Resolution and Tension

Mies van der Rohe and the Myriad Dualities of Architecture

by Andrew Ryan Gleeson
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Advisor: Jorge Silvetti
Cover Image is a sketch by Mies van der Rohe of an auditorium concept.

Font: Windsor (Lt and Regular)  
(Popularized by Woody Allen)

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The symbol above, called a tilde, will be used at various times in the text to connotate complementary and contradictory dualistic relationships. I learned of this usage in an essay on neuro-dualities by J.A. Scott Kelso titled *Metastable Mind* in the newly published book, *Cognitive Architecture* (editors; Hauptman, Deborah, and Neidich, Warren). Page. 119.
This book is dedicated to J.B.
and my Mother.

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Also in memory of my Grandmother and Detlef Mertins.
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Part I: Resolution and Tension
Introduction

Architecture is neither a purely rational nor purely spiritual art. It is a complex mix, whose manifestation -- by degrees-- is expressed either in resolution or tension. Balance occurs when dueling contradictory forces are resolved. Tension results from irresolution in disproportion. Intentional exploitation of these fundamental dualities --to achieve either balance or imbalance -- ultimately deconceals an inherent power within architecture.

In architecture there are myriad dualities with differing hierarchies. Some are foundational, existing at the heart of architectural production. Certain dualities are nested within others, and some cannot be conceptualized separately from other complimentary dualities. Duality is, therefore, not a mode of reduction; it is a method of establishing and trying to address the intricate web of forces in architecture that negate each other through contradictory agendas.

The Struggle of the Architect

The architect is in a tug of war battle between spiritual and pragmatic concerns. They have not resolved themselves to these competing desires. He/she chose this profession because engineering is too constrictive and fine art is too liberating. An architect thus needs discipline and freedom to perform. This battle expresses itself in myriad ways throughout history in the architecture one creates.

The architect struggles against both nature (which is a conceptual chaotic force that negates will) and internally competing Appolonian and Dionysian desires. They are conflicted on how to express the ideal, and are also compromised by the ability of their hand to express the idea inside their mind. Once brought out into the open through a schematized drawing -- a sum total of all internal conflicts -- the idea passes through the screen of extrinsic pressures that mold and shape it further. The laws of science, gravity and technology limits expression. Clients, who often reify the status quo, chime in further with subjective opinions. Material availability and labor skill determine its physical outcome. Budget limits all of these things.

The architect expresses both these internal and external struggles in their buildings. Architecture is thus a manifestation of opposing extrinsic and intrinsic tensions on many levels (fig. 1).

The architectural object is the resultant of these pressures, which compromise its ideal form. The ideal cannot be created in a real world just as certain experiments in physics cannot be performed outside of a fictional vacuum. To take this metaphor further, the extrinsic and intrinsic pressures are the friction that acts upon the ideal and limits its total free expression. Architecture is thus an expression of compromise and frustration. Throughout history, our will
has pushed against the limited possibilities of our real world. An architect with knowledge of this duality, within and without, is better equipped to cope with and anticipate the effects of reality. They can manipulate the compromises to achieve reconciliation, or keep the duality unresolved and exploit inherent tensions.

**Apollonian and Dionysian Aesthetics**

Architecture is the synthesis between the real and the spiritual. The real is the body of elements that influence a building towards its practical function; it is the rationalist necessity or the objective aims of built works. The spiritual is that in a building which is unrelated to, and unsupported by, necessity. The spiritual is borne of a
desire to create something that transcends the laws of practical reality. It is the will to create beauty; to satisfy a deep unknowable longing. In theory, the real is objective and the subjective is spiritual, however, the objective is continuously tempered by the bias of the individual. Conversely, when subjectivity resonates with an almost universal approval, or is validated in time with age value, the notion of total subjectivity can blur. The purely pragmatic is merely shelter; the purely aesthetic is merely sculpture.

The aesthetic, spiritual element in architecture can be self-reflexive, taking cues from methods previously thought of as objective, rational and appropriate. On the other hand, aesthetics can run counter to the practicalities of built work. These a-tectonic gestures seek to divorce the pragmatic aims of a built work from its aesthetic aims. Objectivist aesthetics are found in the expressive rationalism of Louis Sullivan’s skyscrapers or the pure structural diagram of Crown Hall by Mies van der Rohe, while Erich Mendelsohn’s Einstein tower or Frank Gehry’s Bilbao Museum represent blatantly subjective aims.

With expressive rationalism, aesthetics take on an Apollonian desire towards discipline and restraint. The work seeks a rhythm in accordance with its own demands; it rests within its own framed completion.

Expressionist architecture respects the Dionysian. It desires a playful break from discipline: freedom of unadulterated expression removed from the demands of corporeal constraints (structure, program, gravity, client, budget).

Nietzsche writes that the Apollonian seeks out truth and regards its expression as symbolic of that truth. It seeks to eliminate contradiction and is thus inflexible: it is catholic. The Apollonian disavows its temporary nature. Instead it often whole-heartedly mistakes itself for an expression of timelessness. Its aims are thus purely spiritual, even if they poetically echo the diagram of the pragmatic work (late Mies van der Rohe).

The Dionysian is aware of the subjective nature of aesthetic expression. It is open to interpretation, and is aware that its perception will change with time. It acknowledges time and may choose to celebrate temporality and the torrid nature of perception. Building materials are thus made with weathering in mind. The building is not suspended in an ideal state: instead it has an intended lifespan. This very duality between the Apollonian and the Dionysian is denied by the former and embraced by the latter.

Regardless of whether aesthetics are Apollonian or Dionysian, they are always in contrast to the true demands of the built work. Pragmatic reality is a constant opposing force against the creative will to create something out of the raw necessities of shelter.
Why Study Mies?

A superficial criticism of Modernism was that it tried to create truth through positivist objective affirmations. Eisenman calls truth through objective scientific method a faith-based myth bearing little difference to religion. Where, then, can architecture gain its authority? It requires an acknowledgement of a necessary compromise between spiritual and rational concerns. The architect must get their authority from the creative ideal will, as well as through an honest, albeit limited, attempt at objective problem solving. This again, is the dual nature of the architect, and I will argue that the most important architects of the twentieth century operated simultaneously between this pragmatic and spiritual divide, and did so effectively by knowingly attempting to resolve or exploit the inherent contradictions of architecture.

Mies van der Rohe is the most important architect for the study of duality because he most closely skirted the opposing lines between the rational and spiritual. The world we live in is a grey between these dualities, but distillation allows one to see more clearly the black and the white forces at work in the complexity of existence. Mies thus operated within the most supreme of contradictions: in order to express the purely spiritual, he strove to arrive as close as possible to corporeal “truth.” Distillation allowed Mies to create an architecture of pure logic, which ironically begat pure ephemeral spirit.

Mies’s attempt at an objective architecture went hand in hand with an attempt at timelessness. He believed the only way to express the timeless was to skirt the fleeting edge of technological innovation. In other words, the only way one can express the infinite is through the finite (Simmel’s reading of Nietzsche). This is the definition of the zeitgeist, which he tirelessly tried to advance throughout his career. A study of Mies’s work from the beginning to the end reveals the operations of myriad dualities. These are not clumsy contradictions like critics of his work might propose; they are a conscious acknowledgement of an inherent tension between the spiritual and the real.

This first part of this thesis will analyze six fundamental dualities (and one important nested duality) present in all architecture and specifically addressed in the work of Mies van der Rohe. The second part will analyze the transformations of Mies and these dualities after his death.
Bibliographical Notes:

1. Functionalism turned out to be yet another stylistic conclusion, this one based on a scientific and technical positivism.

Eisenman, Peter. from his essay *The End of the Classical: The End of the Beginning, the End of the End.* in *Architecture Theory Since 1968.* page 525

2. Through the thought of recurrence Nietzsche has brought together in to a strange union two fundamental and opposed themes of the soul: the need for the finite, for concrete limits, for definite forms in everything given, and the need to lose oneself in the limitless.

Simmel, Georg. from *Schopenhauer and Nietzsche.* page 175
1. Mies van der Rohe and the Material Spirit

...art is supposed to be nothing but form and idea, but its vision is only possible under the conditions of materiality.  
**Georg Simmel** \(^1\)

A great building, in my opinion, must begin with the unmeasurable, must go through measurable means when it is being designed and in the end must be unmeasurable.  
**Louis Kahn.** \(^2\)

Only where the building art leans on the material forces of a period can it bring about the spatial execution of its spiritual decisions.  
**Mies van der Rohe.** \(^3\)
16 MvdR and the Material Spirit
Prologue

Few people today regard Mies van der Rohe as a pure rationalist. Simplistic critiques of his work painted him as a builder of clinical spaces devoid of human spirit, every decision apparently dictated by positivist German logic. On the surface his writings and works apparently confirm this, but a closer examination shows his interest in rational building was merely a method for revealing an elusive conception of spiritual truth.

In order to discuss Mies van der Rohe and his relationship with a material and spiritual duality, it is necessary to begin with a broader philosophical foundation. First, a brief analysis of Hegel’s aesthetic theory will reveal a central dilemma in the arts. Second, a look at the process of art, its conception from idea to manifestation, will demonstrate the difficulty of making ideas realizable. Finally, architecture, as it is articulated from the other arts, will demonstrate its abundance of real world constraints. These broader frameworks can then apply to the specific typological problem of the high-rise as tackled by Mies over the last fifty years of his career.

Material and Spiritual Philosophy

Art is the material manifestation of a spiritual conception. Reality is the filtering screen that limits the expression of invisible ideas. Filtered spirit reveals itself through the technology and ways of thinking as situated in a time and place: a landscape painting in the Middle Ages cannot utilize the yet undiscovered tool of perspective. For similar reasons, the medieval painting cannot be rendered on a computer nor convey industrial alienation; limitations of expression situate it in space and time.

Corporeal representation is inadequate in displaying the totality of a spiritual idea, regardless of philosophy or technology. The visible is a mere shadow of the idea, because one work of art is not a totality, but a symbol. The archetypal (or typological) reference is a method artists use to breach this constraint. However, any system of symbols is still a particular substitution for a universal notion. For example, a Roman bust can only capture the qualities of its subject through the medium of expression (stone), the skill of the artist and the limitations of its episteme. A bust is never meant to be a one-to-one representation of the person portrayed. It is understood symbolically. As Heidegger puts it: “The Idea ‘house’ displays what anything is that is fashioned as a house. Particular, real, and possible houses, in contrast, are changing and transitory derivatives of the Idea and thus belong to what does not endure.” The artwork is thus an incomplete realization (fig. 2).

The Process of Art

Art is limited in the transition from
the idea to the artwork. Ideas and their clarity are constrained by the artist’s cognition. This painfully obvious statement is necessary in noting that cognitive ability pre-screen an idea before it enters into representation. The representation process is furiously subjective: the artist’s tools, health, hand-eye coordination, workspace, and funds all limit a work. Any innate social, political, or economic conditions further thicken the fog. Thus, internal and external factors transform any objective aim of the artwork. This puts the above diagram into question: at what point before it is externalized is the idea compromised?

According to Hegel, art is a duality whose reconciliation between the opposing conditions of the spiritual and material creates truth:*

*A lack of balance between these two creates mal-formed material expressions. However (as post-modernity has taught us), incongruity between idea and expression can also teach lessons about harmony, such as in Peter Eisenman’s manipulation of the grid in his experimental houses.
...what constitutes truth is merely the resolution of this antithesis, and that not in the sense that the conflict and its aspects in any way are not, but in the sense that they are, in reconciliation.  

The Process of Architecture

A building is unique among all artworks because it must accommodate dwelling. Architecture must defeat gravity, maintain optimum temperature, prevent fire, and please the client. Constraints, therefore, define the built work.

Compared to painting, architecture encounters more problems on its voyage from idea to reality. The first filter of reality lies in the architect’s ability to represent the idea as it travels from sketch to plan to model. Representations are a reality, but they remain symbols for something not yet built. When the building is realized, based upon the drawings of the architect, the project is yet again filtered through a different set of demands. The idea is therefore compromised by both the ability of the architect to represent and implement his building. In fine art this third step exists on a much smaller scale and is limited, because the representation is the end result. That is why architecture, more than any other art, contains its identity through compromise, and the skill of the architect is determined by their skills of reconciliation.

In this regard, the architect’s skills are determined by their ability to conform their ideas within the limitations of the world. The idea, for its inherent success, must be consciously tempered by the real. Poor execution (if the project is intended to go beyond the drawing) results from not accommodating the demands of reality into the original idea. The more the disconnection from idea to reality, the more compromises accrue. Of course there are many unpredictable and uncontrollable factors in design. It is impossible to anticipate all contingencies in the realization of built work. An architect’s accumulated experience of limitations, and their ability to manipulate those limitations to bend to their will, allows for fewer compromises.

Ironically, the more an architect knows about the limitations of the real, the more the spiritual idea is allowed freedom. Expertise in materials, methods, representation, and consultant coordination, allows the architect a clearer field to imagine the possibilities of the spiritual realm.

The Development of Mies van der Rohe

Through his mastery of the built world, and his ability to think through fundamental ideas of spirit, Mies van der Rohe was particularly adept at creating architecture with a minimum of compromise. He achieved reconciliation between the material and spiritual. In doing so, Mies arrived at Hegel’s ideal of truth in art.
His mythologized material sensitivity stemmed from working at his father’s stone carving business as a teenager. Attending trade school further instilled the primacy of first-hand craftsmanship in the young Mies. His sense of integrity for both the materials and the craft required for assemblage directly addressed the real-life methods of making architecture.

This knowledge of the material world was conveyed by his masterful ability to draw. Drawing was important during his early years at the technical school, but it was perfected while working as a draftsman for a stucco factory starting at age sixteen:

“If I thought I knew how to draw before, I really learned now. We had huge drawing boards that went from floor to ceiling and stood vertically against the wall. You couldn’t lean on or against them; you had to stand squarely in front of them and draw not just by turning your hand but by swinging your whole arm.”

The act of drawing was literally strenuous work, and it reified the material reality required of building, which he carried with him throughout his career (fig 3).

Craft and drawing helped him make buildings, but they did not tell him how to think buildings. His initial flirtation with philosophy occurred by accident with the discovery of a philosophical journal in his desk drawer at an architectural office in Aachen. Beginning in 1912 Mies earnestly began his quest to uncover a deep architectural motive that would inform his work. This began after the failed project for Villa Kroller Muller, as well as the influence of mentors such as Peter Behrens, Hendrik Berlage and Alois Riehl. During a near decade-long building slump brought on by World War One, he slowly and earnestly scoured the work of many architects and philosophers ranging from St. Thomas Aquinas to Friedrich Nietzsche. By the early 1920s he had fully clarified his architectural mission: to create innovative modern architecture in contrast to his previous Schinkel inspired Neo-Classicism.

Mies’s mastery of craftsmanship, draftsmanship, and philosophy laid a foundation for practicing architecture that reconciled the inherent conflicts between the idea and the material.

An investigation of his skyscraper typology reveals this slow working through of a problem. From Mies’s first attempt in 1922 to his last built towers in America, a gradual refinement is evident. The idea fundamentally drives the process, but ideas can never fully anticipate the final outcome of a building. Therefore,
models and built works also become generators of ideas, because they bring to the fore problems that were not apparent during the conceptual process. Mies did not have all the answers right away, but he did have the perseverance and patience to work through problems until solved.

**Mies and the Skyscraper**

By the 1920s skyscrapers were ubiquitous in many American cities. Mies lamented their dishonest concealing of the steel skeleton structure with decorative motifs and traditional stone cladding, as practiced by Beaux Arts-trained architects. Instead of their irrelevant ornamental embellishments, Mies chose to use decoration to express his buildings structure. This is how Mies clarified the diagram of stacked towers. The path to this “honest” expression was not fully formulated from the outset. It took many years in the delimiting real world to refine and reconcile his buildings with his spiritual ideas.

His first attempt is the Glass Skyscraper of 1922 (fig. 4). This project never went beyond representation in drawing and model form. Therefore, it remained unresolved, and, if built, would have likely required changes on its journey to material translation. For example, Mies based the structural system on cantilevered concrete pads not yet developed (similar to the later column system of Wright’s Johnson Wax Building). At the time it is unknown how effective this system would have worked in a multi-storied building. Similarly, the glass facade, rendered as strips affixed to the model, seems fantastical.

Despite the purely speculative nature of the project, the model is still important in showing Mies’s methodology of capturing architectural essence. Through transparency, dematerialization and de-formation (found in the amoebous shape of the project’s footprint), Mies defined a fundamentally challenging new avenue of architectural expression. His radical rendering contrasted with the overtly real shapes of the adjacent small houses; the skyscraper transcends a dirty, solid, and grounded city. The tower
exists halfway between spirit and corporeality. Mies’s primary method for expressing spirit was literally to imbue the building with spiritual qualities by using glass to effect a distilled ethereality.

On the quest towards reconciling form with idea, Mies’s first built skyscraper, the Promontory Apartment Building in Chicago of 1947, reveals some of the problems architects face when attempting to stay true to their original conception (fig.5). From the outset Promontory was beset by compromises. According to Phylis Lambert, the building derived from a concrete skyscraper studio project by Joseph Fujikawa (fig.6) under the guidance of Mies. The project consists of a glass tower with exterior...
concrete columns, which step back as the height increases. The translation from this pure diagram into the Promontory shows that the built work was watered down. Due to code requirements, the concrete frame on the terminating sidewalls of the high rise was infilled with masonry. On the front facade, similarly cheap brick infill and conventional sized windows replaced desired floor to ceiling glass walls. Irregular lot size required projecting wings on the backside to increase usable space and natural light. The overall effect is clumsy and has little of the finesse his later skyscrapers achieved.

Regardless of compromises, the building manages to effectively articulate structure from infill, creating a diagram of construction technique. This honesty, albeit unpoetic, was in contrast to the arbitrary stylizations of many contemporaneous skyscrapers. Whether Classicist or Art Deco, skyscrapers from the same era tended to embellish an aesthetic thrust unconcerned with showing the skeletal method of construction.

With the Promontory Apartment Building, the spiritual idea of a pure skyscraper and its material manifestation did not achieve reconciliation, and therefore did not ring true. Compromises that occurred at the Promontory project inspired Mies to further uncover a truer spirit of the skyscraper. During the building’s construction Mies had his draftsman render a drawing of the building with steel mullions instead of the brick and glass infill of the built concrete facade (fig. 7). Amazingly, this rendering is of a project idealized ex post facto from its actual built condition. (It is reminiscent of Palladio’s purified drawings of his compromised villas.) With this new drawing, Mies sought to reveal the spirit of the high rise through a clear expression of its system of construction.

The idealized rendering of Promontory directly resulted in his breakthrough at the Lake Shore Drive apartments of 1948-49. Here the project was less hampered by compromise. The building became a diagrammatic representation of its method of construction. Steel mullions on the outside directly echoed the steel skeleton construction. Floor to ceiling glass prevented any interruption in the clear diagram of the construction frame. Paradoxically, the effect is expressionist and rationalist. In other words, a clarified, ‘honest,’ diagram was achieved by using the I-Beam (the building block for construction) decoratively. Lake Shore Drive effectively molted the concealing decorative facades that plagued skyscrapers from their beginning. The decorative use of expressive structure in the steel mullions allowed reconciliation between aesthetic and structural figuration. This was not the objective or goal of, for example, Art Deco. The ornament in Art Deco expresses the phenomenology of verticality for purely aesthetic affect, thus obfuscating the method of construction.
The rest of his career in high-rise design was a refinement on the discoveries at Lake Shore Drive Apartments. The main problem at Lake Shore was the presence of the column directly on the facade (fig. 8). This required every fourth window to read slightly smaller to accommodate for the added width of the column. The solution to this, as demonstrated in later projects such as the Seagram Building, the Chicago Federal Center, and the IBM building, was a slight extrusion of the facade from the column bays (as originally proposed by Le Corbusier’s Dom-ino frame but perfected by Mies in earlier projects like the Tugendhat House). This allowed complete uniformity of mullion spacing and a reading of the structure as articulated from the non-supportive facade skin. A clear idea is thus realized into a clear building. The inevitable friction that occurs on the journey from the mind to the real is minimized.

Ironically, his most famously spiritual expression of “skyscraper”, The Seagram Building (fig. 9), is realized in the most sumptuous materiality. Bronze cladding, travertine floors and walls, and amber tinted glass render the skyscraper sensual. Mies’s mastery and respect for materiality allowed him the sensitivity to imbue luxurious materials with an otherworldly, spiritual, quality. As discussed earlier, one way a building can appear spiritual is through ethereal distillation. This dematerialization contrasts with the heavy corporeal essence of the surrounding stone buildings. The edification, through expen-
sive material rendering of “common” industrial age components suggests a deconcealing of technological essence, which frames the circumstances of built works in the twentieth century. Materials rendered in careful proportion, arranged in a clear structural diagram, express the ideal spirit of skyscraper in physical form. Therefore, the building has one foot in reality and one foot in the spiritual realm. It is a specific representing a universal, and it is a reconciliation of objective and subjective aims in architecture.

Louis Kahn complained that Mies was not telling the whole truth (and therefore not revealing essence) by concealing shear bracing in the Seagram Building. Kahn writes:

*Take the beautiful tower made of bronze that was erected in New York. It is a bronze lady, incomparable in beauty, but you know she has corsets for fifteen stories because the wind bracing is not seen.*

But this is not full concealment; it is expressive rationalism. Mies was a great editor, and he was able to discern which “honest” aspects of the project actually diverted attention away from a distilled aesthetic diagram. In the same way Picasso uses the phrase, Mies “lies to tell the truth” because the poetry of a building that attempts to reveal an epoch must distill out certain “honest” components that confuse the larger idea* (fig. 10). In the same statement, Kahn also declares the building should

*To illustrate this concept of expressive rationalism, Figure 10 shows how the 50X50 house would have looked had it been truly rationlized.
fig. 10-1: 50X50 House by Mies Van Der Rohe. 1950-51 (Project model photo collage.)

fig. 10-2: The addition of edge columns give further support to the roof and facade. They also define and confine the rectangular volume.
fig. 10-3: The addition of shear truss members further supports the roof and columns. They also obscure the view and introduce the diagonal, which does violence to the atmosphere of the space.

fig. 10-4: The final step is the addition of a hipped roof (actually taken from Frank Lloyd Wright’s Winslow House) to protect from rainwater. The house is now a silly parody of itself, but it is also hyper rationalized. One could go further and add sunshades, or plaster the walls and insert regular double hung windows.
have thicker columns at the bottom. Mies, of course, began this way with the stepped concrete columns in the Promontory Apartment Building, but this detail was simplified in his later towers.

It is worth noting that model iterations were one of the most important steps on Mies’s journey from idea to built form. Mies used the model in all of his later skyscrapers to refine his ideas. Models were placed within a larger context to show relationships between building and their surroundings. He would spend hours analyzing proportions and contextual relationships (fig. 11). The model would teach him things that wouldn’t have occurred to him in his mind alone. As his idea was modified, new iterations were made until they were perfected. This method reveals that Mies was highly aware of, and concerned about, context. The model tempers duality, remaining a symbol for both the idea and the final built work.

**Conclusion**

Beginning with the Glass Skyscraper Project until his death in 1969, Mies spent fifty years in the investigation of a single typology. The investigation was not laden with detours, but by a dogged determination to refine a single idea. The reconciliation between the ideal and the real was explored and manifested slowly through other typologies. This analysis could have easily explored, for example, his clear-span typology (on it’s journey from Crown Hall to the Cantor Drive-In Restaurant to his Convention Center project), but the high-rise shows most lucidly a focused path. This clear path took decades of careful thought and implementation. Through this slow revealing, a refined skyscraper results, and conflicts between its realization and idealization are minimized. In this age obsessed with constant innovation and fresh fashionable product, it is worthwhile to reconsider the importance of methodical refinement.

The essential, in all the arts, reconciles the conflict between the material and spiritual with very little lost in translation. Mies van der Rohe was a master architect because he had the patience to achieve a de-concealing of essential architecture.
Bibliographical Notes:


4. The content of art is the Idea, and... its form lies in the plastic use of images accessible to sense.

Hegel. *Introductory Lectures on Aesthetics*. page 76.

5. His (spirits) medium of existence is therefore essentially inward knowledge and not external natural form, by means of which He (spirit) can only be represented imperfectly, and not in the whole depth of His (spirits) idea.

Ibid. page 78.

6. The work makes public something other than itself; it manifests something other; it is an allegory. In the work of art something other is brought together with the thing that is made... The work is a symbol.

Heidegger, Martin. From *The Origin of the Work of Art in Basic Writings*. page 146.


8. For the modern moralistic view starts from the fixed antithesis, of the will in its spiritual universality to its sensuous natural particularity, and consists not in the completed reconciliation of these contrasted sides, but in their conflict with one another.

Hegel. page 59.

9. Ibid. page 60.


11. Ibid. page 14

12. ibid page 15

13. ibid page 17

14. ibid. page 65


18. Unsatisfied with Promontory as it was being built... Mies took a momentous step and asked Goldsmith to draw the building with projecting steel mullions.

Ibid. page 359.

19. This revealing gathers together in advance the aspect and the matter of ship or house, with a view to the finished thing envisaged as complete, and from this gathering determines the manner of its construction.

Heidegger, Martin. From *The Question Concerning Technology in Basic Writings*. page 319.

2. Battles Within Rationalism: Program and Structure
Introduction

Nested within the rational and spiritual dialectic lies an internal rationalist tension: Autonomous rationalism, as a design methodology, is in constant dialogue between two conflicting priorities; structure and program.\(^1\) (This is a sub-duality which is not as strong or clearly as dialectical as other fundamental dualities discussed in other chapters).

Both of these rationalisms potentially contradict the motivations of the other.\(^*\) Especially dualistic is the ways in which these pragmatic priorities are expressed. Mies favored the expression of structure over the expression of program, as some critics have pointed out. His high-rise facades are never an apparent expression of program, but a unified grid whose regularity is determined by the division of columns. Other architects who say they favor the expression of program over structure are conversely inhibited by the opposing demands of structure. Structure and program constantly inform each other, preventing a purified rationalist reading of any design, yet there is a desire by Mies to reconcile this duality through distillation.\(^**\)

Mies’s Rational Expression

Ironically, much of Mies’s work, although apparently derived by structural means, is simultaneously determined by program. This programmatic motivation for structure goes back to his earliest avant-garde

\(^*\) Autonomous rationalism does not deal with externalities that effect rational decisions such as site context, the placement of views, solar orientation, or the need for privacy.

\(^**\) This essay is not a Foucauldian deconstruction of the subjective nature of rationalism, rather it is an analysis of the motives of architects working under the premise of rationalism.
projects in Europe. In the text for the Concrete Office Building of 1922-25 Mies states:

Functional division of the workspace determines the width of the building: 16m. The most economic system was found to be two rows of columns spanning 8m with 4m cantilevered on either side. The girders are spaced 5m apart. These girders carry the floor slabs, which at the end of the cantilevers are turned up perpendicularly to form the outer skin of the building. Cabinets are placed against these walls in order to permit free visibility in the center of the rooms. Above the cabinets, which are 2m high, runs a continuous band of windows.2

Program determines the structural bay, and it also determines the aesthetic outcome of the facade with the exaggerated large spandrels that conceal filing cabinets (fig. 12). Program thus obfuscates the clarity of
the structure. With a 2m high spandrel, program gets in the way of other considerations, like views. (Although, like the interior atrium of Wright’s Larkin Building, perhaps the limited view is created to keep workers free from distraction.) Most of the glass tower proposals in the next ten years eliminate the filing cabinet facade, allowing floor to ceiling glass to fully reveal structure.

The grid dimensions at the Lake Shore Drive Apartments were determined both through structural and programmatic optimization as Franz Schulze states:

...the 21-foot version [structural bay] was selected for the combination of structural efficiency, accommodation of the residential layout, and precise fitting of buildings to site. (Two bedrooms just squeeze into a 21-foot bay.)}
Similarly, the 24-foot grid for IIT was originally considered, above other considerations, because of its configurability between classrooms, laboratories, and offices (fig. 13). Program is not blatantly expressed, but it is the invisible motive for the expressed structure.

In Mies’s clear-span typologies structure is prioritized in expressive terms, and it is optimized towards its own need to support. Yet the program and its requirement for minimal interruption is what necessitates the free-span to begin with. This shows the inescapable interconnectivity between program and structure, and in some cases, the lack of ease in determining which informs which.

In many cases Mies’s clear-span typology is hard to justify. Programmatically, column free space isn’t necessary in many of the buildings where this typology is implemented. As Schulze points out in the design development of the Chicago Post Office; “the switch from clear span to grid required almost no change to the interior layout, again demonstrating that Mies’s clear-span concept was, for practical purposes, a conceit.”

(This, of course, is a pragmatic criticism of a purely spiritual intention.)

At the 50X50 House project the genesis of the idea stemmed from a daring structural diagram of four columns at the midpoints of the four faces of a square roof. This structural
motive is reinforced by the unlimited interchangeability of floor plan layouts that were proposed \textit{(fig. 14)}. It is unclear why the program of “house” requires the complete banishment of interior structure, nor does it necessarily inform the reason for such an inefficient structurally acrobatic feat. Columns at the midpoints lack structural optimization, and a completely open plan in a dwelling is not necessarily an optimization of program. This failure of clarity weakens the project. The Farnsworth House contained similar faults, but they are forgivable when one is reminded of the house’s scale and use as a weekend retreat for a single person.

Mies, in a sense, struggled against program his whole professional career. He viewed it as something that limited a building as it progressed through time. Hugo Haring’s contrasting organicist programmatic specificity was too constraining. Mies fundamentally understood technological ages are in constant flux. Program is temporally fluid, and only truly effective as a suggestion.\footnote{Structure, on the other hand, creates a framework for current and future activity. It is open to change and provides for the universal need of mere enclosure. Structure is, therefore, prioritized over program.} This leads ultimately to his abandonment of program in the conception of universal space. Ironically, time has revealed Mies’s universal spaces were too immaculately designed to allow for much variation in program. A lack of programmatic constraint
can also perversely prevent programmatic freedom. In the end, Mies emphasized the structural quality of his rational decisions, while suppressing the role that program played in his buildings. Yet there is an unresolved tension between these dual rationalist agendas that informs and strengthens his work.

**Conclusion**

This conflict between program and structure is potentially resolved in the use of the free-plan at his Museum for a Small City, a project that arrived at the hinge-point of his career, between his more avant-garde European work and his more classically oriented American Work. His Museum for a Small City project:

...conceived as one large area, allows every flexibility in use. The structural type permitting this is the steel frame. This construction permits the erection of a building with only three basic elements—a floor slab, columns and a roof plate.⁷

Here the duality between structure and program reaches full distillation. The separation of the two rationalities eliminates any ambiguity of priority. Program and structure operate under autonomous agencies and do not interfere with each other. Program and structure are thus suppressed; no clear emphasis is placed on either. The imposition of architecture fades, and the Museum becomes a tabula rasa for human activity.

The structural feat required of the clear span typology focused too much emphasis on heavy-handed structure even if the intent was to liberate program. The rigid grid of structure in determining program layout at the IIT buildings presents a problem as well. The distilled separation of this tension with the free plan at the Museum for a Small City allows reconciliation between the conflicting agendas of autonomous rationalism.
Bibliographical Notes:

1. Eisenman, Peter. in Post Functionalism from Architecture Theory Since 1968. page 236

2. MvdR as quoted in Neumeyer’s, The Artless Word. page 241


4. ibid. page 197

5. ibid. page 346

6. We have to know that life cannot be changed by us. It will be changed but not by us. We can only guide the things that cause physical change.

MvdR from Conversations with Mies van der Rohe, page 26.

7. Mies as quoted in Neumeyer’s, The Artless Word, page 322
3. The Duality of Tradition and Innovation

At the still point of the turning world.
Neither flesh nor fleshless;
Neither from nor towards:
At the still point, there the dance is,
But neither arrest nor movement.
And do not call it fixity,
Where past and future are gathered.
Neither movement from nor towards,
Neither ascent nor decline.
Except for the point, the still point,
There would be no dance,
   and there is only the dance.

T.S. Eliot. (Burnt Norton)

The artist is not a free agent obeying only his own will. His situation is rigidly bound by a chain of prior events... The conditions imposed by these prior events require of him either that he follow obediently in the path of tradition, or that he rebel against the tradition. In either case, his decision is not a free one...¹

George Kubler
**Introduction**

An analysis of Mies van der Rohe and history reveals a constant acknowledgement of historical precedence, ironically even during moments of iconoclastic rupture from that past. In this chapter, a look at the philosophy of the perception of the past (historiography) will create a framework for seeing the ways in which Mies’s relationship with history changed over three clearly different “historiographical” phases of his work.

**The Hourglass of Time**

The present moment conceptually sits atop the pyramid of history (fig. 15). All that has gone before has taken us to this specific and inescapable height. Our history thus influences our language, our thought processes, our interactions and our views on art. Even iconoclastic acts are inextricably bound up with the past: therefore, nothing can be truly unhistorical. Acts of the arbitrary, as in the Dadaist movement, occur because prior conditions allowed the formulation of a-historical thinking to emerge.* It is impossible to see how much the bias of our own time affects us until hindsight creates a framework to see the conditions of the situation in a different perspective. Even then, the study of the past becomes biased by the specific thought processes of the present (according to Foucault’s epistemological unconscious). This established the field of Historiography.

*In fact, the break from history arose from a direct response to World War I, one of history’s worst calamities. Per this example, a historical event ironically creates an event of historical breakage. Dadaist art is something the artist George Grosz suggests is a protest “against the world of mutual destruction.”
Referring back to figure 1; the future is an inverted pyramid above the aforementioned pyramid of the past. The present moment, similar to the pinch point of an hourglass, concentrates pressure from the future and releases that pressure onto the pyramid of the past. Our lives in time are thus rendered as fluid. Inevitability and uncertainty are ceaseless consequences of the future. It is both something to fear and the very hope that promises to unshackle us from the imprisonment of history.

**Architecture and History**

Architects are obsessed with both the past and the future. The preoccupation with the past is expressed through tradition. The slow formulation of a style is shaped over long periods. A vocabulary is developed, refined, perfected, and then imitated. This approach is the model for classicism, which is broadly defined as architecture that is based on tradition. This usually entails Roman and Greek traditions but also includes any past historical style that was reinterpreted from the Renaissance to the Neo-Classical.

Only in recent history has architecture deviated from the classicist model. Certain master architects of the twentieth century proposed a break from tradition by synthesizing a modernist architectural language based on industrial age technology and positivism. Modernism is thus defined as a conscious break from classicism, and a general view that imitations of past styles do not reflect current conditions nor contain meaning for modern civilization.

On the other hand, Peter Eisenman echoes Kubler’s sentiment concerning the inescapability from the past in his assessment of Modernity. He saw Modernism as a search for objective truth, which superseded a theological truth sought by Classicism. However, this was not a break from the motives of architecture as it always existed: positivism merely became the new deity. The new way proposed by modernism, in the end, was not the great break from the past as initially thought.

Despite its similarities to classicism, architecture in the twentieth century also had projective aspirations. An architecture that looked forward promised the manifestation of a stable, strong, future. Inevitably, projective architecture becomes utopian in nature, therefore looking to past utopian conceptions. This contradiction reinforces the inescapability of history as it informs traditionalist, and even iconoclastic, visions.

**Mies van der Rohe and History**

The architecture of Mies van der Rohe and its relationship with history can be delineated into three phases, which have unclear edges and strong overlaps. In the first phase there is a traditional vernacular style largely indebted to the German nineteenth century vernacular and the architect Karl Friedrich Schinkel. The use of
Schinkel as model produces in Mies’s early work a proto-modernism in the play between symmetrical and asymmetrical volumes. The second phase is an apparent modernist break from tradition. This development arose from Mies’s embrace of technological and ideological innovations. The third phase is a return to certain classical motifs in distilled form.

An investigation into these three phases reveals less difference between them than previously thought. In the classicist phase there hides a proto-modernity. In the modernist phase there lies a hidden classicism, and in the final phase there lies both a hidden modernism and classicism. This apparent duality between the past and future will reconcile itself in the concept of zeitgeist; an attempt at a definition and transcendence of time itself.

**Phase I: Neo-Classicism**

With his first project, the Riehl House of 1907 (fig. 16), Mies van der Rohe displays in full his first style as an architect. Indebted to traditional architecture, the house appears on its surface to be a traditional vernacular cottage of little note, indicating nothing of future genius to come. Lines are clean, windows and gables are arranged symmetrically, and a series of pilasters frame the walls. But, as Fritz Neumeyer points out, the building already begins to play games between traditional and innovative practice in the tension between a sober symmetry and a playful asymmetrical side facade:

*The Riehl House is, in its overall appearance, dualistic. It presents two faces: in the frontal view it presents itself as a longitudinally oriented bour-
The same game between formal traditional symmetry and informal asymmetry can be seen in the Werner House from 1913 (fig. 17). Here the Riehl House hindsight ascribes a perceived proto-modernity. In its historical context, the Riehl House is only certainly influenced by Peter Behrens. Even Schinkel’s villas, Neumeyer claims, were introduced to Mies in 1910, three years after the Riehl House was completed (although it is doubtful, given Schinkel’s prominence, that Mies had no knowledge of Schinkel at this time). Despite this critique, the ‘proto-modernist’ facade of Mies’s first project still manages to transcend its time and helps inform his work to come.

The problem with history lies in our manipulation of it; by projecting our knowledge of a project’s future influence, we apply certain powers to the project that were not necessarily there when it was created. For
again a low covered pergola path append a traditional vernacular German house. This appendage willfully undermines the symmetrical character of the house proper. Proof of this is furthered by Mies’s non-articulation between main house and pergola; the pergola appears to smash into the side of the houses rear. The use of a single colored plaster between the two volumes furthers this tension between them as entwined yet separate volumes.

There is of course overlap between this first vernacular phase of Mies’s work and his later explorations in Modernist form. Mies continued to design conservative houses well into the 1920’s (perhaps to pay his bills) but his real passion lay in the paper projects of the time.

**Phase II: Modernism**

The first mature phase of Mies’s career is a development towards modernist principles. Mies sought to separate his current work from archaic ways of building and thinking by embracing new technology and positivistic thought. He expressed frustration with the dishonest way new steel frame skyscraper construction was being covered up by cosmetic traditionalist stone facades:

> Only skyscrapers under construction reveal their bold constructive thoughts....when the structure is later covered with masonry, this impression is destroyed and then constructive character denied.7

With the Glass Skyscraper project of 1922, context models demonstrate the past way of building. They are shown in the model photographs as dank, depressing masses gathered at the foot of the skyscraper. Mies’s project, in contrast, suggests a progressive way to build; one that is utopian in its promise of fresh air, clean views, and an end to poor living conditions. It is not of the present but of the future. A search for precedents or distilled classicist elements in this project is futile. It is Mies’s most iconoclastic project, and he never repeated its organically strange shape again. The Glass Skyscraper is one of his only projects that does not embrace the duality between innovation and tradition. It is pure innovation, in defiance of tradition. But, as we have learned before, a break from history is never fully possible (Kubler).

This apparently clear break from classicism is the common theme of Mies’s middle period of the 1920’s. With the Brick Country House project, asymmetrical walls that tenuously hold rooms together express a purely de Stijl conception of infinite spatial possibility. It is Frank Lloyd Wrights pinwheel plan taken to an extremely distilled level. Space is not bracketed in the same way as Classicist architecture. But, as Fritz Neumeyer points out:

> Despite this imperative, one always finds discrete reverberations of humanism and traces of a secret classicism, even in Mies’s radical designs of the period: for example, in the way in
which the floors of the concrete office building step out a little one above the other, thereby adding some sort of entasis to the wall.....With such refinements, Mies contradicted his own crude logic of positivistic form.  

When analyzing Mies’s Modernist work, one must search for the classical in the modernist. The spatial formula realized in the Brick Country House is repeated in the Barcelona Pavilion, The Tugendhat House, and the House for a Bachelor (fig. 18). With these three projects, the use of an ordered structural column grid allows for a free placement of the facade and interior walls. If the columns and the roof are isolated from this free-plan, we see a parti of pure symmetry and regularity. In all three examples the columns are arranged in symmetrical rows. The roofs all have equidistant overhangs that project from the column grid. Symmetry and regularity -- distilled principles of classicism -- are in contrast to the fluid movement that defines modernist space. These contrasting operations occur simultaneously. The unnoticing free plan defiantly slides past the columns as they attempt to bind the space. The duality creates a tension: a tension that operates between timelessness (the grid) and ephemeral temporality (the perception of movement in the walls). The duality could also be read as a tension between static arrival (the grid) and fluid becoming (the free plan).

However, this duality is not evenly balanced: through material expression Mies emphasizes the liberated free-plan over the rationalist columnar grid. The hidden classicism of the symmetrical columns at the Barcelona Pavilion are suppressed as much as possible with the use of chrome covering, creating a literal camouflage. The cruciform shape is also dematerializing. The combined effect of material and shape undermine the corporeal presence of the column. Thus, the symmetrical structural grid -- the most pragmatic part of the project -- is given spiritual qualities. To complicate this ambiguous reading further, Kenneth Frampton points out that the fluting, although a dematerialization, is also allusive of the “varying flute-widths of classical columns.” Both a reification and a denial of the past are simultaneously present.

The progressive free plan retains the most visibility, but within the free-standing walls there are also allusions to classicism in the use of symmetrical bookmatching of marble. Bookmatching is not a new technique and Mies would have certainly been aware of it in Schinkel’s Altes Museum. This ambiguity between old and new is further mirrored in the dialectic between the traditional stone clad floor and the futuristic smooth white ceiling. This complicates the duality: Distilled elements of free-plan and grid are undermined by material techniques, rendering a strange swirl of ambiguous allusions to the past alongside projections of a machinic, dematerialized future.
fig. 18-1: Barcelona Pavilion (showing distilled roof and column grid.)

fig. 18-2: Tugendhat House.

fig. 18-3: House for a Bachelor.
Phase III: Distilled Classicism

The Modernist project is never abandoned in the final phase of Mies van der Rohe’s career, but something different certainly occurs between his mature work in Germany and his mature work after he moved to America. In America, a distilled classicism is suddenly and distinctly felt. The use of symmetry, seriality, and rigid proportion (qualities described earlier as distillations of classicism) restricted a purely Modernist reading of his late work; the American works seems much more conservative. Symmetry by its nature dictates the free plan and suggests a motive beyond pure functionality. Crown Hall at the Illinois Institute of Technology presents a project of classical proportioning, repetitive bays, and a symmetrical plan. These all work to give the project a certain formality that prevents it from being read as an iconoclastic modernist building. Crown Hall cannot be read as purely projective, but neither can it be considered retrospective. It reads as a skeleton, because classical motifs in the work and its materiality are distant echoes of literal classicism. Distilled classicist elements bind it to history. Simultaneously, distilled modern ‘almost nothing’ aesthetics keeps it free from the past. These elements work in a duality: the project transcends and concedes to both the past and the future. The project thus achieves timelessness.

Timelessness becomes the obliteration of fashion or trend, a desire for architecture to stay relevant beyond its contemporary conception. But Mies was also concerned with expressing the appropriate spirit of his own time. Through the concept of zeitgeist he found a way to resolve this apparent contradiction. This term can be defined as anything that attempts to both define and transcend the spirit of its own time. This paradox is elaborated further by Peter Eisenman:

*The illusory timelessness of the present brings with it an awareness of the timeful nature of the past time.... Thus, in the zeitgeist argument, there will always be this unacknowledged paradox, a simulation of the timeless through a replication of the timeful.*

Eisenman is stating that the only way to the timeless is through the fulfillment of the possibilities of one’s own time. The architecture of Mies’s late career, therefore, in its mixture between distilled classicism and modernism, is part of a larger ambition to fulfill the zeitgeist by defining and denying its state of present-ness.

A reading of Mies’s American work as conservative would not do justice to its verve and spirit. In the same way a distillation of his European work reveals a hidden classicism (in the uniformity of the column grid and roof); a distillation of his American work reveals a hidden de Stijl, avant-garde, residue. Colin Rowe famously downplayed the symmetrical character of Crown Hall by showing that the symmetry does not read that way:
...once inside, rather than any spatial climax, it offers a central solid, ...an insulated core around which the space travels laterally with the enclosing windows...in spite of the centralizing activity of the entrance vestibule, the space still remains, though in very much simplified form, the rotary, peripheric organization of the twenties, rather than the predominantly centralized composition of the true Palladian or classical plan.\footnote{12}

In this same spirit, if one isolates the plan into one half of its symmetrical whole, the project once again reads as a de Stijl composition that is about the free walls gliding through space, oblivious to the ordering structure (fig. 19). The use of symmetry (which I argue against Rowe is still legible in the space) and its mirroring ef-
flect stifles the otherwise spontaneous effect of the partition walls. The constant double reading of the space as symmetry and asymmetry creates a tension in the work that keeps it paradoxically rooted and futuristic.

This paradox is carried to the exterior where there is also a competing tension between symmetry and seriality. The uniformity of the elevation into a repetitive series analogizes the building as an industrial age mass-produced machine. This is a nod to the modernist innovations of Fordist streamlined production. Window bays are completely uniform around the building (even the outlying bays which inflect beyond the final structural column). The symbolic lintel line of the doors is carried across the entire perimeter skin diffusing any possible ceremonial function at the point of entry. The mullions vary only where they absorb structure, but this is only hierarchichal within the series, rather than inflecting towards the symmetry of the whole. The large externalized beams all appear to be of uniform thickness even though they change as they get closer to the center of the building; but this is hidden from view by the roof.

Symmetry, of course, plays the opposite role by referencing a Schinkelesque past. The only external attempt at neo-classical hierarchy other than the overall symmetry is at the entrance patio and the modest front doors. But these efforts are overwhelmed by the emphasis on seriality. Just as Rowe demonstrated with his analysis on the interior, symmetry does not perform in a Palladian way on the exterior (fig. 20).

The ghost of Mies’s avant-garde past is evident in his treatment of individual buildings in an urban fabric. At IIT and Lafayette Park, individual buildings may be symmetrical and have a distilled classicism; however, the cluster of buildings do not adhere to a beaux-arts classical axial plan. Instead they read in a de Stijl man-
This free arrangement of individually symmetrical buildings is almost universal in his skyscraper projects. Lake Shore Drive Apartments, Chicago Federal Center, and the Toronto Dominion Centre, all follow the model of autonomous distilled classicist buildings arranged in a looser de Stijl urban composition. The avant-garde motif found in the urban design prevents the buildings from becoming tedious and oppressively totalitarian.

**Conclusion**

Mies van der Rohe was aware of his inextricable relationship with the past. On a surface level the three phases of his work demonstrate a traditional phase, a modernist phase, and a distilled synthesis between these two in the final phase. However, a deeper search into his early work reveals a proto-modernity; a deeper search into his modernist work in Europe reveals a 'secret classicism,' and a deeper search into his apparently more rigid classicist work in America reveals a persistent modernism. The uncovering of these opposing conditions suggest that Mies’s career between Europe and America is not as differentiated as one may have thought; there is merely a shift in emphasis. This may be due to a newly considered solution to the problem of zeitgeist. The American work acknowledges the past further, and in so doing (in conjunction with the use of timely methods and materials of construction) allows the work to transcend time while also expressing the essence of its present-ness. Tradition and progress collaborate in conjunction with each other, expressing a dynamic, dualist, tension. This assessment makes it clear that the American work was not a step backwards towards conservative classicism (as many believe), but a progression, which absorbed and reconciled disparities between tradition and innovation.
fig.21-1: Rhythm of a Russian Dancer by Theo van Doesburg

fig.21-2: Barcelona Pavilion

fig.21-3: Lafayette Park site plan fragment.
Bibliographical Notes:


3. [Foucault] looks for what he calls the ‘episteme’, that is, the largely unconscious assumption concerning intellectual order that underlie the historical states of particular societies...These conditions lie below perception, they are not always explicit, so that the episteme is a kind of epistemological unconscious for an age.


7. Quote found in *Mies in America*. Lambert, Phylis editor. page 361

8. ibid. page 76


10. ibid.


4. Protection and Connection

Only now can we articulate space, open it up, and connect it to the landscape, thereby filling the spatial needs of modern man.

*Mies van der Rohe*

The men of old were born like the wild beasts, in woods, caves, and groves, and lived on savage fare....

*Vitruvius*
Prologue

Early mankind’s realization that their bodies were inadequate at withstanding the harsh climactic realities of nature led to the utilization of an externalized second skin for protection. This second skin manifested itself in the concept of shelter, initially found and soon created by humankind as a protection from the elements.

Isolation from the environment was an undesired effect of shelter. In being sheltered, mankind simultaneously required a visual connection to the outside. The connection was both pragmatic and spiritual: Pragmatically, early humankind needed to see perceived threats, such as predators or the weather, to assess whether they could venture beyond the shelter. Spiritually, connection gave agency to both a defiance-from and longing-for the outside. Nature is Dionysian in character; it is contingent and predatory. Shelter is the Apollonian order that frames nature.

The effects of this duality are seen in Le Corbusier’s sketch of the Pompeian Forum (fig.22), which renders columns as rhythmically measuring the undulating landscape beyond: Contingent nature is framed by a hardened symbol of permanence. An Apollonian architectural framing thus controls the Dionysian landscape. The view of nature is also an embrace expressing the desire to return to a state that is now lost by our separation and demarcation from the wilderness.

This duality reveals an inversion of its original purpose: The very act of protection forms the opposite need for connection. Architecture serves both needs in opposition simultaneously. A gradient exists in every built work between these two antipodes. An ideal building either reconciles these competing desires or exploits the irresolution to achieve vibrant tension.

Mies, Architecture, and Nature

The work of Mies van der Rohe demonstrates that the new technology and methods for creating architecture in the twentieth century allowed for new ways to perform the protection~connection duality. From his very first project, the Riehl House of 1907 (fig.23), a deliberate blurring of lines between outside and inside is visible. The sloped facade of the house has a basement level wall that extends beyond the house and into the landscape, breaking the clear line where house begins and ends. Foliage smatters itself across this wall, which reads simultaneously as an act of invasion and blockage of nature.
fig. 23

Protection ~ Connection 61
from the house. Fritz Neumeyer elaborates on this wall further:

*The wall extension defines site and place with a single, deliberate line. It furnishes the needed contrast to the plastic volumetricity, articulates the immediate surroundings, and responds to the wooded hillside on the opposite side of the lake. Mies designed a cadence that, with its far-reaching spatial rhythm, freed the architectural elements from their respective limitations only to release them into a larger context of transcendence.*

Above the extended wall, an enclosed porch creates a transitional space somewhere between inside and outside. If one is entering the house, the porch operates as a rehearsal space towards a fully interior condition, and vice versa for those exiting the house.

The prototypically modernist themes present in the Riehl House become explicit in the 1923 project for a Brick Country House *(fig. 24).* Here the walls extend into nature well beyond the edges of the house, and appear to fly past the drawing’s edge. As in the paintings of Mondrian, the line beyond the frame of the representation implies infinite extension. The extended walls are often situated perpendicularly to a full height glass wall, allowing for total visibility of the brick wall as it extends outward. The glass wall also provides an interior spectator with an uninterrupted view into nature. Glass and brick walls act as distilled elements that both connects-with and protects-from nature. On first reading the glass walls are the elements that link and the brick walls are the elements that shelter. However, it is the extended brick walls that act as the connecting device: Through extension, the opaque exterior wall (something that has throughout history served as a filter from nature) is activated, allowing it to join with nature through an imitation of the infinite horizon.

Roofs and floors also overhang beyond the borders of the house. The cumulative effect of these tricks is the creation of an agitated or ambiguous edge between interior and exterior. The house simultaneously thrusts outwards towards nature and pulls nature inside the confines of the house. The shape of the house restricts a clear reading of it as an autonomous object separated from nature. Instead, the walls and facade act as sliding planes arrested for a brief moment in time and on the verge of total dissemblance.
Wolf Tegelhoff points out that an exterior reading of the house is completely different from the interior reading just described. From the inside, the walls read as constantly moving planes that direct the free flow of space from one room to the next, but from the outside the house looks rather conservative and closed off. As the elevational perspective emphasizes (fig. 25), the walls often terminate at corners on the outside, resulting in a predominately opaque form.

Furthermore, the heavy vertical mullions of the windows, along with their shading, reinforce the presence of the glass (its solidity as a material, rather than as an ephemeral bridge to the exterior, is reified). The house thus reads from the outside as an autonomous form. The extending walls, which reach beyond the limits of the perspective, ineffectively create an ambiguity between inside and out. Tegelhoff suggests that the roof overhangs are the only things that accomplish this blurring. This contradiction between the reading of interior and exterior:

...first appeared to derive from the respective representations of the perspective and the ground plan, but we now recognize that it is not a matter of inadequacy of representation but something deliberately intended.

Mies exploited differences willfully in order to create simultaneous, yet mutually exclusive phenomenon. The need for shielding and privacy is satisfied on the exterior, while the need for outside linkage is satisfied inside.

The de Stijl aesthetic is elaborated further in Mies’s courthouse projects of the 1950’s. In these examples the extension of high walls are relegated to the perimeter. The walls close in upon themselves blocking all views except that of sky, providing necessary privacy in a postulated urban fabric (fig. 26). The boundary of the architecture thus extends beyond the interior space. An exterior courtyard is folded into the composition of the entire building ultimately creating an ambiguity between inside and out. The courtyard performs as another room in the house, but without a roof.
To extrapolate Tegethoff’s earlier analysis of the Brick Country House further; the exterior street condition of the court-house projects appear even more severely cut off from their urban environment. They read as autonomous, hermetic, and unwelcoming additions to the city.

With the Hubbe House project of 1934 (fig. 27), a hybrid response addresses a context that is both urban and private. The perimeter walls extend beyond the house in a similar fashion to the exterior walls of the court-house projects, however, at one moment, where the private view is desired, the wall is broken, and a framed view of nature beyond is visible. The opening in the wall also responds to program as it occurs at the location of the living room. Walls remain enclosed and read as a private courtyard at the locations of the bedroom. Glass is treated traditionally (punched windows in an opaque wall) on the public front facade. The back facade opens up to full height glass walls. The public entrance fa-
cade thus remains private, while the family’s activities remain sealed from view.

The increased use of glass in Mies’s work required this type of distillation between a public and private facade. (This separation didn’t occur at the Brick Country House because the house did not have an apparent front or back.) The front public facade operates as a private and even back-of-house condition. Only at the actual back does the house open up and fully express itself. The public facade becomes marginalized, in a near reversal of the traditional house type. This hermetic public front is a trope of modern architecture widely present in the Usonian House prototype of Frank Lloyd Wright and the Nazi era houses of Hans Scharoun.

The effect of the extended wall in the Hubbe House is elaborated further in the collages of the Resor House project from 1937 (fig. 28). This time architecture is reduced to a framing device for nature. The frame (like the colonnade of the Greek temple mentioned earlier) is represented as a permanent ordered device that, in its act of enframing nature, controls it. The architecture reads as permanent, ideal, and abstracted, while nature, in contrast, reads as mutable, fallen, and real.

This timeless framing of contingent nature is proven phenomenologically
effective at the Farnsworth house. On the inside, one can see the trees blown by the wind, but the wind is silent. The thrill gained from this surprising effects reveals something about humanities relationship with nature: One gains a perverse pleasure in viewing a rainstorm without actually getting wet, or watching a blizzard with hands over a warm fire. It is the satisfaction of conquering the thing that seeks one’s destruction.

With the Resor and Farnsworth houses the overwhelming view of nature marginalizes the architecture. The house is distilled to such a degree it is removed of its own flavor. Nature in its overwhelming variety injects the architecture with mood. Architecture thus behaves like tofu; flavorless yet highly absorbent to that which it comes into contact with.

The Resor House also emphasizes the importance of architecture’s otherness from nature. It stands as an object that is clearly not nature and cannot be confused by anyone to be anything but something made by a rational, thinking mind. Thus mimesis is shunned by Mies as a dilution of architecture from its human origins. Protection and connection, then, cannot be effectively rendered when the edge between inside and outside is unclear.

**Architecture and the City**

In the American city the protection and connection duality no longer pits building against nature, but building as an interior condition rendered against an urban exterior. The effect then, is not about a return, embrace, or longing for nature, but a connection (and simultaneous removal from) the city itself. Mies uses several devices in his skyscraper projects to gradually transition from urban exterior to building interior. The Seagram Building (*figs. 29*), being the prototype for his high-rise work, will serve as the example. A plaza wedged between the city and street edge separates the building from the normal condition of the surrounding buildings. It becomes an interior of absence in contrast to the thick wall of skyscrapers, a wall that creates a street condition evocative of a cut valley. This otherness is further elaborated by K. Michael Hays as a spiritual disconnection from the city, a move that protects the spirit of the built work:

*The simultaneous production of difference and integration with the social city, this impossible third term or “bound duality” is what the Seagram plaza as built tries to effect. It is a cut-out in the city, a literal nothing endowed nevertheless with a positive presence through its material and dimensional precision.*

The covered space between the outside plaza and the lobby is the next step in this gradual transition, a condition Mies uses in all of his mature high-rise projects (*fig.30*). The hovering canopy that juts out from this space is also viewable as a beckoning-in when in the plaza, as well as a thrusting-outward when inside the lobby. This
fig.29. Density diagrams. L-R: Lake Shore Drive Apartments, Seagram Building, Toronto Dominion Center.
space refers once again back to his first project, the Riehl House. It is a zone neither in nor out; a rehearsal space that transitions between either conditions relative to departure or arrival. With the huge expanses of glass, the lobby itself, though effectively an interior condition, still has the aura of an exterior space. The break from the outside is limited, but it is violently cut off when one enters the dense elevator core.

**Conclusion**

Mies van der Rohe exploited the tension between protection and connection from very early on in his career:

*Only now can we articulate space, open it up, and connect it to the landscape, thereby filling the spatial needs of modern man.*

His attempts to objectively work with the available technology at hand allowed him to rethink this relationship, open it up, and further agitate the edge between inside and outside. This dynamic tension, while bringing a building in further connection to nature, also managed to serve as a reminder of how cut off and abstracted we really are from it in the modern epoch.
**Bibliographical Notes:**


3. Ibid.


5. Mies Van Der Rohe. 1933.
5. Programmatic Distillation and the Grounding-Flotation Duality

Two souls, alas are dwelling in my breast,
And either would be severed from its brother:
The one holds fast with joyous earthy lust
Onto the world of man with organs clinging;
The other soars impassioned from the dust,
To realms of lofty forebears winging.

Goethe’s Faust
Introduction

Programmatic distillation is an important duality in the work of Mies van der Rohe and it addresses many other dualities in the process. It allows for the flowering of a universal competing desire in architecture between grounding and flotation. Grounding addresses one’s desire for a building to root itself into the earth, both as an acknowledgment of its corporeal nature, and a reassurance that it is stable and will not fall down. It reveals a positivist truth of facts, one that participates in the world of reality. Flotation is a direct break from the stifling effect that gravity puts upon patrons. It attempts to defy the temporal and corporeal effects of reality, to reach transcendence, and arrive at the possibility of an idealized metaphysical truth.

The effect of flotation occurs where program is concentrated into dense cores. These dense cores are heavy both programmatically and materially. Opacity, heaviness and dense program provides contrast with the transparency, spaciousness, and lightness of ambiguous program. Each allows for the presence of the other, and their proximity to each other strengthens their opposing intentions.

This duality crystalizes as a result of technological innovations during the era, including large plate glass manufacturing and lightweight steel and concrete construction.

Heavy and Light Mies

Heaviness and lightness are deftly contrasted in the Concrete House project of 1923 (fig. 51). Concrete as a material reads heavy, yet Mies’s dematerialization of the corner with ribbon windows and cantilevered concrete roofs undermines the weightiness of the material. This is reinforced by the basement clerestory windows, which stand in as both a negation of the floor plate and a dematerialization of the traditionally heavy corner.¹ (again, an undermining of the expected structural nature of concrete). This is tempered by elements that reinforce the heaviness of
the concrete, such as the terminating wall of the living room with its anchoring fireplace, and the heavy solid plinth, which rests directly on the earth.* Program distillation is harder to assess because there are no surviving plans of the house. Based on his other house designs of the period, however, it can be assumed that program is not as clearly separated between servant and served space as is found in his American work.

At the Seagram Building, dense program is concentrated into heavy cores clad in travertine (fig. 32). At the cores this effect is heightened by half submerged columns, dramatic lighting and the suppression of openings. This allows for its inverse, the loosely programmed lobby, which is transparent and light in effect. The one allows for the other, and their mutual presence strengthens the quality of each. This distillation of specific programs is pragmatically motivated. Bundled utilities at the center of a high-rise are economical, which allows for uninterrupted exterior walls and programmatic freedom. This is not a new notion for steel framed high-rises (the old fashioned structural perimeter walls of the Monadnock Building being an exception), which had already been around for over sixty years, but through an elimination of ornament, and consequently, the use of totally glazed facades, the contrast achieves potency.

The concentrated distilled core already exists in Mies’s earliest high-rise projects. At the Friedrichstrasse,

*These effects are of course borrowed tricks from the prairie school work of Frank Lloyd Wright. At the Heurtley House in Oak Park, for example, the heavy oversized base board and the exaggerated arch entrance conveys heaviness, while the ribbon windows just below the roofline reinforce the flotational quality of the roof.
three identical cores of vertical circulation surround a hollow central space. For the most part, cores are suppressed and not used as opaque foils to the overarching transparency of the work. The absence of the cores in the Glass Skyscraper model proves this. Therefore, the duality is not exploited yet.

The rejection of heaviness in these early projects has a polemical dimension as well. The dissolution of mass for transparency is a critique of an abstract notion of previous power structures, which gained authority through obfuscation (a lack of metaphorical transparency). A glass tower also absorbs and participates with the inclusive city rather than sheltering itself from it in the way the solid surrounding buildings do.

At the Berlin National Gallery, program distillation is clarified sectionally. A heavy, opaque plinth concentrates specific functionality, making room for the clarified yet ambiguous program of the pavilion above. The plinth is a grounding element that ties it to the earth and the real (fig. 33). Its allowance for function suggests mundane human activities (a weakness considering its use for the display of art). In contrast the pavilion above floats and thus loses its corporeal presence. Activity is given a spiritual gravitas and ceremony. This is akin to the Parthenon atop the rock of the Acropolis: The lofty floats and touches the sky, while the real cleaves to the earth, reinforcing gravity’s constraint.

**Shortcomings**

There are instances in Mies’s architecture where the duality does not appear in equilibrium. This results in a building that appears either too heavy or too lithe. At the Farnsworth House the central core is negated by the open...
space below it. At Philip Johnson’s (albeit inferior) Glass House, the core acts as an anchoring device simply because it both directly touches and is of the same material—red brick—as the ground. At the Farnsworth, this reading only works when inside the house, but it is undermined by the dematerialization of the core with its light colored wood paneling and the extended walls, which bookend the fireplace and the kitchen. Combined with the white painted steel and the pale travertine floor, nothing in the Farnsworth House has an aesthetically heavy effect. Other than a programmatic distillation, the house does not participate in this particular dialectical reading.

At the Cantor Drive-In project (fig. 54), the truss holding up the roof appears too heavy, even if its intention is to read at the scale of the freeway. The massive truss undermines the floating roof from the exterior and makes it appear as if it is pinned down by the weight of the truss. From the inside, where the truss is not visible, this heaviness is not present, but that
also means there is a lack of contrast for all the light elements on the interior. The delicate proportioning of the externalized roof structure at Crown Hall and the Manheim Theater Project do not oppress the overall composition.

**Conclusion**

Program distillation was a constant element in the work of Mies van der Rohe, yet the transformation of this duality into the grounding~flotation duality did not always occur. In the end, Mies was more interested in flotation. The heavy element in his work was always an inferior backdrop for the “almost nothing” aesthetic that he favored. But it was necessary as an element of sharp contrast to heighten the effects of its inverse.

**Bibliographical Notes:**

6. Glass: Clarity and Obscurity
Introduction

Through the heavy use of glass, Mies van der Rohe -- perhaps accidentally -- discovered a new phenomenological duality, which is different from all the dualities previously discussed. A phenomenological duality exists as a result of the uncontrollable effects of light upon a building. Light both reveals and conceals contingent upon specific environmental effects, such as time of day, weather conditions, and the various shading and reflections of surrounding objects and surfaces. Mies’s acknowledgment of these inevitable effects prevents a simple platonic reading of his work.

Late nineteenth century structural advancements allowed building facades to finally open up to the outside. Exterior walls -- previously opaque due to load bearing requirements-- were now made of lightweight steel, which allowed large expanses of glass to infill between minimal structure. Glass could operate as a screen that protects one from outside climate and smog while also maintaining a vista.

Mies’s Phenomenology of Glass

In two of his earliest projects, the Friedrichstrasse and Glass Skyscraper of 1922, Mies van der Rohe playfully explored the new possibilities of glass. Mies learns large amounts of glass create a paradoxical phenomenon of transparency and high reflectivity. Mies states that the irregular (un-Miesian!) shape of the Glass Skyscraper project is due to careful calibrations of the reflective effects of a glass facade.¹ The material’s ambiguity is not only acknowledged but exploited. Glass operates simultaneously as something that reveals and obfuscates, and its ability to do either is contingent upon the time of day, weather, and subject’s location. Shadows are downplayed and replaced by reflections: One mysterious phenomenon replaces another.

Several different photographs of the Glass Skyscraper model reveal the aleatory phenomenology of glass. The building is shown transparent in Figure 4. Floor plates and structure are clearly revealed. A low shot of the model (fig. 35), shows the opposite; the building is opaque due to many fragmented reflections of clouds, which gives it a marble-like quality. Only on the extreme edges does the glass remain transparent.

The phenomenon of ever changing clouds and seasons reflected onto the facade suggests Mies was striving for an architecture of open spirit, removed from the physical reality that it contrasts in the context models. A third photograph (fig. 36) reveals the shimmering, glowing effects of the building at night. This night view exploits neither transparency nor reflectivity. Instead the building is pure light shining upwards, illuminating the darkened city. Building here becomes an illusion, a dream, and a spectre from the future.

Still other phenomena of transparency are revealed in the rendering tech-
Glass Skyscraper Aleatory Phenomena

82 Clarity ~ Obscurity
nique of the elevation drawing (fig. 37). Here the building does not give off a quality of transparency; instead it appears as an undulating wave, abruptly sheared off at the top, suggesting a truncated form of infinite height. The effect of the glass is that of a waterfall or a folded curtain.

Model photographs and renderings all reveal Mies full knowledge of the dual effects of glass. His subsequent career is a grappling between this material and its ability to both reveal and conceal. The expressionistic beginning to his career cannot be ignored in light of his later objectivist aims: Glass can never be about total clarity for Mies even if he states this as his purely objective architectural aim in texts.

An equally important project in revealing the dual nature of glass is found in Mies’s Barcelona Pavilion of 1929 (fig. 38). Here glass is once again used experimentally. Many different colors and techniques of glass usage in the project suggest Mies was reveling in its quality to both clarify his distilled structure and, at the same time, undermine reality by washing it in ambiguous reflections that destabilize a proper reading of clear space. This destabilization is reified in the supplementary materials of the project, all of which contribute to the ambiguation of space. The chrome columns and mullions dematerialize in reflection. Marble wall surfaces are polished to a mirror sheen. The very act of bookmatching the marble creates a “reflection” within the material itself. The rippling reflections of water are the last step in creating a space that ends up distilling itself right out of reality. This virtual space acts as if it were a reflection or mirage, ready to disintegrate at any moment. At its center, a translucent
glowing glass core ominously suggests some contained secret or spirit, obfuscated from our view: Contained within the building is an ungraspable mystery.

This all works in complete distinction to a reading of the building as open and clear (clarity being the assumed intentional effect of heavy glass usage). In contrast to its surrounding context, and due to the fact that there was no actual barrier between inside and out, the Pavilion can be objectively assessed as an object of total clarity. This, however, can only be a platonic objectivist view. Once the phenomenological effects previously discussed are experienced by a spectator one can assume Mies’s non-totalized subjective intent.* The effects, therefore, could not possibly be lost on Mies, because he utilized them like a master magician would utilize his illusions. Proof of Mies phenomenological intent can be seen in an interior rendering produced for the building (fig. 39). The drawing reveals a reverse negative effect upon walls and surfaces as they pass through the glass wall. The mirror-

The Barcelona Pavilion introduces us to a building that visually reveals more than any precedent, yet ironically conceals in a whole new fashion, not through opacity, but through reflectivity, which destabilizes space. As Rebecca Comay puts it:

...transparency that might have overcome the difference between inside and outside......manages somehow to do precisely the opposite.*

The phenomenon of glass thus prevents a pure Hegelian reconciliation of dualities; instead Mies had to find power in the tension between opposites.

Glass is ubiquitous in the American work of Mies van der Rohe. His philosophical ideal of a pure objective architecture, embraced more so in this latter stage, emphasized glass as an object that allows for a clear diagram. But the lessons learned from his earlier projects show that Mies was well aware of the ambiguous effects glass could play. This casts his American work in a different light if we are to assume that the dual effects of clarifying and obfuscating glass are present

*These phenomenological effects, of course, paint Mies as a post-modernist.
in the work. Mies absorbs both clarity and obscurity into his more distilled and “conservative” American work.

In the Toronto-Dominion Centre glass oscillates between clarity and obscurity contingent upon viewer location and time of day (fig. 40). During daylight hours the exterior glass appears opaque and reflective from the outside, and completely transparent from the inside. At night the effect is reversed and the building glows, revealing its interior functions. From the interior, the glass at night appears as an opaque mirrored surface. The glass acts as a two-way mirror where the observer on either side is aware that they are potentially being watched or are watching someone whom does not know they are being watched. This effect is a potentially unsettling aspect of heavy amounts of glass. (Consider watching a horror movie while spending the night at the Farnsworth House!)

The effect of voyeurism in glass skyscraper architecture is a side effect of clarity that Mies may have found unsettling precisely because his buildings were about silence. Silence produces tranquility, but voyeurism perverts and disrupts this peace of mind. A solution for this problem, found in almost all of his American work, is the use of blinds to cover the glass as desired allowing for user freedom. Blinds allow for the tailoring of views and privacy.

Glass also allows the absorption and collapse of the surrounding environment:

...transparency is here mixed with reflection and the compression onto the surface of the glass of the distant view of the surrounding environment, all of which produces a visible mark of the natural and social worlds ‘out there’ of the everyday existence in all its particularity that Mies’ work has been supposed to deny.²

Hays shows that glass binds the work to its context. Mies was definitely aware of this when he aligned the entrance of the Seagram Building with the New York Racket Club by Mckim, Mead and White across the street (fig. 41).
**Conclusion**

Glass allows for a building to take on an ephemeral spiritual quality that removes it from the historically solid city. This effect has been lost somewhat in the wake of a glass skyscraper boom, instigated ironically by Mies himself, placing his skyscrapers in a field of self-same reflective glass boxes. However, photographs of the time, and the modeling of solid context in his earliest Glass Skyscraper project, show the pristine towers in extreme, lightweight, contrast to the heavy, soot-ridden city. Conversely, glass in its reflective mode, absorbs that same city, mirroring it back onto itself as either a celebration or some form of critique. The effect for Mies is a camouflaging of his work. At night, however, the dark masses of stone leviathans were outshone by Mies’s glass psalm.

**Bibliographical Notes:**

1. *I discovered by working with actual glass models that the important thing is the play of reflections, not the effect of light and shadow as in ordinary buildings.*

   MvdR. 1922


3. Hays, K. Michael From *The Mies Effect in Mies in America.* page 695
7. Freedom and Constraint
DUALITY RELATIONSHIPS

CONSTRACEINT  FREEDOM

APOLLONIAN-----------------------------------------DIONYSIAN
MATERIAL-------------------------------------------SPIRITUAL
TRADITION-----------------------------------------INNOVATION
PROTECTION-----------------------------------------CONNECTION
GROUNDING-----------------------------------------FLOTATION
CLARITY--------------------------------------------OBSURITY
STRUCTURE------------------------------------------PROGRAM

HOMOGENEITY----------------------------------------HETEROGENEITY
OBJECT---------------------------------------------SUBJECT
CLOSED---------------------------------------------OPEN
SYMMETRY------------------------------------------ASYMMETRY
SERIALITY------------------------------------------ANOMALY
CLASSICAL------------------------------------------ROMANTIC
GREEK----------------------------------------------GOTHIC

MIES VAN DER ROHE
KARL FRIEDRICH SCHINKEL
GOETHE

fig. 42
Overview

The work of Mies van der Rohe is a collision of many dualities. There is a constant struggle for freedom and constraint as carried out in the idea of ordered fixity and loose flow. Freedom and constraint is a dialectic that is applicable to all previously mentioned dualities in Mies’s work (fig. 42). Dualities always express themselves in terms of an element of disciplined control and an element breaking that control. Therefore, freedom and constraint can be analyzed as both an autonomous duality and an overarching duality within which all other dualities are nested.

The Well-Tempered Free-Plan

The most predictable reading of this duality is in the free-plan. In the Barcelona Pavilion the columns measure the space evenly while the walls float within the zone of the grid. Flowing elements prevent the fixed elements from becoming too oppressive, and fixed elements prevent the flowing ones from losing intentionality. Furthermore, the solid stone ground appears fixed and anchored while the white plaster roof appears to float. Each, in contradistinction, gives further power to the other through contrast (as Tigerman states, “white is best seen in the presence of black”).

There is only one instance where a “free” glass wall acknowledges the symmetry of the columnar grid (the wall nearest the reflecting pool with the famous Kolbe sculpture), yet the uniformity of the spacing of free walls from the columns suggests a freedom that is still informed by the grids constraints.

One of his most successful unbuilt projects that addresses this fixity and flow while playing games with the free-plan is the Hubbe House (fig. 43) as it is analyzed by Peter Eisenman. He points out that symmetry is introduced in the column grid, yet this symmetry is simultaneously reinforced and undermined through various other elements in the house, such as furniture and partition walls. The fireplace that separates the dining room from the living room “is asymmetrical about the vertical axis of the bay but symmetrical about the horizontal axis.”

The placement of the living room furnishings, dining table, and fireplace opening undermine one symmetry while accentuating another, resulting in a complex acknowledgement and indifference toward the column grid. The column grid is also arbitrarily present and missing depending on maximized aesthetic effects (fig. 44). Eisenman reveals this when mentioning the one stray column towards the bedroom. An extrapolation of the grid through the rest of the house shows both acknowledgment and ignorance of the grid. The west wall of the house aligns with the grid, as does the solid wall to the east of the dining room. The east wall does not, and there are many other instances where, had the grid been extended, the columns would have intruded into the middle of rooms or in windows.
fig. 43

fig. 44

92 Freedom ~ Constraint
fig. 45

fig. 46

fig. 47

Freedom ~ Constraint 93
In the concurrent Ulrich Lange house project (fig. 45), the column grid is nearly absorbed by “freestanding” walls. This creates a scenario of incidental and isolated columns, which do nothing to elucidate a unifying grid matrix. Mies deconstructs the ordering grid, creating a fragmentary reading of the columns and strains the dialectic between freedom and constraint. This creates a delightful ambiguity. Furthermore, the barest sketching of the grid allows the columns to act as autonomous features in a space, rather than contributors to a larger objectivist matrix. An extrapolation of the grid reveals a close relationship between the placement of walls and windows and the grid (fig. 46). The revealed columns also have an apparent relationship with the spatial flow of the house, from entry court through to the dining area (fig. 47). The columns, therefore, act as nodes about which flow occurs: Elements of fixity (columns) ironically act like autonomous markers in the free plan, reversing their traditional usage.

Mies’s least successful buildings occur when fixity and flow are in disproportion. The Brick Country House is, on first glance, his freest project because it lacks a limiting site or columnar structural matrix. However, the lack of columns suggests that the walls are structural, which hinders their impression of spiritual fluidity. If a regularized column grid were introduced, the walls would clearly be released from any roof supporting obligations, and thus delivered from any notions of fixity (fig. 48).

There are several examples where structural order overpowers other elements. Most of the buildings on the IIT campus besides Crown Hall are fixed within their 24-foot grid (fig. 49). Unlike Crown Hall or the Farnsworth house, there are no corner bays that protrude beyond the ordered grid. The buildings thus read as classically contained.* There are little, if any, elements of de Stijl ordering, which Mies constantly used as a device to suggest infinite boundaries for his buildings. On the inside, partition walls line up with the grid and therefore do not break from the order. The walls of the lecture hall, where the diagonal wall is introduced, rests framed within the bays of the column grid as if it is under containment, attenuating any power it may have gained by disobeying the grid. The free plan is effectively suppressed.

Dynamism is allowed in these building in the negative space of the exterior corner detail, which helps dematerialize the box and allows for a reading of discrete facades. The asymmetrical placement of the classroom buildings on the site also

*Although one could argue that the symmetry of Crown Hall, regardless of its inflected protruding bays beyond the primary structure, keeps it classically fixed. The building reads simultaneously between fixed and flowing, and this irresolution gives the building power.
fig. 48. Brick Country House Speculative Grid by ARG.

fig. 49. Proposed Library and Admin. Bldg. for IIT.
The dominance of the structural grid is diffused in much of his later American work. The columned perimeter structure in the Post Office Building at the Chicago Federal Center does not read as oppressively as at IIT simply because of the immense size of glass expanses between columns, the high ceilings and the openness of the plan (fig. 50). The square footprint of the building does not suggest serial extendibility in the way that the buildings at IIT do. It classically contains space, but the generosity of that space liberates it from structural straitjacketing.

**Conclusion**

Each of Mies’s buildings can be analyzed in terms of this freedom and constraint dialectic. An inhabitant desires fixity to feel safe and connected with the earth, and they desire...
freedom to physically break from the constraints of gravity. Both -- in equilibrium or tension -- are necessary to give true power to architecture. Mies understood these competing necessities and attempted reconciliation through distillation.

Bibliographical Notes:

1. Tigerman, Stanley. Versus. page 146


3. ibid.
Conclusion of Part I: Mies van der Rohe and the Invention of Postmodernism

For the study of architecture in the twentieth century, it is pertinent to study Mies van der Rohe for one reason: distillation. The distillation practiced by Mies allowed architecture to touch upon its own essence and at the same time reveal its fundamental crisis: architecture cannot resolve itself from the inherently equal and opposing forces of the Apollonian and Dionysian.

The Apollonian is discipline and constraint in architecture. It is that which conforms to the laws of reality. The Dionysian is freedom; it rebels from reality in a bid for subjective, aesthetic, pleasure. The work of Mies is a constant back and forth between a disciplined clear structure of Apollonian constraint, which, conversely, allows for a Dionysian freedom of unadulterated open space. Through this freedom and constraint his architecture oscillates between the two opposing forces. These antipodes are simultaneously present in architecture and are in direct conflict with each other. But how does the profession resolve itself if its fundamental nature exists as a paradox?

Mies van der Rohe's attempt at an objective reduction of architecture to its essential character theoretically took architecture to its constructible, material and spiritual limits, thereby revealing “true” form in its own time. Mies thus defined modern architecture in the clearest possible fashion and showed how far the new method of building could go. Through a totalized revealing of architectural essence (operation between freedom and constraint), he painted architecture into a corner where further elaboration could only be labeled as a late style, one beyond refinement, turning towards indulgence, and thereby losing the power of an objective revealing of the moment's reality.*

It is a supreme irony that Mies's fulfillment of the Modern project created its very own dilemma. Mies created the conditions for post-modernism simply because the market of thought perfected by Mies in his modern buildings no longer had materials left to mine.

Postmodernity thus explored new and undervalued, even esoteric, niches of architecture, simply because these interstitial subjects of exploration were all that were left in a nearly totalized realization of a completely revealed architecture. But, postmodernity also explored the crisis of the fulfillment that Mies proposed, casting it into doubt, in effect slaying the dragon by removing its potency through relativization. The objective project was thus exposed as a subjec-

* The only original progress possible towards any objective revealing essence is through a complete change in circumstance brought on by a new epoch. This has arguably not occurred yet, but we are in transition, and thus confusion.
Conclusion to Part I.

Crisis, contradiction, and the simultaneous operation of opposing agendas, is revealed as the fundamental condition of architecture throughout history. The architect is either cast out into oblivion forever frustrated by the inability to resolution, or they embrace the contradiction and manipulates it for benefit. The embrace of contradiction is a post-modern idea that was revealed through the reduction of architecture as it was ultimately fulfilled by Mies van der Rohe.

Postmodern thought was already present in the contradictions that Mies’s architecture revealed through distillation. This is confirmed by his most famous idiom: Less is more. Distillation reveals multitudes of meanings and possibilities. Less could be more clarity or truth. Less could also be more questions that need to be answered about the fundamental nature of architecture. The idiom suggests both a promise of grander spiritual fulfillment and a clue into deeper, previously masked, problems at the core of architecture. The problem reveals itself in the contradiction of the Apollonian and Dionysian battle. If these are irresolvable, then architecture as an art will always compromise its fundamental principles simply because its fundamental principles operate in an antimonious “bound duality.”

One could also interpret this duality as a conflict of the material manifestation of spiritual objectives. It is impossible to express an idea through material means, yet this is the goal of art. Art and architecture thus operate as allegory; they remain poor substitutes for spiritual concepts simply because the distance between the idea and its realization enters into its own negation. In other words, the spiritual must pass through the material to manifest itself as an idea, but this very passing through compromises and places it no longer in a truly spiritual realm: it materializes the spirit. One could also argue that spirit can never be fully fleshless, simply because we would have no capacity to conceptualize it without some indirect material cues.

But what is architecture spiritually manifesting? Is it the elusive revealing of essential truth as it is embodied in its epoch? In an age where objectivity is ruled as difficult within a nearly totally subjectivized framework of vision and language, perhaps this is impossible.
..you don’t know how the others strive
To paint a little thing like that you smeared
Carelessly passing with your robes afloat,-
Yet do much less, so much less, Someone says,
(I know his name, no matter)-so much less!
Well, less is more. Lucrezia: I am judged.

Robert Browning, *The Faultless Painter*
1855.

Less is More.
*Mies van der Rohe*

Less is a bore.
*Robert Venturi*

More is more.
*Rem Koolhaas*

Yes is more.
*BIG*
History tends to kill nuance. In a thousand years -- though unimaginable to us now -- the various modalities of twentieth century architecture may prove hard to distinguish. The architecture of Mies van der Rohe is sophisticated and nuanced. He is timeless and universally communicative on one level, and tied to a very specific episteme on another: Specificity is easily forgotten and universality is easily simplified. His architecture is, therefore, susceptible to future historical reductivism.

Mies’s death in 1969 roughly coincided with both the peak of his influence and the hinge-point of popular dissent. Mies in the hands of populists (whom caught widespread attention by the early 80’s) such as Charles Jencks, Stanley Tigerman and Tom Wolfe, pilloried Mies and displayed him in the town square as a lesson of what not to do. His followers faired even worse, creating often-clumsy imitations of the Miesian model, because the facts of Mies were retained but not the poetics.

Beginning with a comprehensive biography by Franz Schulze there was a slackening of this reductive view of Mies. The work of historians and theoreticians in the late 80’s and 90’s painted Mies in a humanist manner, finding many subtle complexities and contradictions. They analyzed his personal life, relationships, philosophical readings, and various idiosyncratic obsessions that were previously de-emphasized (due to various agendas). As Rosalind Krauss points out,¹ scholars also began looking at the buildings differently: instead of focusing on the perfection of platonic forms they analyzed phenomenological effects in specific contexts, contingent upon subject and play of light. This complexification ironically postmodernized Mies, and cleared the way for a positive reintroduction of him in practice. Unfortunately, the incorporation of Mies into the contemporary scene has suffered from an isolationist reduction of one or two facets of his work. The lessons of the 80’s and 90’s historians were perhaps learned but not fully absorbed. It is possible enough time has gone by and the nuance-killing nature of history is already starting its work.

Mies will remain a part of architecture for as long as the profession exists, but the passage of time risks a leveling of the way he is perceived, resulting in a simplified extraction of his principles. The phrase “Less is More” (impressionable to multiple interpretations), will likely survive posterity, yet others, such as “Form is not the goal, but the result of our work”, may not. The convenient packaging of his aphorisms does little to prevent abuse.

Nevertheless, Mies’s architecture creates multitudes within its simplicity. His refined architecture potentially represents all things to all facets of discourse, past or present. A historian may fit him into nearly any of the compartmentalized “isms” and styles.
of history. Colin Rowe found Palladio in his work. Mies out-de Stijled de Stijl at the Brick Country House. When compared, for example, to a Romanesque Church Mies becomes both Gothic and High-Tech. When compared to the Baroque, his work may evoke a Romanesque barrenness. His architecture is stylistically multivalent, and thus constantly at potential of reevaluation or risk of reduction.

An analysis in further detail of Mies after Mies will reveal the multiplicity of Mies. He operated in dualities, but dualities accumulate to such a degree the system reappears as multiplicities. Therefore, this is not an abandonment of duality, but a look at the ways in which duality manifests itself in multiple ways through the lens of his critics.

The only appropriate method to tackle postmodernism is to focus on individual architects as they react to Mies. This is because each architect in the postmodern era has wildly differing agendas, approaches, criticisms and priorities. I am not including those architects whose work is a positive response to Mies, such as: Renzo Piano, Peter Zumthor, Norman Foster or Tadao Ando. The critics of Mies teach us more by problematizing his work. The chapter on Venturi is disproportionately large because it was the first major critique of the Modernist movement (and by default Mies), and the one that addresses dualities most fully.

1. Less is a bore. The Postmodern Critique from the 1960’s-Today.

The first era of Mies after Mies is the birth of the postmodern era, a rejection of many of the positivist utopian, and ideological components of modernism. The architecture of Mies stands as the most comprehensive representative of the modern movement. Robert Venturi bemoans the simple in his book Complexity and Contradiction, proposing instead an embrace of the complex nature of architecture, and a move away from platonic idealism towards an acceptance of the compromises of the real world placed upon designers. Many populist gentleman architects/critics contributed to a mass revolt against what they believed were the played out conventions of modernism.
Robert Venturi’s seminal book of 1966, Complexity and Contradiction in Architecture, is regarded as a watershed in the battle against modern architecture. His postmodern method embraced inclusion, irresolution, and conflict as positive elements of design. With his playful indictment of Mies van der Rohe in the famous phrase “less is a bore”, Venturi amassed many followers who declared a revolt against Modernism, and placed Mies at the center of the pyre. However, upon a careful reading, Venturi’s book demonstrates a true reverence for Mies’s work. Mies’s distillation allowed (both intentionally and circumstantially) a clear view of inherent, and perhaps irresolvable, dualities within architecture. Such dualities are explored in Complexity and Contradiction, manifested as both a “tension and balance.”

An analysis of selected chapters of Venturi’s book, including relevant examples from Mies, shows complexity and contradiction are present in the work of this canonized modernist. This inclusion blurs and enriches the borders between modern and postmodern.

2. “Complexity and Contradiction Vs. Simplification or Picturesqueness”

Venturi states that modernity is motivated by a desire to discover clarity and reduce ambiguity. He suggests this motivation is inherently flawed. Where modernists attempted to resolve dualities, the postmodernist cynically exploits the unresolved. The Apollonian/modernist objective of arrival and repose thus slips into the Dionysian/postmodern condition of searching and tension. In the unifying goal of expressing pure industrial zeitgeist, the modernist’s aims were focused. Postmodernity uncovered cracks in this unity, which subsequently led to the fall of Babel. This toppling created the diaspora of viewpoints in the 70’s and onwards.

Venturi acknowledges that an effective simplicity must stem from the knowledge of inherent complexity. A skilled architect sifts through the mud in order to create unity out of disparate elements. Many historical examples Venturi cites as complex are (in comparison to the raw data of design) ordered solutions to an intricate ocean of external contradictory pressures. Design legibility will always require much exclusion.

He rightly bemoans both false minimalism and false complexity. False minimalism refuses to acknowledge underlying complex issues. False complexity willfully introduces elements,
outside of necessity, that further confuse design. However, Venturi’s own work seemingly abounds in attempts at false complexity. The circumstantial and humanizing quirks that he finds in the architecture of the past is synthesized in his work. But the willful is not the circumstantial; Venturi’s architecture, therefore, doesn’t ring true (fig. 1).

4. “Contradictory Levels: The Phenomenon of “Both-And” in Architecture”

Venturi’s direct criticism of modern architecture relating to an “either-or” tradition of exclusion simply isn’t applicable to Mies’s work. Postmodernists reduced Mies down to his bare elements. He is labeled a pragmatist, and “reductivism” is used over the more generous word, “distillation”. However, his architecture is often “both-and”, and an analysis of duality in his work (as done earlier in part I) is proof of this. Moreover, Mies was aware and exploitive of these dualities. Glass is both revealing and obfuscating. Factory direct rolled steel details are both ornament and expression. His open flexible pavilions are both programmatically open and unaccommodating. Skyscraper plazas are both gestures of engagement and separation from the city (as are his plinths). Details both articulate a facade up close and bind a unified form from a distance. As Colin Rowe points out, Crown Hall is both hierarchical (a la Palladio) and de-centering.

5. “The Double-Functioning Element”

Venturi criticizes modernity for creating a generic language that addresses many functions, rather than one that emphasizes discrete programs. He uses Mies’s skyscraper facades as an example of programmatic universality, invariant to functional difference. Venturi makes some clear errors in judging the Seagram Building in this way:

Mies’s and Johnson’s Seagram Building excludes functions other than offices (except on the ground floor in back), and by using a similar wall pattern camouflages the fact that at the top there is a different kind of space for mechanical systems.

Obviously this critique is flawed. He contradicts himself immediately when making a concession to the accommodation of program in the ground floor and back of the house. He is also wrong about the mechanical floors: they are clearly different from the floors below because they don’t incorporate the glass or floor-plates. One could criticize the continuation of the
vertical I-beams as ornamentation, but this is a logical aesthetic move. As another counter, Mies expresses alternative program in a sketch of the Chicago Federal Center by lengthening, and exposing on the facade, the floor heights at the levels of the courthouse (fig. 2).

Venturi defines the double-functioning element as a detail or part of a building that serves multiple purposes. It is, therefore, not totally prescribed. The double-functioning element suggests something beyond pure essence; a stated goal of machine age modernists. However, Mies’s architecture of distillation required both excess and concealing in order to reveal aesthetic clarity. In his work there is excess in the material sumptuousness and ornamental detailing, and concealing in the suppression of shear bracing and mechanical systems. These adjustments demonstrate the priority of visual clarity over puritanical truth.

Venturi directly praises Mies for his use of the I-Beam as a double-functioning rhetorical element (decoration that reifies the process or intent of the building). This acknowledgement of complexity in the work of Mies dismantles the simplistic myth that Venturi’s book is a revolt against modern architecture. Modernity and postmodernity blur together in these moments of inclusion.


Venturi introduces the conventional element as something that breaks from orderliness and clarity:

*Meaning can be enhanced by breaking the order; the exception points up the rule. A building with no “imperfect” part can have no perfect part, because contrast supports meaning.*

As a literal critique: architecture is never totally perfect no matter what the goal of the architect is. All buildings are complex results of circumstance. But an intentional self-conscious break from order often reads as a transparent gimmick. These breaks from the rule must occur naturally and over time, otherwise they risk a failed potency.

As for the idea that “contrast supports meaning,” contrast can, and most often, occurs outside of the architecture. A building is in contrast
with the immediate: context, traffic, trees, and people, with their fashions and movement. People animate architecture; architecture cannot perform that way by itself. Architecture is further transformed by the phenomena of changing light patterns from day to night, which constantly modulates shadows and transparency. Mies also used sculpture as this, “contrast that supports meaning.” Calder’s Flamingo in the Chicago Federal Center Plaza reifies the orderliness of architecture, while the buildings reinforce the whimsical freedom afforded to sculpture (fig. 3). The contrast heightens the innate qualities of the differing arts and gives them renewed power. Clusters of citizens, on the plaza and silhouetted in the windows, give life to the building. Occupants and sculpture are ultimately the “artful discord [that] gives vitality to architecture.”

Venturi’s critique of the mundane element is valid when applied to Mies’s architecture. Venturi states that “Our buildings must survive the cigarette machine,” and this is sadly not true for Mies, as is jarringly demonstrated in a photograph of a barbershop in the old student building at IIT before OMA’s addition (fig. 4). This stripping down of architecture to the point that any foreign element is a threat to aesthetic intent is called to attention through the de-concealment Mies’s architecture provides: Less reveals more problems.
7. “Contradiction Adapted”

In his comparison between the Seagram Building and Kahn and Tyng’s project for a tower in Philadelphia, Venturi contradicts himself, but not in a good way. At first he criticizes modernism for operating too long under rigid rectangular floor plates. Kahn states, the Seagram Building “hides its corsets” by suppressing shear bracing. Venturi then points out that Kahn’s glorification of triangulation renders vertical circulation or occupiable floor space difficult. In one paragraph Venturi reverses his argument, and ends up dismissing his counter-example. Rectangular spaces and floor plates are not limiting; they accommodate the most versatile space for any program. The expression of shear bracing is often aesthetically violent and bulky. It also restricts views and spaces.

Exceptional conditions in Mies’s architecture are often expressed, but absorbed --through resolution-- into the larger whole. The regularized but gently curved plan of the Reichsbank project is an ordered solution to contextual circumstance (fig. 5). Similarly, the addition to the Houston Museum of Fine Arts gently curves to allow a connection flanked by the two angled wings of the old building. He creates order out of exceptional circumstance, rather than exploiting the exceptional, like Venturi would.

8. “Contradiction Juxtaposed”

This chapter discusses jarring contrasts between order and compro-
Violent adjacencies occur in Mies’s early revolutionary work not within the architecture, but outside it, in the contrast between building and context. Few instances in architectural history show as aggressive a contrast as the one between the Glass Skyscraper project and its immediate ‘traditional’ surroundings (Gehry at Bilbao is a comparable instance). Similar effects of difference on site occur throughout most of his career: the Reichsbank, IIT and its urban edges, and the Lake Shore Drive Apartments all have a contradictory relationship with their surroundings. Of course, when modernism caught up with Mies, and glass skyscraper imitations went up everywhere, the novelty of a crystalline tower among dank stone neighbors vanished.*

9. “The Inside and the Outside”

Here Venturi criticizes the recently liberated dialogue between inside and out initiated by modernism, and, instead, stresses the differences. He argues, in the end, that the “inside is different from the outside,” and the exploitation of difference creates powerful tension. He espouses an ordered facade that conceals interior complexity, similar to a geode’s inner crystals. The “crowded intricacies within a rigid frame,” as discussed in the example of the Villa Savoye feels arbitrary considering similar things occur in many other modernist precedents. The high brick walls of Mies’s courtyard house projects hide an otherwise glass walled house. This is due to the need for privacy in

*In an ironic twist, when the whimsical and heavy stone clad AT&T tower by Philip Johnson was built it looked like a violent contrast next to its serious neighbors of steel and glass (fig. 6).
an urban residence. Mies doesn’t pursue stark differences that contrast inside and outside where not required; his architecture is unconcerned with novel surprises. The interior of the Farnsworth House is revealed outside because it is detached from an exposed urban environment. Privacy is afforded through arboreal remoteness.

However, revealed interior on the exterior through the heavy use of glass does not equalize inside and out. Outside, the house barely registers within the overwhelming visual, aural and olfactory stimulus of the surrounding context. The glass reflects the trees, river and sky, further negating the houses presence. Inside, nature is framed and captured in silence behind the glass, which flattens and reduces nature to a saturated visual sensation. Any expectation of the interior as revealed on the exterior is quashed when nature is framed on the inside in this fashion. “Inside is different from the outside.”

And why shouldn’t our architecture remain opened to nature when privacy is not a concern? Venturi mentions that the foundations of architecture were due to fortification for military protection, however, he fails to acknowledge that the openness of “glass houses” (even if they are ultimately utopian) might indicate a healthy and peaceful democracy. Allusion to fortification reintroduces fear into discourse.

Venturi endorses a disconnection between exterior shell and interior articulated space, which, he contends, enriches space, creates difference and allows for dynamic interstitial circulation spaces on the interior. This occurs multiple times in the works of Mies van der Rohe, particularly in his open pavilions. His famous Concert Hall project collage of 1942 shows a complete separation from outside factory scale shell, and interior curvilinear auditorium (fig. 7). This theme is carried out further in his project.
for the National Theatre in Manheim, and the famous sketch of an auditorium, simply showing a square with a squiggly shape hovering on the inside. This sketch is eerily similar to Sketch D in Venturi’s plan diagrams for this chapter\textsuperscript{17} (fig. 8).

Venturi would counter this defense of Mies by saying that an effective duality only occurs through a permeability between the container and contained object:

\begin{quote}
The ‘utility core’ of Mies or early Johnson is not relevant because it becomes a passive accent in a dominant open space, rather than an active parallel to another perimeter.\textsuperscript{18}
\end{quote}
Yet permeability occurs in the concert hall project collage. It also occurs in the semicircular dining niche at the Tugendhat House: the niche simultaneously expresses enclosure and embrace due to the large missing portion of the cylindrical shape. This cylinder, inserted in the columnar grid of the free plan, creates numerous incidental poche spaces (what Louis Kahn would call “bad spaces”). Whether Venturi would classify the dining wall as an accent does little to diminish the experiential ambiguity it creates between inside and outside.

Venturi also quips that the Seagram building ignores the city by detaching from it as an autonomous object: “the building which is an isolated pavilion...
rather than one which reinforces the street line has become the norm.”

However, as K. Michael Hays points out, the Seagram Building is not simply an autonomous removed element from the city. Its retreat from the street edge both detaches and invites the city in. The creation of outdoor space in the plaza allows a moment of repose in the solid wall of skyscrapers. This encourages social gathering, which is the opposite of disengagement. Therefore, disconnection from the city, strategically considered, can create connections. The Seagram also has a clear front and a back on the ground level where it most counts (in the same regard as Venturi’s example of the PSFS building). As they ascend upwards, why do skyscrapers need a front/back difference like Venturi suggests? They are not encumbered by a need for literal urban connection; they are detached from those constraints when they rise above the street. A comparison of skyscrapers with Baroque low-rise buildings simply lacks validity. Most bell towers (those elements most akin to proto-skyscrapers) yield undifferentiated facades on all four sides, including many examples Venturi uses in this chapter.

This front and back on the ground floor at Seagram’s is rare for a Mies skyscraper. Frontality is relative in most of his towers. His usual configuration, such as at the Federal Center in Chicago, is to place towers around a plaza. Depending on approach and entry to the buildings, the front facade becomes the one first encountered, whether it is from the plaza side or the street side. Effectively, a lack of frontality does not prevent the building from participating in an interesting, complex or engaged relationship with the city. On the contrary, this frontal ambiguity suggests complexity and contradiction.

10. “The Obligation Toward the Difficult Whole”

Renaissance and Baroque Unity:

Venturi describes the “difficult whole” as those buildings that create unity through inclusion rather than exclusion. In this chapter he is describing (in Wölfflin’s terms) the multiple unity of the Renaissance and the unified unity of the Baroque.

But an architecture of complexity and contradiction also embraces the ‘difficult’ numbers of parts—the duality, and the medium degrees of multiplicity...this is an architecture which exploits the duality, and more or less resolves dualities into a whole.

The exploitation of duality operates between peaceful resolution and/or unresolved tension. Resolution as a goal is not different from the goal of modernism. Tension through the unresolved is the apparent desire of postmodernists (but perhaps of a later ilk, i.e. Eisenman in the 80’s), but Venturi, surprisingly, is concerned with unity here. He wants the duality to remain resolved. He wants Baroque unity over Renaissance unity.
The rest of the chapter defines duality simplistically, merely referring to a facade, plan, or work of art that is literally split down the middle. This limits his examples more or less to the play of symmetry. Citing Sullivan’s Farmers’ and Merchants’ Union Bank (fig. 9), he states that the bilateral duality of the entrance is resolved in the upper arch, creating unity through difference. But is it resolved or in tension or is it both, simultaneously?

Venturi introduces the term “inflection” to describe an element in a building that contributes to the symmetry of the “difficult whole,” but when isolated is asymmetrical and dependent upon the rest to create unity. Of course Mies van der Rohe did this constantly in his symmetrical buildings. Crown Hall has minor flanking outer bays that project beyond the structure. These extra bays are only resolved when reading the whole. When isolated they are without aesthetic (and rational) logic. The same thing occurs with the cantilevered bays on the two ends of the framing structure at the Farnsworth House. It is also evident in the off-shooting minor roof bays of the Berlin National Gallery, the Cantor Drive-In Project, and a dramatic early iteration of the Federal Savings and Loan Association of Des Moines (fig. 10).

At the Berlin National Gallery Mies would argue the cantilevering bays were an optimization of structure. Yet, at Crown Hall and the Farnsworth House, rationalism cannot explain the outer bays, which reach beyond the primary structure. Clearly, aesthetic effects in service to overall unity were the primary goals. This reveals the work is biased by a subjective auteurism.

Granted, these examples lack the multiple unity of Baroque as Venturi’s examples show, but they are not without inflection. These inflected touches contribute to a complex reading between parts and the whole.

**The Problem of Asymmetry:**

Venturi barely mentions how unity is created through asymmetry. In describing Gaudi’s garish dressing table at Casa Guell, he merely states that asymmetry is a series of hyper inflections that (subjectively?) create unity. If the rules of asymmetry are found in a consistency of intention,
Robert Venturi

fig. 10 Federal Savings and Loan Project by MvdR. (Flanking bay inflections)

fig. 10 Fire Station No. 4 by Robert Venturi. (Flanking bay inflections)
and a sum-total balance that occurs when all parts are together, then one missing part would effectively suggest disunity. This is easy to spot in symmetrical compositions: if any part is missing, the symmetry, and thus the unity, is broken.

So, in what ways do Mies’s early de Stijl plan compositions hold up to the concept of unity and inflection? All parts in an asymmetrical composition would technically inflect towards the greater whole, but how is the whole judged as complete? It is a highly subjective opinion in this case. The walls of the Brick Country House and the Barcelona Pavilion become the elements of inflection that reflect the totalized form. When one removes even a single wall, does that reflect poorly on the whole (fig. 11)?

Do the asymmetrical wall partitions in Crown Hall act as inflections to the symmetrical whole? When Venturi criticizes the Tugendhadt columns as being uninflected in elevation (a move the writer makes that -- with the abrupt switch to a smaller scale -- seems to come from nowhere) why doesn’t he mention the inflection of all the other parts in the free plan?

The Tugendhadt house is also a good example to apply to Venturi’s reading of the Modena Cathedral. He states that at the cathedral a “formal discontinuity is implied where there is structural continuity.” The photograph shows asymmetrical placement of elements (motivated by program) measured against a continuous structure. This is the same as the relationship at the Tugendhadt House between the free plan and the consistent column grid.

As for non-architectural elements, Venturi, in analyzing Soane’s Gateway, points out sculpture as the inflected element that creates unity. The Barcelona Chair can act as an inflected object in the architectural field. In Mies’s interiors, all furniture elements are carefully placed, and contribute to an elusive whole. The lush leather and sensual forms contrast with the cold, orthogonal space. Even if the Barcelona Chair is in itself complete and uninflected, it feels more complete when it is paired with another. (This is by far the most common way the chair is grouped). Thus the chair’s pairing is similar to Venturi’s example of the twin churches at the Piazza del Popolo (fig. 12).
Context Inflection in Mies’s Skyscrapers:

Venturi briefly describes Frank Lloyd Wright’s Unity Temple as “devoid of inflection unless the directional entrance is one.” A similar condition occurs with the connecting canopy bridge at Lake Shore Drive (fig. 13). These skyscrapers are autonomously resolved in symmetry, yet the elusive whole is only achieved through their asymmetrical relationship with each other on the site. The connecting canopy reinforces this reading. (If the towers stood alone, like the Promontory Tower, then they would become too oppressively resolved). Mies’s later noteworthy skyscraper projects (including the Toronto Dominion Center, the Chicago Federal Center, and Westmount Square) repeat this pattern of symmetrical towers placed asymmetrically on the site.

At the Chicago Federal Center, the towers are of different proportions and heights, and are further inflected by the low post office pavilion. They are also inflected elements within the larger fabric of the city. Their urban placement is contextualized by the framing effect of the clearing plaza. Without the aid of total symmetry (the Seagram plaza being the only example of a high-rise with a symmetrical plaza), the larger whole is only subjectively definable.

Venturi is at fault in this chapter in proposing that multiple unity, as it pertains to Renaissance thought, is not complex and contradictory. It is complex in the same ways that Baroque inflection is complex. Arguably it is more complex, because in non-Baroque aesthetics unities become nested within other unities. Baroque unity only allows one reading of the whole at one scale. Otherwise the parts are disparate.

Venturi describes the Piazza Del Popolo as “complete at the level of program but incomplete in the expression of form.” A Renaissance approach would reword this as, “complete at the level of program, and
complete in the expression of form.” This allows for unity to jump scales.

Exclusions and inclusions occur in all architecture. It is not possible to suggest that architecture attempting inclusion is not also blatantly rejecting certain elements of its environment when trying to achieve unity. Unified unity and multiple unity both strive for completeness. The difference between them is subordinate to their similarities. It is only relatively recently, through the emergence of deconstructivism, that unity is challenged as the end-game.

**Conclusion to Robert Venturi:**

“[Complexity of] form is not the goal, but the result of our work.”

Willful complexity is artificial complexity. A building that attempts to resolve dualities will already contain myriad complexities whether or not this is the intended outcome. To modify a famous Mies quote: “[Complexity of] form is not the goal, but the result of our work.” Venturi is also against willful complexity, saying it “represents a new formalism.”

This analysis of Venturi and Mies reveals that complexity never departed from architecture. In fact, Mies’s distilled forms brought attention to many problems previously hiding behind the fleshier forms of the past.

Complexity has rarely been the intent of architecture through history. Many of the historical examples Venturi cites create complexity only circumstantially, not through the architect’s intention. As human beings, we like the fallibility of buildings. We like quirky eccentricities that give architecture a sense of belonging in the world. But to gain authenticity these things must occur by chance, and often over long periods of time. Only during postmodernity has willful irresolution and fabricated complexity emerged in an attempt to reflect a cynical state of mind. The reintroduction of forceful, reconstituted, and re-scaled symbolism (as something missing from modernism) is at best
If architects strive to resolve duality while acknowledging that the totalization of this task is impossible (and this is why we cannot return to modernism), they acknowledge that dualities manifest themselves in resolution and irresolution. Resolution of duality leads to peace, irresolution to tension. This is the duality of the duality.

These are both desired outcomes of architecture. They can occur simultaneously or separately. Modernists (or better yet, Apollonians) suppressed unresolved problems, while postmodernists (Dionysians) repressed resolution. A new method of design attempts to create a foundation for dynamic tensions to bloom, without shunning the obligation towards resolution as it is revealed in a certain time and place. This is a concession to chaos within the ambition of order.*

At present architecture is no longer as regimented as it was during modernity nor as playful as it was during postmodernity. Complex issues of culture, globalization, computer technology and sustainability are adding new pieces into the puzzle of discourse. But the breadth of method is perhaps more limited than we think.

Discourse arrives at the intersection between means and theory. Prevalent ideas and technology limit as much as they liberate. It is important for the discourse to address the contradictory dualities still present in design, and to exploit them in resolution or irresolution.

*Most architects today are still attempting resolution. Aside from Rem Koolhaas, the norm for architecture is connectivity and cross-disciplinary mingling, all motivations that seek resolutions. Parametricism is literally about resolving one complex geometry with another. But these new interests largely shun duality, because they are looking for monist solutions that ignore the inherently dualistic nature of design.
b. Charles Jencks

Charles Jencks, after lamenting the absolutist doctrine of Modernity, declares its absolute death (with the destruction of Pruitt Igoe) and the absolutism of postmodernity. (Of course, the irony is not lost in this statement.) Consequently, his texts from the 80’s today issue guffaws in the reader. Postmodernity as interpreted by its more sensitive proponents attempted to sidestep any totalizing thesis for design. The new movement was, after all (according to Venturi), about the underdog, the marginalized, the humbled, and the imperfect. Yet this age is also about fierce subjectivity. Humble and flamboyant views stand side by side in the postmodern era.

Jenck’s own, mostly forgotten, work fails to fall within the category of humility. It is stuffy, derivative, uncomplicated, conservative, and absolute in its doctrine. Many of his critiques against Mies are applicable to his own theories and works. No room in Jencks Thematic House (fig. 14) can “survive the cigarette machine,” let alone the bathroom duct he says ruins Mies’s Lafayette Park townhouses.

He’s created an absolute environment completely lacking any room for inclusion. He berates Mies’s work at IIT for misusing or neglecting the symbolic potentialities of the work, yet his own symbolism at the Thematic House is supremely shallow and not necessarily indicative of the domestic. When Jencks mislabels functions at IIT based on arbitrary symbolic cues,
one could just as easily call Jencks’s living room a bank, church lobby, or private corporate office. His argument for cogent symbolism, therefore, does not translate well in his own work.

As a postmodernist he is arguing a fiercely subjective viewpoint tempered only by personal interest, and leery of any attempt at objectivity. The work resembles fashion, not architecture, through the recycling of classical and art deco motifs. His work therefore has a short shelf live. Unfortunately architecture lasts longer than fashion (it is much easier and cheaper to throw a garment away than a building).

His critique of Mies is indicative of a preoccupation with issues of architectural semantics and semiotics in the 1960’s and 70’s. His analysis of the IIT buildings as lacking in symbolic cogency is today looked upon as rather silly (because the work is such an absorbed part of the canon of architectural history these miscommunications rarely occur). He calls the boiler house at IIT the symbolic cathedral, the chapel the boiler house, and Crown Hall the President’s Temple. He argued there is a disconnect in the use of “factory building” language for educational uses. He questioned the same language of curtain wall utilized for both offices and residential towers. This he labeled “univalent form.”

His counterproposal to this apparent dearth of symbolism is a highly conservative rehashing of classicist motifs, meant to reintroduce decorum within typological difference.

One of Jencks’s only compliments of Mies is of the Farnsworth House. He argues it is the one building where the I-Beam is pure structure rather than decoration:

...these planes are actually held in place by what appears to hold them in place: in most Mies architecture the I-beams are ‘symbols’ for structure or ‘make visible’ the structure rather than being actually the thing itself.

How odd that honesty and a rejection of symbolism are Jencks’s only compliment of Mies (Not to mention the evocation of Kant!). In his own 80’s work, of course, decoration supersedes honesty. The decoration is not even evocative of a structural expressiveness.

In short, Jencks complaints against Mies are at every turn valid on a superficial level, but they completely ignore the complexity of: light phenomena, historical allusions, decorations, contextualities and contradictions present and intended by Mies in his built work.
c. Stanley Tigerman

Stanley Tigerman’s most famous blow against Mies is his “Titanic” collage of 1978 (fig. 15). Here he shows Crown Hall sinking into a calm ocean, a symbol for the deflation and death of the doctrines of modernism. This rejection of Mies was a long process with Tigerman, who practiced as a clunky Miesian modernist for nearly 25 years before making the collage. Tigerman’s may have sensed a sea change in the profession and exploited it for business reasons. The collage stuck, and has survived to this day as a symbol of the death of Modernism.

Tigerman’s rejection is one borne of deep conflict. He wrote a posthumous letter to Mies in 1978 stating, first of all, that he missed him. He then regaled Mies of all the changes that have occurred since his death. These include: the thriving copycat practices like SOM, the hyperbole of high-tech as practiced by (early) Helmut Jahn, the emergence of Post-modernism, and Thomas Beeby’s infiltration of IIT. In his second letter eight years later he updates Mies on the fracturing of his Chicago Modernist dynasty and the full immersion of postmodernity into practice. He also bemoans Franz Schulze’s biography in its suggestion that Mies was a mere mortal. Tigerman is not ready to consider the complexities of Mies; he prefers Mies the god.

Tigerman’s dislike of the Mies’s copycats, of whom he was originally a contributor, and his restlessness in conforming to handed down principles led him to reject the Miesian model. In his text, Versus, he breaks his career down into multiple phases to show his pluralistic approach to building. This is meant as an anti-manifesto, one that celebrates diversity over a singular methodology. He is also an advocate for the fiercely subjective, injecting his religious beliefs and love for the whimsically surrealistic in his work in order to both brand and deflate it. His subjectivity was successful in the sense that it effectively created architecture of non-posterity: Today his work of the 80’s is mostly forgotten.

Duality is one of Tigerman’s major themes, although he fails to see all the complex dualities present in the work of Mies. Tigerman’s use of duality is rarely an intrinsic part of his design like they were in Mies’s buildings: instead they were shown as formalistic applied ornamental symbols. In his Baha’i Temple project of 1982 (fig.16), he literally replicates the shape of the building in the adjacent trees as a commentary on the duality between nature and architecture.

A comparison between this gesture and the tangled old Oak in front of the Farnsworth House demonstrates Mies was able to address this duality intrinsically: His architecture of otherness frames nature. Tigerman’s attempt to connect interior with exterior is to paint a partly cloudy sky on the ceiling (fig. 17). At the Farnsworth House, a white ceiling, trav-
pertinent floors and heavy use of glass literally (not symbolically) absorbs the colors of nature. The intrinsic method is always a more nuanced, subtle, and lasting way to address dualities. Literal symbolism is not necessary in exploiting dualities. It even risks turning these complex relationships into cheap gimmicks (a desired result of postmodern irony).

In his writings, Tigerman diverges from Venturi when he proposes that a dialectic in irresolution is more effective than one in resolution (resolution he states as being the goal of Modernism). He states "black is best seen in the presence of white" as a metaphor for the strengthening tension of extreme contrast. However, these contrasts were exploited in Mies (as demonstrated in the interplay between his buildings and sculpture) with more grace and effectiveness than in the work of Tigerman.

fig. 16 Baha’i Temple project model.
2: More is More: Other Postmodern Responses (Second Wave Postmodernism)

Many other architects in the second wave of Postmodernity showed an opinion of Mies not necessarily in written form but through their works. A common theme in these non-Miesian architects is the use of fierce subjectivity, non-rationalist structure, ultra-contextuality (thus non-Platonic), and the use of color. Surrealism is also a heavy influence on postmodern architects. Gehry, Koolhaas, and Eisenman have all shown the influence of the absurd, the subconscious, and the falsely symbolic in their work to counter their perception of Miesian modernists as serious literalists. The main thesis of this era in architecture is the multivalent approach and the differing priorities of its practitioners.

a. Rem Koolhaas

The architecture of Rem Koolhaas is supremely postmodern in that it obsesses over inclusion, hegemony, and surrealism. His architecture never makes its mind up or sits still. The offhanded use of materials is a direct commentary against the careful detailing of Mies and contemporaries such as Norman Foster and Renzo Piano. Rem is not interested in the slow revealing of form or zeitgeist but the quick flash of discovery. To make a cinematic metaphor (considering Rem was an aspiring filmmaker), Mies is akin to Tarkovsky, while Rem is Fellini.

This offhanded use of materiality is oddly appropriate at the McCormick Tribune Campus Center he designed at IIT (fig. 18). This project swallows the modest Commons Building...
by Mies that once sat isolated in a parking lot block located between the proper campus and Mies designed student housing. Rem’s addition is designed in every way as a contrast to the Miesian model. This creates a dialectic between the two buildings that strengthens the power of each. As Rem states, “Mies needs to be protected from his defenders.” Had, for example, Renzo Piano designed a graceful, well-detailed glass box annexed to the commons, the dialogue would read inappropriately homogenous. To prove this point, look at the poor Miesian copycats on the IIT campus by SOM. With their clunky proportions they totally destroy the harmonic relationships between the Mies designed buildings on campus.

Rem uses hegemonic: programs, spatial configurations, angles, colors, textures, graphics and surfaces to completely contrast the limited palette of the Commons Building. His indifference to the connection between the Mies building and his own is intentionally non-graceful and demonstrates an almost no-contest conciliatory tone (fig. 19). In other words, the crude detailing, unclear
structural diagram and artificial use of patterning draws attention to the immaculate detailing, structural clarity, and honestly expressed materiality of Mies (echoing Tigerman again, “white is best in the presence of black”).

Rem bends the project downward at the point that the train tunnel intersects the building. This is another commentary on Mies, showing that the exception doesn’t make the rule, as occurs in the sizing of the girders at Crown Hall. Instead the exception is exploited as such, and disrupts and ideally consistent roofline.

There is also a heavy debt to graphic iconography and a desire (but disbelief) in the symbolic power of architecture. Mies himself is literally projected onto the cheap aluminum orange glass facade that faces the street and campus. Endless icons represent examples of activity present at the student center (fig. 20). This extra dimension to the building echoes Jencks’s critique of Mies’s campus buildings as not communicating their function due to a lack of symbolic cues.

Within this hegemonic environment Rem also addresses Venturi’s criticism that architecture must “survive the cigarette machine.” Certainly in a landscape of difference, the presence of any intrusion, be it a soda machine, garbage can, or Caution Wet Floor sign, fail to disrupt the architectural affect. Crown Hall tolerates these alien intruders only in the solid lower depths of its basement.

Rem’s addition is a dualistic device that draws attention to differences between the two projects. It comments both on the shortcomings of Mies’s platonic spiritual ideal and the inability of current practice to demonstrate such perfect rigor. Rem casts himself as an outsider to the profession, a Warholian voyeur that points out the irresolution of architecture’s dialectic problems. I would argue that all his other work (which is not connected to a Mies building) suffers in that it expresses otherness without a strong contrasting normalized foil.
Eisenman’s reaction to structure and history are in direct contrast to the methodology of Modernity and Mies, but with a similar intention towards the elucidation of essential architectural truth. This truth is won through the profoundly difficult creation of architectural autonomy. By any degree architecture is, in contrast to all the arts, fundamentally invaded by and a product of external factors. Autonomy (as proposed by Eisenman) risks over-distillation to the point where the ideas that make something “architectural” vanish.

In his essay on post-functionalism Eisenman states that a fundamental duality of humanist architecture lies between the competing desire for function (both structural and programmatic) as it collides with the aesthetic desire for appropriate expression of form. The expression of form is often at odds with the raw truth of design, which creates a rupture between the possibilities of objective truth and the possibility of its legibility in symbolic expression. He goes further to discuss the competing desire of architects to express both structure and program, which, as I’ve discussed in the analysis of Venturi, create differing outcomes. Architecture is essentially a collision between these dualities.

Eisenman argues that modern architecture ignores conceptions of modernity as it is realized in other artistic and cultural modalities. He states Modern architecture -- as it was practiced in the first half of the twentieth century-- is thus an extension or offshoot of a classicist trajectory. His solution is to break from the historical priorities of form and function and create a language of architecture free from symbolic associations, legible only on a direct level and, unfettered by externalities that shape its being (fig. 21). It also rejects building as something that has a goal or a function.

This idea of a post-humanist (and therefore truly modernist) architecture favors the random, excessive, and non-symbolic. It is complex without a purpose, structurally redundant, and (ironically through an obliterating palimpsest) historically negating (fig. 22).

The problem is that architecture is a very slow process, and any attempts at the improvised and unplanned cannot translate within the slow process of construction. Working drawings never function like Sol Lewitt wall painting instructions or John Cage music sheets. Attempts to suppress the coordinated willfulness that goes
into building will always result in a disconnect between the idea and the reality. Architecture, of course, is all about these fictions, which are created to defy the limitations that the material world imposes upon our free imaginings.

Mies is guilty of this in his expression of honesty through concealment, his revealing of structure through ornament, and his use of sumptuous materials to evoke the spiritual.

The radical, nearly Dadaist, break that post-functionalism proposes is only successful in that it places a mirror up to what is truly fundamental and important to architecture. One could say Mies fought the literal good fight, and postmodernists, like Eisenman fought it with irony. As a civilization we desire clarity in defiance of nature’s chaos. We strive for truth, even amidst doubt. Architecture creates a reassuring illusion of permanence for its creators, who are constantly in flux.
c. Frank Gehry

Frank Gehry strives to bring (his interpretation of) feeling back into architecture. The result is highly expressionistic forms that resemble sculpture more than architecture (fig. 23). Gehry’s forms are not based on programmatic or structural rational, but the whimsy of the designer. Construction methods are a posthumous generic framework for his bold forms, rather than a guide for them. This results in extreme structural acrobatics. There is little dialogue between how the building is made and what it expresses. His earlier work in the seventies showed an interest in “vulgar” vernacular materials such as plywood, chain-link fence, and CMU. These are black sheep counterparts to the sumptuous marbles and metals that Mies used in his regal work.

Materiality in Gehry’s later work is strictly intended as an anonymous surface for form. His priority is to solve the problem of these superficialities; all other components of the design are subordinate. One could echo Paul Rudolph’s famous critique of Mies and apply it to Gehry:

*Mies [Gehry], for instance, makes wonderful buildings only because he ignores many aspects of a building. If he solved more problems his buildings would be far less potent. This paradox is heightened by the various commitments to functionalism [expressionistic form].*46

Dualities in Gehry’s work are completely off balance. Sculpture in the context of the Bilbao Guggenheim weakly shows the dialectic between the differing arts (fig. 24). Sculpture and Architecture blur into each other. The architecture thus competes for the attention of the viewer. There is rarely a tension between inside and outside, because his forms are so often opaque. Opacity is required to give presence to his wild forms. The earlier stylistic quotations of his work in the 80’s are abandoned in his mature phase. His new work references only itself; except for complete contrast, it is not in a dialogue with the lineage of architectural history. Innovation is not balanced by tradition.

However, to complicate this reading further (and to finally find a shared struggle between Mies and Gehry), Rafael Moneo proposes that Gehry’s work is primarily an attempt to mediate the duality between idea and form. Ideas, of course, even if Gehry’s are not striving towards some externalized notion of truth (as in Mies), are of supreme importance, because fierce subjective sculptural form is at the highest risk for real-world compromise. Thus, “salvation lies in
fig. 24
maintaining the immediacy of the object." He accomplishes this mediation by largely eliminating drawing and going straight to model-making. The model, as discussed in the first part of this thesis, is an object that represents both (and neither) reality and the idea. It is with the model that Gehry tries to eliminate the barriers between how he imagines his building and how the building will ultimately get built. *

In this sense, Gehry displays extreme pragmatism in his attempt to make sculptural forms. He echoes Mies nearly verbatim (unsurprisingly with less grace) concerning his interest in the construction process; “Buildings under construction look nicer than buildings finished.” In this sense he prefers the visceral honesty of construction and tries to reveal that process of construction, even if – like with Mies or Sullivan-- the formal aspects are not a metaphor for that process. If Gehry paid less attention to the real world, his forms would not align with their final result.

In the earlier analysis of Mies and the skyscraper, one sees that this ability to minimize compromises and find equilibrium between the idea and the built form is a slow process that takes years of mistakes. After many attempts, ideas mingle with possibilities and the results -- whether at the Seagram Building or the Guggenheim Bilbao -- appear effortless.

Gehry’s career, therefore, reveals the Material~Spiritual duality that is fundamental to all architecture. Yet he ignores many other tensions intrinsic and specific to the profession of architecture.

* Moneo points out, however, that Gehry’s buildings often end up looking like literal scaled-up versions of the models. Often times one can see the folds of fabrics or the pieces of balsa wood in the buildings, rather than any suggestion that they have a relationship to what they are actually made out of.
3. Yes is More: Mies in the Contemporary Scene.

Modernism, and thus its symbolic leader Mies van der Rohe, is now among one of many historical eras in which architects today can draw inspiration from. Bracketed fully by history, Mies still stands for a philosophy of design that has not faded. The view of history tends to change as time goes on, and Mies has certainly survived his large dismissal in the 80’s, continuing to inspire practice in new and unexpected ways: Unexpected, because Mies is being applied to new possibilities and constraints that didn’t exist in his own time. Relevancy beyond one’s own epoch is certainly the test of a great artist, and Mies will continue to influence architecture with his broad and clarified ideology.

Modernism continues in the work of David Chipperfield, Herzog and De Mueron, Renzo Piano, and Peter Zumthor with a renewed sensitivity towards material possibilities that would certainly have thrilled Mies. Zumthor in particularly works in a similarly Miesian manner in that he begins with materials and the craft of their construction.

The computer has allowed for new possibilities of precision and form. Many practitioners in the current phase of parametricism cite Mies as a tabula rasa for their wild forms. This is, of course, a woefully simplistic reading of his work, and in no way justifies such flagrant forms of structural acrobatics. Of course, there are parametricists who create wild forms and those who attempt to create forms based on material, structural, or performative optimization. This pure subjectivity and attempted objectivity, in order to truly reflect a Miesian spirit, must balance between the two: the subjective being the expression of the (unreachable) objective ideal.

Others, who focus on the typological, (a concept not truly given a voice or obsessed over until after Mies death) also cite Mies as an important inspiration, with his attempts at refining and clarifying various building types such as the clear span and the high-rise. Once again Mies is at risk of reduction; his architecture standing merely as a symbolic starting point from which other more complex forms spring forward.

Sustainability issues act as a contemporary constraint not widely present in Mies’s time. In the work of Werner Sobek, Mies’s principles of “almost nothing” can serve as an inspiration for a minimal use of materials that are easily recyclable through an emphasis on assembly and disassembly (fig. 25). Sobek is a firm believer in stretching materials to their limits, which ultimately means his buildings use less more effectively. Widespread practice of these techniques would significantly reduce waste during and after the lifespan of a building.

Sustainable practice reveals that liberal glass usage creates new problems
of energy conservation. Mies’s glass boxes simply cannot survive the new performative demands of architecture. An extra layer of sunshading, in all of its permutations, almost always lack the grace of Mies’s unfe
terred crystalline facades. Glass is also problematic as an insulator; therefore mass is a logical reintroduction onto facades to increase their energy efficiency, even if this destroys the clear structure that Mies expressed so well. Unless a highly insulated sun deflect-
ing super-glass is introduced, the use of sunshading and increased mass will likely remain as constraints upon de-

The freedom afforded by new meth-
ods of architectural creation -- along with new literal and ideological con-
strains-- inevitably forces a deviation from the Miesian method of design, a method that defined the epoch of modernity most clearly. The philoso-

fig.25

phy of a slow revealing of form and a search for essence (even in a time when this search may seem foolish) is still a possibility in design. Mies’s philosophy, at its core, can therefore brave the storms of changing history as long as it inspires new generations to think about the fundamental prob-
lems of their own time and the ways in which these problems can be solved poetically.

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Conclusion to Part II.

The fundamentally contradictory nature of architecture, as analyzed through dualities in this thesis, remains in the contemporary scene, but the search for a new computational or sustainable agency marginalizes these pursuits. There are relevant ways that one can continue to exploit or reconcile the inherent myriad dualities in design practice.

Material ~ Spiritual

Any architect that ignores the journey from idea to manifestation will create compromised buildings that are mere shadows of their initial creative outpourings. The computer favors anonymous surfaces and shapes disconnected from the way things are actually built. The real is marginalized in favor of representation.

Consequently, the convincing effects of a rendering are often lost in the corporeal scale, the materiality, and the structural possibilities of the real world. This incongruence between what is imagined and what is built is a constant in architecture, think of Boulee or Sant’ Elia, but these moments of transition usually pave the way for radical ideas to catch up to possibility. Computer design in the future will ideally attempt to (and this is already occurring with the increased interest in digital fabrication) reconcile the freedom afforded on the screen with the possibilities of the real world.

Innovation ~ Tradition

One of the greatest rarely discussed taboos of current architectural practice is tradition. Today there exists a constant pressure to reinvent the wheel. Innovation and newness are prioritized over anything else. Historical richness and the perfected methods of construction over generations are tossed out the window in the name of the refreshing rush of the new. One can see why quotes by Mies such as, “I don’t want to be interesting, I want to be good,” and “You can’t invent a new style every Monday morning,” are seldom used today.

Blind innovation often sacrifices craft, and lacks a foundation for posterity (because buildings last much longer than fashion). Mies’s use of the innovation~tradition duality reveals an alternative to pure innovation or pure conservatism. New modes of construction and new ideas, balanced with historical allusion and perfected ways of building, will create a richness of form lacking in the purely iconoclastic forms of today.

Protection ~ Connection

The semi-recent exodus from rural to urban regions has strained the dialectic between nature and architecture. Discourse since the 70’s finds nearly its entire agency in the dialogue between dwelling and city. In the urban context there is an increasing need for privacy in a world beset by sur-
veillance and increasing population density. This “transparency”—as if a whole society lives in an aquarium on display—reinforces the need for metaphorical privacy in design, which is reified by the need for increased mass to naturally regulate temperatures in a sustainably demanding world. The ideological and literal openness of modernity is less desired; there is an overwhelming, and fundamentally conservative, desire to find repose from the chaos of the city.

Paradoxically, literal interconnectivity is a common architectural obsession in the information age. Current design practices are preoccupied with the linkages between urban design, landscape, architecture, sociology, and the sciences. Ideally a balance can be struck that prevents hermetic compartmentalization and naked undivided flow.

**Freedom ~ Constraint**

The primary driving engine of architecture is not technology, but ideas. Ideas are most often the innovators, and technology is created to accommodate the demands of ideological need. There are often times in history when a revolution in design occurs without a noticeable difference in technological possibility. This occurred during the Baroque and post-modern eras, where the fundamental methods of building changed little, but the philosophical demands did. Computer technology is allowing for the wild forms of our time, but they only really exist because our ideology aligns with different approaches to form.

In modernity, the prevailing philosophy of scientific positivism coincided with the “new” technology and materiality of steel glass and concrete. Modern international style architecture emerged as a result, but fringe design movements revealed that the technology was utilizable in entirely different ways. Mies could have exploited modern techniques to create wildly subjective forms, as did Mendelsohn and Scharoun. His first avant-garde projects hinted at this possibility. However, as the 1920’s continued, Mies increasingly emphasized the rational in design, perhaps because he sensed a hollow novelty in pure Expressionism.

Mies found a way to address the fundamental rational and spiritual battles that occur within architecture. His work constantly oscillated between logical motivation and poetic prowess. Not only did he address dualities, he attempted to reveal essential contradictory forces at the core of architecture. These forces might unfold in restful reconciliation, as Hegel proposed, and as Mies strived towards. He was also aware that every contradiction in design couldn’t endure unification. In these instances he exploited the duality, and mined its disjunctive power. When duality is resolved, it is effortless and nearly invisible. When duality is unresolved, the juxtaposition of extreme contrasts can create dynamic tensions. Either method reveals the underlying dialectic nature of architecture.
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