored convenient for accessibility as well as high



Pan Pacific Hotel entrance on the Cruise Ship Level at Canada Place is sensitively finished and well lit, enhancing respect and security.

security ratings. Entrances placed in lanes contributed to lower security ratings. This also coincides with the attractiveness dimension in the study which indicated that automobile entrances be located on the frontal elevation.

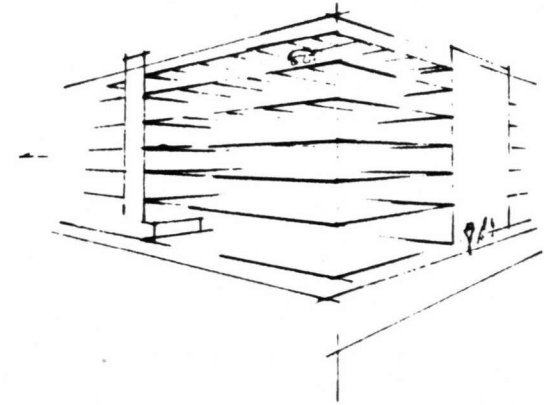
The presence or implied presence of others related to higher security ratings. The central thrust of this thesis is concerned with engaging human experience to elicit participation from building users in their settings. All the following propositions revolve around this engagement of human experience and an interesting observation of the study is that *implied* presence is enough to bring about higher security ratings. Moreover, the greater the number of cars and people visible directly corresponded to higher security ratings. This indicates the need to expose the garage as opposed to hiding it.

High visibility and low sense of enclosure resulted in positive ratings. Visibility was attributed to the desire to see sky. The anxiety of personal assault was also a probable factor in this result. Barriers such as fences and retaining walls produced negative results. Thin slabs and open guard rails produce a lighter, brighter atmosphere than heavy concrete retaining walls. The garages at Granville and Cordova, and Cordova and Richards serve as a comparison. At Cordova and Richards, three of the four sides are opaque, with relief occasionally coming from

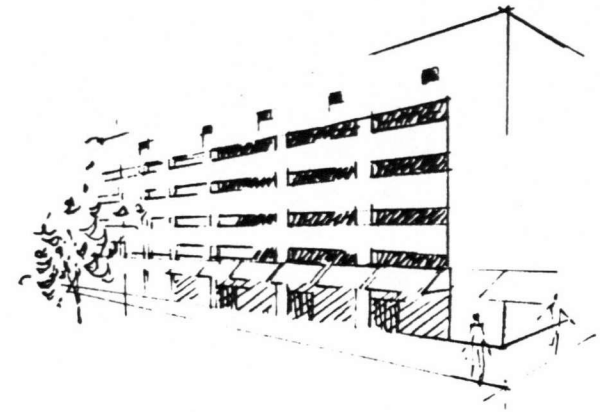
sparse openings on the south facing alley facade. Most of the openings are on the north facade, where daylighting is naturally soft and as a result, the interior is very dark and sight lines for visibility are obstructed. Conversely, at Granville and Cordova, the facades are made up mostly of thin guardrails interrupted only by one major structural diaphragm on each of the exposed west and north elevations. The deck slabs are tapered to the edge, creating a very light framework. Visibility is high and the sense of enclosure is low in comparison.

Perhaps most important to the perceptions of both security and attractiveness are those features that demonstrate care and attention by people. This is directly related to a category the study terms Design and Maintenance. Maintenance of all objects (including vegetation) and surfaces implied higher property value and higher security. Design for visibility, enclosure, and entrance placement were major areas of concern.

Dumpsters, wires and litter were negatively correlated with the above two perception ratings. This is the consequence of poor maintenance and inattentive design.



At Cordova & Granville, Vancouver, open facades increases security rating and is well suited for orientation using sight-lines.



At Cordova & Richards, Vancouver, highly enclosed 'bomb shelter' atmosphere decreases security and the use of sight-lines.

The results of Shaffer and Anderson's research reveal a need to approach garage design as a problem which includes attributes of human occupation. Shaffer and Anderson sum this up by stating:

[the results of the study]"suggest that urban planners should not try to hide the presence of [these] buildings altogether. Instead, perceived security might be enhanced with well-maintained structures where individuals feel they can seek refuge or that imply the presence of others who can either provide deterrence or assistance."²

Shaffer and Anderson's research indicates a need for an expanded concept for the urban parking garage. Implied in their discussion is the need to express a human association in garages. This falls in line with the central aim of this thesis.

Having discussed a general philosophical position for garage design, and having presented independent scientific research findings, which are directly related and supportive of such a position, four propositions can now be presented. The first embodies Heidegger's view of *dwelling*, and reflects his insistence that all buildings are inhabitable. Implicitly connected is Mumford's suggestion of a holistic human experience. The second deals with Heidegger's discussion of *location*, but at a scale of site-with-building, that is, at a

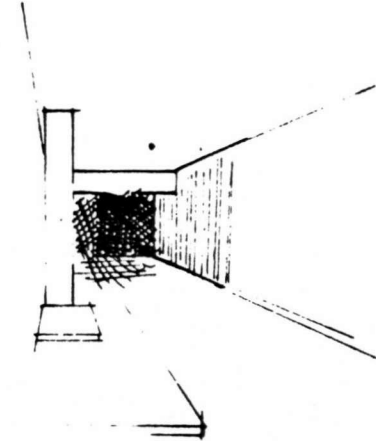
scale that orients users in an urban continuum as identified by Lynch. The third again deals with *location*, but is more intimate, and aims to bring about a specific *here* (from Leatherbarrow, page 51) for the garage itself. And the fourth proposition embodies Heidegger's philosophy on *building, thinking, and technology*, identified by Frascari as an architectural integrity of building assembly.

These propositions originate from the belief that parking garages can, by initial concept, contribute positively to a more coherent continuity of urban movement and activity. All four are concerned with an environmental learning, as implied by Chidister's and Francis' identification of discovery, challenge, delight, and participation - a learning that can result from what Mumford implies is a sensitivity for the balance between objective and subjective perceptions of buildings, and which Irwin describes as *being and circumstance*. They embody architectonic goals attainable by various means.

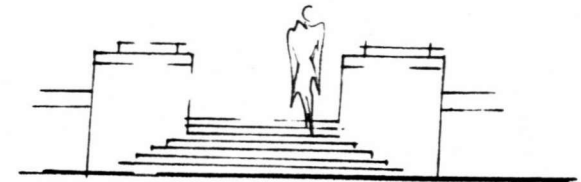
Each proposition is presented with examples of means to achieve the intent.

Proposition One: Design the entire garage with amenities for human habitation.

If urban continuity can be accepted as a goal applicable to garage design, and if the general conditions of respect and civility are to be incorporated, then an architectural gesture must embody these factors. Entrances for example, are to be located where they are easily visible and perceived as important, most likely along or near the frontal elevation. Garage entrances should not be bleak and lacking in detail because they symbolically mark the boundary, a threshold between two spaces. Locating the entrance at the back of the building, or in an obscure corner, hard to find, and difficult to access, cannot help but make a negative gesture towards drivers. Conversely, making them visible and locating them where they can be perceived as important, as in the case of porte-cocheres, will incorporate the idea of *embarkation* and welcome users in a dignified way. Automobile entrances are not alone in this regard. Pedestrian entrances for those going to/from their cars also deserve detailing and thoughtful location. City Center, Vancouver, uses elegant detailing on the pedestrian entrance to the parking area. Thus, respect is granted to drivers returning to or departing from their cars. Oakridge Center on the upper level parking uses highly appointed detailing in the atrium entrances. This is an interesting example because this splendor does not occur at plaza level. The intention of this proposition is to embody in garages, recognition that people use these buildings.



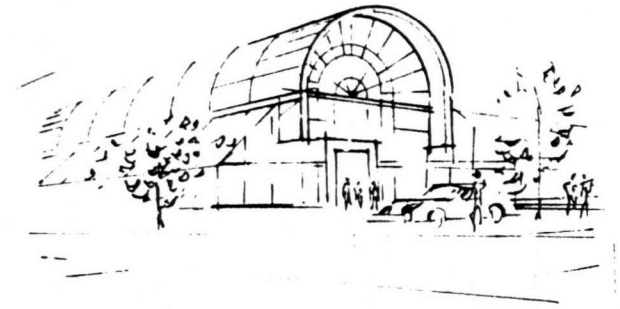
Approach to Robson Square garage entrance is a roundabout path because of one-way street system. Entrance is at back of building, bleak, and is in sharp contrast to pedestrian entrances at front.



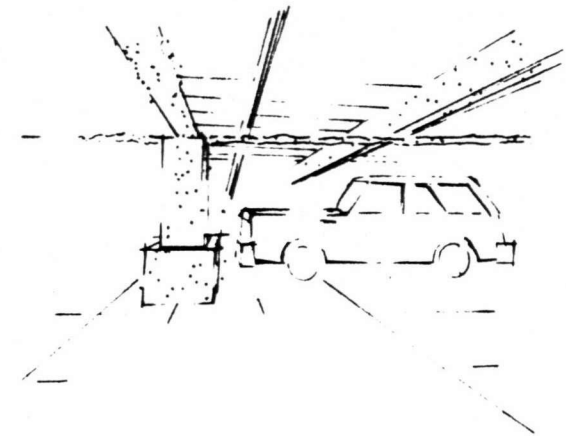
Sensitive detailing of pedestrian entrance, City Center, 12th & Cambie, Vancouver.

This gesture however, need not be limited to entrances. Wall surface, lighting, door fixtures and hardware, acoustics, pavement surface, and graphics all contribute to interiors which are responsible for setting the overall mood of the place. The extremely low head clearance (in some places 2.1m) found in the Washington State Convention and Trade Center, along with the lack of natural lighting, and compounded by the choice of finishing, creates a very cavernous atmosphere. An exceptionally hostile atmosphere can be found in the Butler Garage, at the corner of 2nd Avenue and James, in Seattle. Not only is the building in a state of ill-repair (broken window panes in several locations, grimy walls, garbage), but it also suggests that it contains nooks and crannies to harbor crime. The entrance is depressingly dark, with the only indication of life being some cars parked nearby. Thus, as can be seen from this example, interior amenities must be employed to welcome users.

One may initially confuse this proposition with *decorating*. It is not. *Design* is more appropriate. The strategic allowance of daylighting is not mere decoration, nor is the placement of entrances. Both have implications on structure and plan that can have more impact than decoration on the physiological and psychological responses of building users. As amenities are important in other places of human inhabitation, so they are in garages.



Pedestrian entrance at roof-top parking, Oakridge Center, Vancouver. Sensitive detailing of entrance and panoramic view upon entering is respectful to visitors.



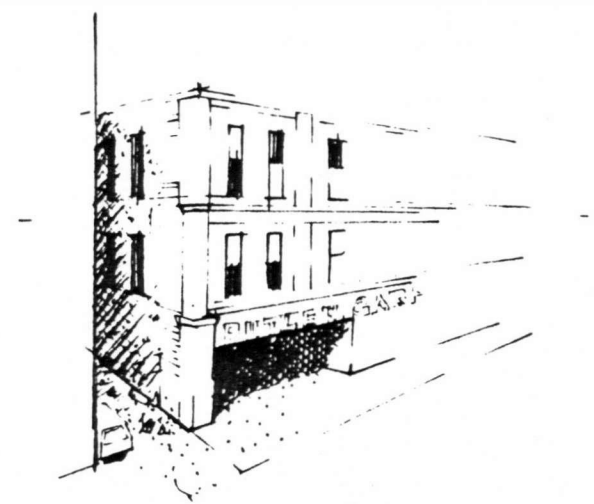
Low headroom and no natural lighting creates cavernous atmosphere at parking level 2, Washington State Convention and Trade Center, Seattle.

Proposition Two: Reinforce local orientation and introduce the building.

William H. Ittelson, an environmental psychologist, tells us that people tend to organize their responses and actions around five identifiable modes of analysis; affect, orientation, categorization, systemization, and manipulation.³ Individually identifiable, they exist in an overlapping and simultaneous context. A brief comment about each will aid in presenting the current proposition.

Affect refers to that which immediately impacts our emotions. It usually is in response to the general ambience and sets the motivational tone for action. Garages clearly have ambiances that provoke rather than evoke. General maintenance and design of finishes and detailing can result in positive affects.

Orientation in environmental psychology usage refers to the most primitive form of orientation - the identification of escape routes. Ittelson suggests that establishing an initial mapping of any situation will provide a base for more detailed exploration. With respect to parking, a sense of bounds, limits, scale, and the presentation of options of route can contribute to this type of orientation. Doing so will allow more complete use of the on-site possibilities, which in turn can reinforce a local orientation within the urban continuum.



Hostile environ, Butler garage, Seattle.

Categorization is that which allows for analysis and understanding. Within this realm, the identification of building types and places occur. Also, concepts are interpreted here and the idea of the building and concept undergoes a distillation process which leads to the fourth dimension of systemization.

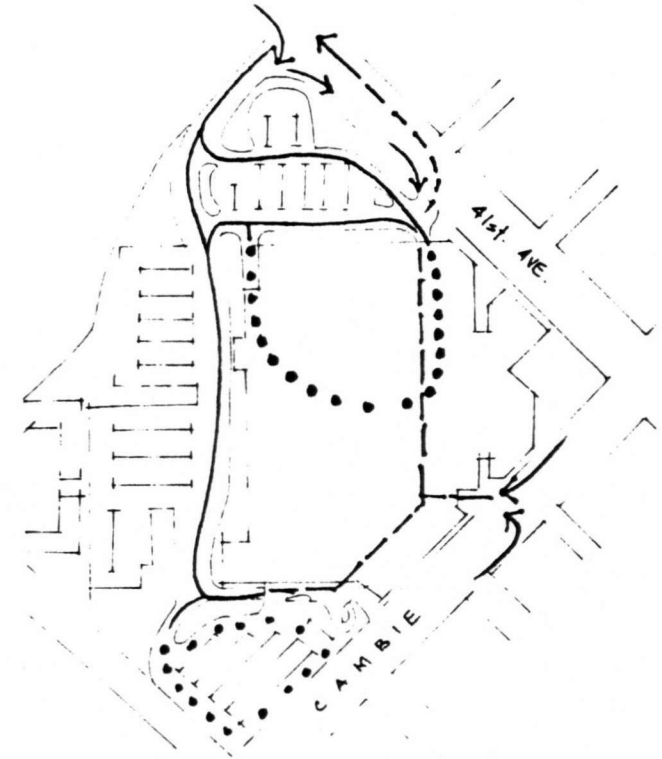
Once categorized, a *system*, or set of logical and ordered connections is sought by the person perceiving. Predictable events are expected. Patterns are made and understood in relation to the building.

Manipulation comes about by the active participation of the individual. By participating, the individual re-informs the earlier processes and the entire perceptive experience is repeated. Personal forthcoming actions will provide a learning of environmental change in accordance to individual needs and purposes.

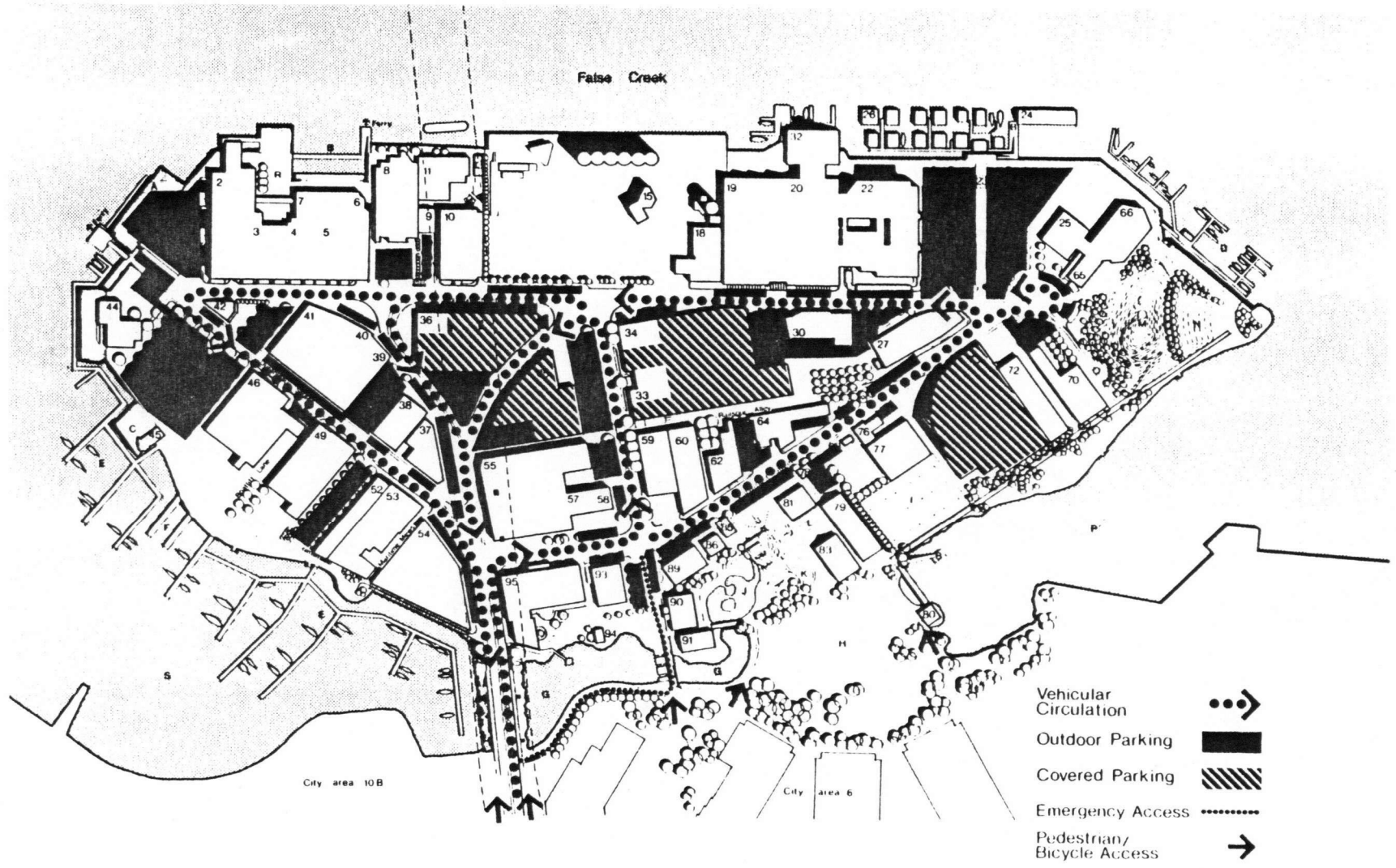
Considering the above five modes of analysis, the sequence of approach, particularly the occurrences immediately before parking, can help to orient the visitor to the site. There are two major types of orientation: one that involves site orientation, and another that involves building orientation.

Site Orientation

Site orientation introduces the site by presenting the visitor with possible routes to and from, and, in and around the site. Placement of entrances, sight lines, presentation of pathways, visual cues in detailing, and communication of plan contribute to effective orientation, important for wayfinding. Granville Island automobile circulation and parking is diffused over the entire site, mixing parking with individual events and activities. Hence a smooth transition is made, and the organization of the site is revealed by the routing of circulation. Transit is provided on site, but its circulation is limited in comparison to that of the automobile. Oakridge Center, Vancouver, is similar in its circulation pattern (that is, one consisting of a major circulation *ring*), to that of Granville Island's, but clearly separates parking from other activities. Hence, the fundamental difference in site organization is the relation of the ring to the rest of the site; on Granville Island, the circulation happens within the activity space, whereas the ring at Oakridge surrounds the activity area. Although both present options of route on site, and provide ingress and egress information, the circulation at Granville Island by its integration allows internal characteristics of buildings to overlap those of the street system, whereas the external conditions at Oakridge are quite independent in function and perceived ambience from the interior of the shopping mall. At Oakridge, exterior ambience is influenced by adjacent building facades and not by the activity from within the mall. The intention of



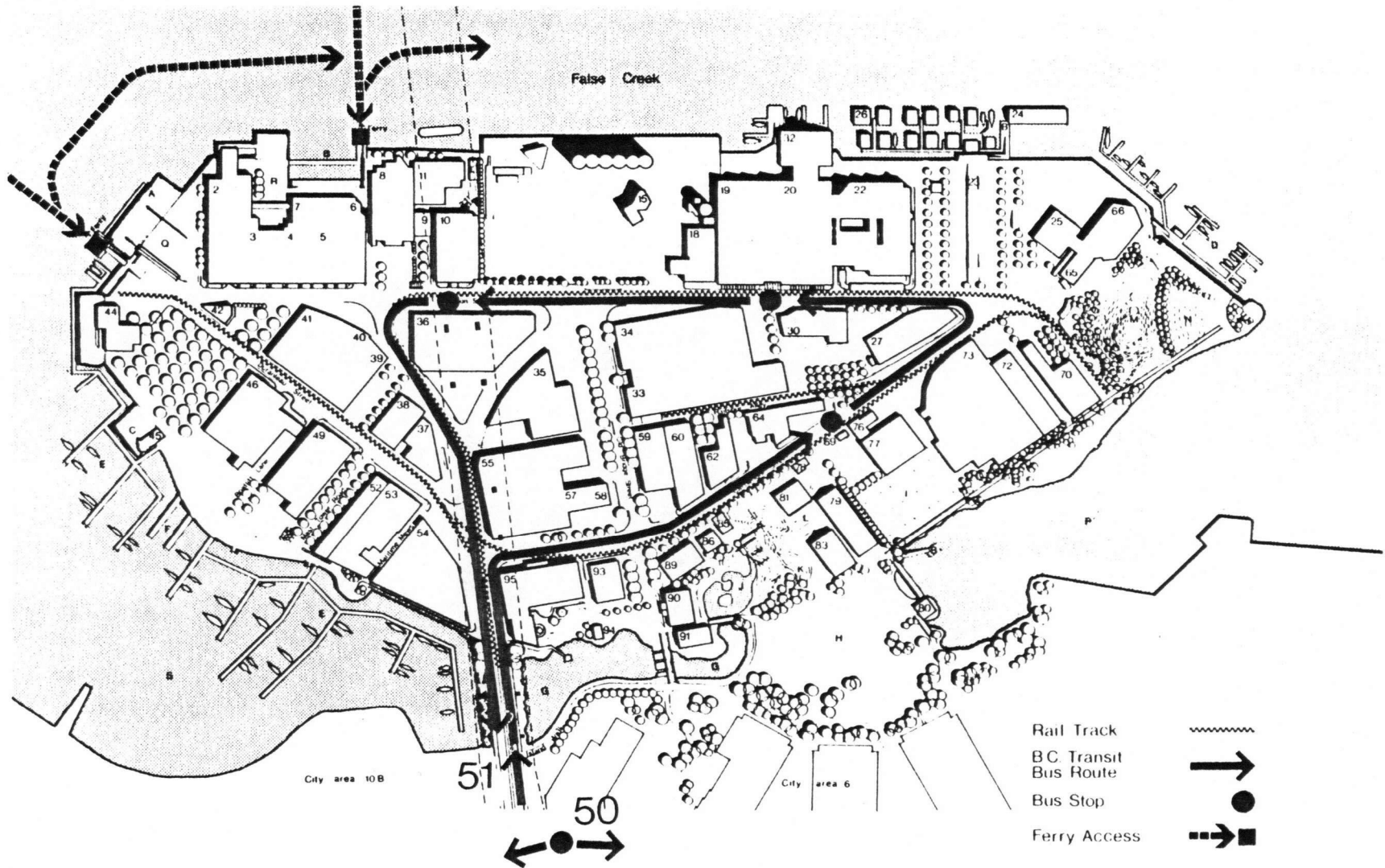
Activity is in center of circulation 'ring' at Oakridge Center, 41st & Cambie, Vancouver.



CIRCULATION AND PARKING

GRANVILLE ISLAND · VANCOUVER B.C.

*Granville Island Parking and Circulation Plan.
 Source: 'Granville Island April 1986 Plan Update.'*



PUBLIC TRANSIT AND RAIL

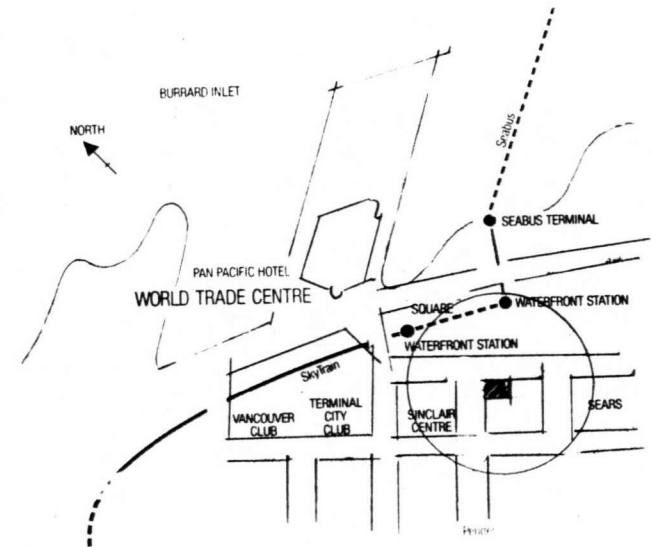
GRANVILLE ISLAND · VANCOUVER B.C.

Granville Island Transit and Rail Circulation. In comparison to automobile circulation, transit is limited. Source: 'Granville Island April 1986 Plan Update.'

this proposition is to unite buildings and sites with their parking areas so that people arriving at these places by car can obtain a sense for the urban continuum. This gives the parking area a quality *unique to that site*, roots it to *location*, and makes it easily negotiable.

Site orientation can be accomplished by two major devices: the strategic routing of circulation, and the use of uninterrupted sight lines. If a garage has sufficient openings on its elevations, orientation can be established through sight lines which use the buildings around the garage as reference points. The garage at the corner of Granville and Cordova in Vancouver is ideally suited for this type of orientation. Located on a corner, with its street facing elevations having minimum sight obstruction, this garage has uninterrupted sight lines to prominent buildings such as Sinclair Center, 200 Granville Square, Canada Place, and the Sea Bus terminal at Waterfront Station, all which can be used to effectively orient the user.

Speed reduction occurs when a driver leaves the street system and this is where more exacting coordinates can be provided for the visitor. Site orientation is at a larger scale than building orientation, and its main function is to provide reference points in important features of the building, and where these points are in relation to the site in terms of ingress and egress. The speed of circulation here is less than street circulation, but still



Garage at corner of Cordova & Granville, Vancouver, is ideally suited for using sight-lines to the surrounding buildings for orientation. Source: 'The World Trade Center Office Complex, Vancouver, B.C.

greater than garage speed which indicates that the scale of forms and details should be designed for the occupants of cars.

Building Orientation

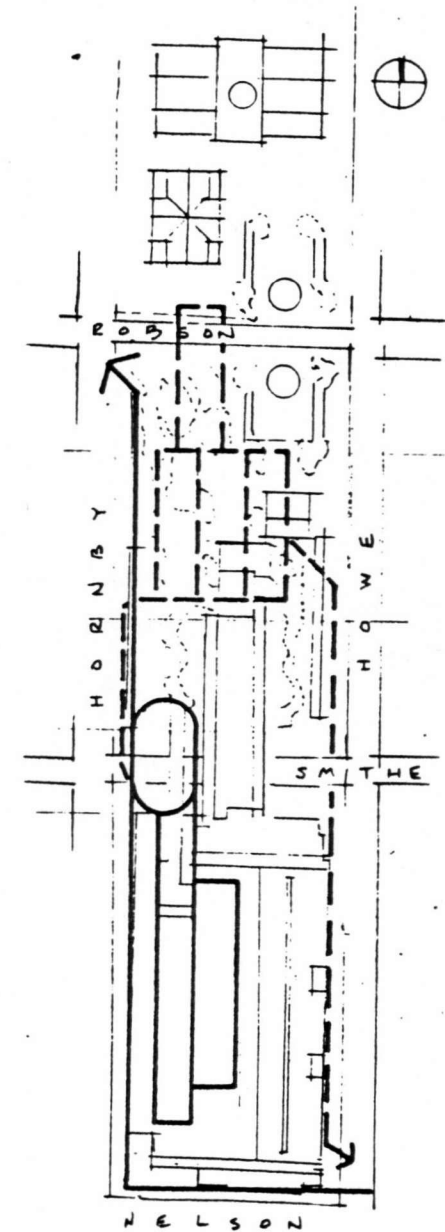
Upon entering the garage, speed is reduced again, and building orientation should be made available. That is, characteristics of a building should be presented to people arriving by car. Revelation of the structural and mechanical systems en route to parking should be used to suggest organization below or above the level at which the car is arriving. One way to accomplish this may be exposing visitors to various vertical elements (elevators, stairwells, mechanical ducts, atria, sight line openings), that reveal or imply their uninterrupted continuance - an atrium being an example of a revealed continuance, and an elevator being an example of an implied continuance. Pan Pacific Hotel at Canada Place is confusing in this regard as the elevators connecting the parking levels continues only as far up as the Exhibition level. Another bank of elevators connects that level to the rest of the building.

In addition, implied vertical orientation may be brought about by the replication and stacking of striking parts of a building. If, during *site orientation*, visitors are presented

with a particular part of the building that was striking and memorable, a skew in floor plan causing change of elevation, or change in roof line for example, and if the route to or from parking passes through this part at any level, the visitors are potentially afforded a reference locale to which they have already experienced in context with the general mass of the building.

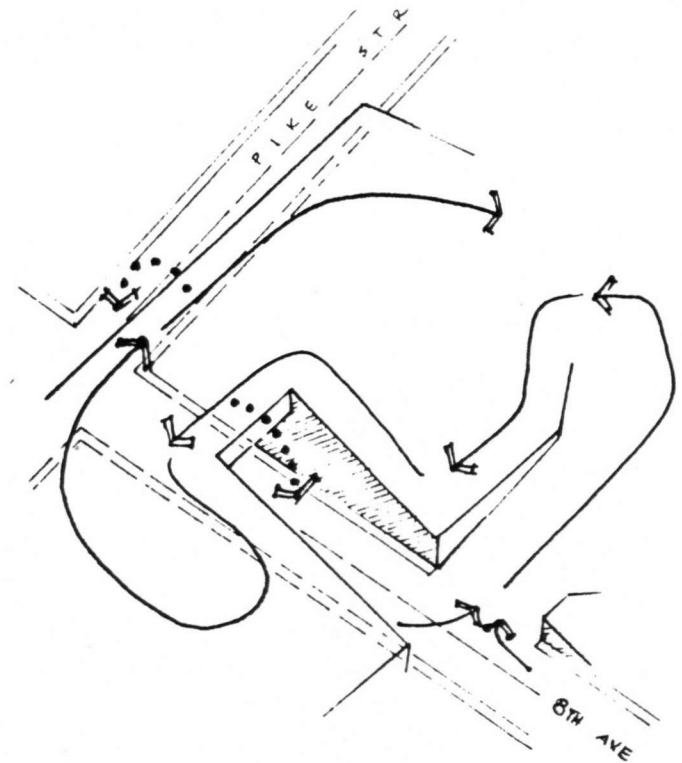
This repeating of orientation reassures the visitor of a correctly selected route and lessens the anxiety of 'going in the wrong direction.' Romedi Passini, author of *Wayfinding in Architecture*, refers to this repeating of information as *reassurance*.⁴ Passini points out the two major functions of reassurance are reducing anxiety (driver related) and refreshing the memory of earlier collected information. A closely related device that can be employed for reassurance is scale. Scale is important for user orientation. Mega-structures as parkades are confusing as well as alienating. Alienating does not necessarily mean oppressive, but large sizes simply make garages less comprehensible. The closer to human scale the structure and circulation are, the more memorable the sequence of approach is.

Two existing examples that could take advantage of this *reassurance* are the parking accommodations at Robson Square in Vancouver, and the Washington State Convention and Trade Center (WSCTC) in Seattle. The vertical circulation between the sub-grade

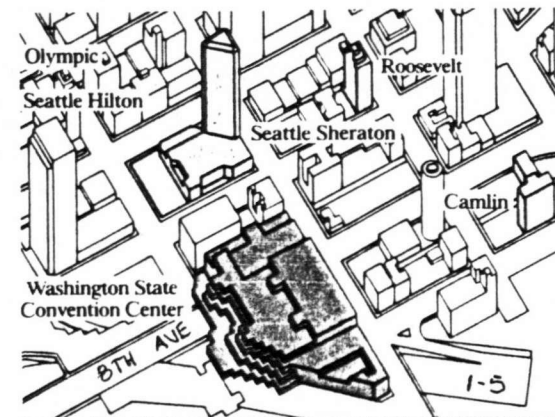


Key coordinates along Robson Square parking circulation, ie. Smithe and Robson Streets, are not communicated to visitors.

parking levels of the Law Courts of Robson Square occurs beneath Smithe Street. Yet, no indication is given to patrons that this is so. The scale of the horizontal travel from the parking entrance (at Howe and Nelson) to the north limit of parking (approximately beneath Robson Street) is two city blocks, making disorientation a common occurrence. The WSCTC has a similar disorientation problem that could be remedied much easier than the situation at Robson Square simply because WSCTC has above grade parking. Entering off of 8th Avenue, a patron is led through row upon row of parking in an area where sight lines to the extremes are not possible because of structural supports. However, a large portion of the parking level spans the space above 8th Avenue. A sight line connecting the Level 3 parking area with 8th Avenue would immediately provide coordinates for a visitor, and yet, the wall is completely opaque. An opening in the wall is not difficult here as this wall is also the exterior enclosure for the parking area. Since the street system is a network already understood by people using cars, reference to this network can only help establish orientation. The fact that the complex straddles major arterials differentiates WSCTC from most other buildings because other buildings usually do not impinge on the space above the street system. Interstate 5 as well as 8th Avenue pass underneath the complex indicating a potential for interesting interfaces between visitors (drivers and pedestrians) and the complex, and a potential for effective orientation.



Dotted arrows indicate potential sight-lines to Pike Street and 8th Avenue are possible, Washington State Convention and Trade Center, Seattle.



Source: 'Seattle the New West,' WSCTC administration.

An important consequence of providing an orientation is that it inherently situates the parked car for easy relocation.

Proposition Three: Root the garage to "place."

This proposition deals more *qualitatively* with a sense of *location* (see page 50) for the garage itself, and is meant to compliment building orientation.

Contemporary parking structures, by having neutrality as an innate characteristic, are antithetical to a traditional notion of architecture understands architecture to involve the revelation of *place* and *time*. Moreover, with specific regard to garages, automobiles are embedded urban artifacts. They possess an urban contextual quality of which urban settings are incomplete without. Their communication is both physical and social; their role is not neutral. Strategies to negate neutrality and to integrate the driver's role are thus appropriate.

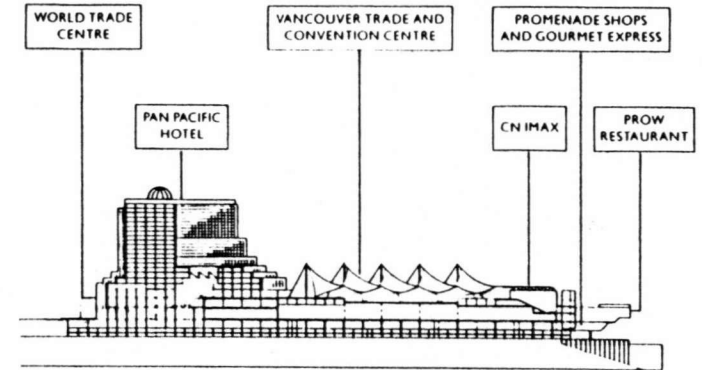
Time and *place* in architecture can be brought about by the use of indigenous materials, construction techniques, and building types. Sensitive response to a site's historic significance, climate, use, how it exists within a network of other sites, can result in a

definite *here* for the garage itself, and because *here* is recognizably coherent, it is the strongest means to counter the neutral tendency of traditional parking garages. History and overlapping activities with automobile circulation and parking can express a change owing to time that allows a different interpretation of purpose, which in turn can lead to an adaptive re-use of the historic integrity already embodied by the primary buildings and site. Granville Island is an example. This does not mean that new construction with regards to garage design is limited to using historicized motifs. Individuality can be brought about by recognizing the uniqueness of cars, and how to integrate the activity of them and their drivers with that of buildings. This *individuality* should not be confused with *exclusiveness* which better describes the situation where the garage and its function are not integrated with those of other buildings. Instead, individuality is intended to negate neutrality by providing an identity for the garage, albeit in juxtaposition to the building. As Cullen has pointed out, "the effects of juxtaposition are in themselves as exciting as the objects juxtaposed - often more so."⁵

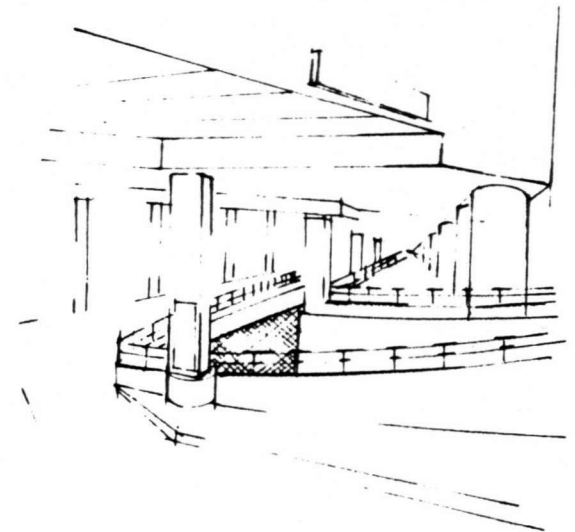
Juxtaposition can be used for activities as well as objects. Newspaper stands, mobile espresso bars, public information and advertising billboards, artwork such as wall murals, can all be juxtaposed in the immediate proximity of parking areas to overlap uses. This overlap gives a uniqueness of location, and is another means of negating neutrality.

Superficially applied historic motifs have the distinct drawback of being perceived as additions and decorative design. Therefore, it is important to note that the potency of historic context arises from authenticity. The site, how people use it, how the sun and wind affect the microclimate, history, and gestures for the future all contribute to strong themes. A metaphorical interpretation that alludes to the historic significance of the site is one way to secure a degree of *here*. Canada Place has a strong theme, a bit literal perhaps, but strong just the same. The building resembles a ship in full sail, and its position on the Burrard Inlet is an appropriate setting. What is interesting about the parking, is that because of the ship analogy, parking is reminiscent of boarding a ferry. Minimal clearances, sharp entry/exit ramps, and open steel structural members support this feeling in the parking levels.

An interesting phenomenon concerning history is that without it, applied interpretations feel temporary and arbitrary, and Frederic Jameson has termed this temporariness *schizophrenic*.⁶ Places where history is easily read are perceived as permanent, and integral with their surroundings. They express a reason for being there. Implicated is the history of garages, and perhaps the evolution of the central involvement of the car. However, romanticism can be the result of misused historic context. Romanticism in this manner concedes to the past as the only source of inspiration. This skepticism of future



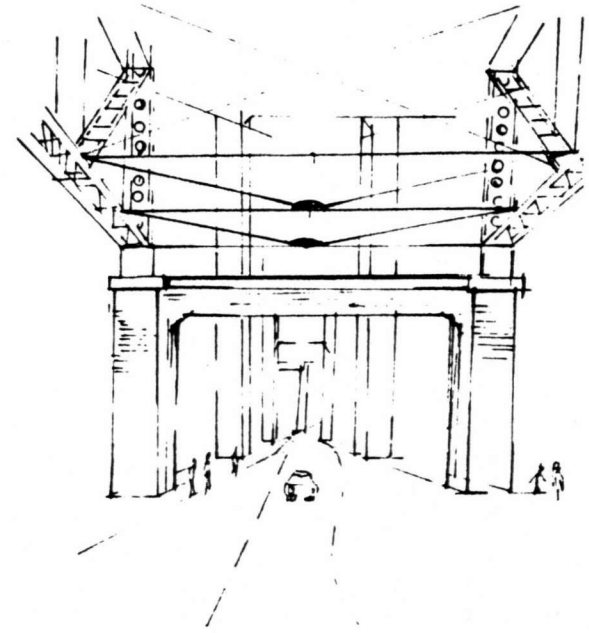
Elevation of Canada Place. Source: 'Canada Place: Where Vancouver Meets the World.'



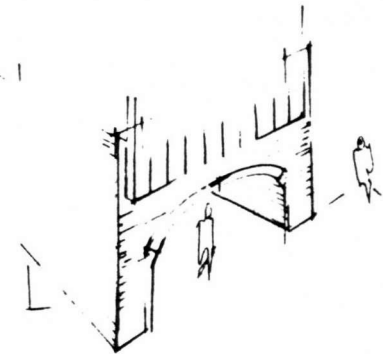
Sharp ramp grades, close quarters, the ocean and views thereof, the ship metaphor, all make the parking entrance/exit at Canada Place, Vancouver, reminiscent of ferry embarking/debarking.

development has been criticized as being an archaeological 'ruining' of architecture.⁷ It promises no hope of things to come and is rigidly focused on experiences that cannot be. In essence, its preconceived aging is no more valid than the condition of post-modernism which Jameson refers to as *paranoia*. Confusion arises between engaging history and historicizing and the latter should be viewed with caution. The recognition of historic authenticity is however, important to give sustenance and integrity to the place. Granville Bridge is a fitting introduction for the industrial vernacular of Granville Island.

In Irwin's usage, "what was, how it came to be, what it is, and what it may come to be"⁸ is essential to the evolution of any particular site and is equally important for authenticity. Historic nuances can situate a place (garage) in a time period and can thus fix it. Joel Shack in a critique of architects using "industrial archaeology"⁹ suggests that authenticity is born from revealing origins. He refers to this quality as Place-Story and implicit in his discussion is the setting for human action. He uses Port Alberni Harbor Quay on Vancouver Island as an example. Another example is Pioneer Square in Seattle. During the evening hours, the large number of people patronizing their favourite drinking establishments, night clubs, and restaurants, gives Pioneer Square a sense that it is a place of vital urban participation. By providing some story of a place, a setting is established in which the visitor may partake. Settings sometimes include artifacts which in themselves



Granville Bridge, embodying historical significance, is a fitting introduction for Granville Island.



A firing kiln is an artifact of Granville Island's legacy.

tell a story. The firing kiln in one of the Granville Island parking garages hints at the building's legacy. This too, may be a source of negating neutrality in garage design.

Proposition Four: Reveal the integrity of building assembly.

A means to achieve an integrity of building assembly is to articulate forms and joints in construction.

Heidegger's usage of *techne* and *poiesis*¹⁰ can be used as inspiration for this proposition. *Revealing* to Heidegger is not to mean making and manipulating. Making and manipulating belong in the realm of process, whereas revealing is an expression of the thing itself. Heidegger uses the example of a blossom bursting into bloom to communicate this idea. In architecture, this revealing is the interplay of the parts, and how they depend on each other. *Poiesis* is concerned with revealing ends, means, and origins. Infatuation with the technical does not offer a sense of ends, nor any specific origin. In such a case, the end is confused as the making of the object itself and not as the end to which the object serves. For example, pre-fabricated rafters stacked up on the ground do not express their belonging until supporting a roof structure.

Revealing in contemporary usage is centered on manipulation. The expression of the garage is entirely one of technical efficiency, with its precise conditions. The revealing of which Heidegger suggests, the revealing of which garages design can concern itself with, is the *bringing forth*¹¹ of its forms and construction. This bringing forth is evident in bridge construction. Discernible human involvement is present (oversized turn-buckles, nuts and bolt heads implying *wrenches*) which makes the experience of perceiving bridges immediate. Piping, handrails, electrical raceways, ticket machines, beam and column connections, Georgian wired glass, plate fasteners, lag screws, suspension systems, panic hardware and door closers, lighting systems, edge finishes, all are areas that can be developed in garage design to bring about a integrity of expression, and with it a human/mechanical dialogue. For example, construction around openings admitting daylight, can express the tending to the natural phenomenon (in this case sunlight), its need in human applications (by the pleasing affect it brings), and the technology employed to meet this human need (the use and strength of lintels and glass). It is this multi-faceted perception that is the aim of articulating forms and joints in construction.

Articulated forms naturally attract attention, and as such, are important not only for an integrity of architecture, but also for site and building orientation. Architecturally sensitive buildings usually set up a hierarchy of forms, bringing attention to specific locales in or of

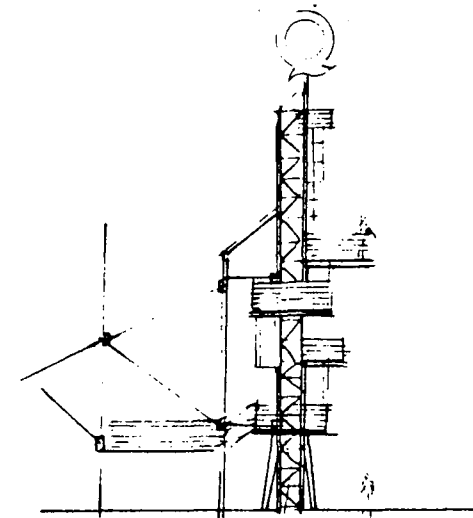
the building. For example, an atrium may be highlighted because it can be a focal point. These forms can usually be spotted from the exterior, as the skylight of the atrium can. The garage, by having its own identity, can articulate itself in much the same way. Bringing more attention to the garage could make ingress and egress routes easy to remember and thus, less confusing. More important though is that articulation communicates a positive intent.

Revealing can bring about environmental discovery. Lynch refers to this mode of perception and action as a *learning ecology*.¹² Implicit in his discussion is that people need to learn and discover their natural and built environs. Mark Francis of the University of California, Davis, has pointed out that an important ingredient of successful urban spaces is its ability to foster *environmental learning*:

"The public environment teaches a city's inhabitants about its past...It is here we become competent in reading and understanding our built environment...fantasy and objects people discover as they use a space make public spaces more meaningful. As Lynch suggests, much of the risk and challenge has been removed from our public environments...Users of a space must maintain direct control of places, making them "ours" as opposed to 'theirs.'"¹³

Discovery, meaning, delight, challenge, and participation can all be attributes of articulating forms and joints. An example is the view tower and its use at Lonsdale Quay. The learning of construction joinery (of the tower itself), the challenge of climbing, the discovery of the surrounding view, all contribute to an active learning by an individual and give meaning to the tower's existence.

Hence, there are two major reasons for articulating forms and joints. Frascari has correctly pointed out that it is in the joint where a construing of the construction gives strength to a sense of architectural integrity. The second reason is revelation and articulation can potentially bring about an environmental learning and an understanding of built forms. These are the qualities that can supplement the pragmatism of garages by engaging the people using them.



View tower at Lonsdale Quay, North Vancouver, encourages environmental learning.

It is of note that, although a large proportion of contemporary parking structures are barren, generic, and uninteresting, there exist a number of examples which do not have these negative characteristics. Moreover, the garages that were not generic, have within them traces of the attributes of which the above propositions seek.

Granville Island is an example of a design which integrates well the role of the driver into its concept. Using the *historic significance*, that is, the industrial legacy of the locale, adaptive re-use of existing structures is successful for drivers and pedestrians. Circulation is an orienting experience as well as a learning one, stirring interest and the imagination. Authenticity was established by respecting the Island's history, giving the buildings a permanence and integrity of expression. All of this roots the site and its buildings to *place*, and allows people to embark.

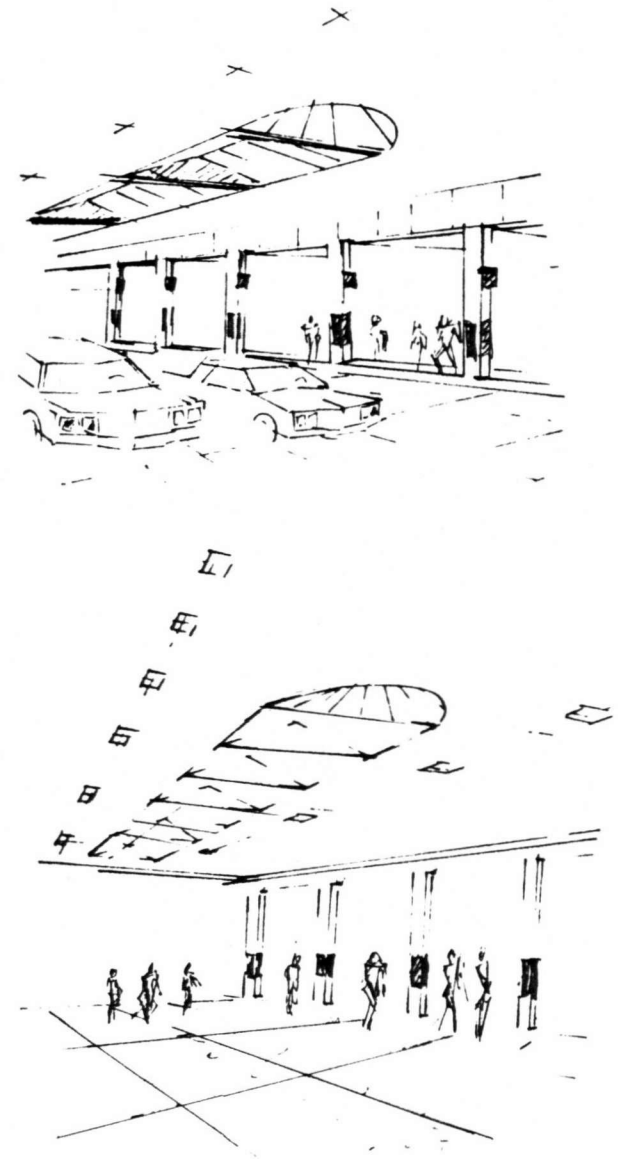
This in itself is interesting because in areas such as shopping centers, there is a sharper division between driver area and pedestrian area. The parking beneath Pacific Center, having no orienting qualities, historic content, and amenities for human inhabitation, feels detached from the continuum to which Lynch refers.

Metaphorical connections are made in some garages such as Canada Place. The surrounding context, both natural and architectural were responded to in a way that gives the building a newness, but a newness that respects the heritage of the waterfront. Moreover, it hints at the human/mechanical dialogue by its metaphorical expression of a ship. Mentioned earlier was its ferry-boarding effect.

Another interesting note of Canada Place is the detailing and lighting of the Cruise Ship Level. The exterior staging area for vehicles is finished in a very similar manner to that of the interior of the exhibition halls. This gives recognition to those arriving by vehicles. The entrance to the Pan Pacific Hotel, albeit down-played from the one at street level, is sensitively finished with glazing, complete with neon signage. Mirrors that increase the ambience of pedestrian activity have been placed on the white rectangular columns in the bays. The west wall is completely glazed, (the glazing divided into a grid pattern), and this glazing affords a view of Burrard Inlet and with it, ample natural daylighting. The pedestrian activity, moving machines, sensitive detailing, and natural daylighting, is appropriate to a place where embarkation and debarkation is staged.

Examples exist where orientation can or could have been further developed as identified above in the designs of Robson Square and the Washington State Convention and Trade Center. Opportunities exist in their configurations that would allow direct sight lines, and vertical connections, both implied or revealed, to be made. These connections and sight lines would aid in a negotiable wayfinding in these buildings.

Reception in entrance design was not encountered in a convincing degree, which indicates a problem area. One notable entrance was City Center, Vancouver. Its expressly thematic entrance though, is sensational, displaced in time, and has a ring of theatrics

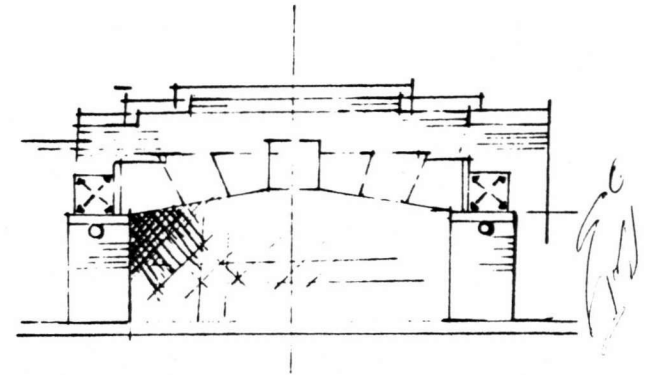


Similar detailing inside and outside of staging area at Canada Place Cruise Ship Level provide respect and smooth transition.

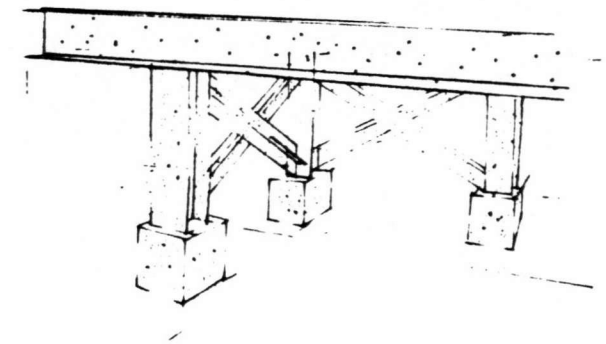
about it. It does however, grant status to the people using the garage. One result of the coherent theatrics used at City Center is that the detailing approaches the condition of which Frascari refers to as *joint*. Even though the expression of the garage entrance is somewhat contrived, it carries a sense of permanence about it and possesses integrity because it indicates what the rest of the building carries as an expression. In most other parking structures, no indication is given to what the quality of the destination may be.

As well, articulation of forms and joints in construction was not encountered as decisive. Granville Island garage structure, although very expressive, is a unique situation because of the Island's status and heritage. Most other garages were constructed in very ordinary terms. Canada Place was again of note because of its use of steel beams in the parking levels, and elements such as Georgian wired glass and heavy steel door hardware. The Washington State Convention and Trade Center has similar structural design. The steel beams sometimes revealed their bolted and welded connections, and the angles in which they met communicated an idea of stability, transferring the forces of gravity to the ground.

An interesting example of overlapping activities can be encountered in the Chinatown district of Vancouver. A surface parking lot at Gore and Georgia, has juxtaposed next to it, activity of a market type. Random produce stands have been erected and the activity of



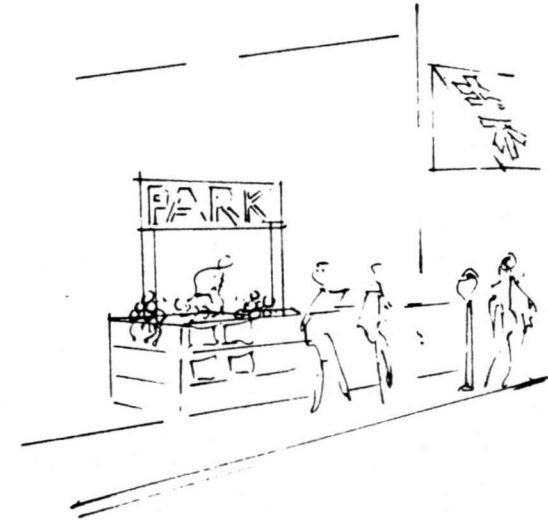
Garage entrance to City Center, 12th & Cambie, Vancouver, is expressively thematic, almost Piranesian (Carceri series), and indicates what expression the entire complex carries.



Structural steel beams and columns, Washington State Convention and Trade Center, Seattle, express constructional integrity and stability.

retail sales occurs in the immediate proximity of the parking area. This however, is an example specific to Chinatown, where the activity of open-air-market retailing is standard.

Of the areas in which parking structures were surveyed, perhaps only one area approached a level of having attributes of all the above propositions. That area is Granville Island. Its weakest point is site orientation. Because of its irregular circulation pattern, first-time visitors may have difficulty in establishing on-site bearings. Its other qualities are worth noting as has been done throughout this thesis. Granville Island access, circulation, and parking structure serves as a transitional link between the urban street system and Granville Island and, as such, contributes to the urban continuity.



Random market stalls erected in close proximity to surface parking lot, Chinatown, Vancouver.

Chapter Five

CONCLUSION

From the outset, it was of interest to investigate the potential that the automobile/driver combination could have in architectural design. Preliminary observations indicated a tendency exists which separates the activity of parking from other activities of buildings and places. Whether an independent garage, or one which is part of a larger complex (a shopping center, for example), one characteristic was clear - their utilitarian function in relation to site and place. As a consequence, barren and sometimes hostile atmospheres often resulted in garages using storage as the primary design concern. Because possession of an automobile and the experiences derived from driving one are so completely a part of daily routine, of interest was the possibility of integrating the function of garages with other buildings and activities that these garages may be associated with, and of overcoming the barren and hostile environments of traditional garages.

From the field observations, it was clear that most parking garages included the driving experience only to the extent of parking a car, and in such garages, deliberation and

civility were not influences in their designs. This has the effect of excluding active participation (beyond that of following signs) on the part of the visitor. Monotonous exteriors and interiors were characteristic of such garages. Also evident from the field observations was the fact that architectural design for most garages was concentrated on the facades and the internal workings and their functional relation to other places remained primarily utilitarian. As a result, the facade treatment related more to the role of decoration (and is perceived as such), leaving bleak interiors to be found by people using these garages. This lack of respect and amenity decreases sharply the possibilities for the garage to contribute to the site, and also decreases sharply the chance for an environmental awareness. The exclusion of individual participation and denial of *occupation*, that is, the *taking* of places, are responsible for the disorienting and alienating environs of garages. These deficiencies contribute to what the thesis refers to as a *fracturing of urban continuity*. As most garages contribute to this discontinuity, a parking study conducted by the Vancouver City Engineering Department was used to discern what fraction of the downtown commercial area was devoted to parking. The result warrants consideration; thirty two percent of the gross built space in the survey area (1983) was occupied by structured parking. This percentage does not include surface or curb parking. Indicated, is the urgency to reassess the role of parking structures.

A theory to elevate the role of the automobile/driver that directly implicates garage design and site circulation is presented. Drawing primarily from the philosophy of Heidegger, *integrated function* with regards to parking garages via *expanded program* and *tactility* is proposed as a philosophical design approach whose aim is fourfold; to ground architecture in experience, to provide a theater for human action, to establish a certainty of place, but above all, to bring back a sense of urban continuity by expanding the concept of traditional garages. From this approach four propositions are presented: one, design the entire building with amenities for human inhabitation, two, reinforce local orientation and introduce the building, three, root the garage to "place," and four, reveal the integrity of building assembly. These propositions are presented in an attempt to reach a state of architectural integrity resulting from a sensitivity for the balance between subjective and objective perceptions of buildings. They are meant to offer an alternative way of conceptualizing the design of parking structures.

The propositions are revolutionary only insofar as they have not been engaged in the design of most urban building types. Heidegger's philosophy is acknowledged, but manifestation of that philosophy is infrequent in buildings. The thesis proposes to engage this phenomenological position as a design catalyst for parking garages, structures having potential of contributing to the urban continuum.

By engaging the users of garages, their function can be integrated with other buildings and activities to which they are associated. In connection with this, it is suggested that facilitating a positive environmental awareness and eliciting active participation could bring about discovery, delight, challenge, and control, all of which could add meaning to garages.

Utility is acknowledged as a prerequisite (that is, garages, as part of their function, must store cars), but only as a prerequisite requiring supplementation. *Practicality* in its singular and exclusive state cannot exist alone as a building determinant in a multi-faceted urban network of destinations and activities. Hence, the philosophical design approach proposes using human experience via *tactility* and *expanded program* in an attempt to reach a state of garage architecture in which the routine of parking can be meshed with a collage of urban activity that promotes positive environmental awareness.

The potential for garage design lies in the reconsideration of its traditional premise. It is this single urban building typology, that has evolved slowly in architectural qualities, that is potentially a catalyst for the continuity of urban activity and movement. It is odd that this significant urban building type remains to be determined only by pragmatism. Robert Irwin, a contemporary Los Angeles artist, commenting on the subject of aesthetics,

proffers a reason:

"What appeared to be a question of object/non-object has turned out to be a question of seeing and not seeing, of how it is we actually perceive or fail to perceive "things" in their real contexts."¹

The garage has been overlooked as a potentially major contributor to the urban fabric. There are existing examples from which the architectural evolution of garages can benefit. These examples have one common thread - they include visitors in ways beyond utility and elicit positive participation and interpretation.

Architects must look upon the garage as an architectural possibility. It is in fact, one like any other by virtue of the fact that the garage is a place, only one presently lacking positive associations. It belongs within the realm of architecture and is to the service of human dwelling. The practice of architecture involves statics, assembly, construction, and dwelling which puts these things in time and place. The garage as any other building, is capable of possessing qualities provocative of a context that elicits positive awareness. To realize this potential, it is necessary to acknowledge individual and subjective assessments as valid criterion in the design of parking structures.

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Appendix A

THE SELECTION OF OBSERVATIONS FOR FIELD STUDY

The field observations were done concentrating on 6 general areas of parking. They are:

1. *Approach*

Approach I take to mean the route a car must follow that is part of the street system. Approach can be broken down into two main phases: *distant* approach, where view corridors and general or silhouette massing can be considerations, and *near* approach, where more detailed massing and site orientation begins.

2. *Entry/exit*

Similar to a gate or doorway, the entry marks the end of the street system and beginning of the arrival path. In many cases, it is nothing more than a depression in the sidewalk or an opening in a facade. Speed reduction usually occurs upon entry. By reducing the speed of the incoming car, a transition is already in progress from street to building.

3. *Control*

Control usually occurs in the form of ticket machine or parking attendant. Control can be located anywhere along the arrival path, but usually is situated near the entry. Control is sometimes passive (warning signs to non patrons using private parking lots) or non-existent (major shopping centers) when parking is free.

4. *Arrival/exit Path*

Arrival path is that part of the circulation route which leads from the street to the parking area. It may be long or short depending on proximity of parking to street system. If path is long, control may be situated further away from street system so that the arrival path can double as a reservoir for incoming traffic.

5. *Parking*

That area where cars are parked and a connection to the building is initiated.

6. *Connection to/from Building*

The path from the parking area to the building and the path from the building back to the car. As wayfinding is important to arrive, it is also important to relocate the automobile for departure.

These general areas by category do not describe such considerations as detailing, daylighting and so on. These considerations however related, are of a different dimension and might be better termed *means*. Some means are as follows:

- symbolism
- detailing (themes/materials)
- daylighting
- plan/configuration
- haptics
- sight lines
- scale

Considering the means, together with the 6 general areas of parking, the propositions were developed. It would be redundant to discuss how each individual proposition affects each area of parking, or which means corresponds to what other variable. The

reason is that they all are interdependent, that is, different means can be used for different areas and propositions.

A list of some of the more salient garages that contributed to this thesis is as follows:

1. 760 Water Street, Vancouver, B.C.
2. Butler Garage, 2nd Ave. & James, Seattle, WA.
3. Canada Place, Vancouver, B.C.
4. City Center, 12th & Cambie, Vancouver, B.C.
5. Cordova & Richards, Vancouver, B.C.
6. Fraser Parkade, UBC Campus, Vancouver, B.C.
7. Gasworks Park, Seattle, WA.
8. Granville & Cordova, Vancouver, B.C.
9. Granville Island, Vancouver, B.C.
10. Lonsdale Quay, Vancouver, B.C.
11. Oakridge Center, 41st & Cambie, Vancouver, B.C.
12. Occidental & Yesler, Seattle, WA.
13. Robson Square, Vancouver, B.C.
14. Sun Wah Market, Keefer & Main, Vancouver, B.C.

15. Surface lot between Keefer & Union on Gore, Vancouver, B.C.
16. U.S. Bank, 1st Ave. & Cherry, Seattle, WA.
17. Washington State Convention & Trade Center, 8th Ave. & Pike, Seattle, WA.