ENVIRONMENTALLY SENSITIVE DESIGN
SCHOOL OF JOURNALISM
UBC, VANCOUVER

by
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ABSTRACT

By examining the Minimalist ethos, joint and junctures and light, it is my intention to propose that Minimalist architecture easily and naturally accommodates the environmental ethos of reducing, reusing, recycling and recovering. Moreover, Minimalism, which draws widespread admiration as all good architecture does, allows us to graft inspiration and inherent environmental queues onto the ever-expanding yet distinct branch of green architecture. Producing a possible hybrid that initiates a new type of architectural discourse, one that moves beyond contemporary convention into the future reality of conservation.

I present to you the UBC School of Journalism. Although, this building presently exists, I chose to design and develop the School of Journalism on the basis of green architecture, which means designing with nature in an environmentally responsible way.
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Green architecture, which means designing with nature and designing in an environmentally responsible way, is clearly a loaded term that currently receives special treatment and analysis by architects as well as architectural critics. This distinct status places green architecture outside of the present architectural discourse. Green buildings are typically discussed solely in terms of their efficient bits and pieces that range from dry toilets to the PV cells, from the environmentally friendly finishes to natural venting.

It is well to provide energy efficiency, a healthier interior, or propagating the notion of sustainability, yet projects that exhibit these features are regarded as a subset of mainstream architecture. They may get a nod of approval for their environmental initiatives, but are rarely critically discussed within the conventional architectural dialogue.

The CK Choi Institute for Asian Research, by Matsuzaki Wright Architects, at the University of British Columbia, is scrutinized and described in terms of a green architecture, not simply as good architecture. Yet, the design efforts by Carlo Scarpa that is almost universally admired and discussed within the present architectural discourse will undoubtedly continue to inspire new generations of architects. Presently, the CK Choi Institute for Asian Research flourishes under the architectural green flag, whereas critic and public alike have distinctly designated Scarpa’s projects to the realm of good architecture.

This fundamental division between green and good architecture marginalizes the energy efficient innovations as well as the fundamental philosophy of green architecture. This general distinction and attitude does little to benefit potential clients who, may have limited if any exposure to the advantages of green architecture. By differentiating the notion of green architecture from good architecture, clients who are not necessarily environmental proponents may never experience the obvious benefits of infusing the environmental consciousness into everyday design.

One has to ask why environmentally sensitive design is considered distinct from the formal issues that are discussed within mainstream architecture. It is my belief that, once we get beyond the notion of green architecture as an architecture that is fundamentally different, we can begin to introduce and impregnate all future design projects with the benefits that are seen as more than environmental dividends but as the only responsible way we as future form givers can and should design.
STATEMENT OF INTENT

In the present culture of excess, one wonders how long it will take before humankind exhausts the earth’s resources. Yet, the apparent inevitability of environmental doom must be addressed and more importantly counteracted. How can we as a professional body of architects be more sensitive and gentle to this planet?

I propose a careful examination of Alberto Camplo Baeza’s notion of More with Less, as a means of informing the current environmental/architectural discourse. This notion derives from the Minimalist ethos that chooses to use a limited palette of material and finishes. This does not however limit the experiential and/or aesthetic result. Minimalist architects such as; Luis Barragan, Ricardo Legorreta, Zahora Cadiz, just to mention a few, have displayed great creativity within simplicity. Capturing a sense of serenity within beautifully sculpted and detailed planes and volumes. This approach can be easily linked to the idea of resource conservation, where homogeneous material and finishes are thoughtfully chosen and sparsely applied.

Within architectural design, the joint and juncture stand-alone in minimal space. They demand attention and, therefore are carefully considered and crafted. The meeting of materials and their edited application have been explored and mastered by the likes of Carlo Scarpa, Herman Hertzberger and Patkau Architects. Environmentally sensitive design of articulated joints can be achieved by the reapplication of columns and beams that have been salvaged from demolished buildings. This conscious resource recovery can be utilized to create something new with something used.

Yet no architecture could exist without light, therefore it is vital to examine the application and effects of light within minimal spaces, by investigating the work of Tadao Ando, Steven Holl and Kazuyo Sejima. This ephemeral layer initiates a sense of well being by creating a sensorial pause from the external chaos. In these architectural projects, natural light is used to enrich the interior volumes and demonstrates how the sun, as a renewable energy source, can be directly linked to the importance of occupant health and welfare. Ultimately, environmentally responsive architecture must help us to reconnect with the natural systems and cycles, and natural light becomes a potent means of doing so.

By examining the Minimalist ethos, joint and junctures and light, it is my intention to propose that Minimalist architecture easily and naturally accommodates the environmental ethos of reducing, reusing, recycling and recovering. Moreover, Minimalism, which draws widespread admiration as all good architecture does, allows us to graft inspiration and inherent environmental queues onto the ever-expanding yet distinct branch of green architecture. Producing a possible hybrid that initiates a new type of architectural discourse, one that moves beyond contemporary convention into the future reality of conservation.

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2.1 ENVIRONMENTAL PRINCIPLES AND GOALS

The following three environmental principles reflect the larger environmental agenda that will result by discussing, confirming and pragmatically applying the seven environmental goals outlined below.

1. resource efficiency - minimum stress on natural resources
2. self reliance - off grid, easily maintained
3. occupant health and welfare - providing healthy interiors

The following seven environmental goals establish the sustainable criteria for the design, construction and operation of the proposed School of Journalism, located on the University of British Columbia campus.

Reducing
- minimum floor area for maximum efficiency,
- reducing the scale of demand for energy and material use

Reusing
- the disassembly and reuse of restored building components
- designing facility for ease of future disassembly

Recycling
- palette of homogeneous construction materials to be recycled in future projects
- internal looped water and waste systems

Recovery
- use of salvaged materials in construction

Longevity
- adaptability of design,
- forecasting future change
- mixed use design
- multipurpose layout

Site sensitivity
- relate program layout to site, climate analysis
- take advantage of natural setting to make facility more energy efficient

Renewable resources
- exploration and utilization of sun, wind, and rain as renewable energy sources
2.2 MINIMALIST ETHOS

Minimalism's associative values include:

- identity of the materials
- shapes
- scale
- weight

Minimalism emerged in America in the 1960's, on artists canvases and in sculpture. Led by Dan Flavin, Carl Andre, Robert Morris, Robert Smithson and Richard Serra as well as Donald Judd. These artists aspired to muteness and can be regarded as a further reductionism development in abstract art. The Artists reduced all content as far as they could to nothing.

2.2.1 AVANT-GARDE ENVIRONMENTALISM

The origins of Minimalist Architecture stems from Minimalist art, and is described by Teresa de Lauretis as; the relations of power involved in enunciation and reception or more plainly who speaks to whom, why and for whom.\(^3\) The emergence of Minimalism in the 1960's stirred Frichard Serra to say that...it was your job as an artist to redefine society by the values you were introducing, rather than the other way around.\(^4\) One has to question whether Minimalism actually proposed a reevaluation of values?

Today the question reemerges and, although we find ourselves in a different economical and social climate, we have to ask whether environmentalism in its broadest terms, will affect or redefine the way we as individuals live our lives within the greater scheme of nature or continues as its conquerors.

Ultimately we must face the fact that the environmental crisis is a human problem and solutions depend on major changes in human values and action. Environmental degradation is not the problem but a symptom of an attitudinal and value system premised on consumerism and excess. Western societies operate within a social and political system, which implicitly considers human activity dominant over and essentially independent of nature.\(^5\)

\(^3\) Ibid.
\(^4\) Ibid.
Minimalist art did not induce social change, but in fact became suspended from politics and commerce and above personal feeling. It used rhetoric of purity, primacy and immediacy in focusing on the artists’ means and on the object relations to the cons terms of their media.

Minimalism has become the illusion of a Avant-Gardism, developing a sort of intellectual connoisseurship of non-commitment. What disturbs viewers most about Minimalist art may be what disturbs them about their own lives and times, as the face it projects is the society’s blankest, steeliest face; the impersonal face of technology, industry, and commerce; the unyielding face of the father: a face that is usually far more attractively masked.

Although Minimalist art stands apart from all that represents present day consumerism, society unabashedly, continues to exploit the planet to further technology, industry, and commerce. Over time, progress has been understood as the evolution from satisfying basic human necessities, to increased amenities and comfort to the current desire for convenience and luxury.

William Rubin’s predicts the effect of Minimalism by pointing to Art History.

About one hundred year ago the Impressionists and postimpressionists artists whose works are today prized universally, were being reviled as ridiculous by the public and the established press. At about the same time, the Eiffel Tower was constructed, only to be greeted by much the same ridicule. Truly challenging works of art require a period of time before the broader public can understand their artistic language.

In retrospect, environmentalism may be seen as a sort or Avant-Gardism, which implies being ahead of, outside, or against the dominant culture; offering a vision that implicitly stands at least when it is conceived as a critique of entrenched forms and structures. Hopefully, present day environmentalism, will not continue to be perceived solely as a rebellious statement or a correctional alternative, but will be internalized as a way of walking softly upon this planet, instead of continuing to trample nature as we bulldoze our way into the 21st century.

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8 Obid.
There are claims that Minimalism is the rebirth of Modernism.

There is a certain amount of truth in this. The interest in openness and continuity of space, generating an essentially horizontal architecture, the reduction of detailing to the minimum, along with the rejection of traditional architectural forms and conventions and the play of natural light on mainly white surfaces, are common to both generations of architecture, and give the work a certain similar appearance.\(^9\)

Yet one of the strongest criticisms of the early modernist movement was characterized by the pursuit of a mechanistic and industrial reinvention of architecture, Le Corbusier’s notion of the house as a machine for living in. This pure functionalism generated a public backlash. Minimalism on the other hand attempts to fulfill the functional program as a means to an end, presenting a sensual experience of uncluttered space.

Both Gropius and Mies van der Rohe came under critical scrutiny by Venturi in his *Complexity and Contradiction in Architecture*. Bauhaus in America was criticized for; *idealizing the primitive and elementary at the expense of the diverse and the sophisticated*. Venturi called for a *fresh understanding of architecture, as a language rich in the meaning and signification inherent in cultural and social history. A complete opposite of the Minimal Art movement of that time.*\(^10\)

By 1972, Venturi’s *Learning from Las Vegas* presented his notion of the *decorated hut*. At the same time the New York Five (Eisenman, Graves, Hejduk, Meier and Gwathmey were calling for the return of the first principles of Modernism, the purism of Le Corbusier. These same architects are seen as the predecessors of contemporary Western Minimalism. While later in their careers, Richard Meier and Charles Gwathmey remained true to Minimalist principles, Graves ran away to the Post-Modernist Camp, and Eisenman diverged away into Deconstructivism.

It is in the substitution of austere functionalism by what can be an almost too consciously composed, too perfectly crafted, poetry of materials in light and forms in space that the significant difference between early Modernism and the new architectural Minimalism lies.\(^11\) The Minimalist idiom is not then simply a revival of early Modern ideals; and there is a further area of significant difference between the two, beyond, but interconnected with, the rejection of functionalism for materiality and sensual pleasure, which is the powerful influence exerted on the new generation of work by the awareness of different regional architectural traditions, in contradistinction to the universalism espoused by the Modern Movement.\(^12\)

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\(^10\) Ibid.

\(^11\) Ibid.

\(^12\) Ibid.
Stravinsky, in the *Poetics of Music* asserted that; the better the artist, the more he limits himself to making his music out of as few as possible pieces, the more he abstracts it.\textsuperscript{13} Minimalism is essentially reductionist architecture with a restricted palette of colors, a sophisticated level of finish within a highly controlled structure. It comprises leanness, shedding away, space, linearity, sophisticated simplicity and contemplation.

The western notion of amassing is contradictory to the Minimalist ideal. One cannot imagine normal family life continuing in its regular haphazardness way in a Minimalist home, even if everything is hidden away in spacious cupboards for children are essentially reflections of self and possessions, both of which are somehow denied or reflected by Minimalism.\textsuperscript{14} It would seem that commercial kitchens, bars, shops and art galleries are more suited to the lean style.\textsuperscript{14}

However, architecture has to be inhabited, and as Charles Moore wrote,

One could certainly make the case that many famous buildings, especially in our own century, don't have any quality of making you feel in repose in the middle, of them, don't event have the capacity to let you connect with then, even to the point of finding the front door so you can get in... Going through the front door is what it's all about.\textsuperscript{15}

Does Minimalism have potential staying power? It's popularity has been associated with the escalation of world-wide economic recession and the increasing growth of awareness of the need to conserve the world's finite resources, if ecological collapse is to be avoided. In this context, Minimalism, as architecture of restraint and limited means, against over abundance and squander, has exercised a deep appeal.

Although increasing professional and public awareness of global degradation is crucial, one wonders whether environmentalism is more than a nudge of individual consciousness. It is difficult to predict whether environmentalism will have the staying power that has eluded other isms in the past. Yet it would seem that a more effective path would be not only to discuss the idea proposed by environmentalism but also to absorb and implement these notions in our everyday lives as a norm rather than something trendy.

But as the cycle turns it seems not unlikely that reaction will set in, and the urge to make more dynamic, more exciting, more actively communicative architecture will return again. On the other hand, the qualities and ideals of minimal architecture may prove to be enduring; for as life itself becomes increasingly fragmented intangible and uncertain, the innate human desire for the calm space, the comfort of solid material and the contemplation of slow-moving nature, may become ever more powerful.\textsuperscript{16}


\textsuperscript{14} Ibid.

\textsuperscript{15} Ibid.

2.3.1 MODERNISM VS REGIONALISM

It is common knowledge that the International Style exudes a clean architectural space defined by function and is devoid of added decoration, clean, efficient and tranquil. Loos declared that cultural evolution is relegated to the removal of ornament from themes of daily use. Ludwig Wittgenstein in building his sister’s house in Vienna proposed his ideals of rationalism, perfectionism and elegance as a sequence of truthfulness in thinking and acting. His belief in simple elegance initiated the basic ideas behind present today minimal design. It is the replacement of extravagance with a universally accessible ethic.

Since we live in a pluralistic age, the quest for an encompassing architecture, like the International Style is highly questionable. It is at this juncture that Minimalism delivers the perception of the freedom afforded to its inhabitants, to experience tranquility and liberation from conventional distractions, via the medium of an uncluttered environment. But it refuses to be a cure-all to the architectural stylistic dilemma. Minimalism, unlike Modernism, supports the idea of regionalism, an idea that is part of the environmental agenda.

An example of Minimalism affirming the idea of regionalism can be clearly observed in the vernacular interpretation by the Minimalist architect, Luis Barragan. His buildings do not only succeed in capturing the vitality of the Mexican culture but also exude intimacy and refinement that can be achieved with the most minimal and modest resources. This approach clearly reflects the environmental ethos of resource conservation and the efficient use of local material.

The graceful poverty of Barragan’s courtyards, walls, gardens, fountains and spaces express a confidence in his architectural craft over and above the flamboyant displays of technology or resources, maintaining that architecture does not have to be fashionable to be important and valued. There is a basic idea that simplicity and humility in the arrangement of resources and materials has a genuine role to play in the creation of architecture with which society as a whole can identify.

Green Architecture does not only propose a minimized resource footprint but also offers and encourages use of local material, that is sensitive and reflects the vernacular of the specific region. Regionalism, unlike the International Style, maintains the look and feel of a town or city that fundamentally differs from one geographic region to another. Variety becomes more than the spice of life, it is a reflection of the people, their history and customs that distinguishes, and marks their unique experience of life.

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2.3.2 GRASSROOTS ARCHITECTURE

In Jonathan Glancey’s view, after decades of excess and material consumption by the richer agents of society, people are tiring of the visual chaos and sheer bulk of too many worldly possessions and discarding them in favor of simplicity.

The magazines stopped showing the wacky homes of eccentrics and set themselves to picture cool rectilinear shapes constructed out of natural materials. Suddenly it was very chic: recession chic.

In The New Moderns, Charles Jencks launched Minimalism as a distinct new movement of the late 20th century architecture. In 1982, Jencks used the term Minimalism in his book Current Architecture. He referred to the work of Koolhaas, who was influenced by the Minimalism of Mies van der Rohe; Hejduk, who took from the Minimalist image; Eisenman, who was influenced by the Minimalism of Donald Judd; while Campi and Pessina made use of a Minimalist pediment. In the 1991 The Language of Post-Modern Architecture, Minimalism was linked to Deconstruction, Avant-Gardism, and the silence used to describe the work of architects Antoine Predock and Luis Barragan.

Glancey and Bryant refer to Le Corbusier, Neutra, Frank Lloyd Write and Chareau as influences on the new modern architects they discuss, while Jencks speaks of Mies van der Rohe as the sole forefather of Minimalism.

It is interesting to note the impressive list of names that are associated with the birth and evolution of the Minimalist architecture. In fact it does not matter who was the single originator, as much as the list of architects that have been influenced by their predecessors. In contrast, Green Architecture is taken into account and practiced by local architects at a local level. Even though, environmentalism is a global matter, the proponents of Green Architecture are few and far between. Some architectural practitioners are fresh converts to green design. The reason for this may be that environmental design involves a change of attitude.

Neither information nor building budgets is real impediments to environmentally responsible building design, though they are the most cited excuse for inaction. The attitudes, commitment and priorities of the design team will ultimately dictate the rate of progress in environmentally responsible building design and construction.

Fortunately, there are architects who have the right attitude and commitment to designing environmentally responsible building. Projects such as the Green on the Grand, an office building in Kitchener, Ontario and the Bentall’s office building in Richmond, B.C. by Bunting Coady Architects are both rated 50% below the standard energy performance.

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of the ASHRAE/IES 90.1. Projects abroad such as the School of Engineering and Manufacture, by Shont Ford Architects at De Montford University, located in the United Kingdom, uses natural lighting, high thermal mass, natural stack ventilation and simple heating techniques to condition a wide range of different spaces, including laboratories and lecture theaters.¹⁹

Back in Canada, and within the province of British Columbia, environmentally sustainable projects include the proposed Earth Sciences Building by Busby and Associates, to be sited on the UBC campus. This future facility will integrate simple user controls that will allow the occupant to manually open and close window walls, and adjust insulating shutters.

Buildings should be designed so that they can be modified to accommodate solar and other renewable energy collecting systems. And the design should take a comprehensive approach where energy is matched to the end use and where waste heat from one process can be usefully employed in another. ²¹

As technology advances architects are faced with a wider variety of solar energy choices. The range of passive and active solar panels has been enriched by the addition of the Photovoltaic or PV cells as well as solar cells that can be incorporated into the building facade itself. Although new technology can be expensive, integrating a range of strategies can augment this initial cost. For example in the Boyne River Ecological Center in Ontario by Douglas Pollard Architect, strategies such as photovoltaics, wind and small scale hydro for electricity, solar collector systems for domestic hot water, and passive solar to offset winter heating²², are successfully used.

Another project, which exemplifies the environmental ethic at the grassroots level, is the C.K. Choi Institute for Asian Research at the University of British Columbia. The attitude adjustment of Matsuzaki Wright Architects Inc. propelled them to approach this particular project with a clear environmental agenda. This environmental sensibility became the driving force that was responsible for the physical result that has been described as a significant contribution to the UBC campus. Although this and other projects represent significant environmental victories, the reality is that one environmental building on campus will not transform the UBC campus into a sustainable campus. This present critique can be tempered with the rebuttal of better one than none. Yet until we can overcome the limitation of means, due to inadequate social acceptance; ignorance on behalf of the client and design professional; and the general excuse that the conventional approach is tried and true; we continue to sow the seeds of degeneration, encouraging prevailing attitudes.

²¹ Ibid.
In the following pages, examples of good architecture, green architecture and mainstream architecture will be illustrated and compared. Each analysis will clearly state the architect/firm and project name and location. In each case a particular design aspect will be illustrated and compared. The goal subheading will relate to the seven environmental goals that aid in establishing the sustainable criteria for design, construction and operation of a building.

Reducing
- minimum floor area for maximum efficiency,
- reducing the scale of demand for energy and material use

Reusing
- the disassembly and reuse of restored building components
- designing facility for ease of future disassembly

Recycling
- palette of homogeneous construction materials to be recycled in future projects
- internal looped water and waste systems

Recovery
- use of salvaged materials in construction

Longevity
- adaptability of design,
- forecasting future change
- mixed use design
- multipurpose layout

Site sensitivity
- relate program layout to site, climate analysis
- take advantage of natural setting to make facility more energy efficient

Renewable resources
- exploration and utilization of sun, wind, and rain as renewable energy sources

The note will point out any specific details that relate to each comparative analysis. A short summery that will describe in more detail the architects' vision and ideas that inspired the design will follow this pictorial presentation. Ultimately, we don't have to be architects to draw our own conclusion from images that reveal design decisions of the past, present, and more significantly point us to the possible future.
### Good Architecture

**Architect**
- Carlo Scarpa

**Project**
- Castelvecchio Museum, Verona, Italy.

**Aspect**
- Detail of beam
- Joint and Juncture

**Goal**
- Reusing, recycling, recovery

**Note**
- Beautifully crafted and detail

### Green Architecture

**Architect**
- Matsuzaki Wright Architects

**Project**
- C.K. Choi - Institute of Asian Research
- University of British Columbia, Canada

**Aspect**
- Detail of beam
- Joint and Juncture

**Goal**
- Reusing, recycling, recovery

**Note**
- Heavy timber easily recovered
- Bolted for disassembly

### Mainstream Architecture

**Architect**
- Unknown

**Project**
- Tantalus Lodge
- Whistler, B.C.

**Aspect**
- Detail of beam
- Joint and Juncture

**Goal**
- Reusing, recycling, recovery

**Note**
- Can be easily disassembled and reused
Good Architecture

Architect
- Carlo Scarpa
Project
- Olivetti Store
- Venice
Aspect
- Radiator screen
- System cover
Goal
- Reusing, recycling, recovery
Note
- Beautifully crafted and detail

Green Architecture

Architect
- Matsuzaki Wright Architects
Project
- C.K. Choi - Institute of Asian Research
- University of British Columbia, Canada
Aspect
- Wall mounted radiator
- Exposed ceiling
Goal
- Reusing, recycling, recovery
Note
- Easily accessed and maintained

Mainstream Architecture

Architect
- Unknown
Project
- UBC Residence
Aspect
- Floor heat source
Goal
- Reusing, recycling, recovery
Note
- Difficult to remove and recycle
Good Architecture

Architect
- Carlo Scarpa
Project
- Banca Popolare di
- Verona
Aspect
- Soffit of the staircase
- Mechanical systems
Goal
- Reusing, recycling, recovery
Note
- Beautifully crafted and detail

Green Architecture

Architect
- Matsuzaki Wright Architects
Project
- C.K. Choi - Institute of Asian Research
- University of British Columbia, Canada
Aspect
- Air stack effect
- Mechanical systems
Goal
- Reusing, recycling, recovery
Note
Higher towers create a stack effect, providing air circulation and exchange

Mainstream Architecture

Architect
- Unknown
Project
- Architectural Office
Aspect
- Soffit
- Mechanical systems
Goal
- Reusing, recycling, recovery
Note
- Easily accessible
Good Architecture

Architect
• Carlo Scarpa

Project
• Banca Popolare di
• Verona

Aspect
• Round window
• Water shedding detail

Goal
• Reusing, recycling, recovery

Note
• Beautifully crafted and detail

Green Architecture

Architect
• Matsuzaki Wright Architects

Project
• C.K. Choi - Institute of Asian Research
• University of British Columbia, Canada

Aspect
• Operable windows
• Window vent detail

Goal
• Reusing, recycling, recovery

Note
• Window frame vent holes allow indoor, outdoor air exchange

Mainstream Architecture

Architect
• Architectura

Project
• UBC Thunder Bird Residence
• Vancouver, B.C.

Aspect
• Operable windows
• Window detail

Goal
• Reusing, recycling, recovery

Note
• Single glazed windows with insufficient flashing
Good Architecture

Architect
• Carlo Scarpa
Project
• Canova Casts Gallery
• Possagno (Treviso)
Aspect
• Interior light
• Editing and quality
Goal
• Site sensitivity
Note
• Ambient delighting indirectly illuminating the art work

Green Architecture

Architect
• Matsuzaki Wright Architects
Project
• C.K. Choi - Institute of Asian Research
• University of British Columbia, Canada
Aspect
• Play of interior light
Goal
• Site sensitivity
Note
• Southwest side window wall shaded by trees, allowing natural daylight to spill into the interior

Mainstream Architecture

Architect
• Unknown
Project
• Tantalus Lodge
• Whistler, B.C.
Aspect
• Play of interior light
Goal
• Site sensitivity
Note
Dependent on incandescent lighting to create cozy ambiance
Scarpa's ability to edit the pallet of materials, and choosing to use dominant elements that are highly detailed, sets him apart from Hoffmann's idea of architecture is decoration. Scarpa is a specialist in handling different design aspects with ultimate restrain.

The real difficulty lies not in coming up with ideas, but in singling out the right one. The relationship between the part and the whole, the fragment and the complete, the detail and the indivisible unity of a deed of an object, of a thought.\footnote{Bianca Albertini, Sandro Bagnoli. \textit{Carlo Scarpa: Architecture in Details}. The MIT Press: Cambridge Massachusetts, 1988.}

Scarpa's minimal fragments are explored through elements endowed with their own figurative unity. Structural elements include support, connector-link, fixed joint-hinged joint, molding profiling, and become as important and intrinsically linked with the notion of perception, closure-aperture, solid-void, surface and transparency.

The connector-link becomes a transitional structural element. The \textit{connector} shapes the sum of assembled parts. Often, the connector becomes the essential complement, providing an outlet for differing formal tensions or, vice versa, a means of harmonizing contrasts. The link, on the other hand, is a smaller-scale element that connects less important parts, but, in itself, it is focal in identifying, characterizing and lending refinement. Examples that exhibit the idea of the Connector-Link include the bridge, Querini Stampalia Foundation, in Venice; The bridge over the ditch in the courtyard at the Castelvecchio Museum, in Verona; The tunnel on the court frontage of the Banca Popolare di Verona and the Egress connector, the staircase in Palazzo Abatellis, Palermo.

The fixed joint-hinged joint becomes constituent parts that interlock, the nodal element of the structure, juncture change of level, and intersection. \textit{The fixed joint lends complexity to a work, it operates three dimensionally and is the divertissement of planning.} \footnote{Ibid.} The Fixed Joint becomes prominent where the scale is small and differing materials meet or overlap with no loss of identity. Some examples of Fixed Joint include the metal staircase in the Banca Popolare di Verona and the Candelabrum in the Brion chapel.

The hinged joint, on the other hand, signifies release of forms in an architectural organism. This is the point from which spaces blaze outward. \textit{Hinging is a constant theme. Whether expressed or concealed, it is the mechanism regulating mysterious and unusual openings or sumptuous detailing.} \footnote{Ibid.} Some examples of hinged joints include: The protective barrier at Brescia and the door on the Brion Chapel.
Each joint or juncture, becomes significant in revealing how different material combine, to create a structural node. Scarpa bolts steel beams to steel plates that support concrete beams. Each joint is carefully thought out and highly articulated and easily supports the environmental goal of reusing and recovery. It appears that each structural piece can be potentially unbolted and reused in future projects. Scarpa’s work clearly demonstrates that renovation or retrofits can be approached as a creative challenge rather than always deciding to start from scratch, building new disposable building with new resources that are quickly running out. Longevity and timeless design are the resulting trademarks of this architect, who continues to challenge us to rethink our short term, profit driven approach to contemporary design.

Basically, it was that if but given the opportunity, his desire was to plan very simple objects in humble materials. It would have given him immense satisfaction to demonstrate that the least expensive buildings might be elegant and that good taste and harmony are not synonymous with luxury and costly materials.

Simplification of detail demands high control of line and graphic. To make something-simple yet beautiful separates the artist from the functionalists who produces austerity for the sake of functionality. The simple has nothing to hide behind, no chaotic elaboration, it must stand-alone and exude a richness that holds the eye and captures the mind.

\[26\] Ibid.
Good Architecture

Architect
- Herman Hertzberger

Project
- Students' House
- Amsterdam, Netherlands

Aspect
- Combining homogeneous materials

Assembly

Goal
- Recycling, recovery

Note
- CMU construction, can be recycled

Green Architecture

Architect
- Martin Liefhebber

Project
- Healthy House
- Toronto, Canada

Aspect
- Combining material

Assembly

Goal
- Recycling, recovery

Note
- Wood construction, some parts can be salvaged

Mainstream Architecture

Architect
- Unknown

Project
- Residential

Aspect
- Combining material

Assembly

Goal
- Recycling, recovery

Note
- Wood construction and stucco façade, difficult to salvage
### Good Architecture

**Architect**
- Herman Hertzberger

**Project**
- Housing for the Elderly
- Almere-Haven, Netherlands

**Aspect**
- Northwest facade of the main building
- Screen and sun

**Goal**
- Site sensitivity

**Note**
- Taking advantage of the north light, but also providing shading

### Green Architecture

**Architect**
- Martin Liefhebber

**Project**
- Healthy House
- Toronto, Canada

**Aspect**
- Building facade
- PV cells and sun shade angles

**Goal**
- Site sensitivity

**Note**
- PV cells used as energy collectors, cutting the angle of the high summer sun

### Mainstream Architecture

**Architect**
- Unknown

**Project**
- Residential

**Aspect**
- Building facade

**Goal**
- Site sensitivity

**Note**
- Provides minimal shade on south face of building
Good Architecture

**Architect**  
Herman Hertzberger  

**Project**  
Elementary School  
Amsterdam, Netherlands

**Aspect**  
Multipurpose sink stand  
Material choice

**Goal**  
Reducing

**Note**  
Compact and functional

---

Green Architecture

**Architect**  
Martin Liefhebber  

**Project**  
Healthy House  
Toronto, Canada

**Aspect**  
Washroom facilities  
Residential standard

**Goal**  
Reducing

**Note**  
Reduces city water intake by harvesting, storing and recycling rainwater

---

Mainstream Architecture

**Architect**  
Unknown  

**Project**  
Residential

**Aspect**  
Washroom facilities  
Residential standard

**Goal**  
Reducing

**Note**  
Does not reduce water intake, difficult to recycle
Regardless of whether the result is sheer simplicity or complexity, we must always strive after the form with the richest articulation of references, so that the maximum scope of possibilities and experiences is offered. The expansion of the architectural space is the course of the 20th century has meant that the materials we use the way we organize them reveal more than there is to see.27

Hertzberger’s Families are essentially represented by a repetition of certain common design features throughout his buildings i.e. concrete columns and modular windows; marquises and metal stairways, concrete blocks and glass paving; as well as lights and furniture that are solidly anchored into ground or indented deep into the walls.

Hertzberger’s attention to placement of the concrete columns and details are evidenced in the Music Center “Vredenburg”, where the protruding window column creates an elegant architectural moment. The point of connection between column and beam or base, become opportunities of nodal celebration. Each place of meeting is emphasized/celebrated by a textural or material diversity. Attention is paid to how the column meets both the ground plane as well as the overhang. How the base rises from the ground at sitting height to provide both a foundation and a place of rest.

The stairs become more than just egress. The stairway becomes a place of rest and meeting, a natural social function that can occur on a sunny day. Metal and concrete combine to create a solid vertical incline, as well as providing adequate room for youngsters to gather.

Hertzberger’s interior furniture include the wooden counters that encase the stainless steel drinking fountains and sinks, which become a visual and tactile relief from the concrete blocked walls that are a dominant structural feature. The simplicity of combining stainless steel, wood, and concrete block, exudes clarity that distinguishes each service island as a sculptural piece. Where the body meets a horizontal surface, the surface is covered with wood. Table tops, benches, counters and general sitting areas become the social nodes that warmly invite both the eye and hand. The exterior furniture, in contrast, remains rough both in material and finish. This may be do to the natural climatic demands and rough play that occurs on school playgrounds.

Hertzberger’s material palette constitutes of homogeneous construction materials that can be potentially recycles and reused. His multifunctional sink stations are both simple and functional. Yet they are handled with great sensitivity to scale and tactility, making for visually interesting sanitary odes, throughout the building. These unique sink stations are

premised on a standalone principle, allowing for flexibility of hookup and removal. These multipurpose stations allow for adaptability of design, which in turn supports the environmental goal of longevity. What outgrows its use in one particular location, may be easily disassembled and relocated somewhere else.

Although Hertzberger chooses to use conventional materials that range from concrete block to brick, form wood floors, to stainless steel counters, he creates a rich visual clarity by combining this economical palette in a way that produces utilitarian elegance. His spaces remain uncluttered with needless excess, striving instead to maximize the space by providing a flexibly of use within a minimum floor area.

Hertzberger is able to do more with less, without sacrificing the architectural aesthetic. In fact he begins to create a new and environmentally beneficial path that should not be overlook, or simply dismissed, by designer who want to participate in and support environmental design.
Good Architecture

Architect
• Luis Barragan
Project
• San Cristobal Stable
• Los Clubes, Mexico City
Aspect
• Simplicity of form
• Planar articulation
Goal
• Recycling
Note
Clear monolithic egress

Green Architecture

Architect
• The Millar Hull Partnership
Project
• NW Federal Credit Union
• Seattle, Washington
Aspect
• Simplicity of form
• Planar articulation
Goal
• Recycling
Note
A basic concrete and glass box protected by a flying roof

Mainstream Architecture

Architect
• Unknown
Project
• Residential
Aspect
• Simplicity of form
• Planar articulation
Goal
• Recycling
Note
• Difficult to recover and recycle
Good Architecture

**Architect**
- Luis Barragan

**Project**
- San Cristobal Stable
- Los Clubes, Mexico City

**Aspect**
- Spatial simplicity
- Screen and sun

**Goal**
- Site sensitivity

**Note**
- Planar clarity opened up by entering daylight

Green Architecture

**Architect**
- The Millar Hall Partnership

**Project**
- NW Federal Credit Union
- Seattle, Washington

**Aspect**
- Orientation of building

**Goal**
- Site sensitivity

**Note**
- Sunscreen tuned for the summer sun hitting the south side of the building

Mainstream Architecture

**Architect**
- Unknown

**Project**
- UBC

**Aspect**
- Orientation of building

**Goal**
- Site sensitivity

**Note**
- Uses natural shading methods
2.4.3 LUIS BARRAGAN

In the publication of the complete works of Luis Barragan, the editor aptly describes the crucial characteristics of the architect's work.

Hero worship and elaborate theorizing have no place here, any more than the high-flown language so inappropriate to the simple walls and spaces so typical of the Mies van der Rohe of pre-industrial materials of the Mexican vernacular.\(^{28}\)

Barragan is recognized as one of the architects of light and silence. He was inspired both by the popular Mexican culture as well as by the American Minimalism.

His architecture is filled with mystery, understatement, silence and intimacy. His plans do not consider the external repercussions of architectural facadism. His beauty is on the other side, amidst naked walls and the mystic union of gardens and discreetly laced picture window, pools and fountains. Straight lines, squares and rectangles dominate in his inward-looking rooms.\(^{29}\)

Barragan’s spaces, interior and exterior, are environments in which to feel and think. Barragan worked through the medium of the emotions; feelings are the leitmotif of his work. Light ahead, sidelights reflected, filtered or shaded - these effects alter the mood of the inhabitant and induce spiritual reflection. His walls are welcoming, containing, inviting. They protect and provide calm and safety against the unknown.\(^{30}\)

Barragan believes that architecture that does not express serenity is not fulfilling its spiritual purpose. Furthermore if the idea of the machine for living diminishes architecture, it also diminishes human beings. It doesn’t provide people with relief from the anxiety that characterizes life in this century nor is it conducive to contemplation. Luis Barragan resists the radical notions of the Modern movement and denounces the philosophy behind the machine a habiter, as damaging to the quality of life.

Barragan’s architecture is a nostalgic reminder of time spent in those marvelous villages, where the art of unhurried living is timeless. These pueblos are moral reserves, civilization’s spiritual sentinels, wellsprings of dignity, and an endangered quality in a time when money and vested interest rule. They are unwitting helots whose human essence is no longer reflected in the large and breathless cities of our day.\(^{31}\)

The house Barragan designed for himself synthesizes his concerns in architecture. The wall becomes a frontier that marks the living space. His architecture tends to be unified by one material, which is easily manufactured and exists in

\(^{31}\) Ibid.
harmony with its immediate natural surroundings. Limited in scale, the house grows within the outline of its walls, which evoke memories, mortared labyrinths of pleasing textures and order that in the end reveal space. It has always been the function of a good architect to purify the forms with which he builds and to recapture the original innocence of the materials he uses. Barragan's, elemental designs, seems to do that.

Barragan's own house and studio, located in Colonia Tacubaya, Mexico City, is a masterpiece that transforms over time. A house that is free of clutter and exudes a serene atmosphere and space all enhanced by the rustic finishings on the walls as well as the presence of the indirect lighting.

The combination of homogeneous materials and care and creativity that is expressed in the planar surfaces that butt into one another creating formal complexity out of seeming simplicity, all point to the minimalist ethos that naturally supports and reflects the inherent purpose of green architecture.
Architecture is brought into existence by LIGHT. Without LIGHT Architecture is nothing. LIGHT is an essential material in the construction of Architecture.

LIGHT is that which creates a relation, a tension between man and Architectural space. This section will explore how light is captured, edited and applied to describe the seemingly stark interiors that are exhibited in Minimalist architecture.

The vehicle of exploration will take the form of three precedent studies that will illustrate the way in which light has been handled to enhance the sheer simplicity of minimal interiors. The intent is to compare and contrast the work of three Minimalist architects; namely Tadao Ando, Steven Holl, and Kazuyo Sejima.

The concluding objective is to demonstrate that this renewable energy source can be applied as a layer of serene enrichment that directly impacts the occupant health and welfare. As well as recognizing that natural light can become powerful means of reconnecting us with the natural systems and cycles exhibited within nature.

Minimalists use configurations that are unified or balanced to begin with, i.e. squares and cubes. The thing as a whole, its quality as a whole, is what is interesting. The main things are alone and are more intensely clear and powerful. They are not diluted by variation of a form, mild contrasts and connecting part and areas. Judd states that the shapes, the unity, projection, order and color are specific, aggressive and powerful.

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It is in the substitution of austere functionalism by what can be an almost too consciously composed, too perfectly crafted, poetry of materials in light and forms in space that the significant difference between early Modernism and the new architectural Minimalism lies.

It is ironic that Minimalism is seen in one sense as an adopted poverty, possibly a lessening of guilt of excessive wealth in an increasingly polarized society. In fact, Minimalism can be an extremely expensive proposition, in order to achieve the level of craftsmanship highlighted in finely perfected details and subtle finishes. Minimalist application ranges from art to furniture, from interiors designed by the likes of Silvestrin, Pawson and Campo Baeza to architects such as Meier and Nouvel. It's known that Minimalism incorporates the good objectives of Modernism with the benefits of hindsight. If one is to equate the maxim that *Freedom of the mind is created within the strictest routines*, than one can speak of Minimalist architecture as an indication of true cerebral and practical liberation.

2.5.1 TADAO ANDO

There is no shortage of proposed theories based on chaos and complexity as a method for creating and explaining architecture and the urban environment. Yet the sheer simplicity and beauty of the Minimalist ethos allows one to withdraw and pause from life's unpredictable roller coaster.

> What distinguishes us in the West is that we have choice and lots of it. Again we have the self-denial, the breaking away from excess. When inundated with visual, sound, air and light pollution the only answer is to retreat into silence.

The West has looked to the East for it's innate tranquillity of the home. It is in the chaos of cities such as Tokyo/Osaka, that the workaholic retreats to his/her home, a sanctuary of clarity and peace.

> With their low perspective (sitting on cushioned mats at low tables; paper covered lanterns; finely grained smooth wood; sliding doors; the use of natural materials (although highly worked) and subdued colors/shadows a feeling of space is achieved. While our perspective is turned into the home, the Japanese look out of theirs (again enhancing the feeling of space) onto the street or a purposefully abundant garden.

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36 Ibid.
An ultimate sense of being is captured in the Japanese design of the Teahouse. Where man exists in harmony with nature, seeking to hear the voice of an object and to feel the will and desire of its being. Tadao Ando attempts to strengthen the serene essence of the Teahouse by constructing a three dimensional space that displays architectural detail and carefully controlled natural light. Peter Eisenman elaborates that:

"In Ando, space is not measured from light to dark, from thin to deep, as it is in the paper paneled shoji and the hewn alcoves of Shokintei. Rather his light is between; neither dense nor sparse, opaque nor translucent. Ando's work deals with a suspension of signs, a suspension of the visual screen that keeps us one step from chaos."

Ando’s architecture creates the effect of the simplicity, lightness and pure planar linearity. In both the Soseikan Teahouse and the Oyodo Teahouse, Ando provides the path roji that leads from the external world to the other world symbolized by the Teahouse. As one proceeds inside, decorative devices are used on the floor, walls, and ceiling, all adding depth to the otherwise simple surfaces. Both Teahouses are minimal by design; the Soseikan Teahouse being constructed out of finely finished concrete and the Oyodo Teahouse was primarily finished with linden plywood.

The application of natural light is both tranquil and strictly controlled. In the Soseikan Teahouse, Ando uses a window of translucent glass that is placed behind a concrete wall, to gently spill natural light onto the ceiling plane. He carves out a low light well, which gives the impression that the massive concrete wall floats suspended over the floor. This critical positioning allows one to experience natural light while sitting on the tatami mats that are inlaid on the concrete floor. The serenity of the spaces are created by editing the shape of the aperture and its location. Ando allows light to creep into solitary spaces, warming the cool concrete planes. The sharp patterns that are created by intense light, that filter around concrete obstructions, soon diffuse into a soft blur as the earth rotates away from the sun.

The interior space of the Oyodo Teahouse is layered with a variety of screens that are set aglow as the natural light attempts to penetrate their tight weave. By harnessing and molding the exterior light, Ando creates a mood of contemplation and peace. Between the extremes of dark and light, are the multitudes of shades that traverse the horizontal and vertical planes, unnoticed, yet intrinsically felt by the occupant of Ando’s spaces.

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Japanese modernity that is expressed by the authenticity of construction has greatly influenced the New York architect Steven Holl. His minimal approach to architecture is at once simple and complex. Holl’s work displays a passion for forms, and details, as well as a sensibility to the essence of materials.

In describing Holl’s approach to architecture, Frampton states that:

At the same time Holl’s constant stress on the texture and light - his culture of materials invariably carries within itself the capacity to save the day. It is this no doubt that leads to speak of the enrichment of our lives through a poetic that is whispered in material and chanted in space.  

Steven Holl attempts to first and foremost address the present chaotic human condition and secondly to provide a place of respite via Minimalist architecture.

To embrace the unique anxiety of our time, one must avoid false optimism and the phantoms of nostalgia. Our challenge is to make spaces of a serenity and exhilaration that allow the modern soul to emerge. Our everyday lives include the upside-down view of the earth, in a live television broadcast in which figures walk without gravity, or stroll along a sidewalk past barrels of live crabs fighting each other. The modern soul, its unprecedented spirit, must have architecture.

True to the Minimalist ethos, Holl believes that material and detail, an intensity of quality, rather than quantity, stimulates the observers senses. It is the visual senses that Holl titillates in his New York experimental glass workshop. He uses the Strand Theater Facade renovation, to explore the interaction of glass and light. The experiment involves transmitted light, reflected light and refracted (prismatic) light. The 60’x250” brick facade is reconfigured with large silent rectangles. At night these areas become sources of projected overlapped light; during the daytime, these same areas become cleaned and whitewashed, and are known as clarified zones.

Unlike Tadao Ando, Steven Holl plays with the idea of spatial color reflection or projected color. In the New York, D.E. Shaw and Co. offices, Holl applies color to the backside of the surfaces, that are otherwise invisible to the occupant of the space. Both natural and artificial light projects this color back onto the space around the wall and cracks. This gives the interior a mysterious calm glow with surprising views as the occupant walks around looking at one pod of color melting into another.

Since Holl admits to being influenced by Japanese design, he possesses a similar attitude to that of Tadao Ando. The outlook that the home ought to be a place of retreat and rest.

The house is a home for the soul, the heart and the spirit. It is a container for the day’s light, from the pale yellow of dawn to the deep blue of twilight. It is a box for the existential objects of life. It is a vessel for imagination, laughter and emotion... and a silent space for the poetic sense of life.\(^{40}\)

The Stretto House, located in Dallas Texas, was sited adjacent to three spring-fed ponds, with existing concrete dams. The house echoes the character of the site in a series of concrete block spatial dams with a metal-framed aqueous space that flows through them.

Coursing over the dams, like the overlapping stretto in music, water is an overlapping reflection of the space of the landscape outside as well as the virtual overlapping of the space inside.\(^ {41}\) Holl formed the building in four sections, each consisting of two modes. Heavy orthogonal masonry and light, curvilinear metal. These four sections/movements were inspired by a piece of music that had a distinct division between heavy (percussion) and light (strings).

Natural light enters the interior through clearstory openings and is reflected by the white vertical surfaces, bouncing light form wall to wall, revealing the spacious interior. The presence of natural light adds life to the half walls that are angled in juxtaposition to the negative space. In contrast to Ando’s Teahouses, Holl does not seem as discriminating with the positioning of openings or their size. He freely combines natural light with electric light that are housed in abstract niches within the wall and ceiling planes.

2.5.3 KAZUYO SEJIMA

Kazuyo Sejima has been described as a new type of architect, whose work is pure, simple and geometric. She does not draw from historical precedents, conceiving her structures by a diagrammatic architecture. In other words, according to her... a building is ultimately the equivalent of the diagram of the space used to abstractedly describe the mundane activities presupposed by the structure.\(^ {42}\)

The Villa in the Forest, located in Nagano Prefecture, two hours by car from Tokyo, was designed as a studio with a living space and display area for an artist’s work. The client, who is a gallery owner, required the allocation of two bedrooms, a bathroom with a good view and a direct car access from the road to the house. The challenge to design on

\(^{40}\) Ibid.
\(^{41}\) Ibid.
a steep sight, was complicated by the fact that high trees would block out the sun’s rays, making the orientation difficult. Sejima decided to use the circular plan...since the homogeneity of the circle is an effective response to the uniform natural space, where directionality and contexts are irrelevant. The basic plan consists of two circles, one placed off center within the other. Where the center circle is the studio and exhibitions space that is filled with natural illumination through a skylight. The space between the center circle and the outer ring becomes the main living space that includes the kitchen, dining and bedrooms.

Taking a section through the building, one finds that the roof slope takes the opposite direction to the slope of the site. This allows for a gentle lighting change of the interior space. Additional views and illumination are produced by a series of apertures in the outer circular wall. This allows for a multitude of perspectives of the surrounding forest, as one moves in a circular pattern. The openings of the exterior ring are glazed with transparent glass and appear to capture the sunrays, filling the white interior with highly reflected natural light. These same openings can also be screened, editing the amount of light that penetrates the interior space.

The inner circle or gallery space becomes a light well that draws the occupant towards it. This off centered inner sanctum is filled with natural light from above. The semi-opaque material that makes up the ceiling plane gently diffuses this light. Small apertures are incorporated into the otherwise solid cylinder. This allows for a penetration of views that has a twofold purpose; one, is to reference the occupant in time and space, as they enjoy the exhibit, they glimpse the images of tree trunks and bits of nature that are ever-present outside of this white volume. Secondly, these carefully placed geometric punctures reveal the brightness of the gallery space and allow the passage of light to illuminate the circulation corridor between the inner and outer cylinders. The wall of the circular corridor are clad with a thin wood veneer and becomes a warmer and more intimate space in comparison to the whitewashed walls of the gallery space.

These light filled, uncluttered spaces provide a relief from the chaotic city of Tokyo. The occupant is invited to retreat to the safety and comfort of the womb-like space, that is in turn sheltered by the surrounding forest. This environment creates a sense of being blanketed with several layers of muted quilts that allow light to pierce through cut out holes.

43 Ibid.
Carlo Scarpa noted that a wall opening could result in a composition where light and opaqueness are used instinctively as elements for an abstract design.

The underlying thought, elaboration and assembly of each element are directed to dispelling inertness. Space must never be confined. Transparency in spaces: one glimpses and sees beyond, the air transfigures the light of day and water brings life to that which it flows over. So too it is with glass artifacts: by virtue of color, held in suspended particles or diffused, reflections, iridescent or wavering shadows, flaring, elongated or dilated forms and the essential fragility of the substance.

There seems to be no end to the possibilities of using light in a way that will create magical architectural spaces. In Minimalist architecture, both natural light and electric light can be combined to give a sense of serenity and well being. Ando's Teahouses are a perfect example of doing away with complexity and frivolous detail, and in turn, focusing on the essential attributes of light and space and how one can enhance the other.

Minimalism by definition leaves little room for error, propelling the architect to scrutinize each aspect of the design and finished product. He/she becomes responsible for orchestrating a finely detailed and finished structure that sculpts the negative spaces and subtly reveals their mystical volumes. It was Erickson who said that, light because of its elusive mystery, which gives life to architecture by its changing volumetric effects and subtle intimation of mood.

It would seem that each architect it is equally concerned with concealing as well as revealing the spatial and sculptural qualities of their minimal design. There seems to be a conscious editing of the amount of light that enters Ando's Teahouses and Sejima's Villa in the forest. Steven Holl on the other hand, seems to be exploring and experimenting with different aspects and qualities of light, by introducing color and projecting light. This is a more forceful and direct attitude, in comparison to the Japanese architects. This attitude may be linked to the inherent cultural differences between the West and the East. In the spirit of the tearoom, the sukiya, man exists in harmony with nature, unlike in the West where man feels he has to conquer nature.

Both Holl and Sejima use redirected natural light, which loses some its original potency as it is reflected by the white vertical surfaces. In Ando's Soseikan Teahouse, the gray concrete finish may have a lower reflective value, but what

the walls lack in color they make up in surface sheen that drives the silent white light deeper into the darkened recesses of space.

Minimalist design provides a pause for all the human senses that are bombarded daily by a plethora of external reference. There are few spaces where one can find rest from the visual chaos and intrusion, a space that announces simplicity and calls for quiet. These are the spaces that wind us down, invite us to take a deep breath and revel in their stillness. Minimalist architecture strives to create a sense of well being by bringing in the notion of back to basics; back to the essential notion of more with less.

This type of architecture is created from a limited palette of materials and finishes, where both beauty and God are found in the details. These are the distinct parts of the architecture that are highly articulated to make the spaces sing in simple, yet delightful rhythm. One is compelled to savor the surrounding by experiencing each nook and cranny of detail as well as the sculptural whole that is captured by the floor, wall and ceiling planes.

Those that rush through, complaining about the emptiness and silence of these minimal spaces, may have to reevaluate their own fast paced lives that conveniently allow no time for anyone or anything that may make them pause and contemplate. Society reinforces the goal oriented, the achiever, the producer, the person who leads in the rat race; but even if you win that race, you remain fundamentally a rat.

The importance of transition cannot be overlooked in the aforementioned projects. Ando provides a roji that leads a person from one world into another. This moment of transition allows one to slip into silence as one enters; and to face the pandemonium of the outside world, upon leaving. Sejima uses the circular corridor as a physical as well as a metal transition from one space of activity to another. In Steven Holl’s Stretto house, one arrives via a driveway bridging the stream. The visitor passes through overlapping spaces of the house, glimpsing the flanking gardens, arriving at an empty room flooded by the existing pond.

Before one can create magical architecture, one has to have an idea. The idea is the birthplace of exceptional experiences.

This Architecture, born of an idea, shaped by essential spaces and tensed by light, allows people to find in it the beauty that only architecture is capable of offering then. That beauty which is always the final stop on this long journey toward liberty, which is creation. 47

FACILITY PROGRAM

• UBC School of Journalism - with the focus on print media.

• Initially, the school will accept 15 students per year.

• The School's two year program is designed for two groups

• Graduates with a strong academic background in a particular discipline who want to develop the skills and techniques of journalistic writing

• Experienced journalists interested in advancing both their academic knowledge of a particular subject and their journalistic skills in that area of investigation.

Occupancy

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Total Gross Area

Net assignable area X net/gross factor of 1:1.65 1227.0
### 3.1 PROGRAM ANALYSIS

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</tr>
<tr>
<td>4</td>
<td>Provide refreshments for faculty and visitors</td>
<td>N/A</td>
<td>all hours</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Reception, secretarial, mail distribution, room and equipment booking</td>
<td>1 person</td>
<td>8:30-5:00pm</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 persons (max)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Photocopying, document assembly and mail sorting</td>
<td>1 reception</td>
<td>all hours-for</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 persons (max)</td>
<td>students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Room adjacent to Secretary to display recent periodicals and dailies for check out - tape recorder storage and check out</td>
<td>1 person</td>
<td>Newsroom Lab</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 persons (max)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Staff break room for coffee and lunch</td>
<td>1 person</td>
<td>8:30-5:00pm</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 person (max)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Service counter inquiries and paperwork mail boxes (open) for faculty and students</td>
<td>1 receptionist</td>
<td>8:30-5:00pm</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 visitors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4-5 persons (max)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Lecture room for Journalism and other students</td>
<td>15 students</td>
<td>days and</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>40 students (max)</td>
<td>evenings</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 faculty</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Used for small group meetings, discussions, work groups, and seminars</td>
<td>16 students</td>
<td>all hours</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 faculty (max)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>18 persons</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Study/work area for school's faculty and adjunct faculty</td>
<td>1 faculty</td>
<td>all hours</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 persons (max)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Study/work area for each graduate student</td>
<td>3 students</td>
<td>all hours</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 students (max)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Similar to &quot;real world&quot; Newsroom, students work on by-weekly magazine or newspaper. Individual assignments as well as group work. Room is potentially very noisy, and doors are typically left open. Students will spend the majority of their time in this room.</td>
<td>15 students</td>
<td>all hours</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 faculty</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>20 students (min)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 faculty</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>30 students (max)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Graphic layout, assembly, mock-up of hard copy, graphic layout of digitized artwork</td>
<td>1-2 persons</td>
<td>all hours</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3-5 persons (max)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>A black and white photography lab for the convenience of the students in the Newsroom Lab. Not intended for teaching purposes. Room will be available for other uses once digitized photography is common practice.</td>
<td>1 student</td>
<td>all hours</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 students (max)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 faculty</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Secure storage of PC's, printers and other audio visual equipment awaiting minor repairs and pick-up by students</td>
<td>1 person</td>
<td>all hours</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 person (max)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Room to store and display student publications and hard copies of other publications used during instruction in the Newsroom Lab.</td>
<td>1 person</td>
<td>all hours</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 persons (max)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Photocopying, printing, document assembly</td>
<td>1 person</td>
<td>all hours</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 persons (max)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Staff and Student Lounge</td>
<td>6 persons seated</td>
<td>all hours</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>18 seated (max)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Refreshment preparation area</td>
<td>1-2 persons</td>
<td>all hours</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>
3.1.1 SITE-CLIMATE IMPACT

- By carefully assessing the climatic conditions of the proposed site, one becomes quickly aware of the impact that the sun, wind and rain may have on the proposed building.

- The key considerations include maximizing the effects of daylight, natural ventilation and thermal value. Analyzing how the internal activities can be arranged to take advantage of these external natural/seasonal occurrences.

- Provide common location of rooms that require daylight during the peak hours of use. This would minimize the use of overhead lighting. Incorporating task lighting at each workstation could augment the requirement of artificial lighting. This would be the prime location for the “real world” Newsroom, where students work on by-weekly magazine or newspaper, individual assignments as well as group work. The room is potentially very noisy, and doors are typically left open. Students will spend the majority of their time in this room, therefore it is important to provide a desirable, well-ventilated, and naturally lit area.

- Allowing each zone to access natural ventilation stack, augmented by operable windows within rooms that are user intensive. For example, areas needed for small group meetings, discussions, work groups, and seminars, as well as study/work area for school’s faculty and adjunct faculty and study/work area for each graduate student, ought to be well lit and naturally ventilated.

- Areas that involve graphic layout, assembly, mock-up of hard copy graphic layout of digitized artwork or a black and white photography lab, for the convenience of the students in the Newsroom Lab ought to be located in the North West corner of the proposed School of Journalism. Secure storage of PC’s, printers and other audio visual equipment awaiting minor repairs and pick-up by students, ought to be located in zone 2 as well.

3.1.2 PLANNING STRATEGIES - OCCUPANT HEALTH

- The key considerations include giving the individual control over his/her environment. Allowing the user to open windows, control localized lighting and heating. This would provide a high level of user comfort, which relates to increased productivity, and a general sense of well being.

- Creating acoustical sub-zones that would allow for good acoustic environment within the Journalism Zone. This can be done by physically separating the Newsroom Lab from the Faculty Offices and Grad Student Offices, or by creating an acoustical baffle between the two zones.
3.1.3 ENVIRONMENTAL IMPACT ON FACILITY ACTIVITIES

1. The location of the main entrance off of the West Mall is easily accessible for pedestrians and kiss and ride. It is well marked and universally accessible.

2. The North-West corner receives minimum natural light throughout the day. The location of activities that do not require natural light or natural ventilation is recommended.

3. Taking advantage of the early eastern sun, activities that require natural light, as well as natural ventilation by taking advantage of the steady easterly wind. There will be little heat gain on the eastern facade.

4. Taking advantage of the south sun exposure, this node serves as the joint/node for future building phases. It serves as a vent stack to take advantage of the easterly winds. This node also serves as egress.

5. Future addition to the School of Journalism (Phase 2)
3.2 SITE-CLIMATE ANALYSIS

- Located on the West Side of Vancouver, British Columbia.
- Encircled by the Pacific Spirit Regional Park on the north side.
- Accessed by SW Marine Drive from both north east and south east directions
- Northwest quadrant of UBC main campus
- West Mall and Crescent Road, close to Gate 4 entrance.

Surrounding buildings of the UBC site include:

1. Thea Koerner House
2. Graduate Student Center
3. Faculty Club
4. Dorothy Somerset Studio
5. Frederic Wood Theater
6. Music Building
7. Old Auditorium
8. Auditorium Annex
9. West Mall Annex
10. Fraser River Parkade
11. Asian Center
12. The C.K. Choi
13. The International House

Although some of the climatic data was collected at the Vancouver Airport, the following factors may play a role in creating a local microclimate, specific to the UBC site. Significant transformations of the climate created by the immediate site include:

- Change of grade - may affect the wind speeds by increasing or decreasing the easterly wind, that otherwise remains at a constant mean speed of 3 to 4 meters per second.
- Tree location and density - may affect the wind patterns by creating a natural buffer to gusts of air that move in from the west.
- Directionality - of the easterly wind may impact the proposed eastern facade of the exposed West Mall site. There is very little protection from the wind or the sun on the eastern side of the proposed site.
The proposed School of Journalism will be opened from September to April.
- Times of operation will be approx. 8am to 5pm.
- All relevant climate data will be presented within the above mentioned months and times of operation.

Max. and Min. Daily Temp UBC

Temperature taken for Vancouver, UBC. 1951-80

Number of Bright Sunshine

Mean Monthly Bright Sunshine 12 Hours - Data for Vancouver, UBC
Mean Monthly Rainfall UBC

Data for Vancouver, UBC.

Mean Wind Speed UBC

Data for Vancouver, UBC. - Most Frequent Wind Direction - From the East
The significant climatic characteristics of the site that will directly and indirectly impact the proposed School of Journalism, include wind, sun and rain:

- The following photographs illustrate the immediate site location and its relation to the existing buildings and surrounding vegetation.
- The site model is placed at a 50-degree incline with a noon south sun source that remains constant, with each passing month.
- North points to the top of the photograph
- The proposed site is marked in red

- This photograph displays the shadow patterns in the month of September - 12 noon
- Dorothy Somerset Studio
- Frederic Wood Theater
- Music Building are the existing buildings that may act as buffers against the easterly winds

- This photograph displays the shadow patterns in the month of October - 12 noon
- Increased rainfall in the month of October will have a runoff effect, as the site slopes westward towards the proposed site
- Possible introduction of trees and other vegetation may reduce runoff, by absorbing the rainfall into the soil
- This photograph displays the shadow patterns in the month of **November - 12 noon**
- Both mean monthly rainfall and the mean wind speeds increase in November
- At the same time the daily temperatures for UBC and the number of bright sunshine decreases
- The surrounding trees also cast longer shadows across West Mall, that may start to affect the proposed site in the late afternoon hours

- This photograph displays the shadow patterns in the month of **December - 12 noon**
- The mean monthly rainfall and the mean wind speeds are the highest in the month of December
- At the same time number of bright sunshine hours remains the lowest at approx. 50 hours a month
- The surrounding trees cast the longest shadows across West Mall, leaving the western facade of the proposed building in shadow for most of the day
- This photograph displays the shadow patterns in the month of **January - 12 noon**
- The mean monthly rainfall and the mean wind speeds decrease in the month of January
- At the same time number of bright sunshine hours increases slightly.
- The shadows remain long and may continue to affect the western facade of the proposed building for most of the day

- This photograph displays the shadow patterns in the month of **February - 12 noon**
- The mean monthly rainfall and the mean wind speeds decrease in the month of February
- At the same time number of bright sunshine hours and the mean daily temperature increases
- The shadows cast by the surrounding buildings and vegetation recede from the proposed site
• This photograph displays the shadow patterns in the month of March - 12 noon
• The mean monthly rainfall and the mean wind speeds decrease in the month of March
• At the same time number of bright sunshine hours and the mean daily temperature continue to increases
• The shadows cast by the surrounding buildings and vegetation recede from the proposed site as the sun remains higher in the sky

• The photograph on the right displays the shadow patterns in the month of April - 12 noon
• The mean monthly rainfall and the mean wind speeds decrease in the month of April
• At the same time number of bright sunshine hours and the mean daily temperature continue to increases
• The shadow patterns have a minimal effect on the western facade of the proposed building

• Renewable energy source afforded by the site may include active solar paneling that can be incorporated onto the south and eastern facades of the proposed building to gather the most amount of sunlight throughout the months of September and April
• There is probably not enough constant strong wind to augment the solar paneling with a wind generator
To benefit the present and future generations by having a minimal impact on the planet’s natural resources, in designing an adaptable education facility. This envisioned end will be driven by the following principles:

1. Resource Efficiency - economy of means
2. Minimalism - more with less
3. Occupant health and welfare - providing healthy interiors
4. Anticipating change - built in flexibility / adaptability

These principles will be supported by the following goals and accompanying strategies.

<table>
<thead>
<tr>
<th>GOALS</th>
<th>STRATEGIES</th>
<th>MINIMALISM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reducing</td>
<td>Minimum floor area for maximum efficiency</td>
<td>Edited pallets material structure color</td>
</tr>
<tr>
<td></td>
<td>Reducing the scale of demand for energy and material use</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reducing amount of material use</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reducing energy draw from the city grid</td>
<td></td>
</tr>
<tr>
<td>Reusing</td>
<td>Reuse of salvaged building components</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Designing facility for ease of future disassembly</td>
<td></td>
</tr>
<tr>
<td>Recycling</td>
<td>Use of homogeneous construction materials to be reused or recycled in future projects</td>
<td></td>
</tr>
<tr>
<td>Recovery</td>
<td>Use of salvaged materials slated for the landfill - last call</td>
<td></td>
</tr>
<tr>
<td>Longevity</td>
<td>• Forecasting future change</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Mixed use design</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Multipurpose layout</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Adaptability / Flexibility of design</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The School of Journalism will be sited next to the CAF a future addition (phase 2). This unique situation encourages the examination of the joint between the existing condition and the future phase. The school of Journalism will symbolize the present/future scenario by incorporating adaptability and flexibility in design. Example: modular, solar sensitive south wall.</td>
<td></td>
</tr>
<tr>
<td>Site sensitivity</td>
<td>Relate program layout to site and climate</td>
<td>more energy efficient</td>
</tr>
<tr>
<td></td>
<td>Respect of natural setting to make facility</td>
<td></td>
</tr>
<tr>
<td>Renewable resources</td>
<td>Exploration and utilization of sun, wind, and rain as renewable energy sources</td>
<td></td>
</tr>
</tbody>
</table>

To enhance teaching effectiveness along with the assigned/required program, the proposed school of Journalism will support:

- interactive education/student systems
- state of the art research and presentation capabilities
- technological universal access
- present and future programming flexibility
- wireless learning environment
4.1 SITE SPECIFIC RATIONAL

1. Resource Efficiency - minimum stress on natural resources

Materials / Components Recovered
Recovering trusses, roof joist, purlines, truss spandrels, truss blots and steel plates, wooden posts, windows and interior doors from the UBC Scene Shop, which is slated for future demotion, has the following benefits:

Using the recovered material will maximize resource efficiency. The recovered components will be reapplied to organize the structural hierarchy of the School of Journalism. The need for new material and the energy costs of producing new material will be reduced as well. Reusing salvaged building components in an innovative way and placing them in a new architectural context reveals a memory of what was a part of the UBC campus. Reusing structural components of the older building is not only a nostalgic memory device of what was, but becomes a dominant part of the present material palette as well as a material that can be potentially reapplied in the future. This can be done by reusing truss components an bolting them to create a new structural hierarchy. By carefully selecting the method of connection i.e. thread and bolts and steel plates, these impressive wooden components can be disassembled and reused in future projects.

Recovery and reuse of old to make new may incur high initial costs but ultimately salvaging, refinishing and reapplying has a minimal environmental impact in the long run. Clearly when one looks at the bigger picture of the complete energy life cycle which includes: harvesting finite resources, processing of material, human labor involved in all stages of the process and the final application and maintenance. Salvaging a stable wood source that is maintenance free minimizes the energy life cycle in all respects. Reusing and refinishing may be a labor-intensive process, yet arguably more environmentally beneficial than buying new.

Salvaging usable material begins to question the present comfort with disposability and excess as well as proactively and practically keeps reusable material out of overflowing local landfill. The benefit of recovering the aged wood is that it can be reapplied as a stable solid timber component in creating structural integrity and order.

2. Resource Efficiency - economy of means

To maximize the use of recovered material -use of most complete components of the trusses, longest spans possible
• primary material source = recovered lumber
• as the primary grid
Structural supporting floor roofs interior and exterior walls. Longest members used as beams and columns

- as the secondary 5' grid 2X6 construction (exterior walls)
- as the tertiary 2'6' grid 2X4 construction (interior walls) possible innovation of single layer screw stud construction with adjustable material paneling
- structural ordering = present and future flexibility
- floor joists can be placed anywhere on the structural grid, leaving opening where appropriate in the future or during a renovation
- open ceiling = present and future flexibility - visible and physical access to joints, piping, ducting, wiring
- natural daylight = less dependency on electric light

Accessibility to natural daylight via hub dome top, hub vertical solar controlled glazing spine north facing glazed window wall, south facing clerestory, solar controlled wall other strategically placed openings

Natural ventilation = less dependency on forced air duct systems (HVAC)

3. Occupant health and welfare - providing healthy interiors

- spatial clarity = ease of access
  universal access, building is easily read and accessed, wide passages
- healthy interiors = non toxic finishes
  paint and cleaning solvents will be environmentally sound in application and maintenance
### 4.2 PRESENTATION NOTES

#### 4.2.1 GENERAL INTRODUCTION

<table>
<thead>
<tr>
<th>Slide</th>
<th>Image</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1 - SLIDE 1</td>
<td>Minimal Impact</td>
<td>Good afternoon ladies and gentleman - my name is Joanna Kruk - welcome to my thesis presentation! Today we live in a culture of excess and one wonders how long it will take before the earth's resources are exhausted. Therefore, we must ask ourselves how we as a professional body of architects can be more sensitive and gentle to this planet. It is my intention to benefit both present and future generations by having a minimal impact on the planet's natural resources.</td>
</tr>
<tr>
<td>P2 - SLIDE 1</td>
<td>Minimal Impact</td>
<td>I present to you the UBC School of Journalism. Although, this building is being completed as we speak, I chose to design and develop the School of Journalism on the basis of green architecture, which means designing with nature in an environmentally responsible way.</td>
</tr>
<tr>
<td>P1 - SLIDE 2</td>
<td>Concept Board 1of10</td>
<td>In the first part of my presentation, I will focus on the location, purpose and program of the school. Next I will define and elaborate on the guiding principles that informed my design goals and design strategies. A tour of the building will follow along with an objective analysis of the finished product. After this I will make my concluding statements.</td>
</tr>
<tr>
<td>P2 - SLIDE 2</td>
<td>Model</td>
<td></td>
</tr>
</tbody>
</table>

#### 4.2.2 SITE AND PURPOSE

<table>
<thead>
<tr>
<th>Slide</th>
<th>Image</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1 - SLIDE 4</td>
<td>Site board</td>
<td>To begin, the School of Journalism is the first design phase of the Centre for Creative Arts Facility. The future and second phase will include the School of Music, a Fine Arts Department, and a Department of Theater and Creative Writing.</td>
</tr>
<tr>
<td>P2 - SLIDE 4</td>
<td>Site model</td>
<td>The school is sited on the north west quadrant of the UBC campus, near the intersection of West Mall and Crescent Road, close to the Gate 4 entrance.</td>
</tr>
</tbody>
</table>
| P1 - SLIDE 5 | Site board close-up | The School of Journalism will offer an integrated program for 30 students that combines graduate study with advanced training in the profession of journalism. This facility will focus on print media. In addition it will support:
- interactive education
- state of the art research and presentation capabilities
- technological universal access
- present and future programming flexibility and
- a wireless learning environment |
| P2 - SLIDE 5 | Site model close-up | The school will emphasize scholarly understanding, critical thinking and ethical responsibility. The Newsroom training will focus on the highest standards in research, writing and editing in the print media. |
| P1 - SLIDE 6 | Word collage | |
| P2 - SLIDE 6 | Site model close-up | |
| P1 - SLIDE 7 | Piper model close-up | |
| P2 - SLIDE 7 | Site model close-up | |
4.2.3 PRINCIPLES - DEFINITION

Now I will define and elaborate on the guiding principles that informed my design goals and design strategies. Every design move was filtered through one or more of the following key principles.

<table>
<thead>
<tr>
<th>P1 - SLIDE 8 Guiding Principles 1st Floor plan</th>
<th>P2 - SLIDE 8 Word collage close-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The first principle is Resource Efficiency, which means: to produce a desired effect with a minimal environmental impact. In other words resource efficiency breaks down into a more familiar format of the 3 R's: Reduce reducing the scale of demand for energy and material use Reuse the disassembly and reuse of restored building components designing facility for ease of future disassembly Recycle recycle of homogeneous construction materials in future projects</td>
<td></td>
</tr>
</tbody>
</table>

2. The second principle is Occupant Health and Welfare, which means: to provide a healthy indoor environment as it relates to air, acoustics, light, temperature, and material choices.

3. Site Sensitivity is the third principle. This involves taking advantage of the natural siting to make the facility more energy efficient and to relate the program layout to the local site and climate conditions.

4. The fourth and final principle is Future Flexibility. This simply translates into designing a building today for tomorrow.

With these definitions in mind, I would like to demonstrate how these principles acted as a filter informing my final design. In applying them I focused on two key areas: building construction and building operation.

In arriving at my design strategies, the first step I took was to consider key components necessary for constructing this building including: Construction Material, Water, Electric light, Daylight, and Sunlight. Then I filtered them through the various principles and arrived at the design strategies. Let us start with resource efficiency as the first principle.

<table>
<thead>
<tr>
<th>P1 - SLIDE 9 Icon - 3 lumber Icon - 4 water</th>
<th>P2 - SLIDE 9 2nd floor plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>For example, I • reused reconditioned heavy timber as the building's structural system • I chose autoclaved aerated concrete panels for non bearing exterior walls • I chose AAC as a structurally bearing floor and wall system</td>
<td></td>
</tr>
</tbody>
</table>

(Inform about AAC and pass block around) Autoclaved Aerated concrete consists of sand, cement, lime, gypsum, water and an expansion agent. Silica sand is a material used in the greatest volume in AAC and is one of the world's most a natural resource. The Hebel construction system (AAC) offers numerous benefits including: fire resistance, weather resistance acoustic efficiency, versatility pest resistance, it is environmentally sound it has proven durability and low maintenance.

To reduce and reuse water, the design strategies I used were:
• to provide a water cistern with a natural filtering system
• to integrate a washing basin with toilet tank in public washrooms
• to use a UV filter making reused rain water potable and accessible in public washroom.
The question here was how to reduce energy draw from the city grid and how to maximize daylight penetration to the interior of the building while reducing solar invasion. Some of the design strategies were:
- to locate PV cells on the hub roof rotated at 45 degrees to the solar rays, this optimizes the conversion of solar radiation into electricity
- another strategy was to design light shelves and sliding shutters on the south window wall
- another strategy was to use ambient lighting in the form of indirect luminaries mounted on channels above computer stations

The second principle is Occupant Health and Welfare. Some of the design goals were:
- to stimulate and educate the public - by providing a perceived water source
- to provide individual control over his or her environment - by providing operable windows and localized lighting control
- to reduce allergy sensitive materials and finishes - by using non toxic materials such as AAC, which is inert and pest resistant
- to improve air quality by providing cross ventilation and a vertical ventilation duct in user intensive areas

Site Sensitivity is the third principle. The design goals was to take advantage of the natural siting to make the facility more energy efficient and to relate the program layout to the local site and climate conditions. To achieve this the strategy was to locate the school within the footprint of the existing parking lot, to orient the building relative to the natural sunpath and group common activities to take advantage of daylight condition.

In designing today for tomorrow I was faced with the following challenges:
- Internal flexibility - how to anticipate future user needs and student population increase
- Future User - how to anticipate the needs of new occupants
- External flexibility - how this facility will link with phase 2 of the Centre for Creative Arts

The design strategy I implemented were:
- to create a flexible open floor plan
- to use a flexible / mobile furniture system to custom adjust to user needs
- to design the south wall as a possible future access into seminar and lecture rooms
Now that we have analyzed the pieces, let us experience the whole. Picture this...

As one walks down West Mall passing Crescent road one's eye is caught by flickering images on a screen that is inserted into a curved wall - This Window into the Future flashes the latest stock prices and weather reports.

As one enters the School of Journalism, on the north side of the building one will find the administration zone which includes:

- an elevator core
- a display and records - used to display recent periodicals and dailies for check out
- reception and secretarial - used for mail distribution and equipment booking
- a service counter - for inquires, paper work, mail pick up
- a director's office
- an administrative assistant's office
- a staff room - break room for coffee and lunch
- a faculty refresh alcove - to provide refreshments for faculty and visitors
- a faculty meeting room - to provide a place for conferences, and meetings

On the south side of the building, one will find the general academic zone which includes:

- seminar room used for small group meetings, discussion, work groups and seminars
- lecture classroom for journalism and other students that seats 40 plus students and
- service core which includes a janitor's room and accessible washrooms

Buffered by the service core is the media hub. The hub walls and railings encircle the viewing students in a theatrical capsule. They are seated on padded steps watching the latest CNN highlights projected onto the media wall. Future activities in the hub can include staging virtual reality presentation, and holographic imaging suspended in the hub void.

Behind the media wall is a curved stair that takes one to the second floor where one could enjoy lunch at the faculty student lounge area, which overlooks West Mall.

As one follows the curve of the stair to the left one would pass a curved balcony ledge and the dividing wall between the viewers and the washrooms.

In the Journalism zone, large north facing windows spill ample daylight into the news room lab, a large space that is littered with workstations and students conversing over common worktables. This is similar to a “real world” newsroom where students work on bi-weekly magazine or newspaper. This includes individual assignments and group work.

- The dark room - located in the center of this work plate, is a black and white photography lab for the convenience of students in the news room lab. Once digitized photography is a common practice, this space can become a part of the duplicating room
- secured storage space - used to store personal belongings
- duplicating room - used for photocopying, printing and document assembly
- lab equipment - secured storage of PCs, printers and other audio visual equipment

On the south side of the building there are more flexible workstations reconfigured for layout purposes. They are used for graphic layout, assembly, and mock-up of hard copy graphic layout of digitized art work. There are adjustable window screens that block out direct sunlight at the same time that light shelves provide reflected light into the space.

In the east corner of the building one will find 3 faculty offices that are duplicated on the third floor. These offices provide a study/work area for school’s faculty.
On the third floor there is a student refresh alcove near a vending machine. This floor is an extension of the journalism zone which includes:

- work stations for layout purposes and a news room lab work

As one continues along the balcony side of the third floor one could exit the building via the back stairs that lead out of the building onto Crescent Road.

With the aim of designing this building on the basis of green architecture I had to make compromises. For example:

- Permanent walls were placed on the first floor to minimize acoustic transmission.
- inflexible vertical air ducts were located in the duplication and dark rooms on the second and third floor in order to provide proper ventilation
- and although an open work environment is conducive to visual and acoustic distraction; it provides a flexible floor space and supports team work and academic interaction

4.2.5 CONCLUSION

I would like to conclude with the following quote and remarks. This quote comes from an article entitled Minimalism and the Rhetoric of Power. - and I quote

“Ultimately we must face the fact that the environmental crisis is a human problem and solutions depend on major changes in human values and action. Environmental degradation is not the problem but a symptom of an attitudinal and value system premised on consumerism and excess. Western societies operate within a social and political system which implicitly considers human activity dominant over and essentially independent of nature.”

End of quote - CLICK

Green architecture, is presently the architectural response to this fundamental and bleak reality. Unfortunately, in the past green architecture has also received special treatment and analysis by architects as well as architectural critics. And to some degree sensitive design continues to be considered distinct from the formal issues that are discussed within mainstream architecture.

Although, we have come a long way in providing energy efficiency, healthier interiors, and propagating the notion of sustainability there is room and hope for a fuller integration of principals such as resource efficiency, occupant health and welfare, site sensitivity and future flexibility. CLICK

It is my belief that, once we get beyond the notion of green architecture as an architecture that is fundamentally different, we can begin to introduce and impregnate all future design projects with the benefits that are seen as more than environmental dividends but as the only responsible way we as future form givers can and should design.

THANK YOU

AT THIS POINT I WOULD LIKE TO ADD A SINCERE THANKS TO MY COMMITTEE CHAIR - EVA MATSUZAKI, AND COMMITTEE MEMBERS - RAY COLE AND DWAYNE ELVERUM.
**FIGURE 1** SITE LOCATION (ABOVE)

**FIGURE 2** GUIDING PRINCIPLES (BELOW)

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**Guiding Principles**

- **Efficiency**
- **Community Impact**
- **Environmental Sustainability**
- **Accessibility and Inclusivity**
- **Operable Spaces**
- **Resilience and Adaptability**
- **Future Flexibility**

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**School of Journalism**
FIGURE 5 THIRD FLOOR (ABOVE)

FIGURE 6 ENVIRONMENTAL DETAILS (BELOW)
FIGURE 15 NORTH WEST CORNER (ABOVE)

FIGURE 16 SOUTH SIDE (BELOW)
FIGURE 17 SOUTH EAST CORNER (ABOVE)

FIGURE 18 NORTH WEST CORNER (BELOW)


