ABSTRACT

Problem:

A critical issue of contemporary urban design is that of the transformation of ringroad and highway development on the periphery of urban centers into elements of urban connection. There is a search for a generative syntax to bind together the urban fabric and traffic routes as a solution to the problem of the threshold between that which is urban and extra-urban. This search also seeks an architecture which is coherent with infrastructures and for a correspondence between fast traffic roads, urban morphology and the landscape. It is the development of this correspondence and its impact on urban morphology that could potentially translate the current disorientation of cities such as Los Angeles and Houston into a positive urban experience.

Using the Galleria Post Oak area of Houston as arena for this thesis, a conjunctive process will compensate for the negative impact of piecemeal development driven by economic and engineering decisions. This project engages components of both the private and public sectors. Proposals are made at the scale of the district, a specific development area, and a generative architectural component.

Thesis:

Acknowledging the nature of dispersing development patterns and their related mechanized access is critical to the potential for a new form of public space and generative organizational patterns for future growth. This transformation of existing disparate typologies into an interconnected urban condition requires both the recognition of urban preconditions and an infrastructural intervention.

In demonstration of this statement in the Galleria/Post Oak area the preeminent urban preconditions are found in the nodal development pattern and the three dominant typologies.

(1) The first typology consists of the strip center and its absolute relationship to the automobile and street.

(2) The second typology consists of the retail mall and its internalized pedestrian street.

(3) The third typology consists of the high-rise building and adjacent garage with their symbolic front lawn and functional interface between tower and garage.

The distribution of these typologies follows a pattern similar to a branching diagram or flow chart. The use of this area provides repetitive singular experiences which are the conscious choices of its users. This is unlike the pattern of the city grid which allows plurality of use patterns and experiences.

The infrastructural intervention of current consideration is the metro rail system. The general locations of its four stops will solidify nodal patterning for the area while their precise placement should respond to the urban preconditions herein described.

The intervention seeks both a horizontal and vertical conjuncture of typological conditions to create a dynamic urban condition. It should not follow the existing pattern intrinsic to autonomous development and itself be an isolated object.

The Post Oak Central complex is chosen to illustrate these principles at the scale of a single node. The Metro station and related infrastructure are chosen for further development due to their conjunctive role among the other typologies and sectional potential.
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Appendix: Research paper: "Conjuncture, The Urban Apex"
The Galleria/Post Oak district began its current urban morphology during the late sixties and early seventies. Initial developments were known as the Galleria, a mixed use complex focused on an enclosed retail mall, and Smith Business Park, a linear grouping of office towers. The mall was located adjacent to a freeway exit at the crossing of two thoroughfares and the business park along the freeway access road. Due to their success a number of other office parks, housing complexes and strip retail/commercial buildings have developed along Post Oak Boulevard and the east/west thoroughfares which it intersects.
Houston's dispersed growth pattern exemplifies the post suburban condition of mobility driven development. The results of which led to areas of mixed usage along freeways and at major intersections. This has affected the grain of the city by deteriorating the mixed use activities of the downtown pedestrian environment and distributing the perimeter grain so broadly as to be accessible only by vehicular movement. The Galleria/Post Oak area will be used as a case study for investigations in this urban form.
Infrastructural hierarchy for movement is currently limited to the automobile and bus. There are three distinct levels of movement representing interaction at the scale of the city, district and autonomous development. These are represented by freeways, thoroughfares and local access roads, respectively. Of these patterns the only one that approximates the scale of the traditional city is the local access roads, and many of these are privately owned with controlled access.
Street patterns for the Galleria/Post Oak area suggest a dramatic departure in use from Houston's downtown grid. The scale of block sizes (excluding privatized access) increases from 250 feet to 900 feet. This change of scale causes the area to be used less like a grid with a great variety of combinations for circulation and more like a linear branching diagram of singular routes as demonstrated by the airport. The totally mechanized connections between the airport and the city as well as between its four terminals is analogous in scale and use to the Galleria/Post Oak area.
Building patterns can be distinguished by separation of typologies. The commercial/retail pattern is primarily linear along Post Oak except at the regional mall. The towers follow two distinct patterns, linear for singular building projects primarily along Loop 610 and nodal for multiple building projects along Post Oak Boulevard. The nodal events are the only figural spaces in the area and each has a different use and character.
Nodal developments include the Galleria, Post Oak Central, Lakes on Post Oak and Four Leaf Towers (not shown). These development plans as well as two airport terminals are superimposed over the city grid at equivalent scales. These developments cover 5-1/2 to 11-1/2 city blocks. From this relationship the potential for pedestrian activity appears limited to containment within a node while depending on mechanized access between nodes which are from 1/3 to 1/2 miles apart.
Typologies which make up the building patterns have different and distinct public interfaces (pedestrian zones). In the strip retail typology this pedestrian zone is along the store front and is usually sheltered. In the mall this interface is internalized in plan and vertically distributed as well as being enclosed and air conditioned. In the tower/garage typology the interface occurs at the garage elevators, representing a series of vertically fragmented sidewalks. In none of these typologies is the interface at the street sidewalk as in the traditional city. When these interfaces are mapped for the district the radically fragmented nature of the pedestrian environment can be understood.
District growth patterns were evaluated through the use of two models. The series of images along the left side describes the use of the traditional city model with its streets and sidewalks as connective elements. The diagrams to the right utilize mechanical movement and human egress to this movement as the criteria for growth, which taken at its extreme results in the model of the airport terminal.
Potential Metro alignments were evaluated based upon the two district growth models, both of which had variations of above-grade and below-grade locations. The demonstration area alternatives shown in model form suggest the four possible results. The elevated midblock location utilizes the mobility driven use patterns of the area. It allows a conjunctive opportunity among the typologies in both the horizontal and vertical dimensions.
Typological recomposition is necessary to provide a conjunctive environment at the nodal enclaves. In seeking a form for this recomposition, the interface zones of each typology must maintain their own integrity while being connected to the other typologies. Additionally, missing typologies should be integrated and future infrastructure for movement systems such as rail should be accommodated. In this instance the mall is the missing typology. It together with the rail station would provide a conjunctive zone between the existing typologies.
The district plan consists of the metro rail alignment, a secondary collector system alignment, and elevated pedestrian crossings of Post Oak Boulevard. The metro system connects the four nodes of this district as well as connecting this district to other parts of the city. The secondary system connects the linear developments to the nodal ones containing the metro stops. The pedestrian crossings correspond to north/south bus service stops allowing convenient access between bus and train.
At Post Oak Central the rail location provides a circulation pattern which suggests its infrastructure should be occupied by the missing typology, the mall. The internal pedestrian mall condition is there for the conjunctive space between typologies. Bridges and walkways connect the mall/rail station to the street level and other architectural components such as parking garages, office buildings and strip retail.
The ground level plan suggests the continued accommodation of vehicular movement by maintaining strip centers and their associated parking while adding vehicular connections to the lower level of the mall typology. Additionally pedestrian connections are made from the strip arcades to the mall interior. Upon approach to this development and through its temporal use one is aware of both these typologies, their interconnections, and a beckoning roofscape above.
The intermediate levels provide the critical horizontal connections between parking garage, mall and other buildings. Likewise they provide vertical access to or from the train system located in a clerestory above and to the street system of vehicular movement and strip centers below. This movement is accommodated through stairs, escalators and elevators. The open nature of the mall/rail section allows visual orientation between movement systems and various destinations.
The roof level contains the Metro rail access and the resulting transformation of parking garage roofs into elevated plazas. This change is accommodated through parking requirement reductions associated with rail use and the anticipated response by existing and future developments to this convenient and visually orienting path to the rail stop. Given the privatized nature of these garages and their many connections to the mall, it is anticipated that other activities will join the circulation patterns. As in the other levels the temporal use of the roofscape provides comprehension of all the typologies and their interaction.
The final jury for this project occurred on Friday, December 9, 1988, in Farrish Gallery. The jurors' comments were as follows:

COMMENT:
What you are suggesting is that you want to enhance the pattern that exists. Could you reverse that for a more urban pedestrian type condition?

RESPONSE:
From analysis the idea of pedestrian connections between nodes is not feasible due to their distances of 1/3 to 1/2 mile apart. Additionally, the environment between nodes is desolate to pedestrian activities. The train stops will tend to centralize future development around the nodes as opposed to proliferating linear growth patterns.

COMMENT:
Is this project planning or architecture? If it is an architectural proposal, there are criticisms for the connections to the mall typology from the western section of the site. For example the bridges are too stiff and limiting for access into the mall.

COMMENT:
There is nothing wrong with admitting that this is a planning project.

COMMENT:
It seems that part of the project is planning but the central structure of the station is architecture. The architectural solution for the station is derived from planning decisions.

COMMENT:
That is the essence of your thesis, the conjunction of the two.

COMMENT:
Will this station be used for trips within the district as well as to other areas of the city?

RESPONSE:
Yes, Metro proposes a trip frequency which would allow the four nodes to be interactive.

COMMENT:
If the automobile environment remains unaltered it may continue to be more convenient (less time consuming) to use the car even after the train system is operable.

COMMENT:
It seems that a proposal for frequency of stops and destination patterns should be integral to this project.

COMMENT:
It appears some program parts are missing. Where is the parking for the mall and Metro?

RESPONSE:
This parking is accommodated in the existing garages due to reduced parking ratio requirements from 4 per 1,000 to 1 per 1,000 due to current use patterns and anticipated automobile reductions associated with the train system.

COMMENT TO JURY:
To clarify the parking relationships to this proposal you must recognize that the major park and ride lots are located at intersections of the radial interstates and the concentric freeways. The parking associated with this station will only accommodate a local population.
COMMENT:
You are at risk of killing the smaller scale strip retail with the mall. It is possible that the mall could consume all of the area retail. (Santa Monica malls and their impact on nearby retail were discussed.)

COMMENT:
These mall and retail conditions are cyclical. While there is the risk of killing the retail, an equal argument can be made for their proliferation. This thesis suggested that the basic relationships that make each typology function will remain intact but will be improved by additional relationships, i.e., the mall will be a better mall because it engages the strip and its automobile domain.

COMMENT:
You have made a number of moves at critical decision points that I would not have made but you believe in your proposal and have maintained your position and established a convincing argument.

COMMENT:
At the beginning of this thesis, I felt strongly about one solution for this area but through your analysis and proposal you have established a viable alternative.
DESIGN PROPOSAL

A critical issue of contemporary urban design is that of the transformation of ringroads and highways on the periphery of urban centers into elements of urban connection. There is a search for a generative syntax to bind together the urban fabric and traffic routes as a solution to the problem of the threshold between that which is urban and extra-urban. This search also seeks an architecture which is coherent with infrastructures and for a correspondence between fast traffic roads, urban morphology and the landscape. It is the development of this correspondence and its impact on urban morphology that could potentially translate the current disorientation of cities such as Los Angeles and Houston into a positive urban experience.

Using the Galleria Post Oak area of Houston as arena for this thesis a conjunctive process will be undertaken to compensate for the negative impact of piecemeal development driven by economic and engineering decisions. This project will engage components of both the private and public sectors.

The project will have three phases, the first of which is the master plan encompassing the area denoted on the following plan. The second phase will be the refinement of an urban space associated with one of the four Metro rail stations planned for the area. The third phase will be the development of the Metro station and associated elements.

THESIS STATEMENT

Architecture and urban design are conjunctive acts, requiring both connections to and the articulations of human conditions as represented by the quadrivial forces of Technology/Fields of Productivity, Hierarchical Infrastructure, Prospect and Repose, and Urban Preconditions.
PROGRAM

Phase I: Master Plan
1. location and integration of 4 Metro light rail platforms
2. recomposition of traffic routes and parking facilities
3. addition of urban amenities
4. creation of recognizable public space
5. enhanced civic symbolic structure

Phase II: Development of one sector of the Master Plan
1. Metro platform 4000 s.f.
2. Metro station and related features 3700 s.f.
3. public plaza and garden as avail.
4. public connections to surrounding context as reqd.
5. public parking 20000 s.f.
6. provision for temporary exhibitions 10000 s.f.

Phase III: Metro station and related components
External Program:
1. platform and canopy 4000 s.f.
2. Information kiosk system 250 s.f.
   total 4250 s.f.

Metro Program:
1. ticket sales; 3 workstations 90 s.f.
2. Information and public relations 60 s.f.
3. schedule display and distribution 150 s.f.
4. public lobby 500 s.f.
5. waiting 300 s.f.
6. administrative office 150 s.f.
7. employee toilet 100 s.f.
8. employee lounge / lockers 250 s.f.
9. janitors closet 50 s.f.
   total 1650 s.f.

Civic Program:
1. concessions 1000 s.f.
2. public restrooms 400 s.f.
3. observatory 400 s.f.
   total 1800 s.f.

Program Total 7700 s.f.
Conjecture: The Urban Apex

August 29, 1988

Thesis Research

Randall Paul Stout

Research advisor: Richard Ingersol
Thesis Director: Albert Pope
Thesis Advisor: O. Jack Mitchell
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THESIS

Architecture and urban design are conjunctive acts, requiring both connections to and the articulations of human conditions as represented by the quadrivial forces of Technology/Fields of Productivity, Hierarchical Infrastructure, Prospect and Repose, and Urban Preconditions.
Introduction: Insurmountable Odds?

The American city is in pursuit of the ideals and myths aligned with the character of its people. In contrast to traditional Western Urbanism the American city seeks a merger of the city and countryside, a scenario which dangerously transforms both into neither. The current dispersionary growth on the peripheral freeways of our cities is the antecedent to a long history of urban mutations of man and nature. Its theoretical beginnings lie with Thomas Jefferson and are perpetuated today by city planning policies, governmental intervention, economic realities as well as investments in infrastructures and the suburban environment since the industrial revolution. As the peripheral development of our cities increases in magnitude we must recognize the nature of its inherent forces and results in order to take advantage of its positive aspects and negate those causing disorientation and alienation.

To this end, a critical issue of contemporary urban design is the transformation of these peripheral conditions into elements of connected urbanity. It is only within recent years that substantial intellectual thought and discussion has been applied to this matter. In fact, while the 1960's produced a recognition of the problematic conditions in our inner cities which was addressed by Jane Jacobs and her contemporaries, there were few authors of note dealing with issues associated with peripheral development. Jacobs has had ample successors as proponents of city revival and yet there have been no heroes to emerge in the matter of peripheral development. In fact the most significant writings on this matter have been sociological and economic in nature, attested by Downs, Baldassare, Berry, Fishman and Jackson. This results in a significant gap in architectural and urban design though between the days of Frank Lloyd Wright's Broadacre City, with its celebrated condition of being "everywhere and nowhere" and the current writings mentioned above assessing the nature of peripheral transformations.

With the realities of a distinctly new phase in the form of the American City (described in detail in the following section) firmly upon us we have begun the search for a generative syntax to bind together urban fabrics and their arterial connections. This threshold between that which is urban and extra-urban is
intensifying in development and has reached a critical need for architecture coherent with infrastructures, urban morphology, landscape and human perception.\textsuperscript{6} It is the development of a correspondence among these elements and its impact on urbanity that is the potential redemption of our current disorientation.

The discussions which follow will not prescribe any list of rules or guidelines pertaining to urban design as has been often attempted but rather define a quadriivial theory for urban design centered on the idea of conjuncture. This theory will be supported by examples and illustrations of recent urban designs (primarily built since 1985). However, before this theory is described it is necessary to discuss some observations which lead to its formation. Sections one through three are devoted to this purpose.
Section I: Current Conditions and Recent Theories

The current state of affairs on the periphery of our cities is one of disorientation which is conveyed in Calvino's description of the fictitious city of Penthesilea.7

... You advance for hours and it is not clear to you whether you are already in the city's midst or still outside it. Lie a lake with low shore lost in swamps, so Penthesilea spreads for miles around, a soupy city diluted in the plain; pale buildings back to back in mangy fields, among plank fences and corrugated-iron sheds. Every now and then at the edges of the street a cluster of constructions with shallow facades, very tall or very low, like a snaggle-toothed comb, seems to indicate that from there the city's texture will thicken. But you continue and you find instead other vague spaces, then a rusty suburb of workshops and warehouses, a cemetery, a carnival with Gerris wheel, a shambles; you start down a street of scrawny shops which fades amid patches of leprous countryside.

If you ask the people you meet, 'Where is Penthesilea?' they make a broad gesture which may mean 'Here,' or else 'Farther on,' or 'All around you,' or even 'In the opposite direction.'

'I mean the city,' you ask, insistently.

'We come here every morning to work,' someone answers, while others say, 'We come back here at night to sleep.'

'But the city where people live?' you ask.

'It must be that way,' they say, and some raise their arms obliquely toward an aggregation of opaque polyhedrons on the horizon, while others indicate behind you, the specter of other spires.

'Then I've gone past it without realizing it?'

'No, try going on straight ahead.'

And so you continue, passing from outskirts to outskirts, and the time comes to leave Penthesilea. You ask for the road out of the city; you pass again the string of scattered suburbs like a freckled pigmentation; night falls; windows come alight, here more concentrated, sparser there.

You have given up trying to understand whether, hidden in some sac or wrinkle of these dilapidated surroundings there exists a Penthesilea the visitor can recognize and remember, or whether Penthesilea is only the outskirts of itself. The question that now begins to gnaw at your mind is more anguished: outside Penthesilea does an outside exist? Or, no matter how far you go from the city; will you only pass from one limbo to another, never managing to leave it?'

It is now evident that the peripheral nature of development is evolving a fourth stage of city form, albeit unresolved and immature at best. Critics have attempted various labels for this transitional form such as ex-urban and "technoburb"8 but regardless of the name there are two distinguishing characteristics of this phase, dispersion and autonomy.

To evaluate this new phase against the prior three, a brief discussion of each and schematic illustration (figure 1) follows. The first phase, that of the pre-industrial city, is distinguished by a tight and varied grain accommodating convenience and security at the pedestrian level. The next phase, corresponding to the industrial revolution, overlays an expansionary linear system of suburban growth along
rail lines. It is distinguished by remote housing, perimeter grain enlargement for concentrations of industrial use, and scars through the city fabric for rail lines. The third phase is that of quintessential suburbia marked by the presence of the automobile. Bedroom communities no longer limited in location by rail lines proliferated the dispersion of housing outside of the city. This freedom of location which could occur in any place that asphalt could be poured rapidly created chains of communities radially and concentrically around the city. Coinciding with this movement were other evident changes in the city, especially that of an enlarged city grain associated with urban renewal and a corresponding zoning of functions which emerged from the now infamous Athens Charter.9

The fourth and present phase of development is marked by the redistribution of industry, offices, retail and entertainment from the city center outward to the upper and middle income residential areas. The immediately recognizable characteristic of this phase is the new grain variety at the periphery with all sizes of buildings being distributed along freeway networks (figure 2). Two less evident characteristics are associated with use patterns in this new form. The downtown of many cities is now vacated as a truly mixed-use area and plays a greater role proportionally in regional functions such as financial and cultural districts and other has sectors which are in economic downfall. The second less evident characteristic is in the travel and use patterns of the individual. The idea of "center" has been transformed from a communal notion, i.e., the town center was previously the benchmark against which one judged distances, locations and relationships, to an individual one. Now it is one's home with its technological autonomy which acts as center and the city is limited to those segments accessible within an acceptable time/travel period.10

This attitude is expected to intensity with the common incorporation into the home of more advanced technology such as interactive computer networking (accessing the household computer to banks, retail and service companies), video systems and telecommunications. If these immediate forces continue the dispersionary tendencies of growth, does this necessarily imply the propagation of object buildings, loss of figural space, grain explosions and non-pedestrian environments? Unfortunately most current theorists and practitioners are avoiding addressing the forces at work and are rather retreating to the design principles of the traditional city of the first phase as previously described. This Sittesque11 school of thought today includes such notable figures as Leon and Robert Krier, Robert A.M. Stern and Christopher
Alexander, all of whom support returning to the romantic principles of the traditional city. However, it seems quite obvious that turning back the clock is not the key. This is not to say that planners and architects should continue with the "pedestrian last" attitude described by Alexander. The pedestrian cannot be ignored but neither can the technology and infrastructure of our present society.

However, as this section seeks to evaluate recent theory, it is important to broadly categorize the approaches which have been taken to urban design.

1. Simulation of past realities.
2. Adaptation of an idea from a previous model.
3. Attempt to create a new vocabulary.
4. Attempt to recompose an existing vocabulary beyond recognition.
5. Additive process-layering of new technology methods and ideas with pre-existing conditions and social information.

Heretofore, there has been a vascillation between the first two categories (representative of current neo-rationalist ideologies) and the third and fourth categories (representative of current modernism, expressionism, deconstructivism). However, it is the fifth attitude which is the springboard for the idea of conjuncture and the only hope among those listed to provide creative opportunities within the contemporay environment while improving the social and urbanistic qualities of our cities.
Section II: Urban Recollections, Inventions, Transpositions
and Realignments

This section deals primarily with urban transpositions associated with shortcomings of the traditional city. These transpositions are of the nature just described under items one through four. After these transpositions are described, a series of realignments will be presented which are examples of conjuncture as presented in item five. The topic of recollections are essentially weighted toward regressive philosophy and are primarily conscious in nature and are therefore well documented and intelligible. For specific example one needs only to turn to the history books for accounts of the neo-classic, neo-gothic, beaux-arts and post-modern movements. To classify these movements under a singular aspect of man's intellect, we must introduce the term repose which along with its opposite intention (prospect) will be discussed more thoroughly in Section IV C. For now these terms can represent conflicting ideologies. Also self-evident are those aspects of total prospect, those which deny the past and attempt to create a new environment. These principles are essentially contained within the modern movement and its subsequent derivations. This thought can be traced back through prior movements such as secessionist/art nouveau, expressionism, baroque and gothic periods.

However, the topic of greater personal interest and less information urbanistically are transpositions and Realignments. The former being a subconsious merger of prospect and refuge and the later being a conscious one. This topic and its architectural connections will be addressed in the following section, the Merger of Ideologies. In the urban transpositions cited below, due to the subconscious nature of the merger of ideologies, one is often far more evident than the other.

The first citation of a transposition comes from the EUR (Esposizione Universale di Roma) in Rome. This urban district, was the last of Mussolini's building schemes. Planning efforts were directed by Marcello Piacentini from 1935-41 and completed in the post war years from 1948-58 in surprising compliance with the initial planning effort. I propose that the subconsious model for this project was the Villa d'Este. Illustrations (figures 3 and 4) show these two complexes at the same size and accurately scaled, respectively. Its use is based on an enormous scale escalation of a familiar organizational arrangement of plaza's, gardens and buildings. The EUR sports complex terminates the major axis of the district, dominating
the landscape in the position of the villa. The frontal gardens are scaled to the sports complex and surrounded by access roads. In transposing this grad scheme from the domain of a person to the domain of a city a number of anomalies appear. One lies in the functional nature of the sports complex being wholly occupied for relatively brief periods and otherwise totally unoccupied save for maintenance workers. For this reason and its isolation by the roads, the enormous garden is not only poorly used but most often secured from public use by means of a chain link security fence. Likewise, other misused features abound such as plazas organized within a symmetrical layout and often centered with fountains which are used as nothing other than parking lots. Surely Piacentini did not envision such conditions, possibly feeling smugly confident in the beautiful villaesque plan.

The second project representing a transposition through scale explosion is the place de la Defense in Paris, the planning of which began in 1958. Its public components are of little difference from their historical models of Parisian places, specifically Place de la Concorde. Illustrations (figures 5 and 6) show these two places at the same size and accurately scaled respectively. Both the historic model and the transposition are in the same axial alignment with the Arc de Triomphe, the former connected by the Avenue des Champs Elysees and the later by the Avenue Charles De Gaulle. This modern business center has as its centerpiece a vast and unarticulated paved plaza and a terminating building that is a highrise office tower in the shape of a modern Arc De Triomphe. The enormous scale of each combined with the lack of functions at the ground plane create a non-pedestrian environment. Furthering this condition is the nature of direct access into many buildings from an underground circulation network related to the subway system. Add to these deficiencies the ludacrous nature of an office building in the shape of an historic monument. This is quite unlike Place de la Concorde which contains a sense of repose and is of a size which allows the perception of its composition. Without nearly the quantity of nearby inhabitants as has la Defense this place is continuously occupied and a pleasure to be in.

The last example of a transposition relates to a specific architectural component of an urban space. It is the Het Woodok project in Rotterdam. This 1985 project by Hartsuyker Architects has the same components and relationships as buildings of the old European city particularly those with arcades prevalent such as Bologna. Typical to this historic example the building fronts a public plaza, the Schouwbing plein,
and has ground floor retail with an arcade, second level retail support space/offices and residential quarters above. The transposition in this example has several components and is not just a problem of a scale escalation. The most severe problem lies in the building's arcade; while a substantial architectural gesture has been made it does not serve the roles of the historic example (figure 7). It does not connect to any other arcaded buildings or other means of protected passage, nor is its height to width proportioned to protect from weather. Additionally the structural spans allowing increased column spacing negates the sense of separation found in the traditional arcade (figure 8). Another shortcoming of the project is its continuous length which in the traditional model would be periodically broken with a perpendicular access path. While built in a modern vocabulary, one must consider this project not far removed from a post-modernist cartoon of a traditional model.

Fortunately, there have been several realignments of transpositions within the last three years. These projects represent at least the beginning of the conjunctive process. Three urban examples follow which include one or more types of conjunction to improve the urban condition. The first example occurs in Cologne, West Germany along the old city river frontage on the Rhein. From the time of the pre-industrial city there has been a one-block width along the water for a distance of approximately six blocks that served as the marketplace and water transit access. The frontage of the second width of blocks thus evolved as tightly grained shops, hotels and cafes. Later the market activities were relocated to accommodate a riverfront highway in their stead. This caused a distressed condition for the existing uses in the adjacent block. The pedestrian usage virtually disappeared and the buildings fell into disuse.

In 1985, associated with the construction of a museum complex housing the Walbraf-Richartz and Ludwig Museums, a masterplan for the area was realized (figure 9). Two crucial moves were made in this plan; first the use of the ground plane of the museums as a connective device between the Rhein waterfront and the city's cathedral with its adjacent Roncalliplatz; and secondly to submerge the highway below grade for the entire length of the old market area, returning it to pedestrian usage. The first move resulted in a permeated museum footprint dimensionally similar to the grain of the old city, which allowed four paths between cathedral and park (figure 10). Each of these paths provides a different spatial experience and supports a variety of auxiliary functions. The second move allowed the construction of a
tripartite park, with a hardscape against the old buildings, a garden zone and a hardscape at the bulkhead returning its serves as river access. This design has created the conjecture of human values, technological necessity and historical continuity. Additionally, the architectural execution of this project is of merit for its intellectual acknowledgement of urban pre-conditions. One example of this is the acknowledgement of the now buried highway with views opened to submerging cars and a transition zone in the plaza of fragmenting pavers and grass in alignment with the route below. Another example lies in the alignment of tree rows, paths, etc. with the cathedral steeple above the park and still another example in the preserved fragment of a Roman road in one of the pedestrian routes to the cathedral.

The second example of a realignment of urban conditions exists in Frankfurt, West Germany at the heart of the old town. After the hail of bombs during World War II had devastated its historic core, the city began rebuilding in various styles including the replication of some historic structures such as the Romer (town hall) in its half-timber style at the Rathhaus platz. Later, they turned to an area between this important space and the Dom (cathedral). Unfortunately, they infilled the northern side of this distance with a large scale modern complex designed in the Brutalist style. This complex, being totally enclosed at the ground plane, was impermeable to pedestrian connections to the city fabric and the central axis between the Romer and Dom.

It is the latest addition to this area, the Shirn am Romerberg17 that illustrates a realignment (figure 11). At this time (project completion was in 1986), with three sides essentially repaired or replaced and a great deal of the central space occupied by Roman ruins uncovered by the bombings, the city decided to redevelop the southern length. The public nature of the building program, which consisted of a city art museum, youth music school and the Young German Philharmonia, greatly assisted the architects who sought to make this building an urban connector. As a result the building was elongated to have a presence on both public spaces and was articulated with a public arcade, as well as a rotunda, and meeting facility at an important cross axis. This elongated but narrow building (approximately forty feet deep) is regulated with several cross axial penetrations at the pedestrian level giving the building a permeability compatible with the grain of the old city (figure 12). This condition also provided a hierarchic sense of pedestrian circulation, allowing a linear and orienting path for visitors and their prospect as well as labyrinthian paths for the repose
of adjacent residents. Also to the project's credit, its materials and forms appear sensitive to urban preconditions and authentic to its place and time without mere imitation.

All of this was achieved while deferring to the presence of the Roman ruins and accommodating the automobile needs with expansion of an underground parking garage. In summation, this project appears to be conjunctive in nature, providing the greatly needed connections within this urban fabric.

The final example of the idea of realignments occurs in Rotterdam, The Netherlands. It consists of an urban design move implemented not with the assistance of an architectural program, but with sculpture. This project entitled "Beelden in de Stad" or "sculpture in the city" was implemented in May of 1988. The concept of this urban design was to create a "sculpture route" to provide a sense of connectivity from the central train station, through the old town to the waterfront and by ferry on to the Southern side of the Maas river (figure 13). Here a former passenger terminal has been rebuilt into the Arts-hall (by Rem Koolhaas) and precedes a great deal of urban redevelopment known as Kop Van Zuid currently being designed by Teun Koolhaas. This route along the Wester Signel is an attractive landscaped boulevard primarily associated with automobile and tram traffic. Its previous pedestrian function was primarily in the cross axial direction. The sculpture program incorporated pieces at these cross axial nodes and other locations, which in their totality were transformed to a linear path of interest, combining prospect and repose, into a twenty minute trip to the waterfront (figure 14). This path is now heightened with the sense of place and linkage in addition to the intellectual messages represented by the sculpture of such notable figures as Paul Beckman, Mario Merz, Zaha Hadid, Coop Himmelblau, Daniel Buren and Aldo Rossi. Of these sculptures, many deal at some level with connectivity. For example, the piece by Buren consists of a series of publically accessible platforms supported by scaffolding which encircles a neoclassic monument, allowing interaction and face-to-face confrontation with an angelic symbol of past glories. The Rossi project provides a more traditionally contextual conjuncture. It consists of two lighthouses one on each bank of the Maas symbolically connecting the city with its future growth.

It is hoped that these illustrations of recent urban design clarify the nature of the principle of conjuncture.
Ill. The Merger of Ideologies

The pendulum of ideological vicissitudes is swinging with increasing frequency. Alternating between regressive and progressive since Antiquity, each swing of the pendulum beyond midpoint has produced thought and work exclusionary of the opposite spectrum. The idea of progressive and regressive is a duality in parallel with Rowe's discussions on Utopia and collage city or that which is scientific and ad hoc. In their most recent manifestations this duality is represented by modernism, post modernism and the current reactions against both.

It is the very context from which modernism revolted that gives it meaning. And modernism without the reference from which it was born is its weakest position since its ideological position is disconnected from all but its technological origins. Likewise post modernism has become an essentially self-referential system disconnected from the issues of current technology and authenticity. Both of these paradigms proceeded until a corrective course was mandatory. The point of correction for modernism came with the discovery of the masquerades of architects as scientists and artists. The masquerade as scientist was equally distributed in the fields of architecture and urban design.

Architecturally it was represented in the extreme styles of Frei Otto, Buckminster Fuller and Archigram and urbanistically in the works of the Russian Constructivists, CIAM members as well as early team X projects and proposals. The masquerade as artist was engaged by fewer notable figures but none the less was of great influence as represented by the works of Reitveld, the architectural embodiment of the De Stigl movement, and Superstudio as abstractionists. All of these works were disjunctive in nature, ignoring the need of the human intellect to associate with things past, to take comfort in repose. Post modernism was thus a reaction to these masquerades which has in turn exceeded a reasonable course of conjuncture in the writings and work of the Regressivists (otherwise known as the neo rationalists) such as Robert A.M. Stern, Leon Krier, etc., who ignore contemporary technology and the need for authenticity. It is not at all surprising that the most lasting thought and work has come at times when the pendulum was near centerpoint and theorists and architects were engaged in both prospect and repose, being simultaneously internal to man's nature. It is the connectivity of man to these dual ideologies that has presupposed the historical significance of those who were willing to mediate the two. It did not matter whether they were
engaged in the swing from prospect, into repose as were Kahn and Scarpa, or from repose into prospect as were Boullee and Ledoux. What mattered was the engagement of conjunctive architecture. Within the age in which we live and the increasing speed at which information is processed, knowledge is gained and technology multiplied, it is apparent that the rate of this pendulum swing is increasing exponentially. While early periods of architectural ideology and their associated styles lasted generally hundreds of years, modernism lasted slightly more than a half century in its uncontested form and post modernism prevailed for only two decades.23 If one projects this swing indefinitely, it is obvious that the future holds us to address the position of dead center. It is at this time when we can have an extended period of architecture which is connected to man's mutually congruent needs of prospect and repose. Even now we may be stumbling upon this time with camps of neo rationalists, deconstructivists, etc. holding their ground we need only a strong few to show the way of conjuncture.
Advancing technology is undeniable. Not much more than a decade ago there were no pc's, cd's or vcr's, no genetically engineered vaccines, and no glimpses into the future to match that of the current high technologist. So radical are these potential changes that it represents a new idiom, that of the Age of Insight, leaving behind the Information Age. Along with superconductivity, biotechnology and advanced communications will come further products of lifestyle alteration. Just as the seemingly simple advent of household appliances (refrigerator, washer, dryer) and entertainment devices (television, phonograph, radio) allowed the relatively autonomous nature of suburban living with which today we are all too familiar, so will these new products bring about changes. To evaluate the potential economic impact is unnecessary for our capitalist investors and producers will engage in this action. However, the social consequences of these products should be considered by planners and architects. At this point the idea of conjuncture is useful. An example of conjuncture with the field of high technology should illustrate. With all of the power and use of current computers their usefulness to mankind has played a limited role to date. It has served adequately the fields of science and mathematics and has required users to be "computer literate" for interaction. However, this requirement of computer literacy and high costs associated with an infant technology reduced the accessibility of the machine to the majority of people. At this point we did not say, forget technology, let us return to use of the abacunas and outlaw microchips as Leon Krier would propose were he a computer specialist. Today, however, the principle of conjuncture has been comprehended as computers are evolving into "human literate" or "user friendly" machines. In fact, most experts in the field predict that by the year 2000 computers will be capable of recognizing handwriting, being voice and gesture controlled, as well as providing visual computing (3 dimensional representation of calculations, etc.). With these abilities the computer will have demonstrated its ability to connect man and technology giving us access to the device we invented, for its best use.

At the scale of the built environment we need to apply the same type of connections between our urban infrastructures, homes, work places and entertainment places and the people who use them. It is the
relationship between these parts that is currently so disjointed, making their access difficult and unpleasant.

A specific example of this lack of connectivity occurs in Houston, Texas. If one lives in the major residential sectors accessed from a freeway and works in the Galleria/Post Oak area (or any of the other peripheral developments for that matter) there are numerous obstacles to overcome. The principle obstacle is the non-heirarchical nature of circulation which will be covered in a latter section. For now suffice it to say that this scenario is not just dominated by but nearly limited to the automobile. This environment must change and be reconnected to the person instead of the inanimate automobile. Our peripheries must become "user friendly."

There are numerous elements within the realm of this criteria that must be addressed in this attempt to provide a paramutual condition serving mankind's prospect and repose. A checklist of these elements follows:

1. relationship to the automobile and related infrastructure as a method.
2. relationship of the automobile and related infrastructure to the pedestrian environment, physically and visually.
3. relationships of methods and materials of contemporary construction.
4. relationships of urban patterns to technology especially regarding the issues of autonomous development.
5. relationships of mass transit and its related infrastructure and architectural components.
6. the actors in development scenario - developer, city, lending institutions, clients.

**Criteria B: Infrastructural Hierarchies**

To maximize the potential of the automobile domain, we must reintegrate it into a hierarchical system of movement. It must be connected. To do this requires consideration at the scale of the region; city, district and place of occupancy. An urban system or place without hierarchy is impractical for the component which is called on to do all things will be overburdened. Just as architecture cannot be comprised solely of
one element such as a structural system while neglecting other needs such as enclosure, finish materials, etc. without evident distortions (example: the tension skin/structure of the Olympic Village in Munich), neither can urbanity. Unfortunately, American cities have too frequently relied on the singular component of the automobile, ignoring the necessity to connect the use of the car with pedestrian and mass transit environments as is especially evident in Houston. Due to the disbursed pattern of Houston's major workplaces (see figure 15), it is necessary that their interconnection be easily accessible. To this end the rail proposal of Metro will aid greatly. Another important factor in rebalancing the automobile's dominance of these workplaces is the need for traffic separations for localized and through traffic.

Additionally, once at the area of the workplace a support environment should exist that allows non work activities to be accessed by the pedestrian or public transit user. As is currently the situation if one works in Post Oak (figure 16) and seeks even a lunch without using a car, one feels as isolated as does the housewife in suburbia. Many issues are involved in the design of these localised environments and will be discussed under the topics of prospect and repose and urban pre-conditions. The diagrams below are specific to Houston, Texas but germane to most other American cities. The idea is simply that of hierarchic connectivity or conjuncture of infrastructural components. When Le Corbusier suggested "the city that has speed has success" it is apparent he did so in the context of transportation dominated objectives that we currently criticize. However, I propose that Corbu's idea was correct if subject to connectivity. If one were to test this idea of speed at each level of the hierarchy one would see inadequacies at every scale due to the automobile monopolized nature of movement. For example, we return to Post Oak and the necessity for occupants of the many high rise office buildings to eat lunch which requires a walk to the parking garage, a 10-20 minute trip in heavy traffic to a restaurant in a strip center and return. This means often a round trip of 25-45 minutes under stressful conditions. However, if a pedestrian environment were available as is the case of traditional cities and a rail system in place as in more advanced cities this could be done pleasantly in 10-15 minutes in a variety of fashions. So if we simply apply Corbu's necessity for speed and efficiency of movement at every scale of the hierarchy, i.e., mass transit, automobile and pedestrian, then each would better serve man thereby being connected to his needs and aims.

Pertinent to the universal nature of this theory proposal is the idea that the element of conjuncture
as it applies to hierarchy can be adapted from this described urban condition to a layering of scale changes whether increasing to inter-urban conditions or decreasing to the components of a single architectural project. However, as it is the primary concern of this writing to address urban issues a series of elements will follow within the realm of this criteria:

1. interconnections between mass transit, individual transit and pedestrian systems.

2. human perception and comprehension in each system.
   a. sense of place
   b. sense of linkage
   c. sense of representation whether civic or privatized

3. ability for each layer within the hierarchy to meet man's needs
   a. physical
   b. intellectual

4. physical relationships between built elements for transportation, parking, private buildings and public space

**Criteria C: Prospect and Repose**

John Jakie has defined the two fundamental aspects of the human intellect regarding interaction on the urban scene as prospect and repose. While Jakie discusses the nature of these internal instincts as evolutionary remnants it is my principal interest to describe this phenomenon in terms of its historical, architectural, and urban application or lack thereof and to present the need for utilizing this precept in the conjuncture of man and his environment. While I believe prospect and repose to have two distinct components, that of physical accommodation and intellectual representation, this section will deal only with the former. The later is covered under the sections on Urban Pre-conditions and The Merger of Ideologies.
Prospect is that desire to seek out, investigate, to attain. It is the sense of adventure. Repose is the balance to prospect, the rest, the relaxation, the sense of security. Without the former there is boredom and lack of motivation. Without the latter, there is physical exhaustion and stress. Both of these qualities should be present at each level of the infrastructural hierarchy as previously discussed. When the daily sense of prospect is limited to the automobile, as in Houston, there is a dimension severely amiss. This dimension is squelched by the autonomous, sealed nature of the automobile. It lacks the casual social interaction cherished by Jacobs and limits the exposure to tactile sensory observations of the pedestrian environment. Likewise there is the external dimension missing from repose. The only places designed to accommodate repose are the hermetically sealed lobbies of large buildings or private facilities. It is critical that our peripheral developments reconnect themselves to human nature and provide this level of prospect and repose. This is the most elemental level of evident built form which has been present since antiquity.

At least from the time of the first Roman Villas there has been an attempt to interact man and nature, that which is built and that which is growing. In the locale of the city this mediation occurs in the form of gardens, baths, open courtyards, all of which accommodate repose. The value of these elements is unsurpassed to a true city dweller who seeks repose associated with that which he is normally deprived. In London it is daylight, in Barcelona it is water and shade, in all cities it is greenery. It is a shame that our automobiles have a greater sense of prospect and repose than we ourselves. They sense the realities of the swift drive; air sweeping over their hoods and into their manifolds while the tires feel the road and then are allowed to rest comfortably in the shade of a parking garage. Two excellent examples of prospect and repose are available to us in the city of Munich. One at the scale of districts in Schwabing, an intellectual refuge of artisans and educators recognized here for its distinct proxemic relationship between the transit center with its intense activity and the northern sector of Englischer Garten. The second example also highlights an immediately accessible relationship between the most active pedestrian street of the city, the kaufingerstrasse and the quietest most introspective platz of the city, the Frauenplatz.

In an attempt to enumerate the elements of prospect and repose as they pertain to urban design the following are proposed:
PROSPECT

1. the sense of organization allowing the selection of destination and path

2. the application of item one to the scale of the city, district and area

3. the application of item one to the hierarchy of transportation systems including the pedestrian

4. distinction of place in order to sense the completion of prospect

REPOSE

1. the physical accommodation of withdrawing from the systems of prospect which include a place to sit or recline, climatological tempering, reduced visual stimulation

2. the application of item one must always be to the human scale, not that of the infrastructure or transportation system

3. repose must be accessible through its interactive layering of prospect, i.e., the potential for repose must not be considered as an element separate from prospect but complimentary to it

4. repose must be accommodated at the various levels of social interaction both in civic and private settings, i.e., the public plaza will not serve the same needs as the private garden or courtyard

Criteria D: Urban Preconditions: Authenticity of Place and Time

Urban projects must be connected to their preconditions to achieve the necessary continuity between the past and present. To acknowledge the preconditions of urbanism simultaneously with the
previous three criteria of conjuncture, one should be able to produce authenticity of place and time. Without this authenticity there is the danger of creating an urban museum piece, a design incompatible with the requirements of its users or one simply inappropriate to its locale.

The acknowledgement of and response to preconditions over time will moderate Utopian "total design" visions and make apparent the true nature of layered city growth as advocated by Rowe in Collage City. In fact, two dimensional planning techniques most associated with "total design" are being challenged by the process of designing in the third dimension and projecting images into plans. Associated with this process is the notion of intentionally incomplete design, allowing the layering process to be more naturally engaged. Among the current designers advocating this new approach are Steven Hole and Lars Lerup whose writings clearly articulate this conjunctive process. Their goal is to maintain a progressive architectural vocabulary while connecting with the human as pedestrian. While this process is compatible with conjuncture, there are two other senses of connectivity, those being place and time.

The idea of connectivity of place suggests the imperative condition of a project relating to its specific locale. This is done through addressing the specific elements of the site and environment, resulting in an awareness of what has come before and what is important to a place and its people, physically, psychologically and socially. An excellent example of this connectivity is evident in the Parque De La Espana Industrial (figures 17 and 18) in Barcelona, Spain. Upon understanding the components of this park, one realizes it is authentic to the city of Barcelona. The park physically satisfies the criteria of a hot mediterranean climate. Water is a predominate feature for cooling and cleansing the air, meditation and recreation. Various built forms and landscapes provide shade at all times of the day. Social spaces are ample and paths are sensitively placed to connect the fabrics of the surrounding. Finally the principal sculpture of the park, which combines as a childrens play element, is an abstract image of the slayed dragon from the epic of the city's patron saint, Saint George. This sculpture symbolically connects the park to the city in general, even to Gaudi's work which often references the same tale of origin. The prior physical aspects also connect it to other major public spaces in the city for it is difficult to find a major public space without that same combination.
The second idea of connectivity which allows authenticity of a project to occur is that of time. It is a connection to our current time that should prevent us from creating "museum pieces," those esthetically artificial representations in our environment which fail to engage the means and methods of contemporary society. This issue is especially critical in regards to transportation, construction materials and techniques, and social issues. A project connected in time also avoids disregard for prior uses and never attempts to "wipe the slate clean" for to do so would disconnect a project from its place in time just as severely as does artificial representation. Again, we turn to Barcelona for an example in the case of Parc de Clot (figures 19 and 20).33 On this site of a former industrial building a city park mediates between new residential quarters on three sides and some remaining industrial facilities. Elements within the park are referential to its past use. Some important remnants are used to allow this effect, but the totality of the new construction being "of its day" and not symbolically "contextual." In this case the contextualism lies in alignments, perspectival sightlines and contemplation of authentic preconditions of the site layered with authentic new construction. This also forces us to deal with the precondition of ground plane as the origin of three dimensional design ideas and sectional concerns.34

As for the peripheral or suburban condition in America which has little or no built fabric as a precondition, it remains necessary to address this issue. This can be done through acknowledging the ideal and mythic aspects of city growth applied to the natural and historical aspects of the site. In any case, it is imperative to consider urban development as a process of elaboration rather than substitution.35 Writings recognizing the nature of these ideal and mythic aspects as they apply to contemporary urban design are discussed at length in Krieger's "The American City: Ideal and Mythic Aspects of a Reinvented Urbanism," Geddes' "The Forest Edge," and McDonald/McNally Bushman's "The American Pastoral Paradox." The most critical common denominator between these writings is the associative relationship between man and nature.

Regardless of the method for grounding a project authentically to its place and time, if these considerations are seriously contemplated and addressed in the design it is better not to formulate specific ways to incorporate this connectivity. It will maintain its interest as an open-ended process which is exactly what we understand the city's growth to be--perpetually evolving.
Several elements within the approach to conjuncture with preconditions and authentic place/time are recognized as follows:

Place
1. response to local climatological needs
2. response to local social needs
3. response to local historical context
4. response to local built environment
5. response to the ideal and mythic context

Time
1. response to current technology
2. response to existing fabric
3. response to historical context
4. response to the ideal and mythic context
V. Conclusion: Conjecture—The Urban Apex

In the conclusion to Invisible Cities Calvino has Marco Polo prescibe to Kublai Khan a wisdom for dealing with one's environment as follows:

"... The inferno of the living is not something that will be; if there is one, it is what is already here, the inferno where we live every day, that we form by being together. There are two ways to escape suffering it. The first is easy for many: accept the inferno and become such as part of it that you can no longer see it. The second is risky and demands constant vigilance and apprehension: seek and learn to recognize who and what, in the midst of the inferno, are not inferno, then make them endure, give them space."

The singular idea of conjecture gives space to the quadrivial categories of Technology/Current Fields of Productivity, Hierarchical Infrastructure, Prospect and Repose, and Urban Preconditions, all of which are undeniably not inferno.

This thesis does not attempt to invalidate previous theories on urban design such as Lynch's five performance dimensions, Sitte's nostalgic rules and a modernized version by Alexander. The former deals with the most broad aspects of design inclusive of social and economic aspects of urban growth and the latter genre deal with formalized pattern languages. However, neither of these approaches is conducive to utilization in the design process of today's informalized and evolving cityscape. The theory of conjecture, however, attempts an approach suitable for current application during the design process which transcends specific period styles, ideologies, or tendencies. These universal issues must be consciously connected by any designer of urban space regardless of his project scope, language or abstraction to avoid past trappings. The incorporation of conjecture into urban designs should mitigate or even devoid the cacotopia of our current peripheral environment.
FOOTNOTES

1. For a historical account of these policies and investments refer to the general bibliography under the headings of Economy, History and Suburbia.
2. The two most influential of Jacob's works are *The Death and Life of Great American Cities* and *The Economy of Cities*, both included in the bibliography.
3. For specific writings of these authors and related writings, refer to the bibliography sections on Suburbia and Suburban Transformations.
4. F.L. Wright, *The Living City*.
5. These issues are discussed in an introduction to an urban design competition for a ring road around the city of Arezzo in
6. Ibid.
8. Labels originated by Jackson and Fishman, respectively.
9. For an overview of the Athens Charter refer to Frampton's *History of Modern Architecture*. Further elaboration on the above phases is not germane to the purpose of this writing. Refer to the History section of the bibliography for additional information.
11. Ibid.
14. Ibid.
15. Ibid.
16. Ibid.
17. Klaus Winkler, *Shin am Romerberg Frankfurt am Main*.
18. Information regarding this program is available in a brochure published by the city of Rotterdam under funding from a program entitled "De Stad Als Podium" [The City: A Stage].
19. The idea of "place" and "linkage" are discussed in Roger Trancik's *Finding Lost Space*.
20. Colin Rowe and Fred Koetter, *Collage City*.
21. The concept of "masquerade as scientist" and "artist" is taken from the lectures of Albert Pope's course on contemporary criticisms.
23. This approximation is bounded by the writings of Robert Venturi beginning in 1962 and the subsequent emergence of a variety of movements beginning in the early to mid 1980's.
25. Kenneth Jackson, *Crabgrass Frontier*. 

26. LeCorbusier
27. John Jakle, *The Visual Elements of Landscape*
29. Villas?
30. Rowe and Koetter, *Collage City*
31. Steven Holl, "Milan Project" and Lars Lerup, "Inside Tableaupolis", *A+U*
32. Luis Pena Ganchegui, "Parque De La Espana Industrial", *QN*
33. Dani Freixes and V. Miranda, "Parc Del Clot", *QN*
34. Peter Waldman, studio program entitled "The City, the Bridge and the Warehouses of Time"
35. Alex Krieger, "The American City: Ideal and Mythic Aspects of a Reinvented Urbanism" - Examples are given for Modern predilections toward substitution such as The Renaissance Center in Detroit
36. Kevin Lynch, *Good City Form*
37. Collins, Camillo Sitte: *The Birth of Modern City Planning*
38. Christopher Alexander, *A New Theory of Urban Design*
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