a projection of space
in reality and virtuality

Andrea Schwappach

Thesis submitted to the faculty of
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in partial fulfillment of the requirements for the degree of
Master of Architecture.

William Brown    chairman

Michael O'Brien

Robert Dunay

Heinrich Schnödt

Blacksburg, December 1998
The plant grows from its seed.
The characteristics of its form lie concealed in the potential power of the seed. The soil gives it strength to grow. And outer influences decide its shape in the environment.

Each of us is like the plant.
The abilities of everybody lie concealed in the potential power of one’s personality. The soil named education gives everybody the chance to grow. And outer influences are shaping everyone’s position in the environment.

It is just a question of how you expose yourself to the world and time in which you live.

To understand life and to conceive form to express this life is the great art of man.
**positions**

**important moments in my design decisions**
1. belief in intuition  
2. translating intuition into intention  
3. vision, imagination and knowledge  
4. finding and establishing analogies  
5. hierarchy of elements  
6. haptic sensibility

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2. urban planning and design  
3. history of the site  
4. the site and its context

**urban planning - city scale**
1. concept drawing  
2. the media center idea  
3. urban proposals  
4. ‘gathering the four horizons’  
5. the public realm  
6. light and shadows

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2. site plan  
3. floor plans  
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The things we perceive as beautiful may be different, but the actual characteristics we ascribe to beautiful objects are similar. When something strikes us as beautiful, it displays more presence and sharpness of shape and vividness of color. It stands out; it shines. It seems almost iridescent compared to the dullness of other objects less attractive.

Working as an architect means being able to see the main issues of a design, examine with objectivity the possible solutions, and finally grasp the technical means necessary to accomplish the project. I think it is important for an architect to be involved in the entire course of a project, since the process of "building" is a simultaneous rather than a sequential one. My architectural education and my work experience as an intern in architecture firms in Germany prepared me well for practice. I covered many technical issues and equipped me with the fundamentals of architectural assembly. Graduate education in the United States provided me with the academic environment to investigate my interests more deeply and to discover my personal strengths. It gave me the opportunity to formulate a mature and coherent position in my thinking and making.

I still cannot explain everything intellectually, since many ideas are intuitively derived or spring from my subconsciousness. But my theoretical and practical background combined with sincere feedback from my classmates and committee members provided the necessary climate to develop and elaborate architectural ideas.

I see life as a continuous course of learning, where personal growth not only strengthens my confidence, but also contributes to the discipline of architecture and to society at large. An architect has a special responsibility towards society as he/she translates the spirit of time into the built cultural environment.
Belief in intuition is the most exciting story if it is a non-essential route.
Louis Kahn

Belief in intuition
As a designer one is searching for what is not always explicitly known. Since there is so much information available in our current society, it is difficult to start any kind of rational analysis. Therefore, improvisation, intuition and imagination are important abilities in the process of designing and decision-making.

It is legitimate to trust your intuition, because everything is coming from something, just sometimes you don’t know where the source is. We always feel our environment, sense the signals, but we do not always know what or reality this something is. Most environmental influences rather affect our senses than our mind. A smell is in the air, striking our nose. A slight wind is moving our hair, tickling our skin. Sunlight and shadows let us differentiate between light and dark, warm and cool, comfortable or unpleasant. Especially sunlight not only affects our visual perception, but also our skin perception reacting to temperature differences. Some people even close the shade in the air conditioning.

Another perception related to light and temperatures is the one of color. Color is a definite natural, landscape, settlement, citiy, object, people and moods. Sunshine amplitudes colors, let them vibrate more vividly. An overcast sky eliminates the colors. Everything moves closer together, more homogeneous. These examples visualize some of the influences we are sub-consciously exposed to every day. The way we evaluate these encounters is very personal. In relation with past experiences and influences they shape our inner world and inspire a continuous dialogue with the outside world. This interaction between our inner voice or spirit and the intellectual reasoning of the mind is what I call the translation process from intuition to intention.

The process of translation at this point is the richest moment of our cultural heritage. The duality between concept and intuition initiates the dialogue that eventually becomes the intention. While a concept is a rather rational notion about something conceived in the mind, intuitions defeat every evident rational thought. Concept and intuition are the placeholders for rational and emotional activities in our minds. The balance between concept and intuition gives us the ability to visualize and transform the vision verbally or as in form of drawings, models or any other kind of representation.

Concept
Synonyms: anschauung, insight, understanding, form, ear, perception.
Inference
Concept is an abstract or generic idea generalized from multiple specific experiences or RREA.

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translating intuition into intention
Threading, rules and laws only record the discoveries of the past. Laws do not explain, they just describe what happens. The things in life that truly make a difference are exceptions and phenomena. Exceptions have major consequences for our thinking since they confront us with what we did not know up to that point. They address our curiosity to find out more about their relationship to ourselves, which leads us to the discovery of the future and hence to higher forms of life and thought. The process of evolution is a sum total of single experiences and in its entirety the story of our cultural heritage. Fundamental to all action is the idea of concept and intention. While a concept is a rather rational notion about something conceived in the mind, intuitions defeat every evident rational thought. Concept and intuition are the placeholders for rational and emotional activities in our minds. The balance between concept and intuition gives us the ability to visualize and transform the vision verbally or in form of drawings, models or any other kind of representation.

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3. vision, imagination and knowledge

The things we see around us every day are the germinations for our imagination and visionary abilities. As Gunter Birkerts states, creativity not only depends on your intelligence, but also on the result of the ability to collect information. The more you know, the more narrative you can develop on your theme and the more creative you can be! The collection and organization of information becomes our personal source and inspiration for intuition and imagination. I define imagination as the ability to visualize, recall and remember. The extraordinary power of visual imagination helps to translate intuitions and ideas into the physical world of objects. I must view my perception to define proportions and see harmony in the composition. I am finding expression in the process of making and beauty in the process of expression. The act of making becomes a more important issue than trying to find explanations and intellectual justification.

The general idea of creativity is to incorporate any kind of creative energy. The influence of art and technology as well as images generated inside/outside environment of TV, movies, commercials and computer Internet enhance our haptic and visual perception. The multiplicity of viewpoints and perspectives presented by the media removes the single person from his/hers seemingly fixed position in order to question the flow of time and events in a large scale. I experienced that an unfocused vision is sometimes helpful and capable of revealing new realities of vision and thought. Since every individual is carrying personal influences and subconsciousness, he or she will automatically react to certain information and immediately detect the necessary ones when listening to the inner voice (intuitive quality).

The introduction of a metaphoric picture can push the ideas independently from the function and execution of the building. I am trying to give every design a personal and character related to the general form or stronghold of the project. A symbol may unify many diverse elements in a simple and expressive form. On the other hand an analogy can be a means to picture things in their wholeness and to not lose the sight for the larger scale. The analogy defines the general boundary condition of the project and delivers the view for the smaller scales. On the other hand an analogy can be a framework to invent an entire story presented by the single parts of the building. An architectural idealogy of interdependences, interrelations and interdisciplinary excursions projects a message of collision and experience.

Everything in this world is interrelated and mutually influenced for our imagination and visionary abilities. In fact we use more metaphorical language than straight description and almost every word has a synonym. One explanation logic, but the results of the ability to collect information. The more you know, the more narrative you can develop on your theme and the more creative you can be! The collection and organization of information becomes our personal source and inspiration for intuition and imagination. I define vision as the act of seeing: to perceive, to observe, to note, to make out, to look at, to attend, to look closely at. Something is visible to the senses of something immaterial. The senses of something immaterial. The concept of vision, perception and experience can be defined as the ability to see and understand by the senses of something immaterial. Vision as an expression of the brain's ability to detect physical stimuli and to perceive". 
haptic sensibility

Like Cezanne’s intention was to make visible the world-touches [1] with his art, architecture should have the haptic depth to involve people for further sensory exploration. We have to remember and experience the reality that we are rooted to the continuity of time, and in the man-made world it is the task of architecture to facilitate this experience. Our desire to experience one being in the world in strongly linked to sensuous curiosity. Man’s relation to space and the world in all its complexities and multiplicities is facilitated by a kind of sensuous perception. In concentration on the present moment we can experience better the interaction of the senses. The private sense of smell, taste, and touch brings us in direct contact with the physical world; and every extended every place can be remembered, partly because it is unique, but partly because it has affected our bodies and generated associations to hold it in our personal worlds. [2] The material and spiritual presence of architecture addresses the senses. Every new experience of architecture is multi-sensory: qualities of matter, space, and scale are measured equally by the eyes, ears, nose, skin, tongue, skeleton and muscle. Architecture is able to emphasize the strength of topography, history and context in order to intensify the building design should incorporate the active forces of topography, history and context in order to intensify the place. Architecture is able to emphasize the strength of things. Instead of forcing something akin to the site, the architect should detect the natural strengths, integrate them into his composition and ‘make places’. Architecture should not only be without gravity in outer space, we are still walking on our legs on the surface of planet earth and have not grown wings like a bird yet. There are some tendencies in architecture to idealize technology and achievements and question the traditional position of buildings. The questioning of outcomes traditions is very necessary in the process of evolution, but as soon as architecture becomes more and more temporal or structurally ‘light’, the employment of architectural elements with sustaining power over time becomes a critical issue. The continuous desire for abstraction will eventually result in the loss of substance and disposition into temporalities. The idea to give at least one element should articulate the particularity of its place and give an identity to the building in its entirety. All parts are in relation to each other, but some elements are stronger than others and possess the position where order is derived from. The order generating members should exhibit a certain material permanence and preserve the story of the building’s origins, time, place and context for future generations. In order to understand the present and shape the future one has to comprehend history. And what could tell the story of past times better than surviving genuine artifacts?

...composition and parts...the retaining wall...structuring elements...
at the Baltic Sea (Kiel Firth) and the Kiel Canal (connecting Baltic and North Sea)

10°08’01” east of Greenwich
54°19’27” northern latitude
74,2 m highest elevation above sea level
point of departure

I had a personal affinity regarding the site chosen for my thesis project as I experienced it from my early childhood on as a place with a magnificent atmosphere. Not only its historic importance, but also its geographic situation in the urban fabric provided the excitement to found my thesis project on.

The site is situated in Kiel, the capital of Germany’s northernmost federal state of Schleswig-Holstein, with a population of 280,000. It is located on the northern end of the palace garden and is in its function today as a temporary parking lot a result of the destruction of Second World War. The site is located in the area referred to as the cultural center of Kiel at the edge of the old town center. The site constitutes the urban nodal point between two important axial connections in the city structure: between the reconstructed palace and the art museum on the one hand and between the public plaza in front of the town hall and opera house, and the waterfront on the other hand. The palace domiciles a concert hall, exhibition spaces, a national history collection, the national library and a restaurant. The art museum is well known for its permanent collection ranging from antique sculpture to contemporary art, and its special exhibitions primarily celebrating contemporary artists.

Unfortunately the spatial relationship between these two institutions is not really present in its current configuration. The old palace garden that stretches the area between palace and art museum is fragmented and the art museum can be easily missed because of its isolated location.

In this setting, my intention is to reorganise the pedestrian interaction in order to revitalize the public realm.

The creation of architecture within a historical context calls for the discovery and revelation of that which had been hitherto unrevealed, and the undertaking of both dissimulation and assimilation. 

Tadao Ando
The characteristics of the place in regard to its history, topography, urban context and closeness to the waterfront, initiated the idea to propose a building which serves the public.

My intention was to improve the urban situation and pursue an innovative, future orientated planning. Besides the goal to reorganize and connect the scattered cultural institutions of the palace and art museum, I wanted to think about possibilities and opportunities for future architectural events. As living and working conditions tend to change more frequently today, the role of architecture becomes even more crucial. The fast pace of our time asks for an architecture of flexibility and adaptability to different use. Contemporary architecture should provide some general qualities of space, light and material, that establish a redundant environment. The building may be influenced by modern technology, computers and cyberspace, but the basic elements of architecture will stay the same. It will always be necessary to have a floor to step on, columns as structural members, walls to enclose space and a roof protecting us from climate and outside influences.
After the immense impact of Second World War, where roughly 80 percent of Kiel was destroyed, the city was rebuilt almost entirely new. Today Kiel presents itself in a fairly contemporary urban structure and with buildings characteristic of the post-war period. Longtime rejected because of this lack of "tradition and history," some of the latest urban developments in the city show that Kiel’s inherent qualities are rediscovered.

There is virtually no other town between the North and the Baltic Sea that has as much physical contact to the water. The closeness of the city center to the water is visible in a lot of instances, be it maritime details to be found everywhere or the chimneys of big cruise ships giving the illusion of ships "driving through the city." The harbor is right in the center of Kiel, beaches and sailing areas are nearby.

After the opening of the Oslo Quay at the Schloßgarten in 1961, the city developed into the gateway to Scandinavia and Eastern Europe. No doubt, the 1.8 million passengers yearly are an important economic factor for retail, trade and service businesses situated in the city.

The other most important economic support for the city has been shipbuilding since 1850. The dominance of the ship cranes marking the territory of Howaldt Deutsche Werft AG, the internationally known shipyard occupying a vast area of land on the east bank of the Kiel Firth, compete with the two widely visible landmarks of the old city belonging to the Sankt Nikolai church and the city hall.

Beside being the biggest sailing event of the world, the Kiel Week encourages visitors from all over the world to participate and contribute to this important cultural, social, political and community event. The energy brought into the city once a year during this week is remarkable and advertises the city’s cultural and economic position all over the world.

The history of Kiel actually started when the town was founded by Count Adolf IV von Schauenburg in 1233. During the Middle Ages, as the town was named at that time, was a member of the mighty Hanseatic League and site of a nation-ally recognized money and commodity market. However, failure in trade, the decline of the Hanseatic League as well as the Thirty Years War resulted in a setback in the town development. It was not until the second half of the 19th century that the economy prospered once again under the rule of the Dukes. One hundred years later the Prussians took over the regentate and, with their men, provided the decisive spur. Kiel became an arms producing stronghold in two world wars, but was also the starting point of the "November Revolution" in 1918. Today Kiel is the capital of the northernmost federal state of Schleswig-Holstein and enjoys an international reputation as a waterfront town and center for sailing. In addition to the annual Kiel Week, Olympic sailing competitions have taken place twice on the "Firth," in 1936 and 1972.

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Originally the site was part of the “Schloßgarten” which was remodelled several times during the pass of the centuries. Right after the erection of the palace at the end of the 16th century, a first modest pleasure garden was developed. At that time the site was still separated from the palace hill through a wide moat that connected the lake like “Kleinen Kiel” with the salt water of the Kiel firth. The garden was to be accessed over a small wooden bridge.

In 1695-97, when under duchess Friederica Amalia the west wing of the palace was built, the garden got its representative baroque form. At that time the palace moat was filled with rubble of the demolished old part of the palace and the whole terrain from the palace hill to the rising area of the adjacent “Düsternbrooker” hills could be incorporated into the new design of the garden. On its long sides the ground of the garden was bordered by the settlement of the village Brunswik to its west and the waterfront to its east side. At that point the banks of the Kiel firth still reached directly to one of the majestic linden alleys flanking the garden on both sides of its pie shaped territory.

After losing its function as a crown domain in 1864, the garden was given to the public. Additional changes occurred as a result of the design of the main university building in 1873 to 1876 by Martin Gropius and Heino Schmiedel. After considerable damage during Second World War the building was demolished in 1950. The park was never restored to its original extends. Rather than reunifying the disconnected parts of the garden after the demolition of the university building, the remodelling plans of the city took into consideration the growing needs for automobile traffic. A main traffic artery was cut right through the garden where once the palace moat was and the part of the former palace garden where the university building stood, serves now as an unpaid parking lot for the university hospitals.

Even though the “Schloßgarten” kept its name, today it represents not much more but the obligatory city park.

At the necessary juncture of culture and place, architecture seeks not only the minimal ruin of landscape, but something more difficult: a replacement of what was lost with something that answers for the loss. In the best architecture this replacement is the intentional restoration of the place.”

W.G. Clark
handicapped accessible entrance of the art gallery
historical walkway lined up with linden trees to both sides
slope towards the street marks the former banks of the firth
pedestrian path bordering the east side of the garden

the site
natural history museum
university library
LBS office building
Steigenberger Hotel

the site and its context
the site and its context
One of the starting points for generating architectural form is the reading of the context.

documentation of the site:
- visually
- structurally

specifics of the site:
- traffic patterns
- position of the sun
- geology of the site
- topography: bluff on the site
- existing trees in the palace garden
- visual relationship to the waterfront and the city center
- pedestrian interaction in the transition from urban space to boardwalk on the water
- relation to the surrounding buildings
- urban intersection - axial relationships between public buildings
thoughts about the student monument of G.A. Munzer (1914/18)

Light filters through the foliage of the surrounding trees, creating a mythical atmosphere within the protected bastion. Out of its center point the sculpture rises like a sacred relic; a sanctuary for memories. The sculpture seeks for the unity with the sky, carrying the crown of thorns symbolizing the suffering and transforming the loftiness of the slender and straight up striving columns. Harmony and continuity surround and inhabit the sculpture itself.
urban planning
interlocking of nature and technology

organic synthesis - when all the factors affecting
the personality of the building come together in
the right magnitude and the building starts to grow
like a plant.

The first drawing isn’t necessarily pretty, but after
you analyze it you see that everything the building
needs is in it because it was created by your mind,
which was full of everything you needed to know.

concept drawing:
just an image, a metaphor
graphic form that begins to
address the plan
The diagram explains how
the building will function,
not how it will look like.

the media center

With the approach of new information technology and ways
of communicating our habits and picture of the world will
change. Especially in the situation as it is today, where the
radical change from the analogue to the digital world pre-
dominates, it seems important to support the educational pro-
cess with media analytic and educational work.

Even though derived from the typology of a library and re-
lated to cultural ideas, the media center should not only serve
as archive and use of knowledge, but rather invite the visitor
into an interactive world. While a library can only present and
offer what is already there, modern media technology
gives the opportunity to generate media art ever new.

A person moves from the position of a “user” into one of a
“producer”. Not the person in his/her role as a consumer is
involved, but the one that is challenging his personal creativ-
ity by critically using the media. In this sense the computer
does not embody the “loss of human nature” of our world,
but on the contrary, an instrument that can virtually support
human communication and exchange of ideas.

The juxtaposition between the existing art museum and the
planned media center should inspire a dialogue between mu-
tionless and animated pictures, a dialogue between the gener-
ally known art genres sculpture, painting, photography and
design and media art.

Fundamental knowledge about the technical issues of the new
media could be offered with the help of different media ex-
periments. Through a didactic approach contemporary art
could be translated into manifold expressions. In a corre-
sponding ensemble this art multiplication could express new
tendencies of our present time and future and enable new
ways of visual perception. Experience oriented, interactive
installations initiate an immediate dialogue with the visitor.
However it should not be the technical issue itself, not the
presentation of the hardware, but rather a playful artistic con-
frontation with possibilities of new media.
Site Planning
After the intense analysis of the city structure and organization, history of the site, margin conditions and urban context, I started to capture my thoughts and ideas about the geometric elements and model studies.

The most important references were the visual relationships to the waterfront, providing a magnificent scenic view, the city center, the surrounding buildings, the relation to the existing trees, the tiny alley of the baroque garden, and the prominence of the topographic shelf between my site and the sculpture garden of the art museum.

Especially the patterns of pedestrian interaction between city and water promenade provided important information to structure my proposals.

Urban proposals

- Fan-like proposal
  - layering of building parts parallel to the waterfront
  - "fingers" reaching into the garden
  - garden flows into the spaces inbetween

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`gathering the four horizons`

like Le Corbusier

respond towards the Schloßgarten, the Martin Gropius buildings, the art gallery and the waterfront

urban response

**constructive means**

The expressive potential in architecture lies in how the roof, walls, and floor relate to the surroundings. In other words, the expression of the delimitation is visualized in the span between opening and closure. Each work of architecture must find its place somewhere between complete closure and complete openness. 

site relations
As an element of integrative capacity I considered the design of a public forum with socializing character at the intersection between city center and waterfront. The public plaza outside the city center, which is mainly ruled by commerce, should serve the citizen as a forum. After studying the realm between inside and outside, I established the fundamental relationship between the building and the plaza as one of interaction, crossing paths and interweaving elements. Based on the investigation of path relations and the urban context, I wanted to emphasize the inherent qualities of the site. On the site the transition takes place between city center, palace garden and the pedestrian walkway along the waterfront. After crossing the pedestrian bridge that sweeps from the site, across the street, to the walkway along the waterfront, the first direct encounter and contact with the water becomes possible. This connection between the urban space and the waterfront is in its present state underdeveloped. After the plaza becomes the connecting element between the palace garden and the waterfront, crossing the bridge should become the special event. Coming from the city side, the path across the bridge is introduced by the public plaza, and coming from the waterside, the crossing of the bridge celebrates the arrival to the plaza.

- human desire for orientation, order and meaning -
- experiencing path connections -
- continuity of path and space -

Buildings should interact and become the connecting instance and reaction to the terrain. The protecting retaining wall becomes the spine for the plaza.
What has the right-size is at the same time both large and small, few and many, near and far, simple and complex, open and closed; will furthermore always be both part and whole and embrace both unity and diversity.

If anything is too much and too little the same, it will also be too much and too little different. Right-size will flourish as soon as the mild gears of reciprocity start working – in the climate of relativity; in the landscape of all twin phenomena.

People seating concentrically in a hollow, gazing inwards towards the center; and people seated concentrically on a hill gazing outwards toward the horizon. Two kinds of centrality. Two ways of being together – or alone. The images, of course, have ambivalent meanings – though the hill reveals what the hollow may conceal: that man is both center-bound and horizon-bound (the horizon and the shifting center – the center and the shifting horizon). Both hill and hollow, horizon and center are shared by all the seated concentrically either way; both link and lure.

Complementary or opposing aspects, qualities of notions – twin phenomena – forms a vast network of meaning from which nothing can be lifted – no twin phenomena (or phenomena split in two) can be extracted without impoverishment or becoming altogether meaningless – mind-splitting.
Architecture is the masterly, correct and magnificent play of masses brought together in light.\textsuperscript{16}

Le Corbusier
I investigated the urban situation, formulated several proposals and made up my mind, trying to find the ideal solution.

Too many ideas. Explosions. Colorful dreams, and the desire to translate the forms in my mind.

Isn’t it most difficult to restrict yourself? I am trying to do everything at the same time as if there is no tomorrow. I have to find a way to channel my energy, and I know the only solution:

deadline: December 18, 1997
goal: develop one of the proposals
elevations and sections

southern elevation
- palace garden -

east elevation
- waterfront forum -

west elevation
- hegewischstasse -

section
- media center - restaurant - library -

section
- multi media - exhibition area -

section
- multi media - meditation -

library

restaurant

open lobby

auditorium

workshops

capacity: 250 seats

1          5          10                     20                     30     60          90 m

1    10             50  100      200         300 feet
continuation of the ordering rhythm of pillars, structuring the university library building

opposing walls and frames define the new building structurally as well as functionally (modular, flexibility)

I am not only gaining back the ensemble impression of the two existing buildings with a third one, but also achieve a new dimension of spatial impressions by layering the facades (superimposition).

relationship to the earth:

retaining wall structuring walls building mass space under ground
spatial layering

transparencies: the facade of the university library building acts as a secondary layer and stays visible in this way.

layering of images...

Nordic Pavilion at the Venice Bienale by Sverre Fehn: the continuous beam emphasizes a sense of direction and guides the view - the room accepts its outside as its interior.

layering of thought...

arcades of the Holyoke Center, Harvard University in Cambridge by Sert, Jackson and Gourley, 1961

thought layering

thought fragments

layering and superposition

complexity, filtering effect, sensation

confusion of perception, elaborating the well known to another level of abstraction

continuation of thoughts, gaining of knowledge
repetition of frames

the skeleton system

The skeleton system concentrates support in a primary load bearing system which frees and lightens the spatial boundaries and thus opens the space. The skeletal system is the very symbol of open space.

characteristics of a tree:
dynamic, continuous, ever-growing, character of lightness, in contrast to the heavy and closed characteristics of a wall.

The structure should support the architecture.
The terrain in front of the existing building of the university library is not flat, but slopes up to the area where the university’s hospitals are located. I experienced this condition as inconsistent in regard to the heavy massiveness of the yellow-brick library building that wants to rest on a horizontal rather than a tilted base line.

A newly created platform in front of the existing building gives back a horizon line and the impression of a base when seen from the plaza- and waterside. Visual connections and interrelations will foster different perceptions and unify old and new.
framing the view

the urban window

transition of the curve
- combining various visual elements of form and space
- relation between curve and straight line
- radial - linear system

Where is the center area of the radiating structural system?

exposing the end condition of the curve
exposing the earth - cut into the ground
reflection - contemplation - art
poetic and mythical dimension

structuring the plaza
many-sided place:
free decision how and where to move and settle

The roof meets the ground to become a plaza. The plaza is both the access to the media center and an exhibition space.

idea of framing the view and the path axis
- idea of framing the view and the path axis
- urban windows
- central connection to the HDW cranes which are dominating the cityscape

The architecture advertises the function and the quality of space and frames the visitor.

The element of the crane is translated directly from the presence of the gantry cranes of the ship wharf on the opposite waterside.

the "art-crane" should have a temporary character, but takes over several functions:

- it is urban window and gate.
- it frames the view relation between palace and art gallery.
- it defines the nodal point at the turning of the Brunswiker Strasse.
- it may be used as an exhibition structure.
- it becomes a landmark and orientation point.
- it transfers an image of the media center.

spectrum of exhibition possibilities - from traditional to experimental -
interactionist architecture - interactive process -
opportunity for exploration -

the urban window
dialogue - anticipation
filter for human interaction
spatial and material opportunities

threshold between inside and outside

Le Corbusier: Carpenter Center, Cambridge
Kallman, McKinnell and Knowles: Boston City Hall, 1963-68
Eero Saarinen: Dormitories, Yale University, New Haven

interlocking of path and space
emphasize the movement through the space in which the visitor becomes an active participant

dynamics
sensation
alertness

second entrance and exit to the gallery - handicapped access ramp from the plaza

transition space underneath the ramp to the art museum
the stepping floor crossing the retaining wall

'Cite de la Musique, Paris'

'making places'

'place for the art work'

'elements 'making' the curve'
The retaining wall follows closely the curvature of the terrain. It traces the topographic level difference between the parking lot and the sculpture garden of the art museum. Through its southern exposure, the curve captures the sunlight and reflects it down into the gallery.

- play with light and shadow -

Steps with an invitation to sit take advantage of the protecting curve. The relation between curve and straight line is best formulated in several instances.

- transition of the curve -

curve – ellipse – circle

Bending is the structural mechanism that enables force to transform a static condition into a condition of tension;

curve: a continuous bending line, without angles
- turn beautifully
- bending of the curve - holding points
- translation of the force
- make the force visible:
- deformations - deflections
- grammar of curves
- definition of boundary conditions

ellipse: a closed plane curve generated by a point moving in such a way that the sum of its distances from two fixed points, the foci, is a constant

circle: a closed plane curve every point of which is equidistant from a fixed point within the curve
- literal deformation of the circle
- idea of perception of a circle or sphere
- question of origin (not only center)
dialogue between light and materials
The design of a good place usually embraces natural light in some way.
Incidence: the striking of a ray of light
reflection: the return of light
diffusion: a scattered reflection of light from an irregular surface or a dispersion through a translucent material.

glass
impenetrable to light.
translucent: capable of transmitting light so that bodies on the opposite side are not clearly visible.
transparent: capable of transmitting light so that bodies situated beyond or behind can be distinctly seen.

the stair
The stair does not just serve its fundamental functional means of circulation and connection. It is a sculptural element within the gallery itself. The stationary architectural element of the stair promotes human movement and transforms the general circulation zone into a notion about events. The space between the retaining wall and the translucent enclosure walls of the gallery becomes a stage for performance, display and projection.

experience of place and meaning
Translucent walls reveal the silhouette of the flight of steps set back into the retaining wall.
The visitor of the gallery is not merely spectator, but becomes the actor upon entering and exiting the interactive museum.
The layering of spaces reveals and conceals actions within sequences. Traditional borders diminish in an ever-changing atmosphere created by light and shadows. It is intended to provide the visitor with a spatial experience that further enhances the educational purpose of this institution.
Reflection, gradations of transparency, overlap and juxtapositions are employed to create subtle and changing sensations of space movement and light."
altering the project
changing the point of view
the landscape

• sense of movement
• cascades of terraces
• diagonal paths
• interwoven green
• echoes of the waterline below

mediating the landscape

The overall concept of the building is to react with appropriate gesture to its environment and the adjacent buildings. Vis-ually the multimedia part of the building, signified by the ellipse and the contained spherical auditorium, squares itself in the gap between the two existing buildings of the university library and the natural history museum.

A hierarchy of elements is established on all levels of the building design. The retaining wall, being the initial generator, reacts to the site configuration. It takes over the role of the strong protector and liberates all other elements from main structural burdens. The retaining wall becomes the stronghold that leans against the mass of the earth. It deflates the mass of the earth, diverts the horizontal load into its vertical structure and transforms the energy that it holds back. The mass of the earth resting on the retaining wall is poetically translated into the structure of the retaining wall. The retaining wall literally leans against the earth and the leaning gesture increases with the length of the wall and the deeper it cuts into the ground. From almost straight, where the curved wall starts its sweep between the exiting buildings of the university library and the natural history museum, to fairly sloped where the pedestrian ramp cuts off the sweep of the retaining wall and redirects the movement to the entrance of the existing art museum.

The structuring principles of the building are subject to an ordering geometry. A hierarchy of purification is established in terms of geometrical complexity. The curve of the retaining wall that delineates the threshold between nature and man-made building provides the protection for the geometric form of the ellipse, which itself becomes the shell for the ‘fragile’ egg or centered sphere.

The idea of creating a horizontal base in front of the existing university library building stays the same as employed in the preliminary design. Just the vertical density changes as such that the ellipse stands out as a solitaire, reaching the same height as the surrounding buildings. The main volume of the building is set underground and only the plaza surface and smaller pavilions constitute the connection to the surrounding. These pavilions serve as entrances and independent structures for a café, restaurant or other services.
The single elements act together to create an ordering system that spans across the whole site. Instead of constituting single architectural events, they form a field of architecture.

The retaining wall defines the northern boundary of the site and becomes the back spine of the design. The ellipse reaches out of the ground and its verticality marks the center and pivot point of the project. The strong presence of the elliptical geometry reduces to the chimneys of the passing cruise ships and introduces the project to its environment at a larger scale. The translucent display facade advertises the function of the building as a media center, but also allows the building to become a widely visible sign for arriving visitors.

The main building volume is realized inside a great cavity below the plaza surface in order to emphasize the transition between the reality of the everyday environment and the virtuality of a media generated environment. A place underground especially has the advantage to provide an austere atmosphere and protect the visitor from the outside noise.

The crucial factor is to introduce natural light into the ground. Natural light is a precious element, since it can only exist in unprecedented immensity. The task of the architecture is to generate moments of sensation and discovery, where the visitor can experience the interrelationships between the inside and the outside world. Mankind can not generate natural light, but light can be captured by making it visible on surfaces and it can be consciously employed to originate spatial conditions.

The ordering hierarchy of the structural members is derived in logical consequence of the building configuration. The curved retaining wall originates a radiating system of columns and beams. The curvature of the retaining wall is reflected into another curved wall that compiles the radiating structure and deflects it into an orthogonal grid system. The grid system reacts to the ordering rhythm of brick pillars structuring the existing buildings of the university library and the natural history museum. The interstitial space between the radiating and the orthogonal grid system becomes the negative space or recessed atrium to experience the vertical relation between inside and outside and to introduce natural light into the space underground.
The circle and the sphere are self-sufficient and project an image of permanence, whereas the ellipse, with its two foci, suggest directionality, that is, a movement toward the future, and shifts from one focus (the present) to the other (the past). Space is to be structured by this directionality.
floorplan and section drawings of the gallery
As an attempt to investigate spatial relationships in coherence with light and material, this study represents an investigation of integrative possibilities between architectural design and digital modeling.

The study assembles several images and some explanations in accordance to the thoughts and ideas that accompanied the development of a "special room".

One of the main aims of this project is to develop the components as integrated, experimental whole, consisting of open spaces, physical elements and functional systems. The alternation of narrow spaces, merging into wide openings, mediating spaces and circulation spaces are responsible for the progressive perception of openness, enclosure and canopy. The development of constructive ideas for a building are similar to that of an urban idea, since the relationship between the city as a whole, the site, the building, the rooms and parts and the single elements are making up the sequence of architectural thinking.

The retaining wall follows the curvature of the terrain. It traces the topographic level difference found at the site. Through its southern exposure, the curve captures the sunlight and reflects it down into the gallery. The play of light and shadow along the wall is emphasized through the sculptural treatment of the construction. The retaining wall has similar properties as a sheet piling traditionally used in the construction of docks. Piles are rammed into the ground, making up a structure of columns which give support to the sheet elements that hold back the earth. In case of my project this way of construction is translated in form of concrete columns with concrete sandwich panels between them.
Beside the three-dimensional modulations of space, another aspect of circulation and connection is the establishment of controlled views. Initially a view may arouse curiosity and initiates the imagination to picture more of what is not seen in the frame. Likewise, an urban window can screen out elements like an adjacent street or other objects that are there but undesirable. The urban window works like a picture frame, framing a specific view, an object, an assembly, the landscape or the horizon. A piece of surrounding is elevated to consciously experience it differently than in its usual context. The visual sense is stimulated by a composition established by an architectural device.

The concrete columns are sloped, referring to the increasing mass of earth they have to hold back the deeper they cut into the ground. The concrete panels are straight, reaching out of the ground to catch the sunlight and reflect it into the gallery space underground. To be able to keep the smoothness of the curve, even though made out of straight elements, and still take advantage of the resulting alcoves between the piles, every second field is clad with steel panels. The flexibility of metal as a material transmutes the curve and recalls the presence and importance of the HDW shipyard right across the water.

The layering of spaces is an apparent concept of the gallery design. The circulation happens in a flowing pattern between shifting walls, creating gaps to pass through. They serve as a filter between the different spatial conditions. The sensation to step from one world into another is emphasized through different lighting and boundary conditions, keeping the curiosity of the visitor alert. Especially in today’s world of information overload, a context creating structure should support the importance of aesthetic qualities.

Constant flow of innovations
relationships - connections - interrelations

Beside the three-dimensional modulations of space, another aspect of circulation and connection is the establishment of controlled views. Initially a view may arouse curiosity and initiates the imagination to picture more of what is not seen in the frame. Likewise, an urban window can screen out elements like an adjacent street or other objects that are there but undesirable. The urban window works like a picture frame, framing a specific view, an object, an assembly, the landscape or the horizon. A piece of surrounding is elevated to consciously experience it differently than in its usual context. The visual sense is stimulated by a composition established by an architectural device.
a metaphorical reflection

How was this book going to look? I was confused. One year of work; researching, developing, designing, having to review things, stepping back from what I have done. Changes, millions of ideas and here I had to find the essence within all. Was there a general idea about everything? Was I able to define myself through the work that by now almost seems like a stranger, a grown-up leaving home?

It is almost like going back to your childhood. First you have to understand “the coming into being”, the reason why you where born to the people you called parents, the country you called home, the coincidences that shaped your personal development, your way of thinking and your character.

Have you ever thought about what would have happened, if...? Are you making your dreams coming true? What is the meaning of life, reality and dream world?

The answers are coming from many different areas of inquiry. Every day I am discovering new insights in the course of my life. The difficulty is to bring them together, to connect single events within a larger vision.

I believe that once you become conscious about the coincidences in your life, you start grasping the greater idea that stands behind everything we call life. I don’t know if I should call it destination, but for sure it is about opportunities.

And that is what I think this book became. It was my chance to elaborate my ideas, document some of my thoughts and test my abilities to present the work that sometime derived from my very self.
camera as a means to see
boy playing in the fountain in front of Navy Pier, Chicago
gas station on Prices Fork Road in Blacksburg, Virginia
‘stairway to heaven’ - tower of the weather station in Blacksburg, Virginia
Zaha Hadid: Vitra Fire Station in Weil am Rhein, Germany
Le Corbusier: Notre-Dame-du-Haut at Ronchamp, France
Frank Lloyd Wright: Guggenheim Museum in New York
Franco More house in Ticino, Switzerland
Daley Plaza with Picasso Sculpture, Chicago
Eero Saarinen: MIT chapel in Cambridge, Massachusetts
Louis H. Sullivan: Carson Pirie and Scott department store in Chicago
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"poetry of a reject" in Blacksburg, Virginia
images

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p.25 5 aerial view after Second World War, aerial reconnaissance picture taken by the american allied forces, Kriegsschauplatz Kiel: Luftbilder der Stadtzerstörung 1944/45, Neumünster: Wachholtz Verlag, 1995

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This work would not have been possible without the sincere support and encouragement of many...

I want to express my gratitude to everybody who left 'footprints' in my life. My work would not have been the same without the inspiration and influence of all of you!

I want to express special thanks

...to my grandmother Dorothea Blender, who dedicated her life to her grandchildren. Her optimism and positive attitude to life in general, even in times of sorrow and pain, shaped my personal disposition. I owe her all my happiness, trust in life and belief in myself.

Omi, ich danke Dir für Deinen unerschöpflchen Optimismus, Deine geteilte Freude am Leben und alles was Du für mich getan hast.

...to my sister Sonja, who is not only my closest relative, but my best friend. Without her my life would only be half as colorful. For everything we share...

...to the Fulbright Commission, who made this journey possible at first. The ‘Fulbright experience’ was and is a unique gift that contributed not only to my personal growth, but granted a much bigger involvement in and comprehension of our culture.

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The supposed end already became a new beginning...

vita

Andrea Schwappach
August 19, 1970

Dipl. Ing. (FH) Architektur
Fachhochschule Kiel, Germany
July 1998

Master of Architecture
Virginia Polytechnic Institute and State University
Blacksburg, Virginia
December 1998