

design essay



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introduction

*This essay should be read together with the **Technical Report**. It is an elaboration of the **Introduction** at the beginning of the book.*

Semiotics, the study of signs, presupposes the assumption that meaning forms the basis of culture. In architecture, meaning relates buildings to all other things to which people attach **[sign]ificance** and value including purposes, ideas and beliefs. According to Morris (Broadbent; 1980; p. x) semiotics has three components: anthropology, psychology and sociology.

Built artefacts, by which humans regulate their transaction with nature, are the fabric of social interaction. They connect, at the highest levels of complexity, elements of human behaviour to create signification (Broadbent; 1980; p. xi). Rules governing this behaviour are outside the epistemological framework, and the behaviour itself constitutes social empirical science.

Any building is a referent, a tangible object to be experienced physically. It is a signifier according to where, when and how it was built. The building is signified by architectural concepts like words, drawings and photographs (Broadbent; 1980; p.2).

Visual culture is the interaction between the viewer and the viewed; the visual event. The viewer engages with technology and media to experience a visual event. The event is the interaction of the visual sign, the technology enabling and sustaining the sign, and the viewer (Mirzoeff; 1999; p.11). The visual image is not stable but changes its relationship to exterior reality at particular moments (Mirzoeff; 1999; p.7)

According to post-modern theorists, the dominance of the image is in its distinctive features (Mirzoeff; 1999; p.9). The outcome of this visual event is that a cultural framework is needed to explain its history and its visual impact (Mirzoeff; 1999; p.22).

Through this essay, the meaning and psychology of architecture as theory is investigated. Architecture is communicated through language. This has relevance to the Berea Park Learners Resource Centre. It is a building conceived through the superimposition of an abstract system on a distinct context. The building is thus communicated to the user through the abstract system so that a relevant, personal meaning can be concluded. An eventful experience of the building, intended by the architect, is then achieved.

meaning in architecture

Meaning and Psychology of Architecture

The most general views in architectural psychology according to Ittelson et al (Broadbent; 1980; p.322) are that of Freudian psychoanalysis, Watsonian behaviourism and Kohlerian Gestalt. These views reinforce certain theories: Operant learning, social modelling, satisfaction sites and behaviour settings. These views and theories assist researchers in conducting experiments of social behaviour.

According to **architectural psychology** (Broadbent; 1980; p.324) organisms survive only if it interact appropriately with the environment. An organisms survival relies mainly on what it can learn of its environment. A person will personally learn the value of the different objects that form the environment and the various spatial locations within an environment. Information is received through sensory receptors. It is not heaped up in order of arrival. A continuous sorting process, where fresh information is allocated to existing material of the same kind, is used. Inner representations are examined and manipulated in the absence of real external objects. The viewer reviews his/her own experiences and decides what should have happened. There is a constant coding of "whatness" and "whereness" of objects. These objects should have a spatial tag. Environmental psychology is based on factors determined by the human capacity to navigate and to move.

The communication between architects and non-architects is at the core of what is experienced as meaningful, good architecture (Hershberger; 1980; p.41).

Research done in Englewood, Colorado, concluded that humans have a mental map of their physical surroundings and their local environment, containing much detail. Lynch's terms paths, edges, nodes, districts and landmarks coincide with this interpretation (Harrison et al; 1980; p.163).

The perception of a city is an extremely complex series of relationships intimately involving the individual as resident-dweller. It is mostly based on function and to serve the particular needs of inhabitants.

Architectural space and semantic space

In semantics there are connotative signs that are described by adjectives e.g. the house is warm, soft, small and cosy. Denotative signs use a noun e.g. that is a house. If these signs become more ambiguous semantic chaos will result e.g. non- artists judging abstract art.

Smell, sound, touch, temperature and adaptation over time are needed to experience architecture. Models and two dimensional communications are not sufficient. Through a holistic view, physiological, psychological intentions and other factors which buildings will

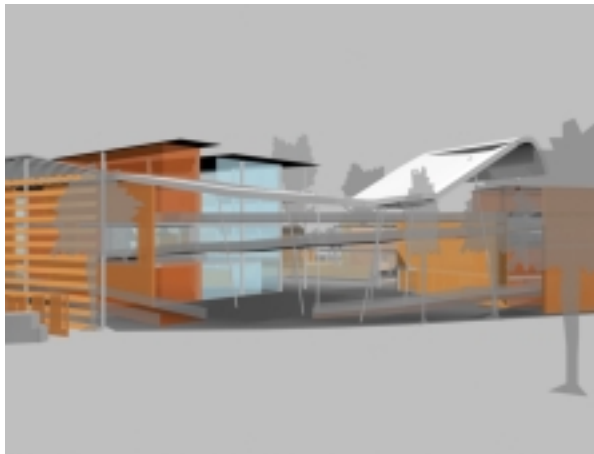


Fig. 1 The three dimensional quality of the design emphasis the exploratory mode of the routes. The entrance "elbow" and circulation ramps.



Fig. 2 The module as an icon (meaning).
North east view from the recreation building next to the river.

influence are realised. Techniques of determining these factors are behaviour questions, real world simulations and unobtrusive/participating observations. This is achieved by the interlinking of two chains: integration chain of human activities and a space chain of physical spaces (Broadbent; 1980; p.313). This is the man-environment paradigm.

When seeing the building for the first time a viewer will notice aspects that will go unheeded because of an exploratory mode of behaviour. If a building is used more regularly a habitual mode of behaviour is experienced and this will determine the true success of a building (Bechtel; 1980; p.215).

LRC-The Learners Resource Centre (LRC) being 5m lower than the Western street edge, is resolved multi dimensionally because of this reason. Emphasis was placed on this quality during the design process, enhancing the three dimensional experience of the user as he/she walks along routes through the building and the site. Thus the exploratory mode of the building and site is extended (figure 1).

Hillier and Leaman (Broadbent; 1980; p.326) are opposed to the man-environment paradigm, stating that it overlooks the importance of symbolic and

semiological systems in the human universe. Language, society and symbolic systems exist in logical space with high symbolic content. This theory is based on structuralism. Structuralism (whether language, society or environment) recaptures logical structures which makes meaning possible. The richness and diversity of man-made artefacts are made intelligible. In reaction to this theory Esser (Broadbent; 1980; p.327) says environment is experienced physically, socially and conceptually, and not split from humans.

According to Hillier (Broadbent; 1980; p.336) a building does five things: it encloses space where an arrangement of rooms, corridors, staircases and their size, shape and adjacencies facilitate activities. It acts as an environmental filter protecting people from the external climate making it comfortable and pleasurable internally. It *will* act as a cultural symbol, has economic implications and environmental impact (climatic, symbolic etc.). People will naturally assign meaning to buildings.

According to Juan Bonta (1980; p.275) another tendency is that of the indicator and signal. An indicator is a directly perceptible fact and an interpreter realises that the indicator refers to a meaning. A signal communicates and an indicator indicates. In design the signal and interpreter are present simultaneously (Bonta; 1980; p.279).

Architecture expresses certain values or meanings to a passive viewer. This viewer is placed in the role of an active interpreter of an essentially passive architecture. Expression is the interpretation of the entire social and cultural group. Architecture expresses values by itself without human interaction e.g. materials, climate etc. Interpretation needs a human agent (Bonta, 1993; p.520). Interpretations are in verbal form. The questions asked; is the meaning intentionally embodied, and is the intention recognised? (Bonta; 1993; p.521). A changing of meaning happens by convention and re – semantisation (Bonta; 1993; p.523).

In post-modern architecture the analogy is complicated and one needs a thorough knowledge of classical architecture to understand what rules are broken (Broadbent; 1980; p.147). A contextual design is a building that houses human activities and acts as a cultural symbol. The building must have cultural reference where the uses of the building are readable. This is the only way meaning can be built into architecture (Broadbent; 1980; p.163). Michael Graves in the eighties used analogies which stressed the relationship between objects in terms of oppositions. He creates symbols giving those further meanings instead of encouraging new meanings (Broadbent; 1980; p.208). Functionalists tried to only have function: it is impossible, architecture will inevitably carry meaning. According to psychology one has to categorise, otherwise everything will have to be thought out afresh every time. Metaphors will be drawn and people will read what they want whether the architecture intended it or not.

The Language and communication of Architecture

Theory and modes of communication

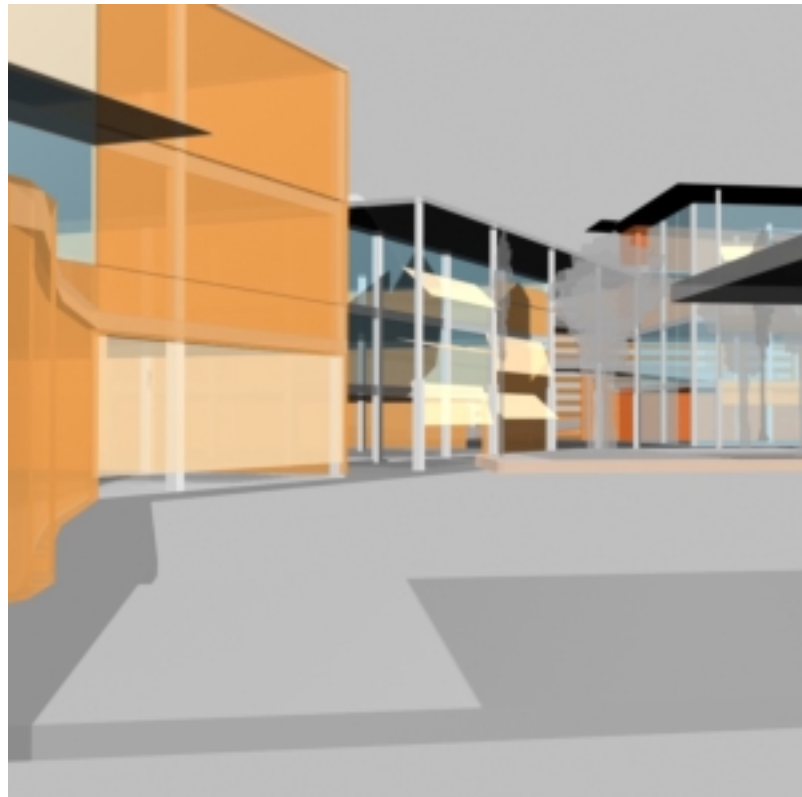
Architectural signs are a compound of indexes, icons and symbols. Questions are asked: what does it communicate, what behaviour does it encourage and inhibit and how

successful is it? This is answered by **semiotics and structuralism**.

Everything is stretched over the same intellectual framework with common thinking and similar results. A sign is something that reminds us or stands for something else, like an analogy in architecture. No sign is completely pure and all have a conventional coded element.

The most important aspect of semiology (the science of signs) according to Charles Sanders Peirce (Broadbent; 1980; p.340) is that of icons, indices and symbols.

An **icon** is a sign referring to an object that it denotes by virtue of certain qualities of its own and which it posses e.g. architects drawings. A building is an icon because of its similarity to plan. An icon can be topological e.g. Frank Lloyd Wright's central planning or analogical if it has the same symbolism as the referred object. According to Jencks (Broadbent; 1980;



p.347) it is the richness of possibilities by which anyone can read their own meanings into it. There is a different relationship between signifier and signified and is relatively motivated. Walter Gropius and Le Corbusier tried to establish a universal language based on iconic signs. The international style based on these signs became too restricted and more clues were needed to understand them. An example of this is a bridge as a conventional representation of forces, not the forces themselves.

LRC - The building is mainly a topological icon with reference to form and space. The meaning of the building is left to the interpretation of the user. The different sizes of the different functions are readable in the module. The module creates an ease of interpretation and a sense of orientation (figure 2).



Fig. 3 The module as a symbol (function). View from the east under the extended hall slab.

A **symbol** is a sign referring to an object that it denotes by virtue of a general law, usually any associations of general ideas, which operates to cause that symbol to be interpreted as referring to that object. This is the quality of relationship with the entity it resembles. There is sensory motor (physical function) - and semiotic (meaning) symbolism. This is the analysis of semantic differential and personal construct theories (Broadbent; 1980; p.348). Categorisation takes place where someone who has learned the appropriate symbols, recognises them and knows the meanings (Broadbent; 1980; p.349). There is an arbitrary relation between signifier and signified. An example of this is in the present day usage of building materials where glass and steel signify an office building. Motivation is involved and orders are connected to functions by usage and constant feedback (Jencks; 1980; p.105).

LRC - This includes a programmatic - and meaningful function. Categorisation takes place and a communal meaning is created, that refers to the building, as soon as it is "claimed" by the users. Repeated use will ensure that the module becomes a symbol for what function it houses. Similarity is key for the building in terms of its role as an icon and symbol (figure 3).

An **index** is a sign, or representation, which refers to its object not so much because of similarity or analogy. The general characters are in a dynamic connection with individual objects and senses the memory of the person to whom it acts as a sign e.g. notices showing people where to go. This is the easiest way to experience a building. A particular building's form encourages and forces people to move along and around certain routes. There is an existential relation between signifier and signified. The indexical sign is functional and, if reused, becomes a symbolic sign e.g. the walkways and ramps in the building becoming signs of route and destination (Jencks; 1980; p.102).

LRC- The dynamic connection and combination of individual objects feeds on the memory of the user. The form and assembly of the building encourages moving along routes and walkways and habitual use generates its symbolic significance. The walkways and staircases become the sign - facilitating a "reading" of the building (figure 4).

Architecture is not just signs but has grammar and intention. It has syntax with the different parts fitted together, and this composition is meaningful through the combination of its parts (Scruton; 1979; p.160). Saussure formulated semiology (the science of signs) thus creating an analogy between language and other activities. Language has meaning because of a deciphered code, this means structure, which means rules. Meaning in language is based on truth which is based on syntax. This is not the same in architecture where there is non-linguistic meaning (Scruton; 1979; p.165). Different elements together create a disobedience to rule. This syntax of architecture enhances and conveys expressive intentions and rules are only found to depart from them (Scruton; 1979; p.172). There is a dependence of meaning between part and whole and vice versa. Details themselves impose a possibility of organization. The success depends on composition and "structural" grammar over, for example, the façade (Scruton; 1979; p.173). In language an incomplete sentence has no meaning. An incomplete building could have stylistic unity. Style emerges from synthesis of the whole (Scruton; 1979; p.176).

The difference between architecture and language is context and medium. The building is designed to protect, shelter, exclude, include and to articulate complexity.

The medium of communication is floors, walls, roofs etc. The elements of architecture have physical and expressive properties. Signs and symbols communicate through expression. A building becomes symbolic of a person in terms of sex and social role.

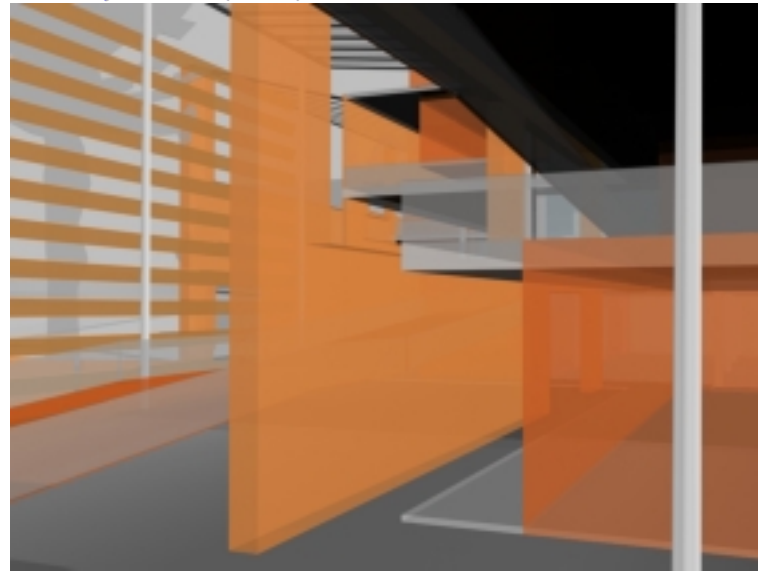


Fig. 4 The walkways and staircases becoming indexes Northern view from the entrance showing the spine and ramps.

Fig. 5 The assembly of the spine, skeleton, skin and elbow View from the south showing historical building to left.

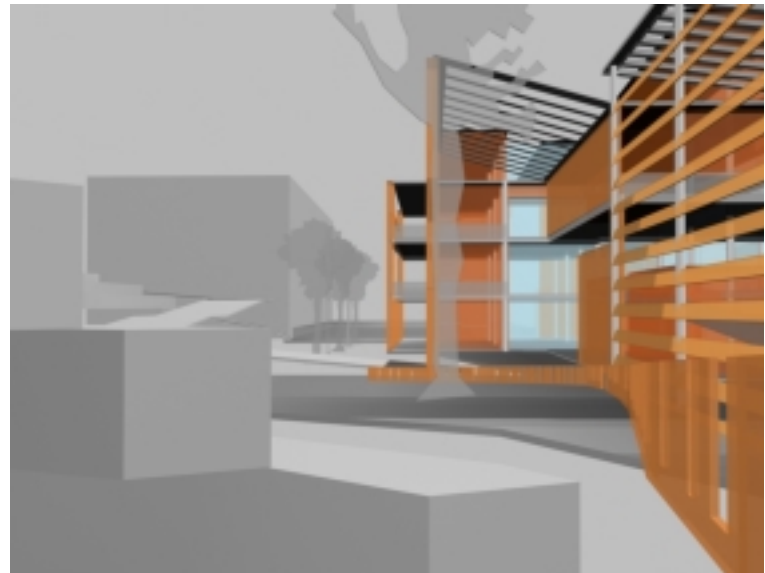




Fig. 6 Plocek House, New Jersey, 1977 by Michael Graves. The colouring becoming an abstract ion of the ground and sky, and the stylised column marking the entrance and hearth and becoming a stair-column

The human body has always had a correlation to architecture in many cultures. A response to buildings is cognate with the response to people (Onions, 1993; p.512). The international movement had a pre-eminence to universal human functional needs. In post modernism the individual emerges, liberated, and personal aspirations are tolerated. These became complex instruments for articulating human interaction.

In the 1980's a new language of architecture was used as a critique of the modern movement. Anthropomorphism is the symbols and meanings related to the human body. A building has silhouettes, faces, tops etc. Modernists symbolise efficiency and utility and process. Symbolism itself was the machine. Balconies became decks, plans "work", the elevation articulated and stairs become nodes. Modernism according to Hellman (1993; p.518) was bureaucratic jargon while Post modernism is pseudo-vernacular, clothed in 18th century garb. Post-Modernity makes the vulgar acceptable. Language in architecture is not static and symbols are constantly replaced (Hellman; 1993; p.519). Space, time, form, atmosphere, texture and colour are added to signs and symbols. This creates poetry and evokes a spiritual response.

LRC- The assembly of floors, walls (transparent or solid) and roofs ensure a unique language. The expression of the elements depends on the combination thereof and the experience of the user moving through, over and under them.

The relation of the building to the human body is related to words describing a certain group of elements: the service "spine", the structural "skeleton", the pivoting "elbow" entrance and a western, punctured "skin". This is related to sensory motor symbolism (function related), more than an analogical look-a-like. The way the building is experienced by the user determines the grammar (figure 5).

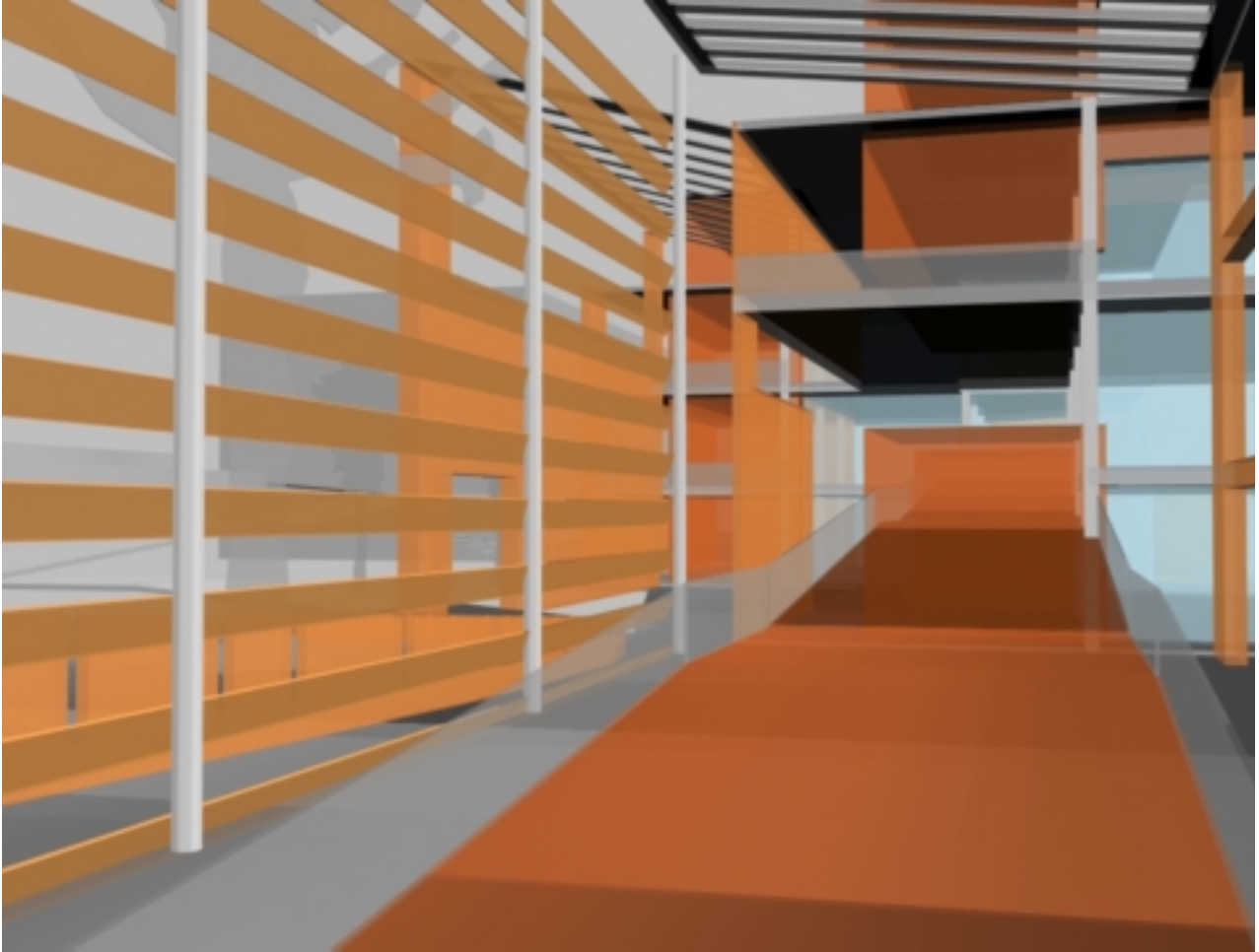


Fig. 7 The skin, spine, skeleton and elbow becoming the semantic field creating a coherent meaning. Northern view from the ramp in the entrance space.

There are no rules in architectural grammar. Although terms are used in describing architecture (Jencks; 1987; p.39):

The metaphor is the matching of one experience to another (Jencks; 1987; p.40). Conflict arises in different subcultures where you need to be trained to understand metaphors and everyone's experience must be taken into consideration. This is dependant on local code (Jencks; 1987; p.42, 43). It determines the way in which the building is experienced.

In the Sydney Opera House actual functions were obscured and the expressive functionalism criticised (Jencks; 1987; p.45). Venturi means the *decorated shed* uses conventional ornament instead some analogy for example a duck (apparently popular in the 1950's). "Duck" buildings can be seen as iconic were decorated sheds are symbolic. An increase in metaphors has an increase in drama as result. In Ronchamp by Le Corbusier, metaphors are called up without naming them; the result is imaginative brilliance and coherent meaning (Jencks; 1987; p.48). Architecture in everyday life is experienced inattentively with prejudice of mood and will. The result is a building with over coded architecture (Jencks; 1987; p.50) and non-literal metaphors are more successful and creative.

Architectural **"words"** are more elastic and polymorphous than spoken or written words. They explain the idea of the architecture and make it identifiable by the user. Thus it is based on their physical context and the code of the viewer (Jencks; 1987; p.52). In a modern building indexical (e.g. arrows), iconic (e.g. structurally) and symbolic (learned conventions) signs are used (Jencks; 1987; p.54). The repeated use of these codes ends up in a symbolic sign. A new language full of gamut of architectural expression can be created. This as a result will have metaphorical reading, signs and sometimes intentional vulgarity (Jencks; 1987; p. 62). An experience is expressed verbally.

The **syntax** includes a combination of various words like doors, windows, walls etc. There is an enjoyment for the designer in breaking the syntactical rules for example Michael Graves foregrounding elements of architecture out of visual functional context (figure 6)(Jencks; 1987; p.63). Semantic meanings are joined with other associations creating a new meaning and experience (Jencks; 1987; p.64).

In this differentiated society, the environment becomes more legible (Jencks; 1987; p.69). The relationship between elements is more important than their inherent meanings (Jencks; 1987; p. 72). In the architecture of the eighties, the technical aspects and aesthetics were more important, not **semantics**. For example steel and glass being seen as cold, impersonal and precisely ordered and thus ideal for the symbol of an office building. Yet, the relationship between brick, concrete, steel creates a semantic field. The semantic questions are left to intuition. The mixed styles of eclecticism, although confusing, could become an aid in communication (Jencks; 1987; p.78).

LRC- Imaginative use of the "metaphors" like skin, spine, skeleton and elbow are used to create a coherent meaning. The metaphors are not named but are determined by experience. The combination of the words (skin, spine, skeleton, and elbow) creates the semantic field of interpretation. This is related to elements of architecture making the user aware of the materiality of the specific element (figure 7).

Practice of communication

Architecture is a form of mass culture as it communicates to large groups of people, thus confirming certain widely subscribed to attitudes and ways of life (Eco; 1980; p.41). Architecture is psychologically persuasive prompted to follow the instructions implicit in the architectural message.

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Functions are signified, promoted and induced. This discourse is experienced inattentively in the same way one experience films and advertising. Not like one would experience works of art or other demanding images that call for concentration and absorption (Eco; 1980; p.42) Architecture as mass communication does not use highly conventional messages. It is inventive and its premise is that society could become something new, different and more informative (Eco; 1980; p.43). It compares with prior and subsequent means and ideologies of inhabitation. A styling happens where new rhetorical forms are born, a reaffirmation of something, with new connotations and re-codification. All this is an increase in information content.

Architectural messages are interpreted in an aberrant way without the addressee being aware of perversion e.g. hanging laundry over a railing. It fluctuates between being coercive and being indifferent where it is seen as being fit. Architecture belongs to the realm of everyday life like pop music, not like high fashion. It is like a business where economic conditions govern mass culture.

Architecture addresses expectations in society and is related to linguistic forms. According to Eco (1980; p. 45) there are three approaches to what society wants: integrating the work into the reigning social system, that to which it is accustomed. Avant-garde subversiveness discards all conventional architecture with an alien underlying code. Then there is architecture that is new but still intends to answer to the basic code. Available data is used to determine what new system of functions can be related to the whole of society. Interdisciplinary work relates sign vehicles to that which lies outside architecture, for example advertising and the virtual universe.

Cultural forms and all determined languages are absorbed in **advertising**: it has no depth, it is instantaneous and instantaneously forgotten (Steele; 2002; p.3). The form of advertising is that of a simplified operational mode that is vaguely seductive and vaguely consensual. Today oscillating forces converge into the parallel force of 20th century architecture and advertising.

The viewer is unable to determine where the architecture stops and the advertisements begin, for example, the reflection of the *Absolut* vodka sign in the façade of the Seagram building (figure 8). Architectural space has become the ultimate consumer ready made with it becoming a vehicle for extending advertising's single greatest invention; brand space recognition (Steele; 2002; p.4).

Real space (architecture) triggers imagined (pictorial) space (Steele; 2002; p.17). In architectural spaces a moving viewer has, as a result, a phenomenological reading: the physical presence of the viewer as subject register.

For human beings in an industrial society everything is rooted in symbols: a **virtual universe** of images (Daniels; 1998; p.26). Media – irrationalism creates everything as artificial, unreal, irrational and meaningless. The brain acts as virtual reality, where there are no more spatial distances. The time dimension is overthrown. Language skills are impoverished and the result is a decrease in creativity and innovation. Language is changed to abbreviated images of symbols. The need of architecture is the preservation of the environment, conservation of resources, necessity for recycling and accommodation for the information age (Daniels; 1998; p.28).

Through e-mail, an electronic identity is constructed and geographical boundaries broken. A community is experienced as a daily network of people. Barrier of "skin" is broken and boundaries between surroundings and architecture will gradually dissolve as well (Daniels; 1998; p.30, 32). A building has a space and time continuum that creates scenes with new dimensions and distance.

LRC- The building is seen as advertising a meaning. It is rich with information content and due to the existence of the virtual, universe a decrease in space needed. Walls become a backdrop for imagery and scenes and the user registers spaces and meaning (as in advertising) as he/she moves through the building. The building becomes a vehicle for a



Fig. 8 The Seagram building by Mies, with a reflection of an Absolut vodka advertisement (Steele; 2002; p. 3).

collective interpretation. The "skin" is broken to make worldwide communication and a contextual architecture without barriers possible. The tension between the inside and outside of the architecture is dissolved. Dynamism in function is possible with a combination of digital and hard copy in the library to ensure context, reciprocity and experience for the user. Re-interpretation of function and the un-static nature of architecture are experimented to create a library space with computers, books and study carrels. A recognisable image (the module) is created (figure 9).

Computer networks and central servers result in a decline in walled-in space. The negative result could be a reduction in significance of real experience, the undermining of education, creativity and the counteracting of schools and libraries (Daniels; 1998; p.37). Creative problem solving still requires context, reciprocity and experience.

Yet, any building should provide shelter, warmth and security. It should illuminate surrounding surfaces, create rooms and should have soft, rough and smooth materials in harmony (Daniels; 1998; p.33). The contemporary, contextual responsibility of a building is realised in the Learners Resource Centre. The meaning and communication of the desired building was kept in mind through the design process and development. An abstract layer superimposed on a context is the resultant design.

Design (de)constructed

Introduction –The context and the superimposition

The context- In the world today entertainment, information, clothes and food is becoming more and more alike. Similar fads are rolled into a massed fashion (Lipman; 2003; p.6). This is all good for business, distribution and mass consumption. Architects relish richness of variety and wealth of differences. The ideal is the realisation that there is unity

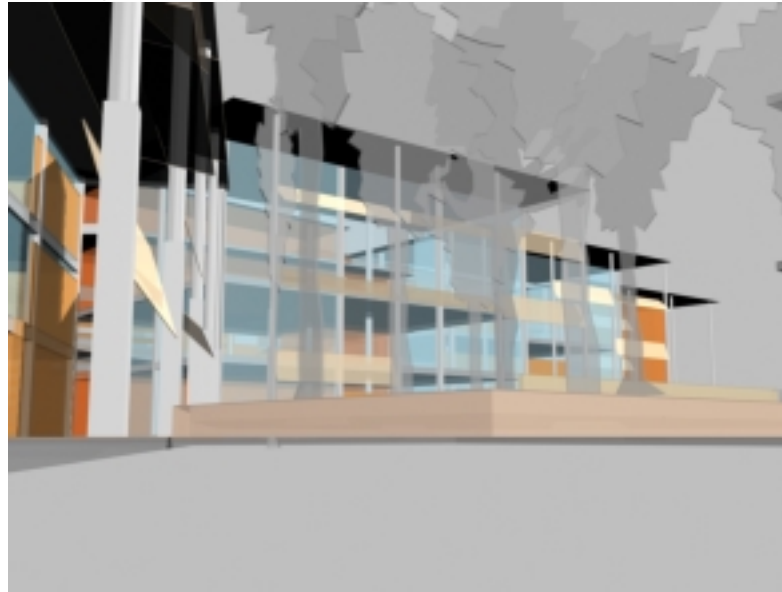


Fig. 9 The module, the walls as a backdrop with the "skin" punctured and the tension between inside and outside. View from the exhibition space to the library modules

Fig. 10 The entrances, paths and routes on the site. Eastern view from the river crossing



in cultural diversity. There is a distinction about the buildings that have shaped physical and cultural settings. Traditional architecture is fragile because of shabby cover ups. It is the same architectural boxes with signs and symbols stuck on. Post modernism resulted in cities cut out of time, out of place and culturally polluted.

A **critical regionalism** is important to make people feel at home in built things. It has a self-consciousness (Frampton; p. 17). It reflects who we are through physical qualities and experiences of people (Lipman; 2003; p. 7). New and old, local and universal is counter posed. Architecture is a resistance to global meaning. To understand the past, the future can be shaped. A vernacular was established in Pretoria by Norman Eaton that includes among others small windows, projecting sun shades and roof eaves. That is an answer to making relevant architecture in South Africa. A vibrant modern architecture can be the result; a township jazz of architecture. (Refer to - the Third Vernacular in the *Brief & Context*).

The superimposition - Tschumi used in the Le Parc de La Villette scheme, a regular point grid selection consisting of a system of points, lines and surfaces superimposed. Superimposition creates a new layer reinforcing a specific aspect of the design.

A calculated **discontinuity** brings forward certain chains. In film, discontinuity has as a result a multiplicity of combinations, the cinegram. Words associated with the cinegram are repetition, inversion, substitution and insertion. The invention resides in contrast (Tschumi; 1987; p. vi). A complex architectural organisation, not resorting to traditional rules of composition, is the result in La Villette.

There is a **dis-integration** versus the totalising synthesis of objective constraints, versus cause and effect. The new contiguity and superimposition result in something opposite to totality (Tschumi; 1987; p.vii). La Villette is non-contextual with a specific vision of post-modernity. The idea of meaning imminent in architectural structures and forms which directs signifying capacity is used. Post modernity rejects well-defined signified that guarantees the authenticity of the

work of art. La Villette de-regulates meaning, rejecting “symbolic” repertory. Architecture is always changing meaning, it promotes programmatic instability. It means nothing, just a multiplicity of impressions (Tschumi; 1987; p.vii). Meaning is a function of interpretation: a dispersed and differentiated reality that marks an end to the utopia of unity.

The **superimposition** of three systems generates a system of calculated tensions reinforcing the dynamism of the place. Each system has a logic and independence (Tschumi; 1987; p.3). Programmatic requirements are distributed over the total site with arrangements at points of intensity. This emphasises discoveries and present visitors with a variety of programs and events. The folly is a neutral object with function, the structure is bare and the programme complex (Tschumi; 1987; p.4). It is an autonomous sign with maximum programmatic flexibility. It becomes an etymology, an artificial abstraction (Tschumi; 1987; p.5). The superimposed systems consist of points as programs in fragments, lines as axis, meandering and lanes of trees, and the surfaces as textures (Tschumi; 1987; p.6). The follies (points) become necessary to fulfil the programmatic and to develop a clear symbol. This enhances easy maintenance and orientation (Tschumi; 1987; p.7). The lines coordinate the most frequent activities. The curvilinear line intersects the straight lines at important points. The surfaces are textured according to program and the left over surfaces are compacted earth and gravel (Tschumi; 1987; p.8).

The cinematic promenade allows for associations along the routes with a plurality of interpretation rather than a singular fact. The frames along these routes are experienced in sequence or independently. Like a cinema this creates flashbacks, jumps etc. (Tschumi; 1987; p12). In the park there is a distancing agent, like the actor and his/her character. This agent is the folly where the program is reinterpreted, re-written and deconstructed by the architect. A globalisation in architecture is impossible if a design is responsive to its context and the relevant abstraction.

Berea Park Learners Resource Centre

The context of the design was its single most important generator. Extensive time was spent designing the site and fitting it into the context. To use Lynch's terms; the gateway and landmark quality is celebrated with the placement of the entrances to the development and building. This permeability places the user on certain paths and routes with intersections to create nodes of activity (see drawing 1 and 3D model) (figure 10). The site is a nature room, part of the green open space system. This is respected by creating new urban spaces and a fusion of indoors and outdoors. The site making actions are the movement patterns on and around the site. The activity systems on the site include a multi functional development on the northern side of the site. This is a harder urban form to fit in with the grid of the inner city. The southern part of the site is the campus development with pavilion buildings to fit in with the green open space system of Fountains valley (figure 11). Between the buildings a hierarchy of spaces is created with emphasis placed on gathering of users. Trees are concentrated on spots, curved walls are

strategically placed for orientation, high trees are placed to communicate places of meeting, rows of trees define axis and benches, walls and berms become nodes (figure 12). Important views are created celebrating the importance of the resource centre. The legibility creates a democratic environment where visual appropriateness ensures robustness. Large scale robustness on the site is because of many functions creating diversity (see drawing 2). Small scale robustness caters for the different backgrounds of the users; making it understandable.

The visual quality of the landmark is created by the context. This is vertically enhanced by the entrance and horizontally by detail like openings in the walls.

Vernacular architecture takes into account climate, materials, site, economics and cultural expression. The resulting vernacular is an abstract language of what the elements of architecture are. Sensitivity to landscape and climate, simple plan forms, low pitched roofs, large overhangs are some of the clues used gathered from Pretoria Regionalism. Material use is important with the use of articulated face brick (brick aesthetic), exposed



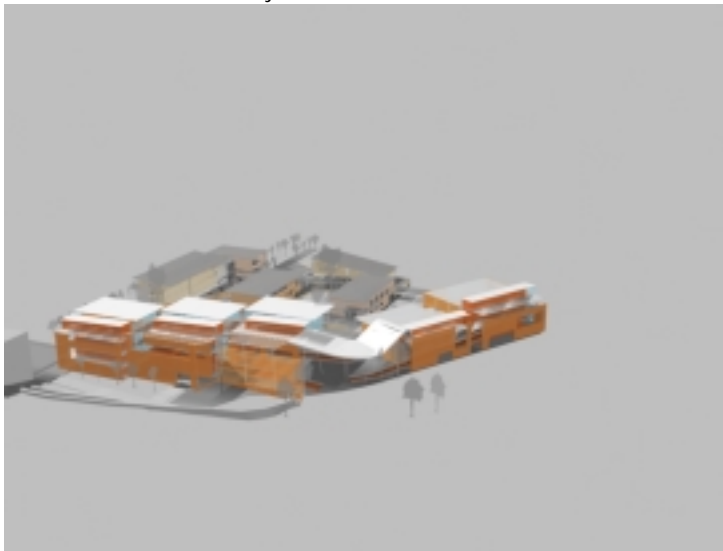
Fig. 11 The pavilion buildings fitting into the green open space system and creating a hierarchy of spaces. Eastern view from the river.

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Fig. 12 Rows of trees, curved walls and high sculptural trees.
North view to building.

Fig. 13 The auditorium and office vs. the library modules.
Western birdseye view



concrete (international style), glass and steel. The architectural elements described from west to east:

Abstract overlay- The superimposition of layers and modules on the site makes the functions and program of the building readable. The layers consist of the walkway, services and functional spaces. They, in turn, are made up of a punctured western façade “skin”, a walkway and service “spine”, a steel structural “skeleton” and an entrance “elbow”. This enhances the experience of the building where the scale of elements determines the interpretation of the user. The modules consist of these layers. A combination of books, computers and study carrels fill the functional spaces. The different modules are readable as to what function it houses. The library modules are the same combination of elements, the office module is lower and smaller and the auditorium bigger (figure 13). The auditorium and office module is a “heavier” architecture than the library modules because of its commune function. The building is read from east to west to the river, and from north to south to the entrance junction, as close to open. *The entrance* is articulated by slanted columns and a curved concrete roof. The dynamic tension of the entrance is created by the ramps connecting the different modules and tying all the elements together. This is the “elbow” where the building is junction-ed. The north and south-east corner’s articulation fits with the entrance, celebrating the circulation and landmark quality of the building (figure 14).

Western skin- This is in response to the harder, busier van der Walt street façade and because of evident climatic restrictions. The off- shutter concrete walls frame the different modules and different heights and strategically placed punctures allow for an interesting composition and harmony over the entire façade. The functions of the wall include allowing natural ventilation and indirect lighting as well as entrances and views along the paths through the building. The wall consisting of wall modules enhances the entrance ramp and creates an openness fitting in with the entrance and punctured concrete roofs.

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The secondary non load bearing walls will be face brick tying in with the brick aesthetic of the vernacular. These curved walls articulate the corners of the building, stressing the importance of them as places of arrival (figure 15). As mentioned before the loose standing curvilinear walls define routes and orientation on the site. The curved concrete wall on the western façade celebrates the entrance and defines the western amphitheatre space created by the contours of the site.

Circulation spine- The ramps and staircases are indexical signs. The ramps create tension at the entrance and become iconic and symbolic, celebrating place of arrival and orientation. By its width it creates places of gathering, meeting and socialising. The staircases at the north and southeast corners, together with the curved walls, enhance the articulation and therefore become visual elements. A three dimensional labyrinth is created with the user intentionally forced to use specific ramps to get to a specific destination. This enhances the experience of the building (figure 16).

Serviced-service spine- These spaces include all services; the buildings' and the users. Ablution, offices, storage and environmental control is serviced here. The services are kept apart from the rest of the building. The design is based on adaptability and flexibility. The whole "spine" is made up of dismantable modules, and it can in totality be removed from the building, without the integrity of the building structure being compromised. This creates dynamism in the architecture (Figure 17).

Structure skeleton- The steel columns are perceived as being lighter and contribute to the openness of the eastern façade of the building. It has a high slenderness ratio, and through this the scale of the volumes is enhanced. The colonnade becomes a threshold between inside and outside; it is read as being more than just a covered walkway (figure 18).

Glass wall, shading and wall modules- Besides these elements having a functional role which is fulfilled, it also has a visual one. The combination of these elements on the eastern facades creates a pattern

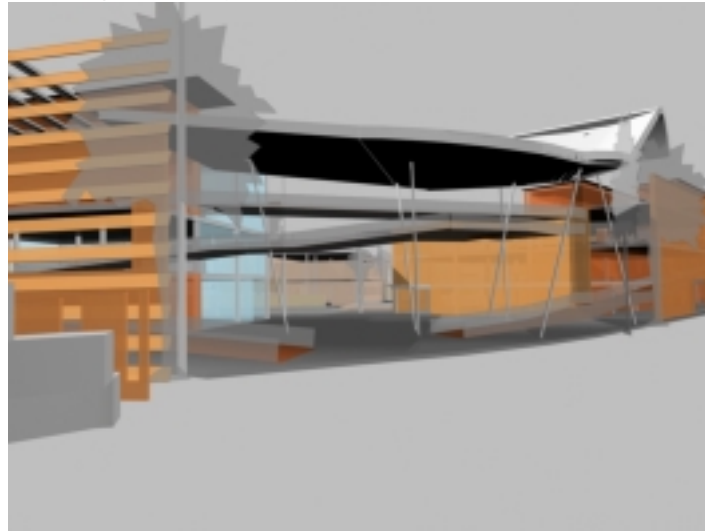


Fig. 14 The entrance "elbow"
The entrance showing the curved roof.

Fig. 15 Concrete walls and the corner walls articulated.
South east corner of the building (auditorium)





Fig. 16 Walkway ramps and staircases
North view of corner showing the staircase

according to the air- and sunlight need on the inside. An articulation is the result where the interior workings are readable. Views are created and the non-static aspect of architecture is enhanced by it constantly changing. The timber louvres on the auditorium and restaurant, together with the curved walls, clearly contribute to the functional difference of this module; it being an important place of gathering (figure 19).

Roof modules- The roofs are metal and concrete. The pitched metal roof, together with the eastern steel structure, is perceived as lighter. This allows for natural lighting and –ventilation by clerestory windows. The service spine is also a metal roof, differentiated from the other roofs. The concrete roofs tie in with the harder western façade and it is accessible for maintenance. Together with the poetic concrete entrance roof, dynamism between light and heavy is created. This is successful with the result being an articulation that defines all the different spaces underneath. The punctured concrete roofs allow for a play of light that washes the surfaces and allows for time and movement

to be evident on a two dimensional plane. The different roof heights allow for a difference in size of module. This makes the different functions readable (figure 20).

In the design of the building certain attributes are regarded as essential and some as incidental. To understand meaning we connect a word with an object in the real world (figure 21). It refers to an object and this is termed referential theory of meaning. In the design of the resource centre a reference is made to the human body. These essential concepts create hierarchy in the building; The musco- skeleton (centre) of the building includes the furniture and fittings: it is determined by the programme of the building. The structural skeleton is the support of the building: it carries the function. The elbow (joints), e.g. the entrance, becomes a point of orientation: the entrance as place of arrival determines which routes the user will take; thus determining movement. The spine is the backbone of the building, where servicing

Fig. 17 Service “spine”
View from south along western facade



Fig. 17 Service
“spine”
View from south
along western
facade



takes place: the nervous system (operation) of the building. The skin becomes the environmental filter as it controls climate and becomes the barrier/ threshold to the building (figure 22). The meaning of the building to the user will be a matter of social definition and habitual use.

Conclusion

There is a constant spatial coding of objects which generates meaning in architecture. This building has a spatial tag and the experience and perception of its environment is based on factors determined by the human's capacity to navigate and to move. An extremely complex series of relationships makes up the architecture of a building. If the whole is looked at, that is the physiological (senses) and psychological (meaning) factors, the building influences are thus realised. The user *will* connect meaning to the architecture and it *will* act as a cultural symbol. Context and medium are crucial ingredients in architecture to relate the abstract to reality.

The language of architecture consists of signs that are a compound of indexes, icons, symbols and terms like metaphor, word, syntax and semantics are used to describe architecture. This grammar and syntax of architecture enhances and conveys expressive intentions. Architecture as a form of mass culture communicates to large groups of people and confirms certain widely subscribed to attitudes, ways of life and meaning. Physical boundaries are broken in the virtual universe and architecture responds accordingly.

In La Villette, Tschumi wanted to create architecture without context. According to him that is the only way the meaning of the architectural structures and forms can be signified and the authenticity of the artwork be assured. Opposed to this, Lipman emphasises the concept of critical regionalism and the recognition of a unity in cultural diversity. Through this, a person feels at home in a building if it is designed for a specific context. Both are against a globalisation of architectural meaning. The mass consumption of architecture is not

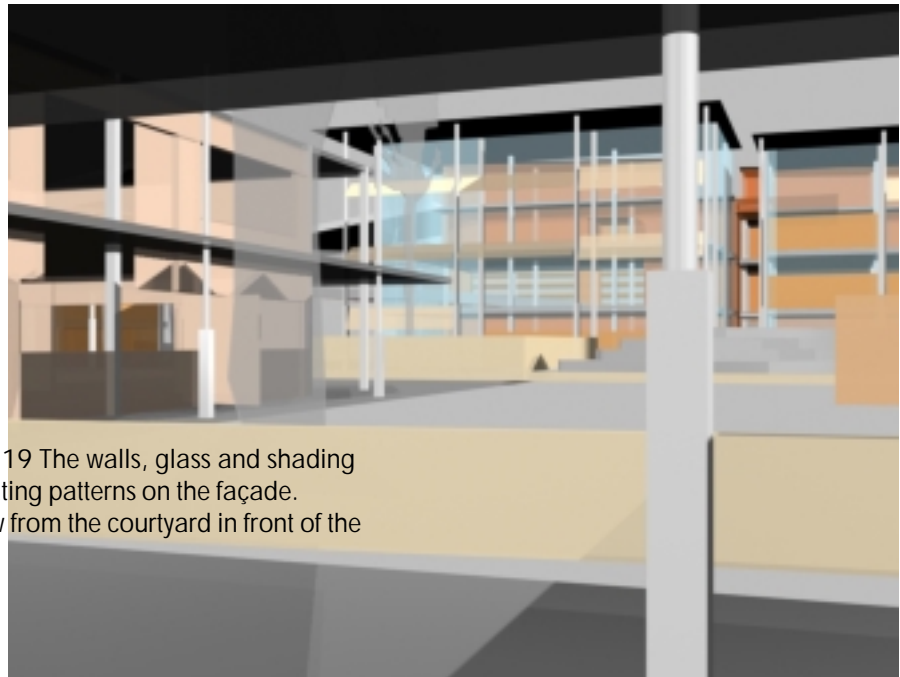


Fig. 19 The walls, glass and shading creating patterns on the façade. View from the courtyard in front of the hall

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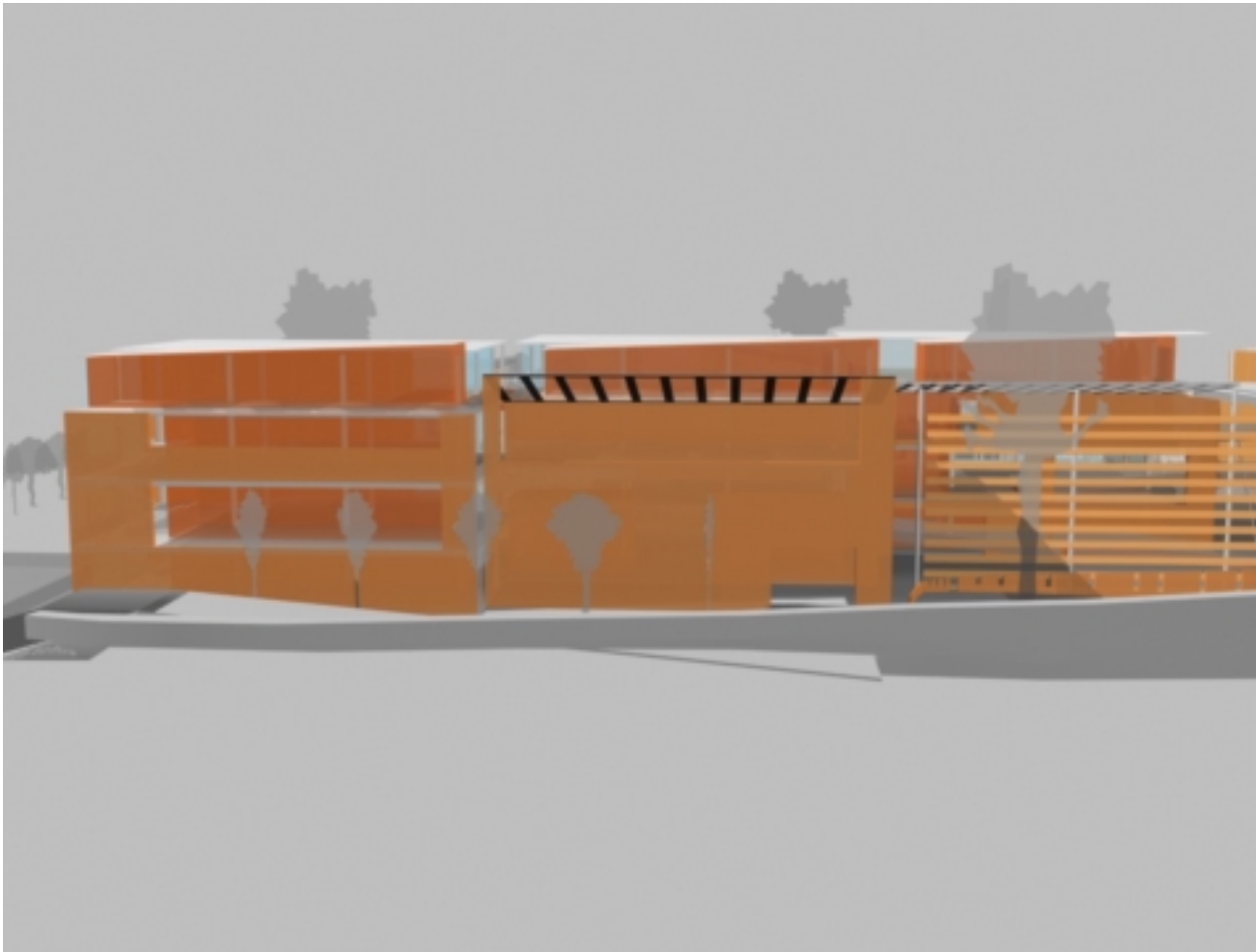
just about economical gains, but creating a vehicle for sustainable development instead of becoming the advert and consumable object itself.

The language of architecture needs context and medium. With this vernacular (contextual) architecture, not becoming something usual and expected, the architect can overlay an "abstract" (like in La Villette) to

make something exciting, dynamic, exploratory and new. Putting that over a context creates an authentic work of art that is understandable. The composition of the architectural elements (medium) creates a simpler architecture that can be interpreted, categorised and used as seen fit without it losing integrity and becoming static.

Fig. 20 The steel-, punctured concrete- and mass concrete roofs.

Western view from van der Walt street.



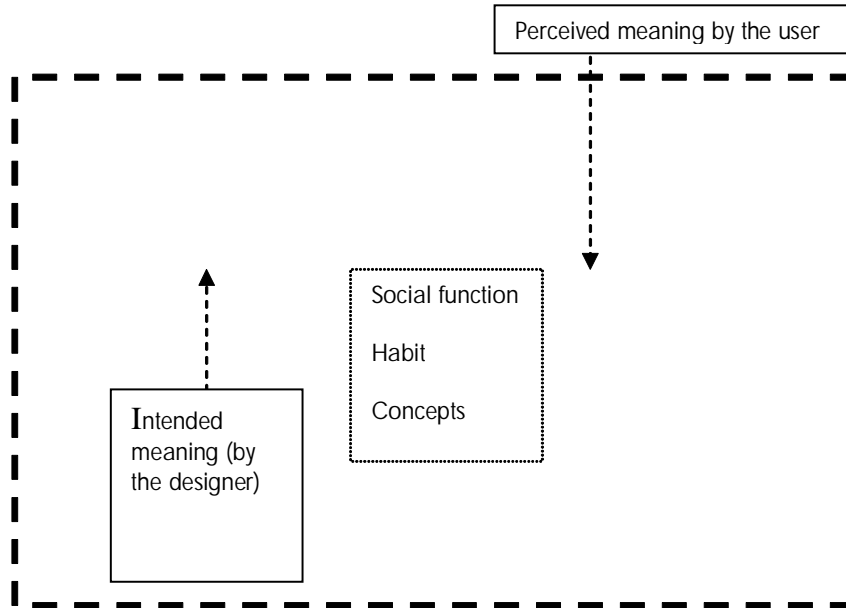
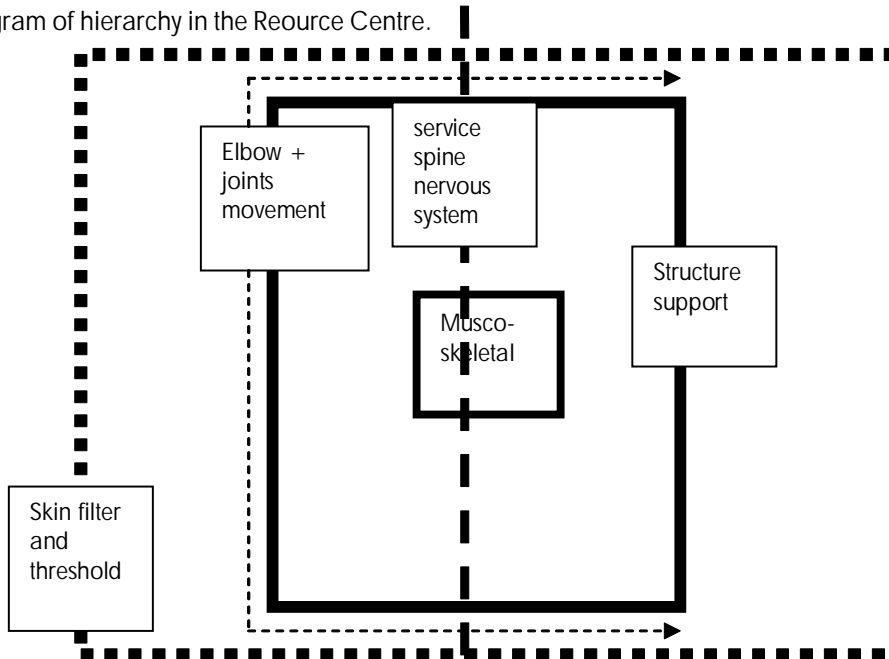


Fig. 21 The "horizon of understanding"

Fig. 22 Diagram of hierarchy in the Resource Centre.



List of References

Bechtel, B. 1980. Architectural space and Semantic space. *Meaning and Behaviour in the Built Environment*. Edited by G. Broadbent, R. Bunt & T. Llorens. New York: John Wiley & Sons Ltd.

Bonta, J. 1980. Notes for Theory of Meaning in Design. *Signs, Symbols and Architecture*. Edited by G. Broadbent, R. Bunt and C. Jencks. New York: John Wiley & Sons Ltd.

Bonta, J.P. Expressing and Interpretation in Architecture. 1993. *Companion to Contemporary Architectural Thought*. Edited by B. Farmer & H. Louw. London: Routledge.

Broadbent, G. 1980. A semiotic programme for architectural psychology. *Meaning and Behaviour in the Built Environment*. Edited by G. Broadbent, R. Bunt & T. Llorens. New York: John Wiley & Sons Ltd.

Broadbent, G. 1980. The deep structures of Architecture. *Signs, Symbols and Architecture*. Edited by G. Broadbent, R. Bunt and C. Jencks. New York: John Wiley & Sons Ltd.

Daniels, K. 1998. *Low-tech, Light-tech, High-tech: Building in the Information Age*. Basel: Birkhauser publishers.

Eco, U. 1980. Function & Signs: The semiotics of Architecture. *Signs, Symbols and Architecture*. Edited by G. Broadbent, R. Bunt and C. Jencks. New York: John Wiley & Sons Ltd.

Frampton, K. *The Anti-Aesthetic, Towards a Critical Regionalism: Six points for an Architecture of Resistance*. Photocopied piece. p. 16 -31.

Harrison, J.D. & Howard, W.A. 1980. The role of meaning in the urban image. *Meaning and Behaviour in the Built Environment*. Edited by G. Broadbent, R. Bunt & T. Llorens. New York: John Wiley & Sons Ltd.

Hellman, L. Language of Architecture. 1993. *Companion to Contemporary Architectural Thought*. Edited by B. Farmer & H. Louw. London: Routledge.

Hershberger, R.G. 1980. A study of meaning and architecture. *Meaning and Behaviour in the Built Environment*. Edited by G. Broadbent, R. Bunt & T. Llorens. New York: John Wiley & Sons Ltd.

Jencks, C. 1987. *The Language of Post Modern Architecture*. London: Academy Editions.

Jencks, C. 1980. The architectural sign. *Signs, Symbols and Architecture*. Edited by G. Broadbent, R. Bunt and C. Jencks. New York: John Wiley & Sons Ltd.

Lipman, A. South African Architecture: What is it? Where is it? *Archi Technology*, March 2003, p. 6-7.

Mirzoeff, N. 1999. *An introduction to Visual Culture*. London: Routledge.

Onions, J. Sign and Symbol. 1993. *Companion to Contemporary Architectural Thought*. Edited by B. Farmer & H. Louw. London: Routledge.

Scruton, R. 1979. *The Aesthetics of Architecture*. London: Methuen & Co. Ltd.

Steele, B. Absolut ® Mies™ Absolute Modern: Building Good Copy. *A-A Files*, vol. 48, 2002, p. 3 – 39.

Tschumi, B. 1987. *Cinegram Folie Le Parc de La Villette*. New Jersey: Princeton Architectural Press.

list of references