

Rendering as Critical Reflection:

On the visual production of architecture in China and the West

by

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AUTHOR'S DECLARATION

I hereby declare that I am the sole author of this thesis.

This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

ABSTRACT

This thesis reflects on our thoughts and actions towards the proliferation and use of photorealistic rendering by the architectural profession in China and the West, both of which actively engage in this form of image making to various degrees with both positive and negative reception. As architects do not have the privilege of working directly on the subject of their work, drawings as mediators become critical to the intellectual identity of the profession as a whole but the way we speak of images themselves do not reflect this level of importance. If the standardization of parallel line projection could be understood as symbolic of the architectural values of building, distinguishing architecture from all other visual professions, then what architectural values does the standardization of photorealism speak to?

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DEDICATION

To my family
and to my friends who might as well be family too.

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Fig. 0.1 | Wiew out the window of my rented room in Cambridge, ON

Source: photo by author



INTRODUCTION

ENCOUNTERS WITH IMAGES OF ARCHITECTURE AT THE PICTORIAL TURN

It has never been more apparent to me exactly how much of our understanding of the world is formulated through mediated experiences. Sitting in my rented room in a townhouse in Cambridge, Ontario, under a mandatory two-week quarantine, I find myself staring out the window in front of my desk, hyper aware of the limits of my physical reach and how much we as a society have come to rely on information gleaned from the things we see through other means, tv, radio, podcasts newspapers, internet forums and pictures sent by relatives of their daily lives across the globe.

In this respect our understanding of architecture is built upon this same mediated condition, mediated through various forms of images-- *drawings* and *pictures*-- circulated across a multitude of printed and digital media platforms. Plans, sections, elevations, sketches, paintings, or most commonly photographs, and photorealistic renderings have become the windows by which I have peered through into a world of architecture outside my immediate reach allowing me to 'experience' architectures that I would not have known otherwise or architecture that can no longer be experienced any other way except through their remaining visual accounts.

A common piece of advice given to students embarking on their architectural career is to travel. We are told that every new city or building we encounter and experience will assist us in our work. However, thinking back over the years of my education, of the countless projects and buildings I have studied, taken inspiration from and incorporated into my professional work, I have visited in person only a small handful of them, yet all of these buildings became accessible to me through the convenience of their pictures pinned to the board of my studio desk. Without images we are left with text and our imagination.

This condition by which our thoughts and actions are continuously informed by visual mediators is identified by WJT Mitchell as a symptom of the "pictorial turn"; an ongoing process in which contemporary thought is reorganizing itself around an increasing engagement with the *pictures*.¹ *Pictorial* referring to *pictures* and is defined by

"Most important, it is the realization that while the problem of pictorial representation has always been with us, it presses inescapably now, and with unprecedented force, on every level of culture, from the most refined philosophical speculations to the most vulgar productions of the mass media."

WJT Mitchell

¹ While Mitchell writes this in the early 1990's, he also notes that the awareness of the visual that characterizes this turn is not a new phenomenon but has only been made more significant with advancements in production techniques and platforms for transmission and broadcast which make it impossible to avoid them. W. J. T. Mitchell, *Picture Theory : Essays on Verbal and Visual Representation* (Chicago: University of Chicago Press, 1994), 11-34.

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Mitchell as possibly ranging from something as simple as an object framed upon the wall in our home or as *complex assemblages of virtual, material, and symbolic elements*². If Mitchell points to the linguistic philosophy's desire to defend speech against the visual as a sign of the pictorial turn³, then it is possible to view the professions apparent abjection⁴ towards photorealistic renderings as a sign that a similar confrontation with the pictorial has been intensifying in architecture for the past 30 years, but has been whispered about for as long as the profession has been around.

The contemporary understanding of architecture's relationship to images -- especially when entering professional practice -- is embodied in the *architectural drawing*⁵ which differentiates itself from other forms of drawing through the principles of parallel line projection. Through *architectural drawing* we understand images to be the product of design for the purposes of design realization-- building. This is prevalent in the way we speak about architecture as a *project* [Fig.0.2] in which the design, conceived of in the mind of the architect, is *projected* forward onto the page through the mathematical principles of parallel line projection; the resultant image produced out of the design process is then understood to represent the design idea and inversely it is the design idea that we look for when we encounter them.

In a lecture given to a group of architectural students in Brazil (1930), Le Corbusier said "*Architecture is made inside one's head. The sheet of paper is useful only to fix the design, to transmit to one's client and one's contractor.*" Through Corbusier we understand that as far back as the 1930's images as mediators were understood in practice

2 W. J. T Mitchell, *What do Pictures Want? : The Lives and Loves of Images* (Chicago: University of Chicago Press, 2005), 12.

3 W. J. T Mitchell, *Picture Theory : Essays on Verbal and Visual Representation*, 11-34.

4 Julia Kristeva writes "the abject has only one quality of the object- that of being opposed to *I.*", in other words, abjection deals with identity, between what is considered the self and what is considered other. Julia Kristeva, *Powers of Horror : An Essay on Abjection* (New York: Columbia University Press, 1982), 1.

The public discourse over rendering in practice as discussed in online platforms and journals narrate a trajectory in which photorealistic rendering approaches the state abjection, of being stuck in a limbo between what is considered "architectural" and what is not.

5 The term *architectural drawing* and even simply *drawing*, like Mitchell's definition of *picture*, can be used to refer to something as seemingly benign as a photorealistic render or as complex as an orthographic drawing, with the latter being a more common definition than the former.

IMAGE AND TEXT

Fig. 0.2 | On the relationship between image and text

Many architects that I have referenced writing on the subject of rendering, such as Doreen Bernath, Igor Marjanovic and Pler Vitorrio Aureli amongst many other scholars, use linguistics to broadly explain the way we think about the subject of architecture as a project and the ideas surrounding projection and drawing. The use of linguistics has also been demonstrated historically in the attempt to explain the functioning of images through semiotics as WJT Mitchell also points out (the pictorial turn follows the linguistic turn). However, what has always bothered me with this approach, even as I fall back onto it in my own writing, is that no single language is universal in the same way images present themselves.

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as the main form of communicating of the design to the client and contractor. Contemporary architectural drawings communicate design with the intention to *build*.

The principles of parallel line projection, in which all architecture students of my generation are educated in-- and most certainly future generations will continue to be-- represents this essential part of architecture-- *to build*-- and the resulting orthographic plan, section and elevations carries within itself this valuation complete with its own set of visual techniques to communicate its constructability. This system of line weight, hatch, fills, tags, cuts and grids have developed over time and has become recognizable in practices across the globe. It is in this highly specialized form of drawing by which the profession finds its intellectual identity separating itself from the realm of art [Fig.0.3].

However, the majority of our encounters with images of architecture are not experienced in plan or section and while we hope to one day be able to travel again, to experience architecture in the bodily way that architects always *intend*, it does not change the fact that we are more likely to experience architecture through the professional lens of a photographer or the amateur lens of a friend's smartphone. We experience architecture 2.5 seconds at a time through the pictures that fly by us on the endless scroll of digital platforms and through the renderings of shiny new developments emblazoned on the hoarding that guards a construction site --- *and as you round the corner of the street you think to yourself "Is this really architecture? Is this what it is all about?"*. While the plan and section may embody the professional view of architecture, the impact of photorealistic renderings of architecture upon our own perceptions of ourselves can no longer be ignored.

The traditional⁶ relationship that architecture has to images that is prevalent in architectural drawing is currently being challenged by the standardization of architecture's secondary form of visualization which presents architecture pictorially in perspective projection. This form of architectural visualization has always existed but has recently risen to prominence over the past three decades with the advent of computer assisted design programs which have replaced the traditional medium of artists impressions, seemingly removing

⁶ Traditional for at least the last century, It is what anyone entering architecture today would understand.

the artist or architects hand. Over the past 30 years this form of architectural imagery has crystalized into the universally recognizable style of photorealism present in the renderings that accompany nearly every new design proposal submitted. If the standardization of parallel line projection could be understood as symbolic of the architectural values of building, reflecting the intellectual identity of the profession, then what architectural values does the standardization of photorealism speak to?



Fig. 0.3 | Origins of Painting, Karl F. Schinkel, 1830

Robin Evans notes the difference in the function of drawings in a seen through an artist and an architect with the main distinction being two fold. The first being the use of parallel line or orthographic projection represented by the light of the sun being the source of illumination for the tracing of a shadow, and the second being an indirect labour process, whereby architects do not engage in building themselves.

Source: Evans, Robin 1986, Translations from Drawing to Building

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THE STATE OF THE RENDER

The secondary⁷ standard present in photorealistic renderings has risen to prominence parallel to orthographics, the first standard, indicating that there are now multiple perspectives on the way we understand architecture. It is evident in the way that photorealism has developed to coexist rather than supersede orthographic drawing. Yet Western critical discourse which has inherently been *transgressive*⁸ towards established norms lends itself towards a rhetoric of “either/or”, rejection or resistance. In general, critics argue that photorealistic renderings have reflected back onto architecture the picture of a profession that “has increasingly been engulfed in and made subservient to the goals of the capitalist economy”⁹ and what is at stake is painted as no less than architectural integrity speaking once again to the crucial position drawings-- both orthographic and *pictorial*-- have in defining architecture’s identity.

The validity of William Saunders’ summary on the state of architectural design¹⁰ is not in question, but this thesis is concerned with addressing the tendency for existing rhetoric on the subject of photorealistic renderings to bypasses the rendering itself to speak directly towards issues of capitalism and commodification (Renderings understood as the product of X) or more commonly, to lump photorealistic renderings in under the general concerns of *drawing*¹¹ as representation keeping up with the skills required to attain ever increasing levels of technical realism. In essence photorealistic renderings are seen as technical productions or visual anecdotes to discourse, understood as a sign of some other process, rather than entities themselves that are undergoing a long can contribute legitimate architectural dialogue.

Inversely articles that speak directly towards photorealistic renderings present themselves outside of what we would consider traditional platforms of intellectual discourse¹². We speak of rendering

7 Secondary in sequence of standardization, not necessarily of importance.

8 Peter Eisenman, “Critical Architecture in a Geopolitical World,” in *Architecture Beyond Architecture*, ed. Cynthia C. Davidson and Ismail Serageldin (London: Academy Editions, 1995), 75.

9 William S. Saunders, *Commodification and Spectacle in Architecture : A Harvard Design Magazine Reader* (Minneapolis: University of Minnesota Press, 2005), vii-viii.

10 Saunders wrote this in the mid 2000’s but it still holds today.

11 *Drawing* as a subject in architecture is incredibly vague. In architectural writing one can use the word *drawing* and refer to hand sketches, artists impressions, digital renderings, and technical drawings all under one term.

12 The same general disregard for online discourse is what also leads to a disregard of photorealistic renderings. Though naturally, many of the sources that are cited in

with classmates and colleagues in studio and in the office. We read about them in online editorials and opinion pieces, write about them in public forums and comment threads. Discussions that occur on the same digital platforms by which these images are encountered either celebrate them in their technical craft or paint them as misleading in some form or another. *"Renderings are blamed for the poor outcome of architecture"*¹³. Renderings are *"sugar-coated versions of reality"* and those who create them are not architects but *"Rhino monkey's and Photoshop slaves"*¹⁴. Renderings mask the *critical concerns* of architecture which are not prevalent in these pictures that fail to show *"the reality of our lives"*. The resulting intellectual withdrawal from the photorealistic renderings beyond the utilitarian function it serves in design practice is concerning in light of the pictorial turn which has made it nearly impossible to avoid the significance of photorealistic renderings and what they communicate back to us.

Photorealistic Rendering have reached a point of contentious stability in architectural practice today, existing in a paradoxical position of seeing both universal use in practice for its ability to present the building in style that believable and easy to understand, while also being the subject of wide-spread disapproval in theory for its association with the idea of architecture under the yoke of capitalism and the commodification of architecture. The result is a gap in the understanding of architecture understood by the public as icons of luxury and prestige and the social values of architecture as seen by architects. This has led to the rise in the popularity of non-photorealistic styles of rendering as a response. However no clear alternative has been found with enough momentum to challenge photorealism's seat. Without a clear contender, Western architectural critiques made on the render have mainly revolved around warning away from its use which locks architecture and the render at an impasse.

this thesis will stem from these online articles.

13 Troy Hodgeson, "Opinion: "The Role of the Contemporary Visualiser is Deeply Misunderstood"," *Dezeen*, October 25, 2018, <https://www.dezeen.com/2018/10/25/architectural-renderings-defending-visualisers-troy-hodgson-darcstudio-opinion/>.

14 Aaron Betsky, "Opinion: "Renderers, show Us Where we might Go"," *Dezeen*, September 19, 2018, <https://www.dezeen.com/2018/09/19/opinion-aaron-betsky-architectural-renderings-fantasy/>.

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The traditional understanding of the relationship between architecture and image as that of facilitating *building* which has propelled the advancement of photorealistic technology is being questioned by members of the profession themselves who look at these images and find them lacking, as Aaron Betsky statement resonates with this changing sentiment: “[renderings] are where and how we think we are. Truly frightening is what most renderings don’t show: the reality of our lives”¹⁵.

Naturally each individual comes to the table with their own interpretations of rendering based on their own encounters with images of architecture in their daily lives but it is apparent that we seek from *rendering* something more than (the) *building*. Part 1 of this thesis seeks to establish a basic outline of the current situation, elaborating on this confrontation and subsequent impasse between the value of *building* that has traditionally informed the relationship between drawings and architecture and how that is changing today - mainly the concept of non-photorealism as a practice of critical rejection against the negative influences of capitalism understood in today’s photorealistic standard.

By identifying common lines of critique of photorealistic renderings and examining the actions or inaction that have resulted from these sentiments, the beginning of this thesis attempts to identify the underlying biases that inform our approach to both the reading and production of rendering that have resulted in the separation of architecture and its visual production over time.

Our condition today is that of extreme distance which has elevated images to a role of greater importance. As Barthes wrote in 1977: “In other words, and this is an important historical reversal, the image no longer illustrates the words; it is now the words which, structurally, are parasitic on the image.”¹⁶ Either we rethink our expectations of rendering which would impact the method by which we represent buildings or inversely rethink how we engage and talk about renderings as more than representations. Where Part one deals with the former, Part 2 and 3 of this thesis engages with the latter, introducing the principles of chinese painting as an example of how one can begin to pick apart the complex assemblage of parts

15 Betsky, “Opinion: “Renderers, show Us Where we might Go”.”

16 Roland Barthes, *Image, Music, Text*, trans. Stephen Heath (New York: Noonday Press, 1988), 25.

that form a *picture*. Whereas North America, and by extension the Global West, demonstrates an increasing skepticism and criticality towards rendering, China presents to us an influential body within the architectural field that exhibits a reversed scenario. China provides us a unique perspective into a practice in which renderings are used excessively to great effect around the questions of visibility and identity.

INTRODUCTION:

WHY CHINA?

“Architecture does not exist without drawing, in the same way that architecture does not exist without texts. Buildings have been erected without drawings, but architecture itself goes beyond the mere process of building.”

Bernard Tschumi - Architecture and Limits 1981-1983

Much of the negative discourse around photorealistic renderings is based on a specific understanding of realism and representation that is rooted in Western values. To limit discourse to the West would be similar to running in circles coming to the same conclusions because the fundamental values which guide our reasoning is unchanged. In order to see more clearly the situation at hand it is necessary to step outside of oneself from time to time.

Today China is seen as one of the largest exporters of digital rendering services in the world [Fig.4] catering to both international and domestic demand. The critical position that the West takes towards photorealistic rendering does not inhibit the use of photorealistic renderings in China. This is not to say that there is no critical opposition from architects either but if a Western critical discourse which seeks positive change under the transgressive mindset of an “either/or”, a complimentary mentality of “and” or “with” can be found in an Eastern philosophy of *efficacy* (the question of how one is to effectively bring about change) which engages directly with the new ways of understanding architecture presented in the photorealistic rendering.

Part 2 of this thesis compares the underlying philosophies of image making in the East and West in order to see how our current approach to creating images reflect on our current reception of their apparent messages and what we expect of them. Doreen Bernath suggests that one of the major reasons for the proliferation of renderings in China is due to a “*socio-psychological demand for systemized visual aesthetics which historically structures Chinese visual arts and perception of architecture.*”¹⁷ Examining the cultural differences in the philosophy of picture between East and West, *mimesis* which sees the relationship between image and subject as fixed versus *móxiě* which sees this relationship as referential and fluid, may help us break through our current impasse, or at least let us see our own situation in a different light.

Part 3 traces how the principles embodied in *móxiě* have shaped both the Chinese architectural profession as well as the built environment as it directly relates to an engagement with images in search of its own model for practice that can accommodate the shifting needs of contemporary China and craft a global identity.

¹⁷ Doreen Bernath, “The Intrusive Rendering: Dictation of Stereotypes and the Extra-Ordinary,” *Taiwan in Comparative Perspective* 1, (2007): 68.

It is not the intention of this thesis to predict nor posit possible futures but to provide a mechanism by which we can re-engage with photorealistic renderings both in theory and practice. Until society reaches a level of technological advancement that allows for instantaneous free movement across the globe, images will remain the main method by which we *experience* architecture.



Fig.0.4 | Sheencity Rendering Software

While rendering technology is attributed to having developed in the West, China is rapidly advancing its own proprietary programs. Sheencity based in Shenzhen is producing a dual-mode PC/VR editing software compatible with current CAD technologies called MARS.

From the model on the left to the image on the right it took 19minutes without the need for post processing.

source: <https://mp.weixin.qq.com/s/dG-DrGaozPtDBB-3hY7rcoA>

PERSONAL STATEMENT

Before we begin, I would like to clarify a few things about my intentions:

The word perspective in the traditional sense implies a singular, often privileged vantage point, but even as I say “Eastern” and “Western” perspectives, two completely different cultural positions, understand that these two perspectives are both held within myself as a student of Architecture and as a first generation Chinese-Canadian born and raised in Canada in a relatively conservative Chinese household. This thesis can be told in a myriad of methods and my method is not necessarily the only way, nor the best way but the East/West perspective is nevertheless the one method I am uniquely positioned to tell.

It is also important to note that while these perspectives are distinct, they are not meant to be read as a dichotomy in opposition to one another as it is so often done to the detriment of both sides. I hope to be able to present these two views as different dimensions of the same subject of Architectural Visualization, therefore, “East” and “West” are more akin to one's own “Right” and “Left” eyes, which would work together to add depth and reanimate our understanding on the subject matter.

PART 1.0

PATHEOGENESIS OF PHOTOREALISTIC RENDERING IN WESTERN ARCHITECTURAL PRACTICE

*What is the content of the photographic message?
What does the photograph transmit?*

*Roland Barthes - Image Music Text*¹

path·o·gen·e·sis
/,paTHə'jenəsəs/

noun: the manner of development of a disease.

What is the content of the photorealistic message? What does photorealistic rendering transmit? How do we begin to approach evaluating our thoughts and actions in regards to photorealistic rendering? What do we *understand* them to be and what do we make them to be? Roland Barthes notes two methods by which meaning is drawn from images². First is the primary message which is explicitly denoted in the image itself, the *literal scene* presented to us in the render. In the case of photorealistic rendering the scene typically consists of the *design of the building* itself within a varying degree of physical context that does not require interpretation for us to understand. Second is the meaning which is implied through connotation, a secondary subjective understanding *imposed* upon the scene through techniques applied at various stages of production and post production. This secondary understanding can be as refined and specific as an individual interpretation or as commonly understood as a social or cultural reality.

When viewed in this way, the problem the profession has with Photorealistic Rendering (PRR) as understood through its critique has less to do with the denoted content of the renderings, the designs themselves, nor do they have to do with the functional role that photorealistic renderings have in practice-- which is the reason for their creation-- but they have everything to do with the secondary meanings that we have come to associate them with at a societal level. These associations, which we will review shortly, are so strong that they have preconditioned the ways we approach rendering and have precluded any effective methods of working with these images. The ways we act and react to PRR shows that we no longer see them as *just* objective visuals but *also* as symbolic of ideological positions that we must defend ourselves against.

Photorealistic Rendering as Non-Architectural

Architects have always dealt with the visual within their work, but even within our work there exists a hierarchy to the forms of drawings with which we engage in. While we as architects understand *drawing* as a crucial part of architectural practice, the term *drawing* in an architectural con-

¹ Roland Barthes, *Image, Music, Text*, trans. Stephen Heath. (New York: Noonday Press, 1988), 16-17

² Roland Barthes speaks explicitly about photography and the photographic meaning and while not all principles of Barthes's photographic theory transfer across logically to photorealistic renderings our approach to digital realism is conditioned by how we interact with photography. Later on in this thesis we will discuss the influence of photography and the issues that arise from this conditioned reading of photorealistic rendering.

PART 1.0

text is understood differently from the conventional meaning understood in Western art or even the general term used in everyday conversations yet this distinction is rarely articulated by architects themselves. For what reasons do we insist that the photorealistic rendering is less architectural than other forms of drawing employed in the creation of a building?

Thus, what is crucial in the consideration of architecture is not seeing but the apprehension of structures. The objective effect of the builds on the imaginative being of the viewer is more important than their "being seen". In short, the most essential characteristic of the architectural drawing is that it does not take a pictorial detour

*Walter Benjamin - Rigorous Study of Art*³

For Walter Benjamin, what differentiates the *architectural drawing* from other forms of drawing in Western art is the fact that *drawing* in the architectural sense "*does not take a pictorial detour*"⁴. What is most important is not the thoughts of the architect projected through the drawing to be perceived by the viewer but that the viewer understands the drawing depicted as itself. Therefore architectural drawing differentiates itself from other forms of art because an architect draws seeking remote objectivity whereas the artist draws through individual expression. While not explicitly stated by Benjamin, the only form of drawing that would fulfill this statement would be orthographic drawing which traces along projected lines that are parallel and therefore infinitely removed from the individual perspective of the *pictorial* which assumes a single vantage point. Under Benjamin's definition of architectural drawings, photorealistic renderings would fall under the definition of *pictorial*.

Ask a group of architectural students to draw a floor plan of the same home and the resulting drawings would be largely the same because orthographic drawings use parallel projection as a standard. Deviations would most likely be due to an error in measurements. But if instead we asked the same group of students to draw an exterior view of the same home from the sidewalk and you'll likely find a greater variance in outcomes, not due to error but due to a variance of technical skill and stylistic variance amongst each individual.

Pictorial representations of architecture fall short of being architectural for this form of drawing is traditionally understood as the result of an interpretation by the individual artist and therefore falling into the realm of art. This evaluation is exemplified by the traditional term used to refer to *architectural rendering: the artist's impression*.

³ Walter Benjamin, "Rigorous Study of Art," trans. Thomas Y. Levin. *October* 47, (1988): 84-90. <https://doi.org/10.2307/778983>.

⁴ While not explicitly stated by Benjamin, the distinction of pictorial and non-pictorial would refer to the distinction between orthographic and non-orthographic (rendering) forms of architectural drawing.

Reyner Banham writes “*The true power of architectural draftsmanship (of all design draftsmanship, indeed) derives from its being a means, not an end.*” An architect may differentiate themselves from the labour of building through drawing but an architect that does not build will always have the shadow of doubt casted on them by society. From here we begin to understand the role of drawing in architecture. Orthographic drawing is understood as neither the thoughts and intentions of the individual architect nor the understanding extracted by the viewer but as an independent entity-- a *building* -- both an *object (noun)* and the *objective* (verb). Therefore the relationship between drawing and architecture is, as Delibor Vesely states, “more or less coincides with the essential nature of making, and in particular with the making of our world”⁵, representation and realization, tied by an emphasis on *building* -- the *chief objective of the profession* -- a value which differentiates the orthographic from the render.

A great architectural drawing is great because of the architecture it seeks and in-tends to create; it may be neither beautiful nor elegant, though it must be transparently clear to the one man who matters in this context-the builder. All the rest of us are mere kibitzers and voyeurs; drawings made to please us are trivia-and we know it!

Reyner Banham, *Iso! Axo! (All fall down?)* ⁶

This emphasis on building is also seen in the alternative name for the orthographic drawing in practice which is often referred to as the “working drawing” or “construction drawing”. Over time, as architects became increasingly invested in the production of orthographic drawings as a means of facilitating construction these drawings became the ‘core’ of architectural design as a business practice with the construction documentation stage taking over the majority of a project’s timeline and budget.

The emphasis on construction documentation also coincides with the rise of architectural illustrators, delineators and eventually architectural visualizers as an independent industry. In the late 19th and early 20th century it became more common to contract out the pictorial representation of the design to freelance illustrators or other architects with better technical skills in illustration than the current design architect⁷. No longer a simple differentiation based on values, the differentiation between orthographic and pictorial rendering became solidified in practice as one of the few parts of the design process that is acceptably outsourced is the pictorial representation of architecture.

5 Dalibor Vesely, *Architecture in the Age of Divided Representation the Question of Creativity in the Shadow of Production* (Cambridge, Mass: MIT Press, 2004), 14.

6 Reyner Banham, "Iso! Axo! (all Fall Down?)." In *Great Models: Digressions on the Architectural Model*, ed. Suzanne Buttolph (North Carolina State University, 1978), 17-20.

7 American Society of Architectural Perspectivists, *Architecture in Perspective : A Five Year Retrospective of Award Winning Illustration* (New York: Van Nostrand Reinhold. 1992), viii, 10-11.



Fig. 1.1 [top] | Cannock Boyce, UK

Fig. 1.2 [bottom] | Pingus Winery, Spain

source: DarcStudio <https://darcstudio.co.uk/>

Fig. 1.3 [top] | One Beverly Hills

Fig. 1.4 [bottom] | One Beverly Hills

source: DBOX rendering firm
<https://www.dezeen.com/2021/07/14/foster-partners-one-beverly-hills-plant-covered/>



Fig. 1.5 [top] | New Baishizhou

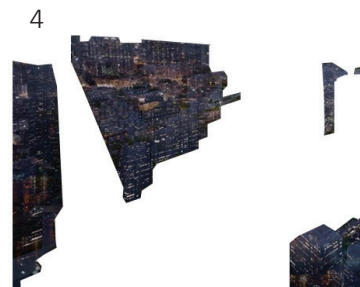
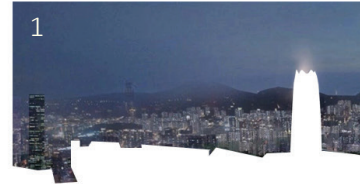
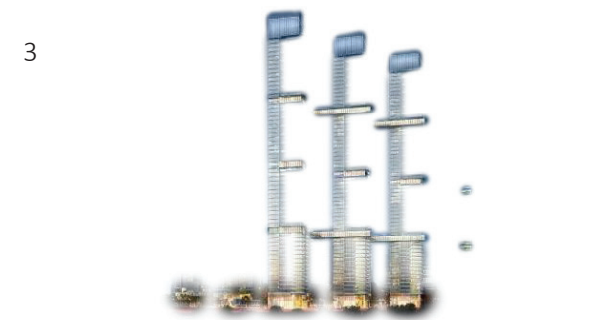
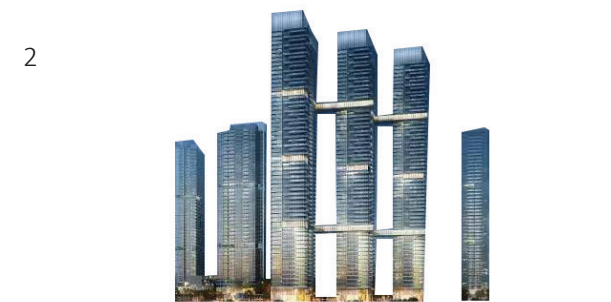
Fig. 1.6 [bottom] | New Baishizhou

source: ATCHAIN rendering firm
<https://www.kpf.com/projects/lv-gem-baishizhou>

Fig. 1.7 | Seamless digital rendering

Digital renderings are composed through a stitching together of subject (2), background (1) and important contextual elements (4) made seamless through delicate yet deliberate lighting choices (3) which help create a certain atmosphere and direct the eye.

source: diagram by author



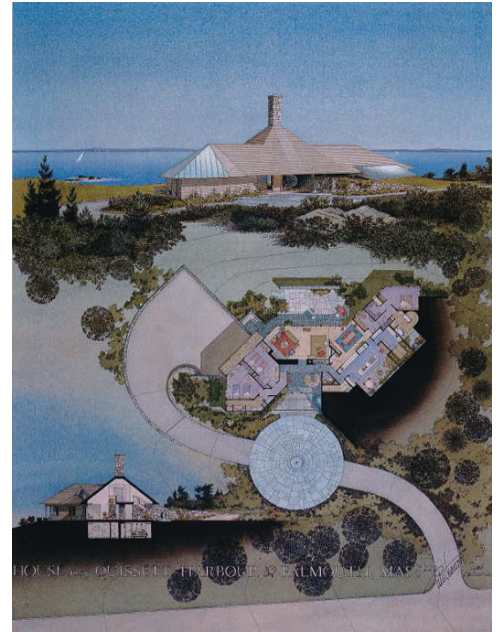
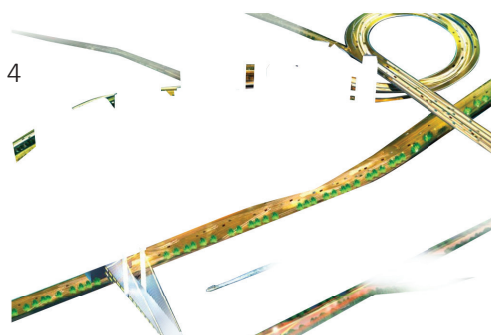
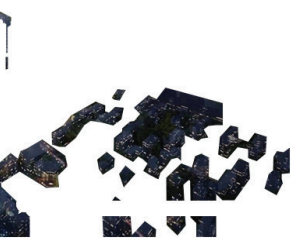
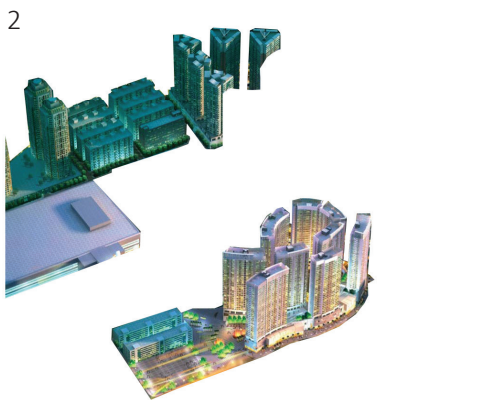
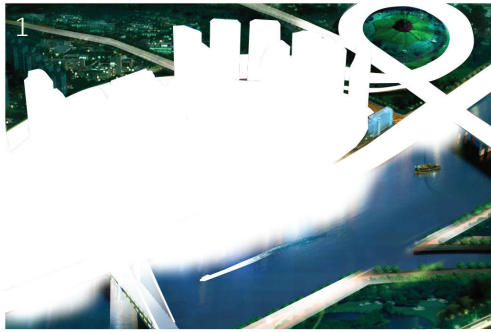


Fig. 1.8 | Composite Perspective

One of the key concerns of architectural renderings today is positioning the proposed building seamlessly within the context of the built environment.

In majority of renderings the proposed building must be situated within the context of the site through a careful matching of perspective in order to achieve a single seamless image. In the case of these renders, the image reads as if it was taken by a photographer from a plane at dusk. Although the matching of perspective is common, this singular seamless image was not as ubiquitous as it is today. Prior to the digital era, renderings were also commonly depicted as compositional pieces including both perspective matched images and parallel line projections.

Peter Adrian Thomas
Lincoln Architects, 1987

source: American Society of Architectural Perspectivists. Architecture in Perspective : A Five Year Retrospective of Award Winning Illustration. (New York: Van Nostrand Reinhold, 1992).

PART 1.0

Photorealistic Rendering as Commercial

Now considered outside of architectural purview, photorealistic renderings have often been conflated with other forms of commercial imagery; mainly commercial photography. In lieu of the objective distance of parallel line projection, commercial imagery employs the exclusive and subjective perspective of the camera lens as the preferred style of representation with the intent of selling products to the public and to appeal to potential buyers. The metaphorical gloss of photorealistic renderings recall techniques used in commercial photography that emphasises the creation of a specific atmosphere in order to create compelling images. Techniques such as staging, composition, lighting, soft focus and post-production refinements⁸ find their way into the visual language of architectural visualization [Fig.1.7-8] across the globe in varying degrees of emphasis. North American Firms have been described by industry experts as pragmatic or literal in their visualization, European visualizations as sophisticated, cool and somber while lastly the visuals exported from Eastern firms in China lean towards a cinematic or dream-like ideal. [Fig.1.1-1.6]

Regardless of regional differences, these techniques have coded⁹ into rendering a distinctly commercial aesthetic which lends to the reading of architecture as a commodity. Yet this coding is also a part of the functional necessity of making the building understandable to those outside of the profession, with the most understandable form of depiction being how we see reality through our own eyes. Architects across the globe would argue that renderings produced during design development are not commercial in nature because the techniques used in rendering are employed to communicate design intent. However, it is difficult to discern whether or not a rendering of a building is there to sell you the building or to convey the design as both types of images employ the same visual rhetoric of the commercial architectural photography used to document the building for publication post construction. The ease by which the same image embodies both objective function and subjective connotation is the main source of our unease when faced with the proliferation of photorealistic rendering.

This association of photorealistic rendering with commercial imagery leads to the current understanding of rendering as the hallmark of commodification. These images are seen to represent the notion that architectural design no longer addresses architectural issues but seeks only new and novel forms for the sake of novelty. This misunderstanding of architecture

⁸ Elspeth Brown, "Rationalizing Consumption: Lejaren À Hiller and the Origins of American Advertising Photography, 1913—1924," *Enterprise & Society* 1, 4 (2000): 715-738, <https://www.jstor.org/stable/23699534>.

⁹ Individuals using the same code to extract meaning from the same sign would come to the same conclusion.

is what current critics of photorealistic rendering seek to address with varying degrees of success by which we will review in later sections. This idea concerns the emergence of *starchitects* and the iconic architecture pursued by cities around the globe for the prestige such buildings will add to their cities rather than address urban issues. This only adds to the idea that design has become a visually driven process in which the novelty of the form drives design above all else. This further aligns with existing rhetoric which questions whether or not architectural visualization is to be considered architectural or not which in turn addresses the overall relationship between drawing and architecture as a whole.

Photorealistic Rendering as Spectacle

The spectacle is the sun that never sets on the empire of modern passivity.

Guy Debord ¹⁰

The third association is in regards to the current critical position on the render which associates photorealistic rendering with Guy Debord's concept of the "Spectacle" and reaffirming its association with capitalism. The *Spectacle* is commonly used by critics to position photorealistic rendering as a self-perpetuating problem by which engaging directly with photorealistic rendering could never lead to any other outcome other than the one we find ourselves in at present. When Photorealistic Rendering is understood as Spectacle and by extension as media, it becomes removed from the concerns of architecture. Therefore conversations in regards to rendering have always been concerned with engaging or withdrawing from the problems that media bring.

Similar to the development of stereotypes, these associations are justified and reinforced by historic precedent and echoed back to us in our everyday lives. Now deeply entrenched in the professional psyche, these associations have shaped the critical position on the subject of photorealistic rendering into two categories; *resistance* in theory and *rejection* in practice. Both of these positions represent the desire to combat spectacular commercial architecture presented in photorealistic renderings while reaffirming design integrity with varying degrees of short-term success. However, in the past decades since the establishment of photorealistic rendering as a standard of architectural visualization no clear alternative has been found with enough momentum to challenge photorealism's seat which suggests that this style of imagery still contains some value to us. The next few sections will further dissect these two critical positions of resistance and rejection along side photorealistic value in order to better understand the uneasy stasis between architecture and its visualization.

10 Guy Debord, *The Society of the Spectacle*, trans. Donald Nicholson-Smith (Zone Books, 1994), 13.

Fig. 1.9 | MVRDV's The Valley

This specific image of MVRDV's The Valley Project became the central talking point of Minkjan's critique of rendering.

Image produced by MVRDV's in house rendering team and the client was OVG Real Estate.

source: <https://failedarchitecture.com/what-this-mvrdv-rendering-says-about-architecture-and-media/>



PART 1.1

CRITICAL RESISTANCE AS IDEOLOGY

The first category of critique against Photorealistic rendering exists mainly in written form, and can be summarized as a warning followed by a call for action. The goal of this form of critique is to establish a position that promotes architectural design integrity through the discouragement or discrediting of photorealistic renderings as a means of mitigating the negative associations they bring to the profession. The situation is reduced to a binary understanding; for or against. To be against photorealistic render has become synonymous to promoting architectural values and has become something close to an ideology in itself. Inversely working with photorealistic rendering, regardless of the intentions of the architect, can be misconstrued as catering to mainstream media's desire for spectacular images.

A prime example of this form of critique can be found in Mark Minkjan's award winning article on rendering, architecture and media. Minkjan's critique consists of a warning in three parts summarized by the three sections titled "Render vs Reality", "Architects as make-up artists" and "Why question architecture, right?". The article uses a photorealistic rendering of MVRDV's Zuidas development as its central talking point [Fig.1.9]. To Minkjan PRR is unrealistic, non-architectural, misleading to the public and obscuring the important social questions about architecture. In conclusion he compels us to not be misguided by such images for they do not represent the real concerns of architectural practice.

Do we really need this building? What issues are facing the city and how does this building contribute to solving them? Who's paying for it? Who's profiting from it? Who will be allowed to use and enjoy it? How affordable will the residential units be? How sustainable is its construction and use?

Mark Minkjan, What this MVRDV Rendering Says About Architecture and the Media ¹

A meta reading of this argument can be found in an exchange between Peter Eisenman and Zhu Jianfei on the subject of Eastern and Western critical architecture. In his previous essay² Zhu put out in the open the question of whether or not critical architecture is possible in China and what forms that does or would take. Here Eisenmann writes a short response to Zhu stressing the important need for architecture (regardless of cultural positions) to begin addressing the media more critically, implicating both Eastern and Western architectural practice as complicit in the perpetuation of spectacular architecture. The title of Eisenman's response aligns with the tendency to approach the subject as a binary problem, in

"Where is architecture's critical resistance to this process of loss? The crisis of the spectacular demands a call for a new subjectivity, for a subject removed from the passivity induced by the image and engaged by form in close reading."

*Peter Eisenman,
Contro Lo Spettacolo*

¹ Mark Minkjan, "What this MVRDV Rendering Says about Architecture and the Media," *Failed Architecture*, February 15, 2016, <https://failedarchitecture.com/what-this-mvrdv-rendering-says-about-architecture-and-media/>.

² Zhu, Jianfei. "Criticality in between China and the West, 1996-2004," in *Architecture of Modern China A Historical Critique* (New York: Routledge. 2009), 129-147.

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which case Eisenman's position is clear, "*Contro lo Spettacolo*" or "*Against the Spectacle*". Like Minkjan, Eisenman's response paints the profession as one lost in the "*tidal wave of image-dependant media*"³ while calling for "**critical resistance**" against "*seductive renderings*". Resistance here is loosely defined as "*a new subjectivity, for a subject removed from the passivity induced by the image*". Thus we the subject, the viewer, should resist the rendering's superficial message in favor of a more critical position which has been left undefined in terms of how one should proceed leaving the definition of what it means to be *critical* as equivalent to *resistance*.

3 Peter Eisenman, "'Contro lo Spettacolo,'" in *Architecture of Modern China : A Historical Critique*, by Jianfei Zhu (London: Routledge, 2009), 150-151.

PART 1.2

REJECTION OF PHOTOREALISM: “NON-PHOTO-REALISM AS AN EXPRESSION OF CRITICAL RESISTANCE

The second form of critique manifests in a rejection of photorealistic rendering through stylistic change which directly engages with the act of image making in order to address the problems that photorealism presents to professional practice. It is the most obvious solution one would expect in light of the open endedness of the previous form of critique but aligns at an ideological level. If the commercial elements of photorealism stem from the association with commercial photography then a simple solution would be a change in visual style. However the resulting styles, most commonly digital collage, or traditional mediums like hand sketches or watercolor, risk being perceived to be equally as *spectacular* as what it is seeking to replace.

In 2019 the Louisiana Museum in Denmark held an exhibition on Tatiana Bilbao and her firm’s work which included a large collection of models and collages that the firm produced during design development in lieu of photorealistic rendering. For Bilbao the use of the collage [Fig.1.10-12] represents the firm’s design philosophy which values collaboration and the understanding of design as a dialog that is open ended and accommodating; as the architect herself explained, “every piece of architecture comes into context as part of a collage”.

Tatiana Bilbao: As I said, I want my architecture to be a platform for anyone to create their own way of living. I think a collage accepts all of those personalities, diversities and complexities that are not only my ideas. A collage also accepts processes, it accepts mistakes. I like to think that our buildings are the same, so it became very clear that collages were a very good way of representing our buildings.

*Tatiana Bilbao*¹

For two years Bilbao’s team worked to prepare the exhibition which was to communicate to the public *the mind, the process and the experience* of the firm’s architecture. Notably the exhibition includes models, collages and materials and emphasizes the exclusion of photorealistic renderings. As part of the media blitz Bilbao gave an interview with Dezeen stating that the firm had banned photorealistic renderings till the final stage of design development. The exclusion of renders from the exhibition adds to the continuing dialog which considers PRR as outside the concerns architectural design. For Bilbao, the reason for the ban of renderings was because of a misunderstanding between herself and the client who was misled by early renderings of the design and voiced his surprise over the outcome of the project.²

1 Tatiana Bilbao, ""We Banned Renders" from the Design Process Says Tatiana Bilbao," interview by Amy Frearson. *Dezeen*, December 4, 2019, <https://www.dezeen.com/2019/12/04/tatiana-bilbao-banned-renderings-architecture-interview/>.

2 Bilbao, Interview.

Fig.1.10 [top] | Collage work by Tatian Bilbao

Fig.1.11 [middle] | Collage work by Tatian Bilbao

Fig.1.12 [bottom] | Collage work by Tatian Bilbao

Images shown in lieu of photorealistic renderings in Tatiana Bilbao's exhibition representing their firm's Architectural philosophy.

source: <https://www.dezeen.com/2019/12/04/tatiana-bilbao-banned-renderings-architecture-interview/>



I realised that he stopped imagining how the house was going to be after that. He stopped following the process because he fixed an image into his mind, as if it was a finished product.

*Tatiana Bilbao*³

It is ridiculous to think that we have gotten so good at representing the building believably that we lose track of what happens during the design process yet this not that different from the situation as described in the writing of Bruno Latour and Albená Yaneva in which they state that “the static view of buildings is a professional hazard of drawing them too well⁴”. As architects we understand that there is a long period of time between the export of a render from photoshop to the construction of the built object during which unknown contingencies and unexpected client demands may lead to changes in the building design. Yet the ways we pick apart the render for discrepancies against the final building would suggest otherwise. Renderings represent a sliver of the design process at a single point in time, and it is because of our inability to communicate the design process as a whole that Latour and Albená call for a new *visual vocabulary* by which we can communicate just that. In this sense Bilbao’s exhibition could be understood as working towards correcting this deficiency by shifting our attention away from the single static frame of architecture presented in photorealistic rendering and towards the different frames that exist within Latour and Albená’s cinematic understanding of architecture as a process, a process that architects inherently understand. However, the explicit exclusion of renderings highlighted in the exhibition could also be seen as detrimental to this cause, falling back into the same trappings of a hyperfixation on photorealism; to fixate on a conception of architecture that is too narrow.

The most fundamental objective of photorealistic rendering and of all pictorial visualizations as architectural drawing is to convey the design in an accessible manner. This objective intent on behalf of the architect is what makes photorealism so appealing to architects and is the reason why architects do not consider the renderings they produce as commercial in nature. MVRDV’s response to Minkjan’s critique of rendering falls back on this functional intent of realism to explain the evolution of representational technique’s the firm has utilized over time, from raw exports from 3D modeling software to in house discussions over how to represent the number of floors in a design with an opaque facade⁵.

Bilbao’s rationale of her collage work as representative of the firm’s design

3 Bilbao, Interview.

4 Bruno Latour and Albená Yaneva, "Give Me a Gun and I Will make all Buildings Move: An ANT’s View of Architecture," *ARDETH* 1, (2017): 103-112, <https://doi.org/10.17454/ARDETH01.08>.

5 Jan Knikker and Alex Davidson, "In Defense of Renders and Trees on Top of Skyscrapers," *ArchDaily*, March 2, 2016, <https://www.archdaily.com/783045/in-defense-of-renders-and-trees-on-top-of-skyscrapers-mvrdv>.

PART 1.2

philosophy is well articulated in her interview yet we are not conditioned to view architectural illustrations fully outside of the objective lens of visual legibility. In the same way that a functional purity has purged ornament from architecture, the metaphorical reading of visual elements required to equate the Bilbao's collage work with a collaborative design philosophy is overshadowed by a preconditioned mindset which we still carry within us today, a mindset that seeks objective clarity in architectural visualizations before considering any *secondary meanings* that speak towards design philosophy especially in relation to professional practice.

PART 1.3

DECONSTRUCTION OF NON-PHOTOREALISM: STYLE AS RED-HERRING

If Eisenman evoked Debord in order to illustrate photorealistic renderings as a self-perpetuating problem, as *“mutations of their own mediation”*¹, then it is also possible to evoke Debord to explain why the very idea of “non-photorealism” as a style is merely a continuation of the same problem.

Debord writes that *“the basically tautological character of the spectacle flows from the simple fact that its means are simultaneously its ends”*², unless the choice in representation is borne from the intentions of the architecture it represents it will always be consumed by the dominant commercial narrative, for part of the commercial narrative is the effective novelty of what it presents. The second visual representation is conceived of as “non-photorealistic” it no longer speaks to the architecture it represents because it no longer acknowledges photorealism as a visual standard with associated expectations and embedded values developed on a societal level over time. What it speaks to instead is our understanding of non-photorealism as a style, whatever visual form it may take at the time playing back into the cycle of novelty for novelty’s sake. The danger with non-photorealistic styles of rendering is when they are done for the sake of being non-photorealistic, when non-photorealism becomes a means and an end. At that point it is possible for the idea of “non-photorealistic” drawings to not speak to architecture at all, simply responding to the perceived problem of photorealism; more specifically that it is *not* photorealism.

The objective clarity that architects fall back to in defense of rendering can still be achieved through non-photorealistic methods. Applications of “non-photorealistic styles” that have been positively received tend to toe the line between technical accuracy and artistic interpretation. Examples can be found in the more nuanced application of isometric collage or ligne claire perspective line drawings [Fig.1.13-14] of Pier Vittorio Aureli’s commercial and theoretical work which maintains the principles of projection while not appearing as equivalent to our perception of the real. They fill the expectations we have of the render that come from where these images are typically produced in the design process, near the end of design development to convey how the building will look.

The term “non-photorealism” and the idea of opposing the “realism” of *photorealistic* renderings refocuses the attention on this specific time frame that renderings fill in the design process which comes with its own expectations. It does not help that Bilbao’s refocus on collage also obscures the fact that renderings are still produced by the firm later in the

1 Peter Eisenman, “Contro lo Spettacolo!,” in *Architecture of Modern China : A Historical Critique*, by Jianfei Zhu (London: Routledge, 2009), 150-151.

2 Full quote: “The basically tautological character of the spectacle flows from the simple fact that its means are simultaneously its ends. It is the sun which never sets over the empire of modern passivity. It covers the entire surface of the world and bathes endlessly in its own glory.” Guy Debord, *The Society of the Spectacle*, trans. Donald Nicholson-Smith (Zone Books, 1994), 13.

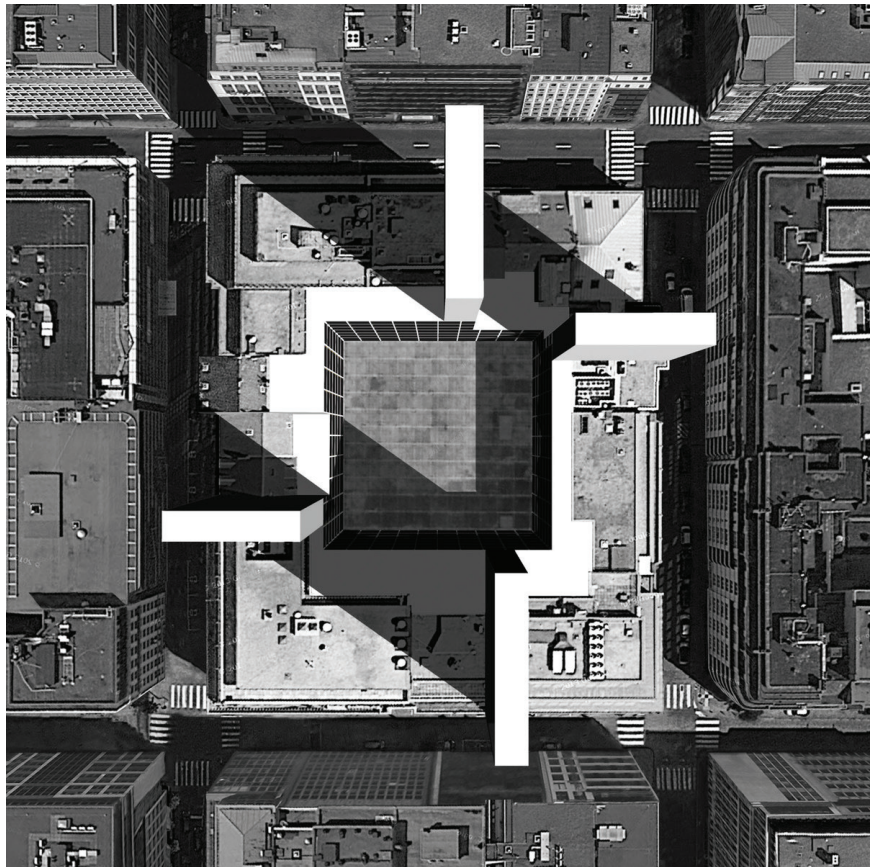
Fig. 1.13 [top] | Dogma Exterior Perspective

Fig.1.14 [bottom] | Dogma Site Plan

Dogma, proposal for the transformation of an office block, plan Brussels, Belgium, 2014.

The proposal, which seeks to reabstract the idea of an office space, is represented in an abstracted visualization of the architecture yet it is not so abstract as to become unrecognizable.

source: <http://www.harvarddesignmagazine.org/issues/41/production-reproduction-housing-beyond-the-family>



design phase. In reality Bilbao's collages are not seeking to replace photorealistic renderings, simply illuminate a portion of the design phase not often communicated to the public.

As soon as we regard drawing as an end product of design, we have architectural interruptus; we have the creative process cut short at the point where it could become creative in "the world beyond the drawing board."

*Reyner Banham, Iso! Axo! (All fall down?)*³

Referentially understood, the term non-photorealism as a way of describing alternative rendering styles becomes a problem in itself as it is used in place of positive definitions of both traditional mediums and techniques. Mediums of Watercolor, gouache, graphite, even digital equivalencies are all placed under the umbrella of "non-photorealism" as a style of which the most important factor becomes the understanding that it is *not photoreal*.

Prior to photorealistic rendering, there was simply **rendering** whose common definition in the dictionary is a work of visual art and **to render** was to represent or depict artistically. In the past architectural delineators, as they were referred to rather than architects, produced renderings using a variety of traditional mediums and in order to render buildings successfully the delineator required a degree of technical skill that not all architects had [Fig 1.14-15]. Prior to 3D rendering software which birthed the contemporary definition of the word *render* and the subsequent split between photoreal and non-photoreal, the notion of style was tied to the individual artist or the medium used and professional architectural delineators were chosen to best represent the design idea in the event the project architect did not possess the necessary degree of technical skill.

In the first retrospective volume of the American Society of Architectural Perspectivists released in 1987, the award for best in show went to Lee Dunette [Fig.1.15], both architect and illustrator for a proposal for the Worth Square Building in New York of which Dunette artfully rendered in airbrush, watercolor and pencil.

Worth Square is a perfect example of my career as a (material) polygamist; I will use 'whatever gets me through the night.' If tap dancing on the drawing would have the desired effect, I would dance.

*Lee Dunette*⁴

³ Reyner Banham, "Iso! Axo! (all Fall Down?)." In *Great Models: Digressions on the Architectural Model*, ed. Suzanne Buttolph (Raleigh: North Carolina State University, 1978), 17-20.

⁴ *American Society of Architectural Perspectivists. Architecture in Perspective : A Five Year Retrospective of Award Winning Illustration* (New York: Van Nostrand Reinhold,

PART 1.3

Fig.1.15 | Best of Show in First AIP Exhibition

This award later became the Hugh Ferriss Memorial Prize, also known as the Prtizer prize for architectural illustration

Lee Dunette, AIA

Worth Square Building, New York
airbrush, watercolor, pencil, 40x30

source: *Architecture in Perspective : A Five Year Retrospective of Award Winning Illustration 1992*. New York: Van Nostrand Reinhold.





Fig.1.16 [top] | Friedrichstrasse Skyscraper Project, 1921

source: <https://architizer.com/blog/inspiration/industry/mies-van-der-rohe-collages/>

Fig.1.17 [bottom] | Bismark Monument Project, 1910

Mies's Collage work is considered by some to be the predecessor to modern rendering techniques which position architecture in the context of the site by manipulating and drawing over site photographs.

One of the most famous architectural illustrators in modern times, Hugh Ferriss was often referred to as architect first before illustrator when addressing the illustrations that he is most famously known for. Inversely one would not dare refer to Mies as an artist for his beautiful collages, nor Zaha for her paintings. They would be referred to as architects who so happen to make beautiful visual representations of their built work. All of this speaks to the perceived importance of image making in the hierarchy of an architect's work, that is, it is objectively important to present our work visually, but for architect's the production of images will always be of secondary importance to that of the process of design.

source: <https://www.moma.org/collection/works/87492>



PART 1.3

The resulting piece was applauded for its delicate synthesis between the objective qualities (orthographic and well executed linear perspective) and the subjective qualities (lighting, color, composition) that are necessary in order to communicate the intricacies of design, laying both context and orthographics onto the same picture plane, something of a trend at the time.

In the subsequent development of criteria for the AIP's annual competition⁵ the jurors and curators discussed two principles by which they would judge submissions by. The first being that they would only accept "*time-removed*" drawings" or, in their words, drawings that depicted "*a building or environment, or a portion of a building not wholly existing at the time the drawing was made*". Inversely, "*drawings made from observation of existing subject matter were to be considered outside the realm of perspectivism*".

The second was that the images presented must be an "*exceptional example of the media and drawing type as well as a compelling presentation of the architecture*". Which is to say that it is not enough for the drawing to be compelling as to render the architecture incomprehensible speaking again towards the balance of both objective and subjective values.

Both these criteria were intended to separate architecture from general art and once again fall back on an emphasis put on the objective of design realisation in the same way that we understand the value of orthographic drawing as a means of building. Unlike the orthographic however, the pre-digital age of rendering also acknowledges the affective qualities of architecture absent in orthography but recognized as important to successful communication of architecture. The individual artist/architect's judgement was critical to this synthetic process.

These two values present in pre-digital rendering have not disappeared when it comes to digital photorealism, but instead, with the disappearance of the artist's hand from the creation of these images, we have leaned heavily into the objectivity of linear perspective. Yet there exists a clear hierarchy between the objectivity of linear perspective and subjectivity of visual affect which relied on the artist or architect's hand evident in the way we critique renderings as non-realistic.

1992), 15.

⁵ American Society of Architectural Perspectivists, *Architecture in Perspective : A Five Year Retrospective of Award Winning Illustration* (New York: Van Nostrand Reinhold, 1992) 15.

PART 1.4

PHOTOREALISTIC VALUE: WHAT MAKES A GOOD RENDER?

At this point we can begin to see that photorealistic rendering it is apparent that regardless of the apparent shortcomings of photorealism there are aspects of this method of visualization that we value. If this was not the case then one would assume that the profession would have already turned towards other methods of representation or rather, would not have turned to photorealism to begin with. What then is the criteria of a good photorealistic rendering and what can that tell us about our values as a profession?

The term *unrealistic* is often used to discredit photorealistic rendering often painting them as the reason for bad architecture¹. To make the statement that renderings are unrealistic in the way Minkjan does in his critique, *“Rendering versus Reality”*, implies that we hold photorealistic rendering to a standard of *reality* or *realism* and in some cases it is possible to see that this standard for visual truth is something that we value and strive towards. For instance, in a celebration of technical skill dutch architecture firm Mecanoo created and currently maintains a pinterest board (aptly named “Render versus Reality” [Fig.1.19] explicitly showcasing the uncanny similarity between their project renderings and photographs of the constructed project. Inversely in 2018, Herzog and Demuron’s project 56 Leonard Street came under fire when the founder of Dezeen Marcus Fairs noted the “cheap-looking white window frames” [Fig.1.18] that dominated the building’s facade were not expressed in the initial renderings.

From this we can understand that the standard of *realness* that we use to gauge the success of a rendering as architectural *representation* lies within the realm of how we perceive the built environment and that our perception of reality has transformed into an objective standard aligned with some notion of truth or truthfulness.

If taken literally, the expectation of the photorealistic renderings being *real* is absurd especially when we remind ourselves of the nature of these images as architectural visualizations, drawings that anticipate their *real* counterparts yet it is exactly this “suspension of critical disbelief” that Robin Evans notes as “necessary in order to enable architects to perform their tasks at all”² for as architects we are unable to *build* directly ourselves. The products of our work are in fact drawings understood **as** building.

Our current expectation of “realness” and the ability for us to suspend our disbelief, to believe the denoted building in the render can be attributed to our understanding of photography, from which photorealism takes its namesake. The standard set by the camera’s lens at any point in time becomes the standard by which we accept something as realistic and deem

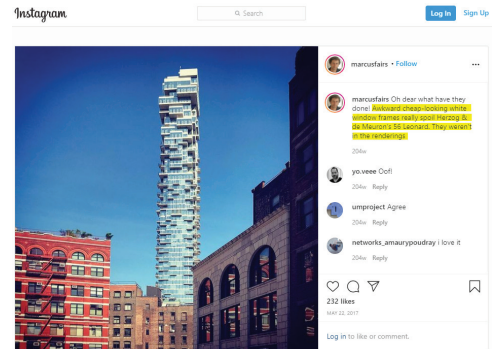


Fig.1.18 Render vs reality argument

“marcusfairs Oh dear what have they done! Awkward cheap-looking white window frames really spoil Herzog & de Meuron’s 56 Leonard. They weren’t in the renderings”

Marcus Fairs editor-in-chief of Dezeen

source: https://www.instagram.com/p/BUZM0bxFOvo/?utm_source=ig_embed&ig_rid=a635bd84-873e-4222-8549-8b71b71bd639

1 Troy Hodgson, "Opinion: "The Role of the Contemporary Visualiser is Deeply Misunderstood"," *Dezeen*, October 25, 2018, <https://www.dezeen.com/2018/10/25/architectural-renderings-defending-visualisers-troy-hodgson-darcstudio-opinion/>.

2 Robin Evans, *Translations from Drawing to Building and Other Essays* (London: Architectural Association, 1997), 154.

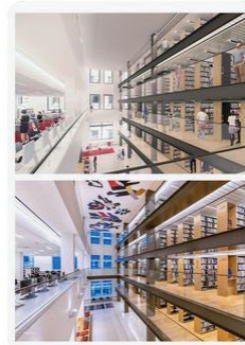
Fig.1.19 | Meccanoo's Render VS Reality Pinterest Board

source: <https://nl.pinterest.com/mecanoo/render-vs-reality/>

Render vs Reality

Collection by Mecanoo • Last updated 2 weeks ago

37 Pins • 1.1k Followers



Stavros Niarchos Desktop Screenshots

Stavros Niarchos Foundation Library

SNFL is a new-generation library for all New Yorkers, with special...



Outdoor Areas Outdoor Play Outdoor

Render vs Under Construction - Tainan...

Mecanoo and MAYU's design for the Tainan Public Library...



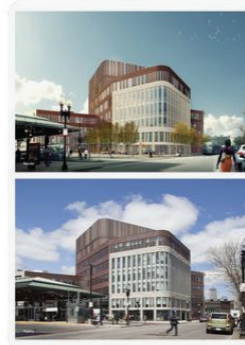
Under Construction Paris Skyline

Render vs Under Construction - Kaohsiung...



Under Construction

Render vs Under Construction -



School Department Innovation Center

Render vs Reality Bruce C. Bolling Municipal Building

As a testimony to the vision of the late Mayor Thomas M....



School Department Innovation Center

Render vs Reality Bruce C. Bolling Municipal Building

As a testimony to the vision of the late Mayor Thomas M....



Architects Building Homes Architects

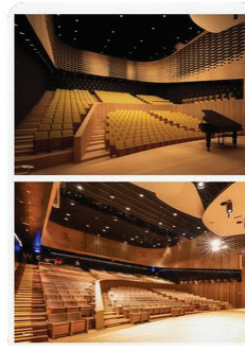
Render vs Reality - OBA Library Mercatorplein...



High Building

Render vs Reality - Campus Studen...

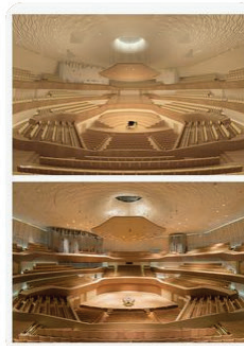
<p>The eight-s accommodates



Concert Hall Architecture Facade Archi

Render vs Reality - National Kaohsiung Centre for the...

The 434-seat Recital Hall has the most intimate atmosphere of th...



Halle Theater Auditorium Design

Render vs Reality - National Kaohsiung Centre for the...

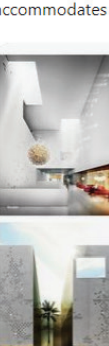
The 1981-seat Concert Hall is shaped like a stepped vineyard...



Studio Theater Theatre Public Squ

Render vs Reality - HOME Arts Centre

HOME, Manchester's new centre for international contemporary...



New Palace Pu

Render vs Reality of Justice

The new Palace Córdoba is loca

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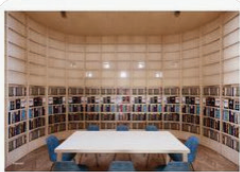
in Times Square

er
KAMPUS



Amsterdam Conference Room

Render vs Reality - OBA
Library Mercatorplein...



Basketball Court Sports Hs Sports

Render vs Reality - OBA
Library Mercatorplein...



Architects Basketball Court Buildi

Render vs Reality - OBA
Library Mercatorplein...



Multi Story Building

ity - Erasmus
nt Housing

storey complex
281 studio unit...



Under Construction Thesis Pergol

Render vs Under
Construction - Tainan...
Mecanoo and MAYU's design for
the Tainan Public Library...



University Of Manchester School Of

Render vs Under
Construction - Mancheste...
The University of Manchester's
Engineering Campus...



Auditorium Architecture Auditorium

Render vs Reality - National
Kaohsiung Centre for the...
The National Kaohsiung Centre
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ity - Palace

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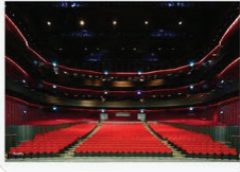
Street Performance Steel Structure

Render vs Reality - National
Kaohsiung Center for the...
The 2236-seat Opera House is
arranged in the form of a...



Modern Balcony Street Performance

Render vs Reality - National
Kaohsiung Center for the...
The 2236-seat Opera House is
arranged in the form of a...



Street Performance Steel Structure

Render vs Reality - National
Kaohsiung Centre for the...
The 2236-seat Opera House is
arranged in the form of a...

PART 1.4

it false or uncanny. Renderings produced in the early 1990's would have been more believable to us then than they are now not simply because architects got more skilled at creating them, but because technology has enhanced our vision of reality. Our common sense reading of photography carries with it our objective understanding of what reality is. "*Something we hear about, but doubt, seems proven when we're shown a photograph of it.*"³

While this trust in photography is undergoing a re-evaluation especially in light digital post production tools, we still retain a tendency to trust in photographic images as being "the perfect analogon"⁴ of the real. This valuation is demonstrated in Mecanoo's *Render versus Reality* album by which *reality* as a visual standard of success is understood through a comparison of the rendering with the carefully matched photographs of the finished buildings.

Even though an artfully rendered building looks real, we logically understand that they are not, at least not in the way that we subconsciously believe photography to be. But one could understand everything denoted in the render, the surrounding building forms (staging), sky (lighting), and the objects and people that populate the scene (composition) along with the building itself, as techniques derived from a photographic code to impress an understanding of realness for the objective goal of communicating the design without the confusion of abstract interpretation. The idea of *realness* itself could be understood as a secondary meaning coded into the render through photographic technique defined by Susan Sontag as perspective projection understood as a physical tracing of light as opposed to the notion of visual likeness, mimesis and illusion by which realism is achieved in the realm of art.

Photorealism as a movement in art began in the 1960's and questioned, amongst other things, the role of the artists hand, of skill and virtuosity when it comes to how we determine the value of art in the advent of photography⁵. The legacy of mimetic observation⁶ as a central concern of art carried forth from the Renaissance sees a successor in the photograph -- produced by a machine-- where then does that leave the artist? There were many who thought that photography spelled the end of art but even as photorealistic painters mimicked the camera lens as critical commentary the resulting realism in painting still required the technical skill of the individual artist. What photography does, is achieve realism without such deviations, without the artists hand.

3 Susan Sontag, *On Photography* (New York: Picador, 1973),10.

4 Roland Barthes, *Image, Music, Text*, trans. Stephen Heath. (New York: Noonday Press, 1988), 16-17.

5 Louis K. Meisel and Linda Chase, *Photorealism at the Millennium* (New York: Harry N. Abrams, 2002), 11-22.

6 Meisel and Chase, *Photorealism at the Millennium*, 11-22.

Sontag notes that a photograph is not just a representation of reality, but is a tracing of reality itself, “like a foot print, or a death mask” photographs are connected to physical reality through the principle of projection, the tracing of light as it reflects off the surface of an object and registered through the lens of the camera⁷. The result is an artifact understood as a tangible extension of the subject itself free of the interpretation added by the artist’s hand.

Photography, like architecture, straddles the line between objective representation and art and it is through the photographic lens that architecture finds a foothold in creating an objective standard for the pictorial visualization of architecture that had yet to be established till now. Architecture distinguishes itself from art through the principle of projection found in the lens of the camera and this objective value manifests within the principles of digital photorealism.

The same projective principles as the camera form the foundation of modern digital rendering programs but while a physical camera traces the light rays that pass through its lens the virtual camera casts virtual rays outward and traces their path through an evolving set of algorithms in a process called *path tracing*. Programs like Vray and Maxwell, use virtual cameras to trace simulated rays of light that would scatter throughout a 3D modeled scene. In the process of digital rendering, architectural visualizer would input the same settings into Vrays virtual camera as they would input on a physical camera in real life in order to set up the scene, then algorithms would simulate light rays extending out from the virtual camera, through each pixel of the picture plane and towards the modeled object. This sense of *realness* coded into digital renderings is what allows us to suspend our disbelief in the same way we do with photographs to the point where we are able to compare them side by side with intense scrutiny.

Photorealism in architectural rendering differentiates itself from realism understood through art by this degree of technical accuracy which advancements in rendering and CAD technology has afforded us. This tracing of light is equivalent to the objective standardization found in parallel line projection and is the principle behind the use of reality as our standard of evaluation when it comes to PRR. Yet this principle seems to have been forgotten in favour of simply using photography and our perception of what reality should look like as a measure of value.

But renderings are not photography and in simply focusing on the visual signifier and notions of style, rather than the principle and fundamentally architectural values, we are left at the mercy of the photographic lens which has also led us to become skeptical of these images due to the commercial qualities coded into PRR.⁸

7 Susan Sontag, *On Photography* (New York: Picador, 1973),124.

8 Elspeth Brown, "Rationalizing Consumption: Lejaren À Hiller and the Origins of American Advertising Photography, 1913—1924," *Enterprise & Society* 1, 4 (2000): 715-

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These photographic techniques, often applied in post production programs like photoshop, bring back into the equation the hand of the artist. Instead of presenting the objectivity of which we have become biased towards, these photographic techniques seek to appeal to our emotional and impulsive instincts. There is nothing innately incorrect about this coding as prior to digital rendering these qualities were considered essential to successful visualizations in the era of traditional mediums.

What is being addressed with the turn towards “non-photorealistic” styles of rendering lies in this stage in the architectural visualization process, in the post-production coding of secondary meaning [Fig.20-21]. But ironically it is also in this stage that non-photorealistic renderings are created which might speak to why non-photorealism is unable to challenge photorealism’s seat.

Fig.1.20 | Raw export from Sketchup

source: <https://visualizingarchitecture.com/no-render-quick-collage/>



Fig.1.21 | Final Collage Render

The idea of non-photorealism and the “no-render quick collage” are still reliant on exported imagery from 3D modelling programs that utilize basic ray casting to form the base image (top) for the final visualization (bottom).

source: <https://visualizingarchitecture.com/no-render-quick-collage/>



PART 1.5

MIMETIC IMPASSE

From here we become fully aware of an internal conflict brought up by the rise of photorealism in architectural renderings that lies between maintaining a degree of distance, of *objectivity*, as is crucial to architectural integrity and engaging further with the *subjective* meanings which drive image creation, meanings which are then impressed back upon the viewer. Photorealistic renderings, while driven by the former, embody both objective and subjective information. It is both an objective tracing of light as well as an embodiment of subjective ideals such as *commodification*, *commercialization*, *gentrification* or *collaboration*, *community*, and *environmentalism*.

All of these ideals, good and bad, can be presented within a single image, opening photorealistic renderings up to a multitude of contradictions which has created our current struggle. The current discourse around photorealistic rendering could be seen as an attempt to differentiate or emphasize positive from negative messaging mediated through rendering. But it is also apparent that this discourse often results in a purist approach often denouncing the entirety of architectural visualization, blaming renderings in general rather than acknowledging the underlying visual mechanisms from which they stem, and which are neither inherently good nor inherently bad. Those like Minkjan who call for an increase in visual literacy or wariness around renderings often do so in a defensive manner of a skeptic.

This state of contradiction that is so characteristic of our contemporary relationship with images and the skepticism towards them is not a unique phenomenon. Martin Jay identifies the “dominant visual model of the modern era” as stemming from Cartesian perspectivalism, “*Renaissance notions of perspective in the visual arts and Cartesian ideas of subjective rationality in philosophy*”¹. What is often understood as a single dominant narrative, Jay points to the internal conflicts presented in Cartesian perspectivalism before parsing out two “scopic regimes” which roughly aligned with the conflicting value of photorealistic rendering and speaks to the impetus for the rise of non-photorealistic rendering as a response.

The first regime is referred to by Jay as the “*art of describing*”² and constitutes an *empirical visual experience*, in which that which is depicted in the painting is indifferent to viewer in front of its surface; it exists independent of the viewer's gaze. This regime's principles of observational mimesis distinguishes itself through the suppression of the narrative tradition of Cartesian Perspectivalism and this objective lens is then carried forward with the advent of photography; as Sontag notes: photographic proof is

1 Jay opens the essay by asking what constitutes our modern visual culture, explaining our modern behavior towards images by tracing our tendencies through larger historic movements. Martin Jay, “Scopic Regimes of Modernity,” in *Vision and Visuality: Discussions in Contemporary Culture #2*, ed. Hal Foster (New York City: Bay Press, 1988), 3-23.

2 Jay borrows this term from Alpers. Jay, “Scopic Regimes of Modernity,” 6.

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objective truth³. As the way we react to renderings is largely influenced by the photographic lens, we evaluate renderings with the same bias towards observational mimesis. Parallel line projection and the use of photorealism in architectural renderings align with the first regimes values of mimesis as a visual standard.

The second regime is described by Jay as the “*second moment of unease*” and is largely a response to the first. Where the *art of describing* is concerned with “lucid, linear, solid, fixed, planimetric [and] closed forms”, aspects of observational truths, the *second moment of unease* is “painterly, recessional, soft-focused, multiple and open”⁴. Non-photorealism as such a broadly defined term in architectural visualization aligns with the principles of this second regime which reveals more of the architectural process that is often not communicated and challenges the dominant visual narrative. Such is the case with Bilbao’s collage work.

Western historic understanding of the relationship between architecture and drawing is understood with Phillippo Brunellesci’s founding of Cartesian perspectivalism in the Renaissance which sought universal truth in the metaphysical tracing of the divine *lux*. Yet the religious roots of these theories have all but been stripped from modern day understanding leaving only the bias towards “*objective optical order*”⁵. The principle of parallel line projection used in orthographic drawings removes the religious aspect of Cartesian perspective through the use of parallel lines, thereby removing God’s eye at the apex of the *beholder’s visual pyramid*, that there may be no individual perspective at all. This embodies the objective nature at the foundation of orthographic drawing by which architecture can be built out of. Photorealism as a standard in architectural visualization aligns with the *art of describing* which carries forth the empirical values of Cartesian perspective that were embodied in orthographic drawing further into pictorial digital rendering technologies.

Yet the trend towards non-photorealism as a critical response values the resistant nature of the *second moment of unease* and speaks to the nature of criticality as transgressive in nature, aligned with the avant-garde and in opposition with the status quo⁶. The deliberate exclusion of photorealistic renderings from the Louisiana Museum’s exhibition frames our encounter with Bilbao’s collage work which forego photorealism and with it the intention to communicate the design of the built structure. However, in its stead, the collages communicate architecture as building and *more* -- architecture as the ideological position of collaboration communicated

3 Susan Sontag, *On Photography* (New York: Picador, 1973), 10

4 Jay, “Scopic Regimes of Modernity,” 16.

5 Jay, “Scopic Regimes of Modernity,” 11.

6 Peter Eisenman, “Critical Architecture in a Geopolitical World,” in *Architecture Beyond Architecture*, ed Cynthia C. Davidson and Ismaïl Serageldin (London: Academy Editions, 1995), 75.

through the act of viewing.

This brings us to the current impasse between architecture and its pictorial visualization. The critical view of photorealistic renderings as commercial and therefore not architectural has led to the rise of non-photorealism which is seen as undermining the fundamental objectivity of drawing that separates architecture from art which is to build. The bias towards optical objectivity ingrained in Western visual culture has secured photorealistic rendering a visual standard and is the main reason why non-photorealistic styles of visualization are not able to effectively challenge its seat.

At this point it seems we might be at our limits on the discussion of images and architecture, caught at an impasse in a hierarchy of irreconcilable values. While we can understand the logic and value of non-photorealistic renderings, it would be another to convey the design to a client purely through these means. However, in countries outside of the West that have visual cultures which have developed independent of Cartesian perspectivalism, we may find another mindset in which to view images outside of the value of optical objectivity.

If photorealism as a standard in visual practice were to change in order to communicate the more abstract values of architecture, it would have to come out of a culture that does not have this bias towards photorealism and I argue that one of these potential places is China. In the next chapter we will look into the visual culture of China which has developed independently for thousands of years before the introduction of Cartesian perspectivalism.

PART 2

FROM WEST TO EAST

Up until now we have examined the significance and value of the rise of photorealism through a Western historical lens and a Western lens only. This is due to a few reasons. The first is that the readership of this thesis is majority Western educated and that myself, as the author of this thesis, is as well. Much of the impacts of images in architecture outside of direct representation, especially with respect to photorealistic renderings, are seldom discussed in depth in an educational setting. Rendering in the educational sense is free of some of the contractual weight they carry in practice.

In general photorealistic renderings are seen as problematic when there is something to be built. When photorealistic renderings are used in theoretical and academic settings, they do not carry the same negative associations as strongly as those produced in practice because each setting carries its own requirements as representation with the commercial appeal being less relevant to hypothetical constructs. Renderings made in professional practice are highly public and obtain a near contractual status, often held up against the building post construction as a method of evaluating the success of a design. Renderings produced in theoretical or educational environments rarely produce tangible buildings and therefore lack the connection to reality as a point of evaluation.

It's only when architecture is on the brink of realization, the condition which produces such renderings, that the question of image and architecture truly comes to light. This also means that each individual most likely comes to the table furnished with their own ideas mediated through their own encounters with images of architecture. With Part 1 I had intended to provide an even foundation for all present readers, establishing the impact of Cartesian perspectivalism from which we inherited the bias towards optical objectivity which acts as the framework of majority of our encounters with images and its connection to the development of parallel line projection which differentiated architecture intellectually from the realm of art.

The second reason is that fundamentally digital rendering technology and application in architectural practice began in the West. The values which lead to its continued advancement towards increasing levels of realism and the global standardization is deeply rooted in the same Western values present in Cartesian perspectivalism [Fig.2.1].

The third reason lies within the idea of the Western sense of crit-

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icality in architecture understood as a transgressive force that responds to existing social and political ideology and seeks change by a principle of differentiation. One of the fundamental objectives of architecture-- building – is manifested in the visual form as the objective standardization of parallel line projection which is what differentiates architectural drawing from the realm of art. Therefore architectural identity is tied with a sense of professional autonomy that is harder to justify within a world view mediated through pictorial images like renderings and photographs

Pictorial photorealism challenges this principle of difference. As our encounters with architecture are increasingly composed of pictorial images that seek increasing levels of *photorealism*, drawing as the act of that differentiates, defines and insulates architecture's intellectual identity from all other visual professions is beginning to dissolve. Media theory would tell us that it is the nature of images to break down all forms of hierarchy. Images are universal equalizers by which the all possibilities of knowledge, actions and events present themselves to us simultaneously for us to selectively draw upon.

The image shows states of affairs, scenes, and the eye has to discover the relations. More elegantly put, the image synchronises information, and the gaze desynchronises the image. Therefore the gaze that is trained by the contact with images sees states of affairs everywhere: everything is tied into reversible relations.

Vilhelm Flusser ¹

Photorealistic rendering brings back into the open, the question of what architecture is about. In today's global scope this question is incredibly hard to answer without some sort of contradiction and indeed those who attempt to communicate any sort of definition of *what architecture is* would not claim it to be a universal fact. But what happens when the contradictions brought forth at the pictorial turn threaten to undermine foundations built upon centuries of practice?

Photorealistic rendering has not eliminated architectural values

¹ Flusser, Vilhelm (Medienkultur 1997) quoted in Bram Ieven, "How to Orientate Oneself in the World: A General Outline of Flusser's Theory of Media," *Online Magazine of the Visual Narrative* 3, 6 (2003): <http://www.imageandnarrative.be/inarchive/medium-theory/bramieven.htm>.

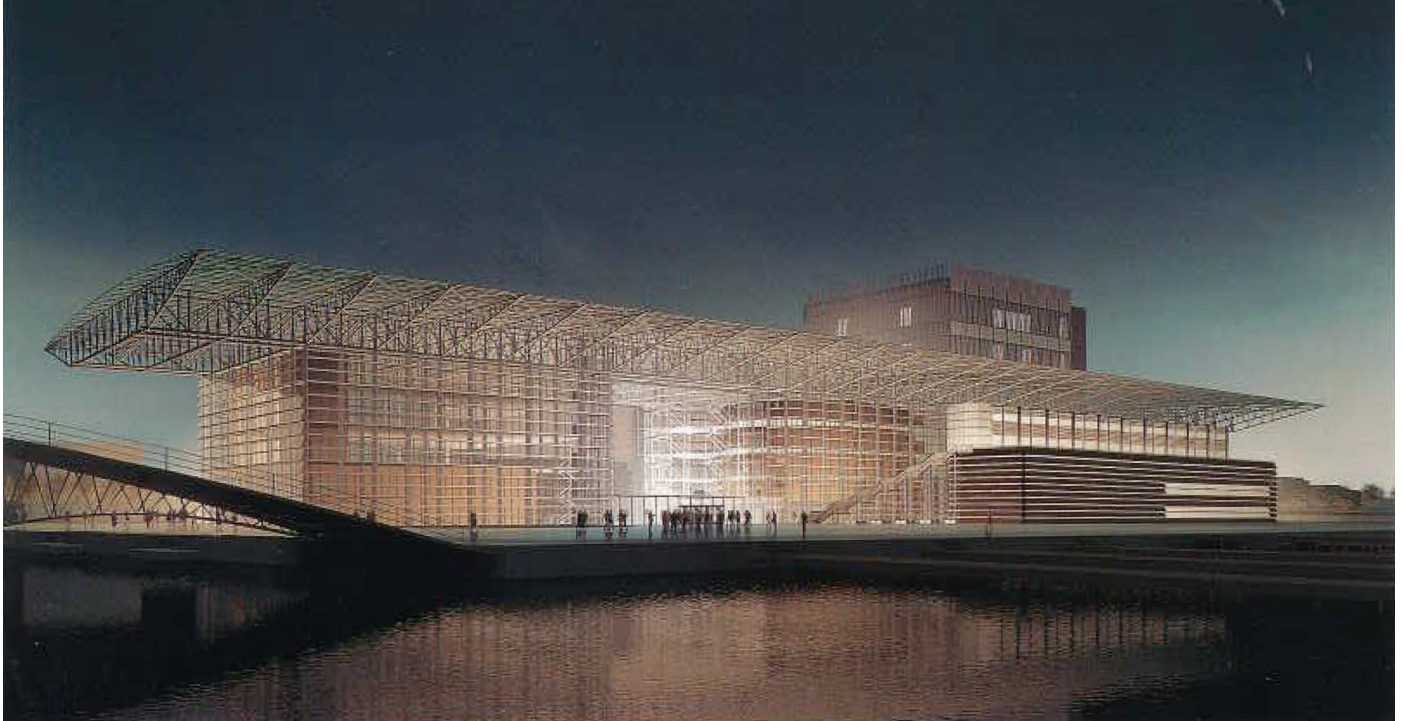


Fig.2.1 | First digital rendering to receive the Hugh Ferriss Memorial Prize, 2001

Advanced Media Design, Inc

Oslo Opera House

Architect Designer: Friedrich St Florian
Digital | 20" x 32"

"There is no doubt in anyone's mind here that for rendering programs to get better they have to be developed along the lines of mimicking physical reality"

Jonathan Kletzien

Jonathan Kletzien, "Interview with Jonathan Kletzien of Advanced Media Design Inc," interviewed by Jeff Mottle. CGarchitect, Accessed Jul 6, 2021, <https://www.cgarchitect.com/features/articles/db-47beca-interview-with-jonathan-kletzien-of-advanced-media-design-inc>.

source: "Architecture in Perspective : A Competitive Exhibition of Architectural Delineation." 1986a. *Architecture in Perspective : A Competitive Exhibition of Architectural Delineation*. 12, 16, 17.

in drawing as is the common criticism today, in fact at its core is the value of an objective tracing of light, as close to *real* as mathematically possible, that drives its propagation in architecture today. The founding principles of parallel line projection finds itself an equivalent standardization in the digital rendering technologies we find today, enabled by advancements in technology but has left itself open to *other* forms of interpretations that were not present in orthographic drawing. Rendering is diversifying and changing our understanding of architecture by acting as our mediators, communicating to us what architecture is or could be, in lieu of the physical building itself.

The criticism against rendering is still valid but the general tendency to throw out the baby with the bathwater suggests that the values of architecture present in rendering that are beneficial to the profession are wilfully ignored for what is inarguably a just cause. However, the antithetical solution of non-photorealism as a concept that arises is failing because of it.

This discussion about the expanding definition of architecture and its many complex values is enabled by pictorial photorealism and

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has been elevated to the scale of a global discussion by the pictorial turn which places great emphasis on such images. Of course we must think critically about what is presented to us but when we disagree with what is placed in front of us, rather than throw the baby out with the bathwater as seems to be a common reaction to *spectacular* renderings, we need another method of approaching the understanding of renderings. The critical mindset that attempts to remove architecture from unwanted aspects of it's creation does not accommodate this diversification brought forth by the pictorial turn that assumes all things, regardless of contradictions, can and will coexist at the same time. Rather than cut off or deny these aspects presented to us, we must curate this diverse understanding that is being brought to the fore.

If photorealism and architectures resulting impasse is rooted in Western critical mindset then it might be possible to break through this impasse, even if for just the duration of this thesis, by stepping outside the Western framework.

The next sections will look at the significance of photorealistic renderings from an Eastern mindset. specifically, that of China in which this digital photorealism is used extensively throughout the architectural design process and whose relationship to images is fundamentally different from that of Cartesian perspectivalism and has developed independently for millennia.

PART 2.1

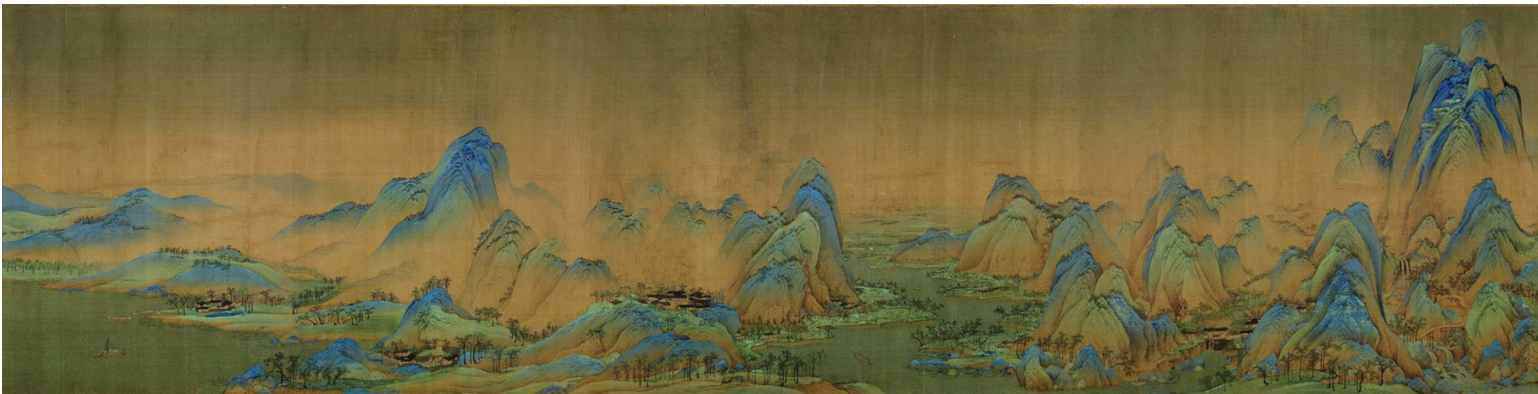
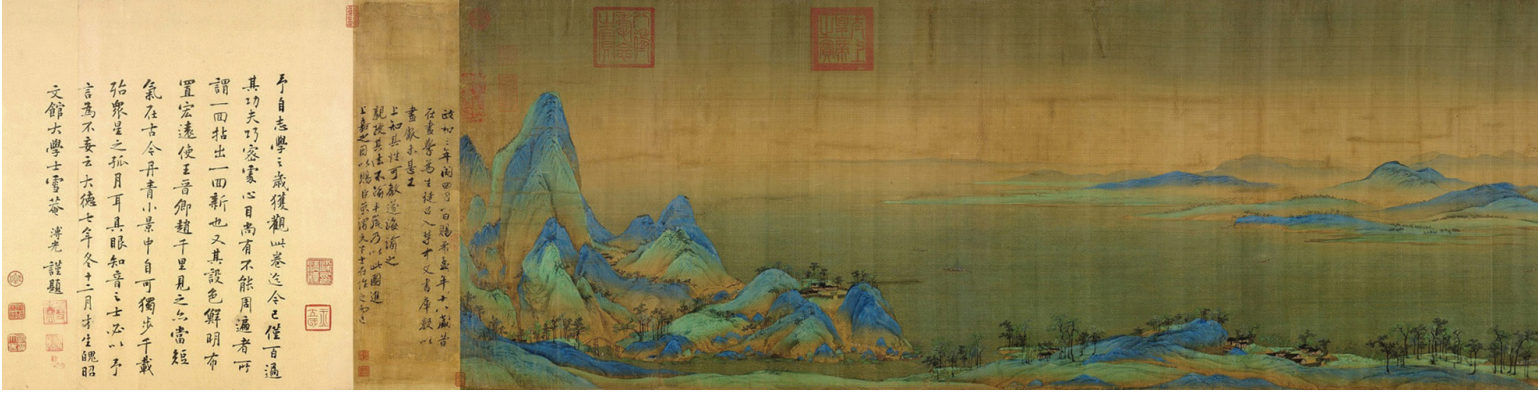
MIMESIS TO MÓXIĚ 摹写

The positive valuation of **photorealism** present in architectural visual standards today can be attributed to the modern emphasis on Cartesian perspectivalism and the objective principle of observational *mimesis*. At its origin, architecture in the West could be seen as having defined itself in relation to this concept of *mimesis* in order to successfully *build* what we conceive of in the design phase (this is the basis behind orthographics). But regardless of how the profession defines the boundaries of its intellectual identity, architects inescapably share the same value judgement outlined in the classical definitions of mimesis which perceives physical reality as a reflection of truth. This notion manifests in the insistence of using reality as a standard for successful renderings in which the closer one gets to visual realism the more positively it is received. Mimesis becomes the functioning connection between what is presented in the image and what it means to us, ie, a sense of truthfulness. What is present in the image and how close to reality it is has become a matter of great importance in the pictorial turn, because images become the mediators of a modern architectural understanding. However, using reality as a bar for excellence begins to feel contradictory when we speak about architecture as a profession that brings things into being that have not yet existed which will inevitably change the built environment, hopefully for the better. So what would happen if we removed reality as a bar?

Historically in China image-making has never been about depicting some sort of visual truth [Fig.2.2]. The idea that an image should be a reflection of reality and of truth stems from Western theories of painting. With Chinese painting however, there is no *persistent* visual expectation placed upon the final image that informs the painter what a painting should look like or strive to be. Instead the *standard*, if indeed it can be called that, is created by the form and technique of visuals present at the time of which the painting is created. Therefore the visual style of a Chinese painting is defined within the process of its creation and the process is called *móxiě* [摹写].

Wáng Kēpíng (王柯平) compares the Plato's conception of mimesis at the centre of Western painting to the Eastern concept of *móxiě* [摹写]¹ which in turn sits at the centre of classical Chinese painting. On a surface level both of these concepts appear incredibly similar to one another [Fig. 2.4] *Mimesis* is broadly defined as *the act of*

¹ Although the principles of *móxiě*, copying and drawing, can be traced very far back into Chinese painting Wang attributes the first formal definition to Dong Qichang (1555-1636). Keping Wang, "The Platonic Mimesis and the Chinese *Móxiě*," *International Yearbook of Aesthetics* 14, (2010) 214-233. <http://www.golob-gm.si/2-the-political-origins-of-modernism/p-the-platonic-mimesis-and-the-chinese-móxiě.htm>.



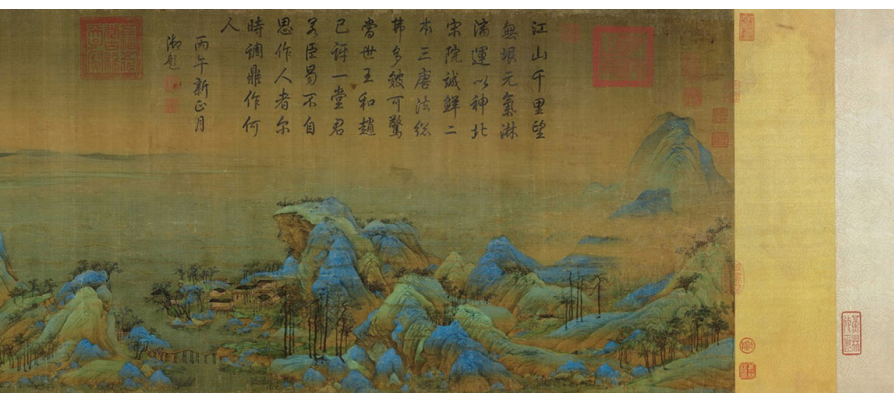
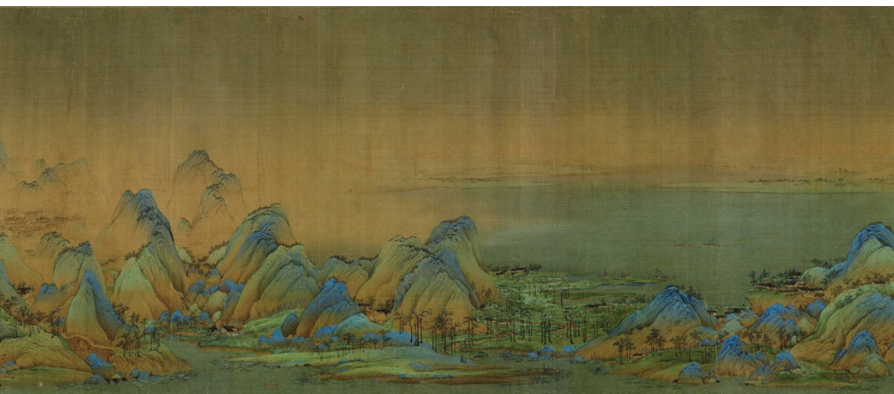
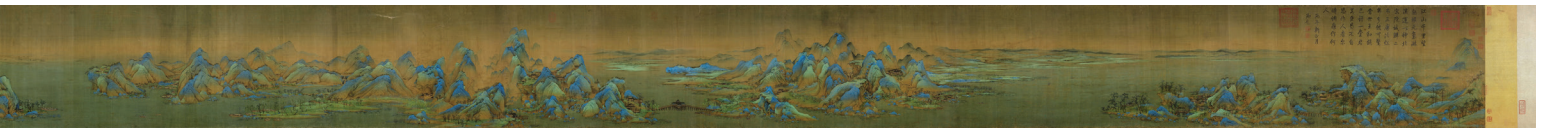


Fig.2.2 | Wang XiMeng, One Thousand Li of Rivers and Mountains, 51.5 x 1191.5 cm

What is distinct about Chinese paintings is the use of isometric perspective (等角透视 Děng jiǎo tòushì) which enables the painter to capture and depict coherently the great expanse of a country's landscape within a single work of art. The relationship between subjects are preserved, undistorted by vanishing perspectives.

This also accommodates for the specific format of Chinese paintings that take the form of scrolls of various lengths.

source: <https://www.comuseum.com/painting/famous-chinese-paintings/wang-ximeng-one-thousand-li-of-rivers-and-mountains/#>

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*representing or imitating reality in art*² with the original greek meaning of the word being “to imitate” much like *móxiě*. To introduce the concept Wang translates *móxiě* directly as *copying* [Mò 摹] and *drawing* [Xiě 写]. This method of translation is efficient enough to outline the broad strokes of this concept which correlates to imitation in the context of art.

In his comparison Wáng notes that both Plato’s *mimesis* and *móxiě* are often referred to as universal principles of representational art in their respective cultures³. He also outlines the intellectual process underlying the creation of art as a form of copying or imitation. My interest in Wáng’s comparison is to understand how these two methods of understanding image making reflect back onto how we read and evaluate images today. The method of his comparison revolves around breaking these concepts down into three parts which define a hierarchy of values that encourages the painter to abide by and in turn these values become principles in a process of painting which heavily informs what the final criteria for visual art is and what it *should* look like. The resulting standards arising from each *mimesis* and *móxiě* inform two very different methods of approaching images and their evaluation.

Wang continues to point out that Plato’s *mimesis* implies a hierarchical structure of reality which becomes separated into three distinct levels; the first consisting of images-- the realm of the painter’s work --, the second consisting of physical objects and nature-- the reality the painter lives in-- and third is the realm of god and the ideal form -- truth as the final goal. Plato’s philosophy encourages the painter to pursue the ideal form through the *imitation* of the secondary realm of reality which is itself defined as an *imitation* of the third realm of god. *Mimesis* as *imitation* becomes the process by which one accesses higher realms of being through lower realms of being. This is the understanding of images equivalent to what the image is depicting. Ultimately the closer one gets to the second realm of reality the closer one gets to god. However it is implied that one can never truly reach the realm of God only become god-like because one can never cross through these levels of reality.

For by the gods assuredly that man will never be neglected who is willing and eager to be righteous, and by the practice of virtue to be likened unto god so far

2 “Mimesis,” Cambridge Dictionary, accessed May 9, 2021, <https://dictionary.cambridge.org/dictionary/english/mimesis>.

3 Wang, “The Platonic Mimesis and the Chinese Móxiě,” 214-233.

as that is possible for man.

Plato, *The Republic* ⁴

While the religious values driving Plato's *mimesis* have been all but stripped from the contemporary mindset, the hierarchical structure founded in platonic *mimesis* remains. This structure dictates the relationship between images and reality as mimetic, that the realm of images should strive to be closer to the realm of reality. This positive valuation of visual truth as found in the use of reality as a prevailing (perceived universal) standard that has been carried forward over time into the renaissance principles of chiaroscuro in painting and cartesian perspectivalism's tracing of the divine lux, then forward again into the perception of photography as a visual truth before finally landing within the pictorial visualization of architecture and the standardization of photorealism through digital means of production.

Photorealistic rendering is also valued in Chinese architectural practices, and its use is even more pervasive due to the fact that renderings tend to play a critical role earlier in the design processes of Chinese architectural firms than in the West, some projects even hinging on a single image [Fig.2.3]. However the significance of photorealistic rendering in China did not come about due to the platonic values of *mimesis* but instead rose to importance due to the principles of *móxiě*, loosely translated as a practice of *copying and drawing* and is closely tied to the emergence of the current architectural profession in China.

Móxiě reflects the concept of self cultivation (修养⁵ xiūyǎng) in which one seeks to improve one's own mental and physical capabilities through varying processes of self discipline and practice. While this principle is at the heart of many East Asian religions, such as buddhism and confucianism, *móxiě* aligns within the framework of a Daoist way of life, promoting the painter to seeks harmony with Heaven and Earth⁶, between the self and the world at large. In the same way Plato's *mimesis* organizes the relationship between man the painter and nature as separate levels of reality, *móxiě* also reflects on this same relationship but comes to a different conclusion.

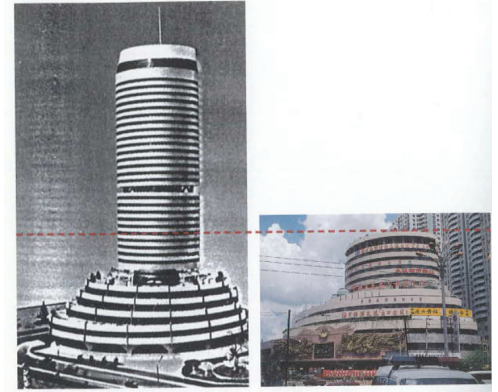


Fig. 2.3 | Shunde Shujian factory building and the render it was based on

Heavy significance is placed upon the render of the building as the root of design. In the case of Shunde Shujian refrigerator factory the building was created based on a picture of an existing building design. In this case the rendering is the source of design, inverted from the typical Western perspective which views the render as produced out of the design process.

source: Chung, Chuihua Judy, Jeffrey Inaba, Rem Koolhaas, Sze Tsung Leong, and Bernard Chang. 2001. *Great Leap Forward*. Köln: Taschen.

4 Plato, *The Republic*. trans. Allan Bloom (New York: Basic Books, 1968), 10.613a

5 Like *móxiě*, *xiūyǎng* is a compound word formulated from the two compound words 修心 xiūxīn and 养性 yǎngxìng.

6 Wang, "The Platonic Mimesis and the Chinese *Móxiě*," 214-233.

PART 2.1

Wáng further elaborates on the definition of *móxiě* as follows:

[*Móxiě* is] divided into two interrelated stages of artistic practice: one is ***lǐnmò*** meaning to imitate the works of the old masters so as to develop painting skills, and the other is ***xiězhào*** meaning to portray natural landscapes so as to improve artistic expertise.

Wang Keping, *The Platonic Mimesis and the Chinese Móxiě* ⁷

Here we begin the realm of the art embodied under the practice of *lǐnmò* in which the aspiring artist seeks to improve their technical skills through the copying of old master's *differentiated from* the realm of the natural world which pertains to the practice of *xiězhào* in which the mature artist seeks to draw directly from nature. However, unlike Plato there is no value judgement attached to either of these two stages which pertain to the realm of the image and the realm of nature.⁸ Even though it is acknowledged that *lǐnmò* comes before *xiězhào* in procedural order and that *xiězhào* has a degree of technical difficulty that exceeds *lǐnmò*, both are seen as equally important to the overall *process* of painting. *Móxiě* is ultimately a process of cultivation.

Further elaborating on the concept of *móxiě*, Wáng explains that through these two stages of artistic practice, the mature painter seeks a third stage in which one can draw upon the skills developed in the previous two stages and paint directly from the mind that which exists or does not exist yet in equal measure. The result of reaching this third stage is the ability to create *xīnhuà* (心画 lit. mind-heart drawing) which seeks to capture the vitality (*qi*) of what is being depicted. Upon the creation of *xīnhuà* the painter ascends to become a master themselves.

In summary, *Lǐnmò* and *xiězhào* are the names of practices one follows to achieve the first and second stage of painting respectively. This third stage is defined as the result of the combination of the prior stages of artistic practice in order to create something truly original, *xīnhuà*. *Móxiě* does not impose a notion of visual standard for good painting other than the present state of the natural world and those of previous master's which in turn were based on other master's and the state of nature in the past. This process promotes

7 Wang, "The Platonic Mimesis and the Chinese Móxiě," 214-233.

8 Wang, "The Platonic Mimesis and the Chinese Móxiě." 214-233.

one to look for continuity between student and master, painting and nature and take into account all things in equal measure. The resulting painting emerges as a synthesis produced out of the conditions from which it arises and the term used to define the process of achieving this final third stage of painting in Chinese culture can be defined as the linguistic synthesis; [lin]móxiě[zhào].

Through *móxiě* one comes to different conclusions in regards to the way that the East looks at images and it's creation that differ from those that appear out of Western *mimesis*.

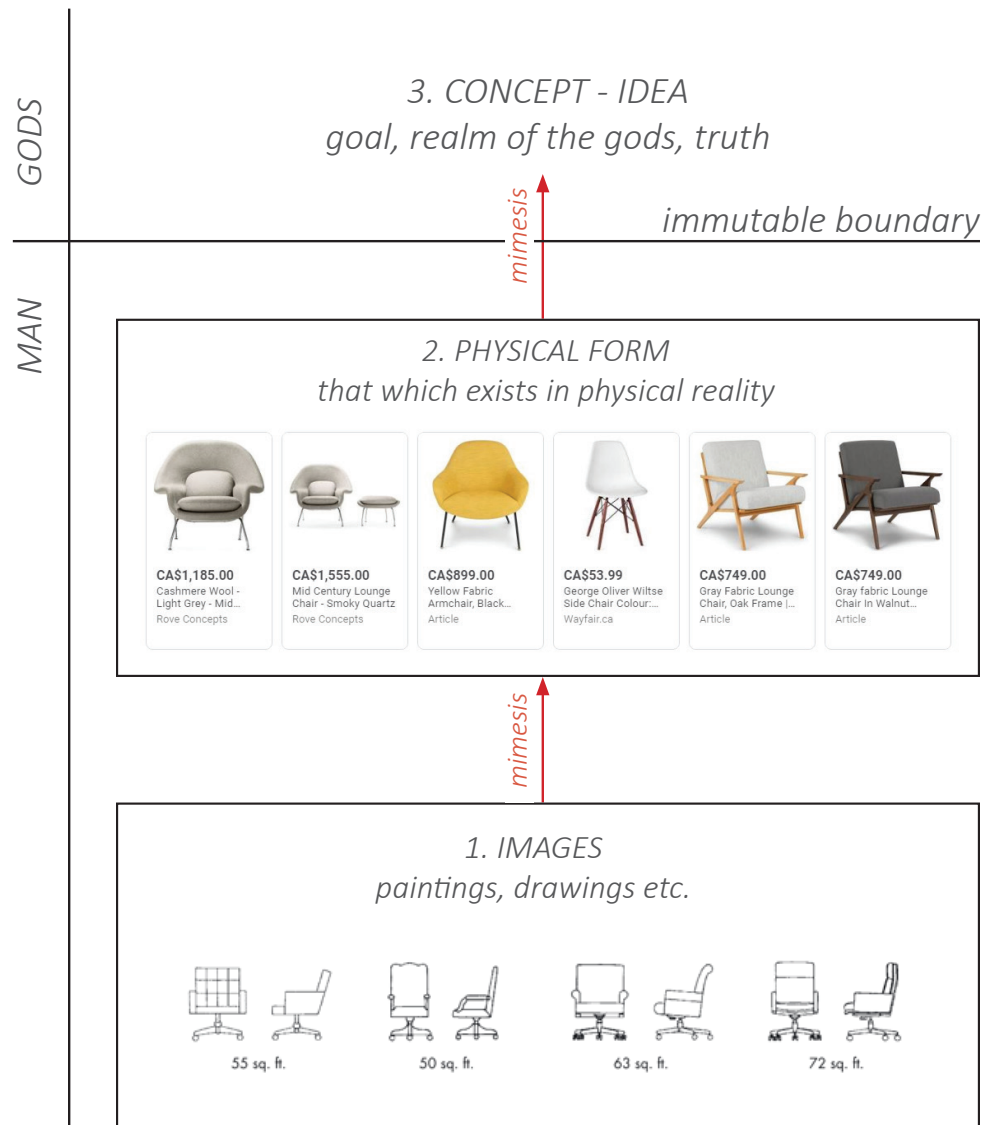
The first major difference is on the subject of visual standards which roughly align with a notion of visual styles. Painting, specifically *xīnhuà*, and the natural world are seen as equal within the principles of *móxiě* and as result, *móxiě* does not lead to the perception of reality as a visual standard. Instead of a fixed visual standard to abide by, *móxiě* directs the painter on a general path forward that draws upon already existing visuals in order to create a new image. The resultant *xīnhuà*, now understood as a synthesis, will be regarded by future painters as prime examples to learn from.

The second major difference is the understanding that images produced off a principle of *móxiě*, through copying, can lead to the creation of something truly original but is a definition of originality that exalts in its likeness to other things. If the principle of differentiation by which architecture identifies itself works in opposition to the nature of images as mediators which connect both disparate and alike together into a whole then *móxiě*, which defines itself by their connection to other things, can provide an alternative understanding of the current impasse. The next sections will elaborate on these key differences, before demonstrating how they apply to the development of the Architectural process in China.

PLATONIC MIMESIS
IMITATION

Fig. 2.4 | Mimesis Vs Moxiě

source: by author

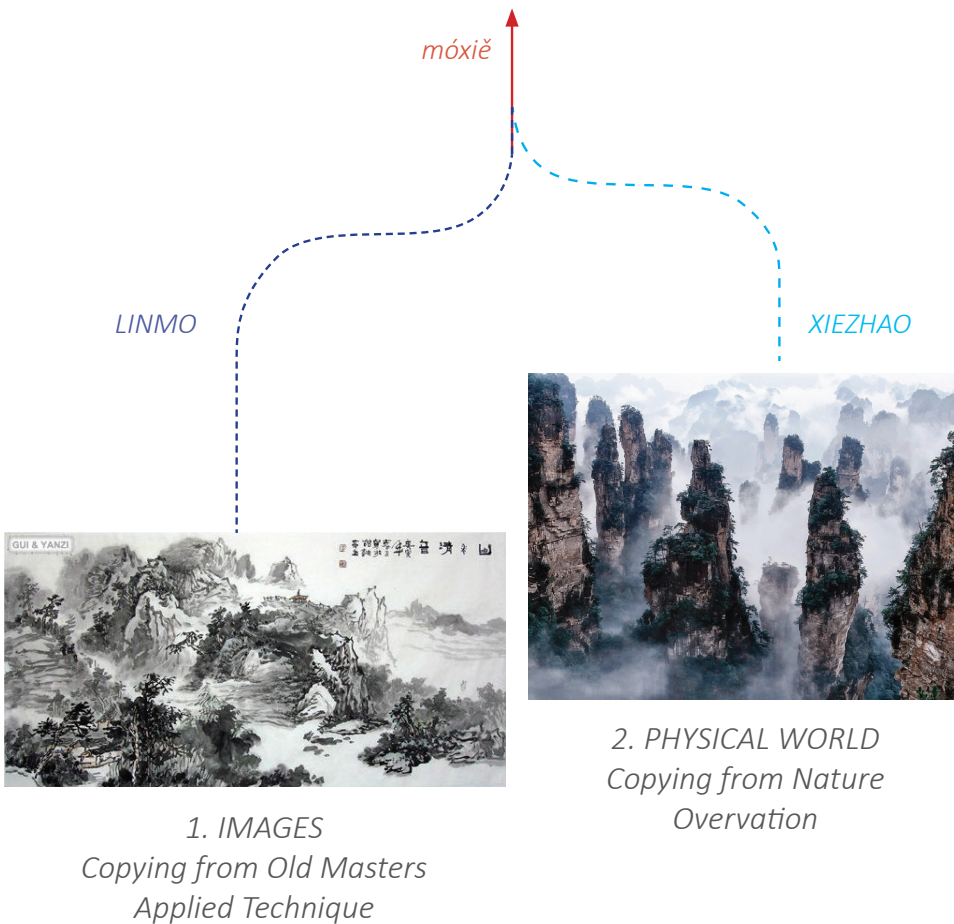


mimesis becomes the fixed relationship that allows transference of knowledge between each level images, physical world, god

CHINESE Móxǐě
COPYING

3. Embodiment of Qi

New Creation "XinHua" synthesized out of existing creation that embodies Qi, true nature



FOLLOWING THE PRINCIPLES OF DAO

no heriarchy between realm of images and physical world, relationship between each realm is a procedural synthesis

Fig. 2.5 | Calligraphy Scroll Art

The Chinese consider calligraphy as an art equal to painting and can stand alone as a work of art. Calligraphy itself is considered a crucial part of the painting itself, often incorporated into the overall composition of a work.

source: authors photo



PART 2.2

PAINTING, TEXT, RENDER

If the religious terminology is removed from the equation, what remains of *móxiě* as a process of painting is a concept of creation via a synthesis which in turn sees all things as defined by their constituent parts. All things are created through the synthesis of existing things which themselves are defined as a synthesis of other existing parts or wholes creating a continuous and theoretically traceable chain of references. What emerges from this synthetic understanding of the world is a referential way of thinking that puts emphasis on the connections between subjects as critical to understanding. This is not too dissimilar from the mediating nature of images.

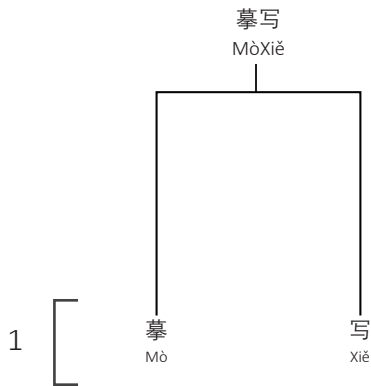
I do not argue that the concept of synthesis or this way of thinking is unique in any way to Chinese culture, simply that it is complementary to the distinct dichotomies of Western scopic regimes which we all subconsciously operate under. If modern thought in the West is based on a conception of *mimesis*, *móxiě* could be seen as a comparable method of introducing us to an Eastern framework of thinking. The question then becomes whether or not this can be demonstrated in the present; exactly how pervasive is this method of thinking today?

The synthetic world view presented in *móxiě* is embedded in the very structure of the Chinese written language and has already been exemplified in the way in which Wang KePing broke down and explained the word *móxiě*. Much like how Roland Barthes explains the nature of images through text, I will attempt something similar, but utilizing *hànzì*, Chinese written language.

Móxiě 摹写 is a word¹ in the Chinese language that is synthesized through a compounding of two existing characters-- *mò* 摹 and *xiě* 写. On their own, these two constituent characters have their own explicit meanings as words themselves and are still in common use today. *Mò* 摹 means "to copy". *Xiě* 写 in this case means "to draw" [Fig.2.5]. The definition of a Chinese compound word like *móxiě* is composed of meanings invoked by these various characters. As such it is possible to convey a dense amount of information through very few characters when read at various levels of meaning. It is important to note that there is no hierarchy of importance in the different levels of meaning that are about to be discussed-- one is not "more true" than the other-- instead the levels refer to a degree of complexity or depth of understanding. It should also be understood that the levels of understanding are akin to **methods** of looking for

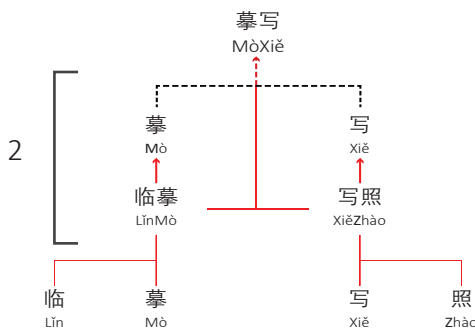
1 A great majority of the words in the Chinese language are compound words which utilize as it's base a pool of common characters.

Fig. 2.6 | *móxiě* breakdown level 1



source: by Author

Fig. 2.7 | *móxiě* breakdown level 2



source: by Author

meaning and that the meanings presented are closer to fixed definitions-- as fixed as a living language can be-- and do not take into account individual subjective interpretations.

The first method of extracting meaning is by looking at the surface. Here a rudimentary understanding is drawn from the literal definition of a word informed by its constituent characters [Fig.2.6]. This is the first definition of *móxiě* 摹写 as introduced by Wang; literally the act of copying *mò* 摹 and drawing, *xiě* 写. In most cases one can intuit a sense of the deeper meaning of a word from its constituent parts². Copying-Drawing; two actions one following the other suggesting a procedure or a process.

The second method of extracting meaning takes into account the context of a words constituent characters in their compound word forms³. [Fig.2.7] This is the more complex level of definition that Wang KePing gives when introducing the concept of *móxiě* as the interrelated practice of *línmò* 临摹 and *xiězhào* 写照. Therefore the second level of meaning extracted from *móxiě* 摹写 is the interrelated process of copying from the old masters to train the hand and then copying from nature to train mind and eye.

The meaning as a result of synthesis at this second level can impact both the whole word, and it's parts; from individual meaning informing the compound meaning and from the compound informing the individual meaning. For instance, the word *xiě* 写 has many definitions in the Chinese language but it is most commonly used to as the verb "to write". The more common word used for *drawing* would be the word *huà* 画, but because the word *xiě* 写 in *móxiě* 摹写 refers to the *xiě* 写 in *xiězhào* 写照 the correct definition is understood to be "to draw" as opposed to "to write". A compound form can help determine the meaning of an individual character as much as an individual character can inform new compound forms.

Another way of illustrating this two way contextual understanding is through the method one would instruct another on how to spell a word they do not know. In English it is possible to sound out the approximate spelling of a word in which the letters themselves speak nothing of its meaning. Inversely one could also sound out the pronunciation of an unfamiliar word. In Chinese it is not possible to do

2 This also extends to the possibility of intuiting the meaning of a single character from it's individual radicals. The classic example being one of the characters for tree which is a singular mù 木 (lit versus forest being a group of trees which is lín 林 comprised of two of the characters (also referred to as radicals) mù 木 together in one.

3 Not all compound words reference other compound words.

either due to chinese characters being pictographs which do not relate to any phonetic standard. A new unfamiliar word in Chinese may be composed of characters one already knows how to write but has not encountered in a specific compound form. It's best demonstrated with names and other proper nouns; for example my name is Hé XuěHuà. If someone was to ask me how to spell my name I would say;

何雪桦, 姓何, 下雪的雪, 桦树的桦
 HéXuěHuà, XìnHé, xiaxuedexue, huashudehua.

My name is Hé XuěHuà.
 Family name Hé,
 (character) “snow” from (contextual use) “it is snowing”,
 (character) “birch” from (compound form) “birch tree”

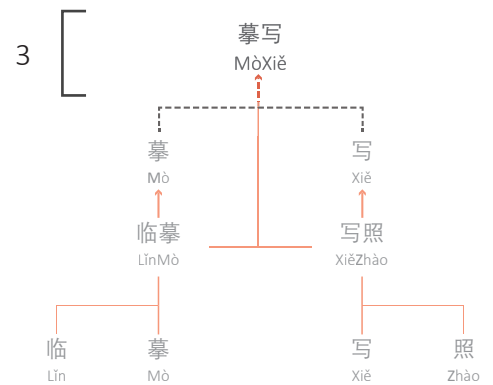
To arrive at the correct word and the correct meaning one *must* acknowledge contextual use. Therefore this second method of extracting meaning is perhaps the most active method out of all the methods to be discussed which are done almost subconsciously.

Lastly, a final method of understanding *móxiě* 摹写 is to acknowledge it as a wholly original word while still taking into account the meanings of it's constituent parts [Fig.2.8]. This level of meaning is extracted similarly to the way that we extract meaning from figurative speech in the English language. Metaphors, similes or idioms are literary devices used to simultaneously draw upon multiple disconnected subjects in order to create a richer abstracted meaning. Chinese compound words function largely the same but on an individual word level instead of within a sentence. At the word level, figurative speech can be understood and invoked with the same level of authority as a formal definition.

The abstracted definition of *móxiě* is a rich and complex concept of the process of self-cultivation of the painter by acknowledging and learning from existing context (old masters/nature) in in order to create a new masterpiece, *xīnhuà* (心画). This process also maps directly onto the structure of the chinese language, in which new words are synthesized through the compounding of existing words and therefore can also be desynthesized to gain additional understanding⁴.

⁴ This can also be replicated on a single character level, by which characters are composed of radicals which themselves can be read as individual characters as a whole or represent characters in part.

Fig. 2.8 | *móxiě* breakdown level 3



source: by Author

PART 2.2

This final definition takes up the majority of Wang KePing's paper in order to articulate but nonetheless is already embodied in the composition of the word itself because of this synthetic compounding. It is possible to trace back in etymology the conceptual meaning of a word as complex as *móxiě* where as much of the complexity of the original greek word *mimesis* became lost in the modern conception of the word. [Fig.2.9]

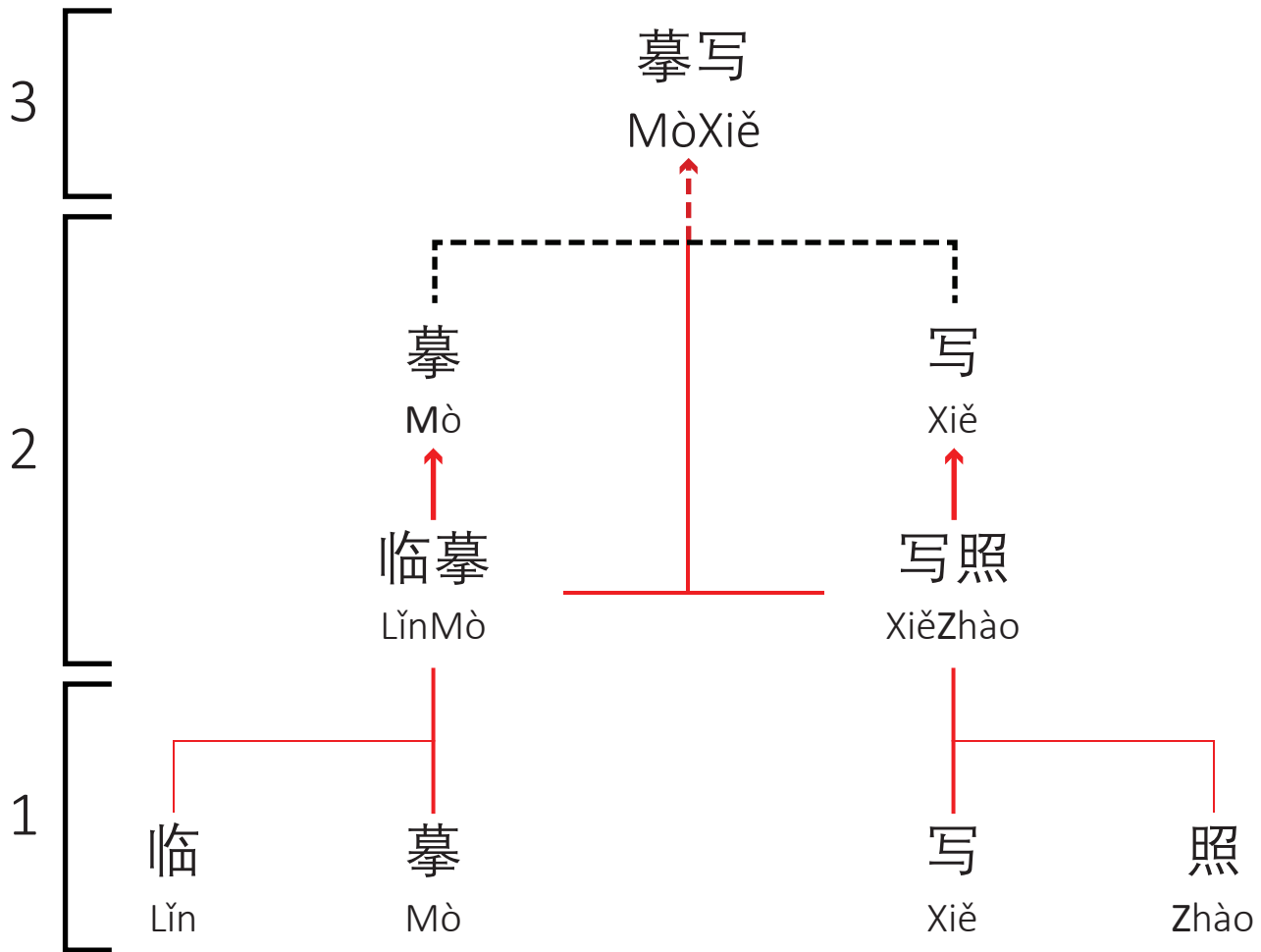
Last but not least, the translation of mimesis into either "imitation" or "representation" seems to be misleading in a way. For the Greek word itself carries a gradation of meanings that ranges from imitation, representation, reproduction, make-belief, image-making, to art creation.

Wang Keping, The Platonic Mimesis and the Chinese Móxiě⁵

The Chinese language is filled with such compound words utilized in everyday speech. What one is able to extract out of language (and down the line images) is a meaning greater than the sum of its parts but is also not subjected to an individual bias. A fluent mandarin speaker is able to move fluidly back and forth between literal and abstracted methods of extracting meaning⁶. In this case it is perhaps beneficial that my grasp on the language is less fluent allowing for these otherwise subconscious processes to come to the fore. When faced with something unfamiliar I often look toward this middle ground understanding for guidance, paying quite a lot of attention to the root of meanings as a method of developing understanding of a word or phrase, a method that takes into account the surface level meaning as it relates to a meaning in depth. The question now is, how does this synthetic approach to understanding translate to an approach towards reading images?

⁵ Keping Wang, "The Platonic Mimesis and the Chinese Móxiě," *International Yearbook of Aesthetics* 14, (2010) 214-233. <http://www.golob-gm.si/2-the-political-origins-of-modernism/p-the-platonic-mimesis-and-the-chinese-móxiě.htm>.

⁶ For instance, the word for telephone is *diànhuà* 电话 composed of the constituent characters *diàn* 电- which means electricity- and *huà* 话- which means to speak. A literal translation would be electric speaking which approximates the meaning of the word but is not the word itself which refers to the object that is a telephone. Because the word for electricity and speaking are so common and because the written form does not place spaces in between single character words and compound words it is difficult to parse the various different meanings out of Chinese text as a non native speaker and is largely the reason why translation software often fails to catch the synthetic meaning of compound words and instead translating it literally.



To return to Eisenman’s critique; “the distracted viewing of the surface has replaced the reading of depth”. What exactly consists of “surface” and what of “depth” of architectural visualization? Roland Barthes’s methods of extracting meaning from images is based on semiotics which maps a western language system onto that of pictures. A commonsense reading of the meaning of “surface” is “**at face value**” or “**literal**” This aligns with Barthes’ notion of the primary or denoted message presented in images, while “**depth**” would allude to “**critical**” thinking which leads to an “**abstract**” or “**figurative**” meaning. Barthes’s secondary meaning as *inferred through connotation* fits this definition of depth. But Eisenman’s critique suggests we actually think of images differently from the way we use language to express them. Eisenman collates the “**abstract**” understanding of architecture as spectacle as “**surface**” as well. Therefore, what is “**depth**” of understanding when it comes to images?

Fig. 2.9 | móxiě breakdown

The Hànyǔ Dà Cídiǎn 漢語大詞典 is the most comprehensive dictionary of the Chinese language and defines some 370,000 compound words. Yet these 370,000 compound words are composed of a significantly less number of single character words which are compiled in a separate dictionary, the Hànyǔ dàzìdiǎn 汉语大字典, which traces the evolution of these character written forms and their usage as it changes over time.

source: by Author

PART 2.2

If we map Barthes's approach to images onto the Chinese language, we will find that there is also some congruence but it is not complete. Barthes' notion of the primary message as what is explicitly denoted maps onto the first method of extracting meaning from Chinese words, a literal definition. This is the primary method of representation in architecture and one we historically have fallen back upon in light of the rise in significance of the second method. This secondary method being the connotative meaning, which I argue maps onto the third method of abstracting meaning in the Chinese language because it takes into account the wider context to inform a figurative, or symbolic understanding. This is where we find the abstract understanding of architecture as commodity or as capital.

What is not acknowledged but is inherently ingrained in the Chinese psyche through language is this middle ground method of active extraction of meaning-- as opposed to a subconscious or passive reading⁷ -- which engages and connects both literal and abstract meanings reflected in both the structure and meaning of the word *móxiě* and in the Chinese culture.

To read an image in depth is to rethink; the relationship between the render the architecture it is *meant* to represent between the built object and the question of what exactly architecture means to society today (In light of environmental concerns the question of "What are we building" shifts into "Should we be building?") To re-engage with the render, with these pictorial visualizations of architecture, is to re-engage with the creation and recreation of our own profession as it unfolds over time.

⁷ In response to Eisenman's critique, Zhu Jianfei writes the following: "it remains unclear why 'surface' cannot be or has not always been part of reality in depth" Jianfei Zhu, "Criticality in between China and the West, 1996-2004," in *Architecture of Modern China A Historical Critique* (New York: Routledge, 2009), 162-163.

PART 2.3

RENDERING THE MIDDLE GROUND

One of China's most famous contemporary painters, Qi Baishi, famously stated that a good painting must remain between likeness and unlikeness¹. It was understood that a single image, however realistic and convincing it may appear, is incapable of expressing the true nature of any subject because the subject is always in flux but stray too far away from likeness and it becomes a lie.

Under *móxiě* one is instructed to focus one's attention on attaining a middle ground that stretches between two points, between what currently exists and what might possibly exist. This middle ground is where I would place theorists like Pier Vittorio Aureli and Bruno Latour and Albená Yaneva whose writings on the subject of architectural representation address re-evaluate how images in relation to architecture are no longer representational or rather, no longer simply mimetic.

Aureli uses Manet's paintings to articulate the existence of this middle ground, "a gap" in between the spectator who perceives meaning and the image, acknowledging that images suggest ways of viewing architecture that shapes our understanding². This works in contrast to the general idea of image production as the byproduct of the architectural process, opening up a two way dialog that is indicative of this middle ground presented in *móxiě* and in the middle ground.

On the other hand Latour and Yaneva call for a re-evaluation of the static view of architecture, invoking instead a Deleuzean³ perspective of a "building in flight". What is expressed in Latour and Yaneva critique is a frustration with the object-ive view of buildings produced in modern digital space which has been described in previous chapters as overly concerned with visual likeness and therefore are unable to present architecture faithfully. The static view of modern architectural representation fails to communicate architecture as the complex, dynamic and responsive entities that they are (actuality) and will continue to be throughout its lifespan (possibility). "How irritating it is for us not to be able to picture, as one continuous

1 Qi Baishi quoted by Keping Wang, "The Platonic Mimesis and the Chinese *Móxiě*," *International Yearbook of Aesthetics* 14, (2010) 214-233. <http://www.golob-gm.si/2-the-political-origins-of-modernism/p-the-platonic-mimesis-and-the-chinese-móxiě.htm>.

2 Pier Vittorio Aureli, "Manet: Images for a World without People." *Scapegoat* 03 (2012): 10. http://www.scapegoatjournal.org/docs/03/03_Aureli_ManetImages.pdf.

3 Deleuze and Guatari's *A Thousand Plateaus* as well as Actor Network Theory in which Latour writes from both focus on the relationship between two things as their emphasis (process, affect etc). This aligns well with Eastern philosophies which also places greater significance upon the changing relationship between things.

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movement, the project flow that makes up a building.”⁴ However this static view of renderings I argue is also an issue of perception, as Erwin Panofsky states: “modernity is characterized as an epoch who’s perception was governed by a conception of space [...] expressed by strict linear perspective”⁵. The relationship between image and architecture has always been fixed as *mimetic* representation. Rather than develop a “new visual vocabulary”, as is called upon by Latour and Yaneva, it might suffice to change how we approach pictorial visualizations of architecture and the expectations we have of them by re-engaging the middle ground that has been occupied by mimesis for all of modern times. What happens if we view the same image through *móxiě* rather than *mimesis*?

“European imagery for example tends to be more sophisticated and refined, while North American imagery is more practical and literal. Chinese film work tends to be incredibly over the top, almost Hollywood blockbuster style. Each continent has its own unique flavor”

*Jeff Mottle*⁶

Jeff Mottle’s description of rendering styles across the globe aligns very well with Martin Jay’s scopic regimes which in turn extended from the same umbrella of mimesis and cartesian perspectivalism. Mottle defines two distinctions present in the global West-- North America and Europe-- and a single entity outside of the West. I find that it is not a coincidence that this third distinction is that of the renderings coming out of China.

North America embodies the visual acuity of mimesis and Cartesian perspectivalism, described as pragmatic and literal. Europe is described as sophisticated and refined while others have defined it as

⁴ Bruno Latour and Alben Yaneva, "Give Me a Gun and I Will make all Buildings Move: An ANT's View of Architecture," *ARDETH* 1, (2017): 103-112, <https://doi.org/10.17454/ARDETH01.08>.

⁵ “Modernity is characterized as an epoch who’s perception was governed by a conception of space [...] expressed by strict linear perspective. This “expression” is evidently a simple and derivable relationship; it is a species of equivalency or mimesis” Erwin Panofsky, *Perspective as Symbolic Form*, trans. Christopher S. Wood (Zone Books, 1991), 8. <https://doi.org/10.2307/j.ctv1453m48.4>.

⁶ Jeff Mottle is the founder of CGarchitect, one of the largest online platforms supporting the architectural visualization industry. Jeff Mottle, "How Technology is Transforming the Architectural Visualization Industry," interview by Lidija Grozdanic, *Architizer*, July 28, 2016. <https://architizer.com/blog/practice/materials/the-art-of-rendering-cgarchitect/>.

somber and atmospheric, better embodying that second moment of unease. Then what scopic regime would renderings produced out of China align with? I argue that China provides the midway perspective, combining both the functional clarity and stunning visuality of both scopic regimes engaging heavily with images in an ongoing process of cultivating its own architectural identity. [Fig.2.10-2.12] The benefits and setbacks of engaging with visual models will be discussed in Part 3.

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Fig.2.10 | Tianjing Citadel by BIG

Renderings produced by architectural visualization firm MIR based in Bergen, Norway.

source: <https://architizer.com/blog/practice/materials/the-art-of-rendering-mir/>



Fig.2.11 | Huangang Village Redevelopment

<https://www.skyscrapercity.com/threads/shenzhen-baishizhou-redevelopment-450m-x-3-1476ft-x-3-pro.1587183/>



Fig.2.12 | Bright Water

Norm Li rendering studio based in Toronto.

source: <https://www.normli.ca/projects/brightwater/>

PART 2.4

VISUAL STANDARDS VERSUS VISUAL MODELS

In striving for harmony with Tao, painters and critics have given weight to the complementary idea that everything should be in its proper place and should function accordingly. This stimulated intensive efforts to effect order in every possible way.

*That ordering fortunately could be flexible, **for the chief characteristic of Tao was conceived to be movement and constant change, representing all the processes and mutations of nature.** Hence the innumerable rules, methods and classifications, at first sight excessive, are upon closer study and in actual use quite general and remarkably elastic.*

*MaiMai Sze, *The Way of Chinese Painting: It's Idea's and Technique with Selections from the Seventeenth Century Mustard Seed Garden Manual of Painting*¹*

From Plato's *mimesis* the notion of *reality* as a *visual standard* has led us to use realism as a bar for excellence and evaluation of rendering in modern day. The notion of a visual standard implies that we can approach any image with some idea of what it should look like and the value of an image can be determined in part by said standard. The value of reflecting a design believably, as if it was reality, is what has driven the development and proliferation of photo-realism as a standard in architectural visualization today. **Is there an equivalent standard under *móxiě's* synthetic world view by which images are read from?**

The concept of depicting *qi* can be seen as a comparable standard/non-standard under *móxiě*. *"In striving for harmony with Tao, painters and critics have given weight to the complementary idea that everything should be in its proper place and should function accordingly."*² Vitality or *Qi* is conceived of as "movement and constant change" within the natural world and it is understood by the Chinese painter that everything in nature is a part of a constantly shifting flow. *Uncertainty is the only certainty there is*, so to speak. The value of depicting the multiplicity of *Qi* presents itself visually in a historic preference for expressive brush strokes and line work (*bǐlì* 笔力, *bǐfǎ* 笔法) within Chinese painting and calligraphy³. It's

¹ Mai-Mai Sze, *The Way of Chinese Painting: It's Idea's and Technique with Selections from the Seventeenth Century Mustard Seed Garden Manual of Painting*. (New York: Random House, 1959), 86.

² Sze, *The Way of Chinese Painting: It's Idea's and Technique with Selections from the Seventeenth Century Mustard Seed Garden Manual of Painting*, 86.

³ Jianfei Zhu, "Perspective as Symbolic Form: Beijing, 1729-35," *In Architecture of Modern China A Historical Critique* (New York: Routledge, 2009), 11-40.

prevalent in Guo Xi's three distances⁴ of painting-- three distances which place the viewer in different positions with reference to the landscape-- and the method of viewing images through a scroll-- in which one sees only a portion of the whole image at any given time before shifting to view another portion in succession.

This positive valuation of representing dynamic qi present in the Chinese painting process circles back around informing the value of an image. This is exemplified in the reception of Western photography introduced into China in the 1840's⁵.

"You could go in at any hour of the day, providing you were a Chinaman, and get a portrait executed in a very short time. . . . The heathen Chinese had merely acquired a large collection of portrait negatives, and when a customer came, he took his measure mentally, looked through the stock, and chose the picture most like. As all Chinese heads are pretty similar, and their pigtailed much about the same length, it was never difficult, apparently, to make a match, for the public were quite content with what they got for their money."

M. C. Kardactz ⁶

Kardactz words, while not academically rooted and filled with racial bias, nevertheless summarized neatly the difference in valuation of visual likeness between East and West. The West emphasis on achieving greater visual likeness in a way that the Chinese did not. Instead what was important was not so much the accurate tracing of light and shadow upon a person's face at the time which the photo

⁴ The three distances Guo Xi speaks of places the *painter* in relationship to the artwork. These distances are used by the painter to translate specific painting techniques (brush stroke types, color selection, wash techniques). Kevin Hsieh, "Contextual Perspectives and the Aesthetics of Guo-Xi's the Lofty of Ambition of Forests and Streams," *Journal of Liberal Arts and Social Sciences* 33. (2009): 49-66. <http://140.127.82.166/retrieve/14633/H33-3.pdf>.

⁵ Yi Gu, "What's in a Name? Photography and the Reinvention of Visual Truth in China, 1840-1911," *The Art Bulletin* 95, 1 (2013): 120-138. <https://www.jstor.org/stable/43188798>.

⁶ Excerpt from an article entitled "How to Produce Photographic Portraits without a Camera" by M.C. Kardacz in 1875. ("How to Produce Photographic Portraits without a Camera," *Anthony's Photographic Bulletin* 6, no. 17 (1875): 17.) This story was presented in Yi Gu's article which traces the evolution of the Chinese word for photography from its introduction in the 1840's to modern day terms. Gu, "What's in a Name? Photography and the Reinvention of Visual Truth in China, 1840-1911," 122-123.

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was taken, but that the essential qualities of a person were present. Photographs were often modified to fit the visual conventions of painting. Facial features would be touched up even if the image was already sharp and the application of seals across the photographic surface speaks to the photograph as a flexible medium rather than a method of achieving a naturalistic realism⁷. [Fig.2.13]

To continue Qi Baishi's metaphor, visual likeness is understood in the way a child copies the actions of their parents, however Qi's words are not said as a means of disparaging visual likeness, simply that visual likeness should not be the end result. A child copies their parents in order to mature and grow, such is the goal of *móxiě* (*to copy and draw*). Thus, in alignment with copying as understood in *móxiě*, the Chinese began to engage with visual likeness as a method of self cultivation.

In the year's after the introduction of photography into China, officials and scholars realized that the ideas that were crudely laid out in Mr Kardactz article were inhibiting China's growth. In response to this perceived deficiency was an explicit re-evaluation of the importance of *zhēnxiàng* (真象) in the Chinese visual culture⁸ that was carried out with the intention of raising China up to be on par with the rest of the world's developed countries. This period of intensive engagement with the Western values presented in realism -- in photography -- at the beginning of the 1900's also coincides with the emergence of the architectural profession in China which greatly benefited from Western practices which were used as models for the one currently set up in modern China. But China taking upon itself the values of Western realism is not done as a method of becoming the West-- the West is not the standard like reality is a standard-- it is done to "bring oneself up" in the hopes of creating something greater.

Chinese scholars could be seen as having adopted the same enthusiasm towards realism as the West as guided by the principles of *móxiě*, using realism as a model for investigating and learning from the West in order to better the country. This is not the same as becoming Western. Whenever West and East came into contact in the

7 Gu, "What's in a Name? Photography and the Reinvention of Visual Truth in China, 1840-1911," 123-124.

8 Gu points out that *zhēnxiàng* (真象) was used to encompass the concepts of "realism, naturalism and lifelikeness" but this is not the first time that Western values were introduced into China but it is the instance which coincides with the establishment of the architectural profession in China. Gu, "What's in a Name? Photography and the Reinvention of Visual Truth in China, 1840-1911," 124.

past what has been produced out of China was a hybrid shift in representation made possible by the accommodating nature of *móxiě's* synthetic process.

True to the concept of *qi* there is no visual standard suggesting how an *image should look*. Even if one can trace prevailing characteristics within painting it does not dictate the end result. The positive value of expressive brushstrokes does not define what an expressive brush stroke *should* look like because a painter that can successfully copy another master's work 1:1 is not automatically considered a master themselves. If a standard defines an end goal but leaves the process open (painting, photography, computer assisted design programs), then a *model* simply points the painter in the right direction, providing a path forward for self-transformation. What is promoted under *móxiě* is the understanding that all images are seen as potential *models* to learn from and that which seems contradictory can indeed be reconciled through active inquiry.



Fig.2.13 | retouched portrait, 1888

source: Liang, Shitai, *Seventh Prince with Deer*, from 1888. Gu, Yi. 2013. "What's in a Name? Photography and the Reinvention of Visual Truth in China, 1840-1911." *The Art Bulletin* 95 (1): 120-138. <https://www.jstor.org/stable/43188798>.

PART 3.0

ENCOUNTERS WITH IMAGES OF ARCHITECTURE IN CHINA AT THE PICTORIAL TURN

As our understanding of architecture is formulated increasingly through our encounters with images of architecture in lieu of knowledge obtained from bodily experiences it is my belief that we need to re-examine the role between images and architecture as something more than *representation*. If instead we understood images as visual models as they are under the principles of *móxiě*, then rendering can be defined as not *just* a product necessary for design communication¹, not *just* a distracting surface² but *also* a product of a long history of architectural values, culminating into the specific stylistic form of photorealism as employed ubiquitously throughout practice today. The subjects of these images present to us the multiple facets of *architecture* understood as a complex and shifting whole and it is the understanding present in this shifting whole that we must learn to work and mould with in continuous reflection of our daily work.

Through *móxiě* we see a method of mindful engagement with images that differs from the critical resistance as present in non-photorealism. *Móxiě* presents to us the outlines of a theoretical and practical path towards creation that emerges from existing conditions, allowing us to rethink the way we create and evaluate images and in turn the value of these images in the design process. *Móxiě* is a deliberate but accommodating process which, for the majority of the time, goes unnoticed for its main action is not to seek difference outright, but instead allow for the change to emerge naturally out of existing conditions³. Through keen observation and acute awareness of the situation at hand we can discern the correct time, place or project that can bring about a desirable outcome.

This contrasts with Western criticality which actively seeks change by establishing a predetermined standard of action⁴; the rejection

1 Doreen Bernath, "The Intrusive Rendering: Dictation of Stereotypes and the Extra-Ordinary," *Taiwan in Comparative Perspective* 1, (2007): 37.

2 Peter Eisenman, "'Contro lo Spettacolo,'" in *Architecture of Modern China : A Historical Critique*, by Jianfei Zhu (London: Routledge, 2009), 150-151.

3 "By the end of the process, and thanks to the way that it has evolved, what was initially accidental has progressively become an 'ineluctable consequence.'" Which is to say, that the Chinese mindset is attuned to identifying potential within a situation, being open, nurturing and accommodating of events as they naturally arise. François Jullien, *A Treatise on Efficacy : Between Western and Chinese Thinking* (Honolulu: University of Hawai'i Press, 2004), 78-79.

4 "the 'European' way of 'model-making,' involves a means-end relationship. Once an end is ideally conceived, we set about finding the means whereby that end can be made to enter the realm of fact". Outside of the means-end relationship of understanding goals and consequences (results), all other events seem as if to come about through coincidence for they are not guided by a preconceived goal which would

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of the status quo⁵; that seeks to remake what is present. Inversely post-criticality could be defined as an attempt to not be critical, absolving itself from the responsibility of resisting the realities of capitalism. While móxiě's accommodating nature aligns with notions of the post-critical, it also does not exclude the possibility of being critical if the opportunity arises. Rather than focus on the standard of result Móxiě instead acknowledges what French sino-philosopher Francois Jullien would call a process of "silent transformation", an eastern concept of the process of effecting change.

-- it is an unfolding process with which you continuously try to keep in step and to each of whose stages you adapt. By dint of careful scrutiny, you identify the inception of the process and then you act as befits each stage as it evolves. [---] it is regulated time: it maintains a balance in the course of transformation and remains coherent even as it continues to innovate. This is time that is oblivious to the distinction between theory and practice

*Francois Jullien, Treatise on Efficacy*⁶

Jullien would attribute our difficulty to see and address the render as rooted in the greek philosophy where one is an engineer of opportunity, developing a preconceived goal to achieve. Success is measured by the meeting of the pre-established goal, a standard for success⁷. The concept of "silent transformation" acts as a foil to the Greeks way of viewing action and change, explicitly acknowledging the period of time in which one anticipates future possibilities while maintaining a sense of balance and normality, in this case through the copying of existing conditions. During this time it seems as if nothing is happening and innovation comes as if by coincidence to the observer.

Exactly when did we flip the metaphorical page and enter the pictorial turn? WJT Mitchell gives no date, simply states markers of its occurrence, television, film, photography⁸ etc, which span the bet-

structure the process of attaining desired ends. Jullien, *A Treatise on Efficacy : Between Western and Chinese Thinking*, 31-32.

⁵ Peter Eisenman, "Critical Architecture in a Geopolitical World," in *Architecture Beyond Architecture*, edited by Cynthia C. Davidson and Ismaïl Serageldin (London: Academy Editions, 1995), 75.

⁶ Jullien, *A Treatise on Efficacy : Between Western and Chinese Thinking*, 78.

⁷ Jullien, *A Treatise on Efficacy : Between Western and Chinese Thinking*, 79.

⁸ W. J. T. Mitchell, *Picture Theory : Essays on Verbal and Visual Representation* (Chicago: University of Chicago Press, 1994), 11-15.

ter half of a century. Equally it is unclear whether or not we have stepped out of the 'previous' linguistic turn. Before we know it, everything has changed, but we can't point to exactly when or how or why.

It is this indeterminate period of time by which change emerges that is not addressed in either critical or post-critical modes of thinking which instead acknowledge the prior state and outcome of a situation. This is not unlike Vilhem Flusser's description of our modern state of visual inundation where he states boldly that the world is no longer historical, whereby effects no longer have distinct causes, and all that appears seems to come into being as if by coincidence⁹. Those who succeed in navigating this post-historical visual deluge are those who engage in the middle ground, creating new connections to generate new meaning. Thus at the pictorial turn, China seems to be uniquely well equipped to navigate this world of images.

Under *móxiě*, I believe that we can begin to see images as critical reflections of their subjects, containing within themselves the necessary conditions to pave the way towards new possibilities of being. Understood as a model renderings can begin to present and suggest to us new ways of experiencing architecture¹⁰ which in turn reshapes our expectations of the built environment.

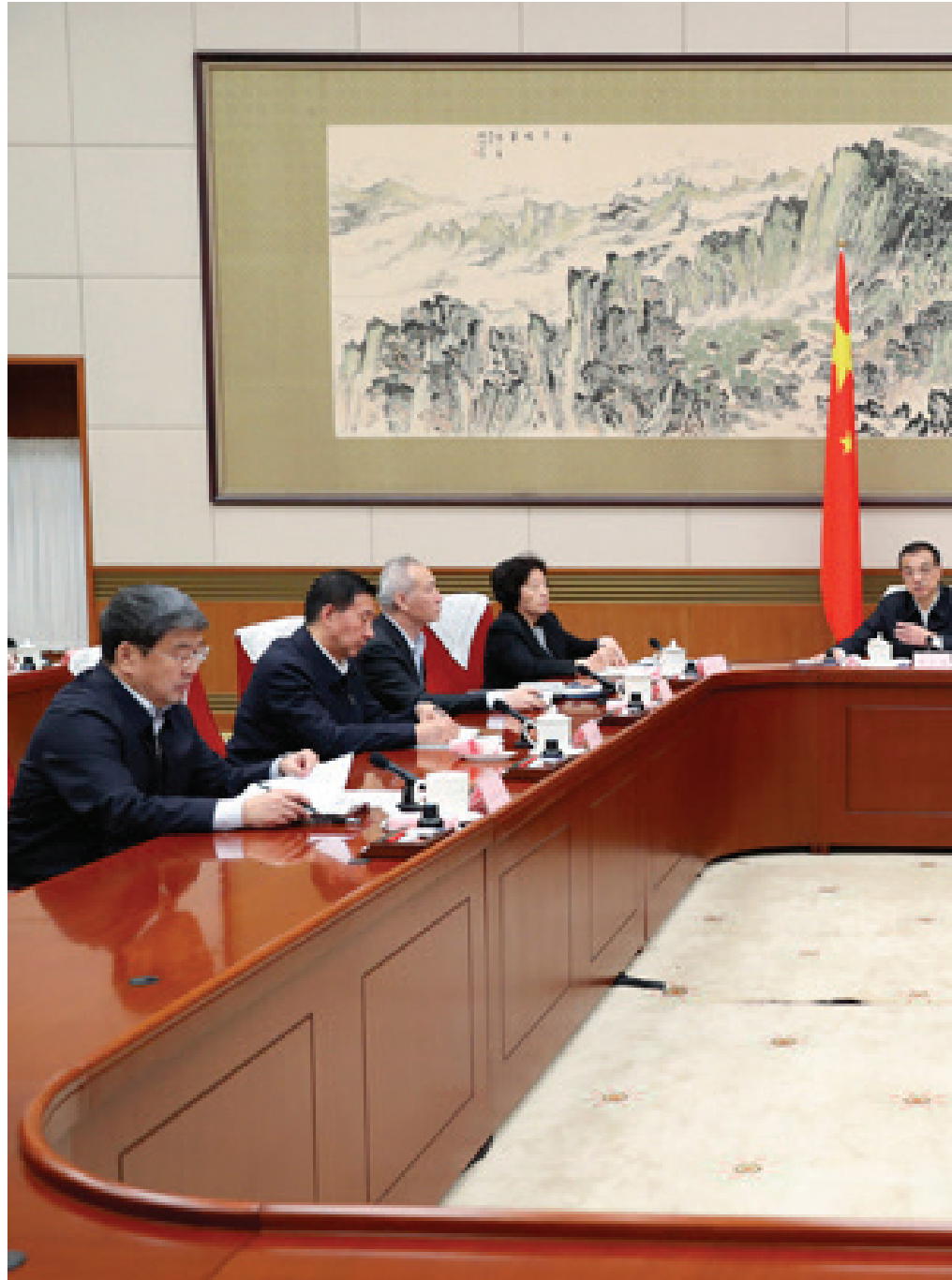
9 Bram Ieven, "How to Orientate Oneself in the World: A General Outline of Flusser's Theory of Media by Bram Ieven," *Online Magazine of the Visual Narrative* 6, (2003): <http://www.imageandnarrative.be/inarchive/mediumtheory/bramieven.htm>.

10 Pier Vittorio Aureli, "Manet: Images for a World without People." *Scapegoat* 03 (2012): 10. http://www.scapegoatjournal.org/docs/03/03_Aureli_ManetImages.pdf.

Fig.3.1 | Painting and Politics

Premier Li Keqiang addressing the Standing Committee of the Political Bureau of the Communist Party of China to discuss the development of 14th 5-year plan which would layout the path for development of cities and infrastructure for the entire country---- Nov.25 2019

source: http://www.xinhuanet.com/english/2021-01/21/c_139684771_3.htm





PART 3.1

IMAGE AND IDENTITY

The ability for images to influence our thoughts and actions and in turn affect the “*real world*” is acknowledged and demonstrated within China’s centuries-long struggle to rise to the world stage. Images and identity have become important issues in the larger geopolitical scale as well as at the smaller scale of the Chinese architectural profession -- and in the greater picture, it is the subject of image and architectural identity that we confront at the pictorial turn. However the narrative of China’s rise, especially in relation to media and images, is often steeped in the negative connotations of the word propaganda¹ [Fig3.1], which leads to the general attitude of being “critical” of what we see and as images appear all around us this critical position turns into an armor that we’re reluctant to give up.

In a lecture at the World Architecture Festival in 2018, Koolhaas warned that the West, too preoccupied with maintaining a moral democratic high ground, has been turning its back on significant conversations about architecture and urbanism by refusing to take seriously the architectural practice of authoritarian states like China². Much of what is communicated between China and the West is ultimately done through media and in the last two years this mediated condition becomes increasingly inescapable and indispensable. Here in the West much of what we understand of the Chinese architectural practice is through visual representations of projects abroad viewed on online platforms and what we recognize out of these images are things we are familiar with. It is easy to overlook what could be learned from images presented to us that look overwhelmingly familiar as to become banal in their own sense, submerged in a sea of similar images.

Commenting on the relationship between China and the global architectural world, Liu Jiakun describes the Western perception of Chinese architecture with a quote from the movie *Isabella*; “*It is not that I look down upon you, it is that I can’t see you.*”³ What we see in the renderings produced out of China is the image of the West reflected back at us. We see a photorealistic style of render-

1 The intermingling of political or moral high ground inhibits engagement, such is the basis of Rem Koolhaas' argument and warning in his 2018 interview at the World Architecture Festival. Rem Koolhaas, "West must Lose 'Sense of Superiority' Towards China, Russia and Middle East, Says Rem Koolhaas," interviewed by India Block, *Dezeen*, December 5, 2018, <https://www.dezeen.com/2018/12/05/rem-koolhaas-world-architecture-festival-china-russia-middle-east/>.

2 Koolhaas, interview.

3 Jiakun Liu, “An Open Letter to Jianfei Zhu,” in *Architecture of Modern China A Historical Critique*, by Jianfei Zhu (New York: Routledge, 2009), 151-153.

ing depicting a metropolitan skyline reminiscent of the great global cities of the West. Yet the architectural design process which produced these renderings and the cities that we compare them to could not be more different from our own.

What is harder for us to see in these images is what exactly makes it *China*. As Liu states again: “I often feel that they (colleagues in the West) are coming back from the future we are chasing to talk to us about our past”⁴. This is because the Chinese architectural practice exists suspended in the midst of a silent transformation driven by the intensive engagement with the principles of Western perspectivalism that began in the early 1900’s when the profession was being established. This process of engagement with foreign visual models begins with Liang Sicheng’s annotations of the *Yíngzào fǎshì* (营造法式) to match that of Western orthographic conventions⁵ [Fig.3.2-3] and continues today in the adoption and establishment of a rendering services and software.

Today China is very much visible to the rest of the world but it is always understood in relationship to values of the West. Even when what is denoted in the image is visually of the same language, what one *perceives* is ultimately different due to the framework of *mimesis* or *móxiě*. Keeping in mind the principles of *móxiě*, this form of visual likeness is done so in order to advance oneself in the creation of something better and I believe it is this iterative process present in the visuals coming out of China that we can learn from.

If the pictorial turn better aligns with an Eastern philosophy of images then examining the visuals produced in the struggle for Chinese architectural identity can allow us explore the possibilities and setbacks of engaging with images as visual models.

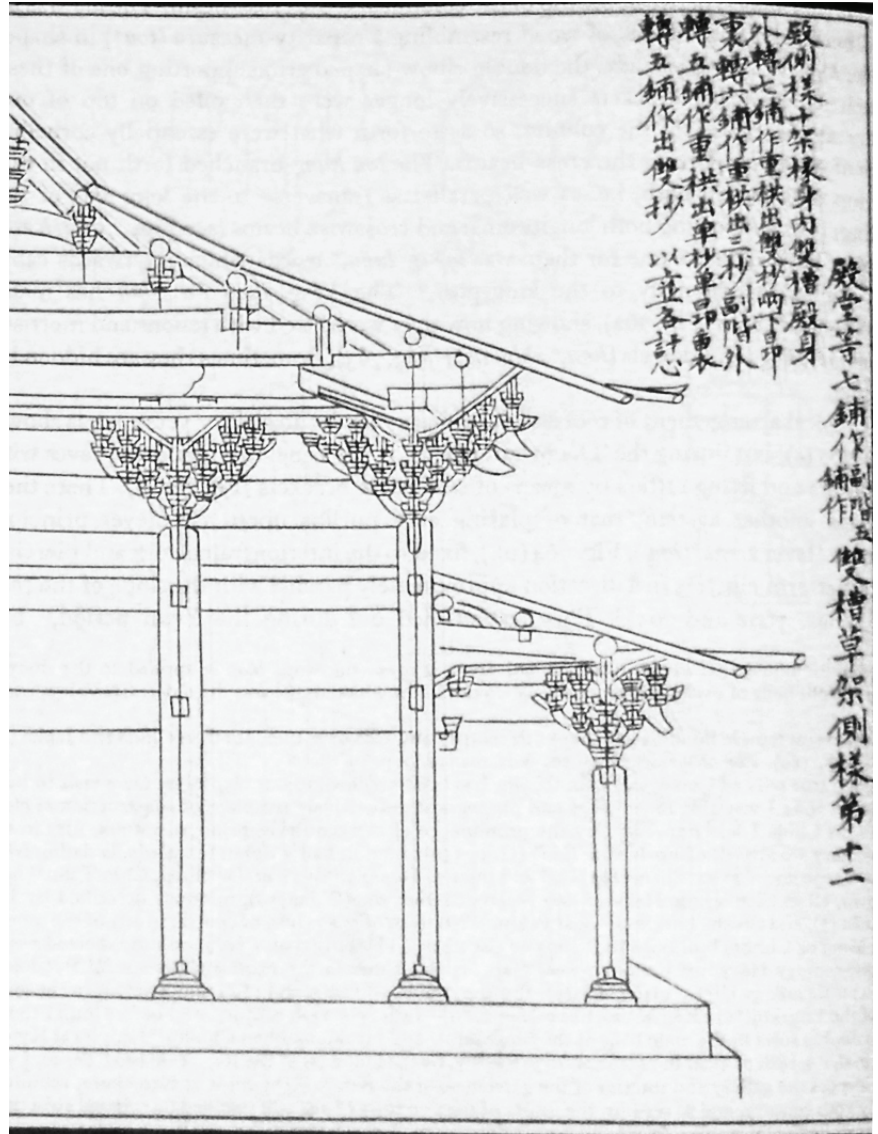
4 Liu, “An Open Letter to Jianfei Zhu,” 152.

5 In later years Liang would venture out to document the various existing examples of traditional Chinese architecture in order to create a new history that connects and positions China within the same framework as the global West. Qinghua Guo, “Yingzao Fashi: Twelfth-Century Chinese Building Manual,” *Architectural History* 41 (1998): 1-13. <http://www.jstor.org/stable/1568644>.

Fig.3.2 | Yíngzào fǎshì (營造法式)

Excerpt from the Yíngzào fǎshì shows drawings that are drawn in a form of isometric section and with a format of textual annotation that is reminiscent of Chinese painting. See Fig.2.2.

source: Qinghua Guo, "Yingzao Fashi: Twelfth-Century Chinese Building Manual," *Architectural History* 41, (1998):1-13. <http://www.jstor.org/stable/1568644>.



RULES FOR STRUCTURAL CARPENTRY ACCORDING TO YING-TSAO-FA-SHIH.

A TREATISE ON ARCHITECTURE
BY LI CHIEH, COURT ARCH-
ITECT OF THE SUNG
DYNASTY, FIRST
PUBLISHED IN
1103 A.D.

宋營造法式
大木作制度
圖樣要略

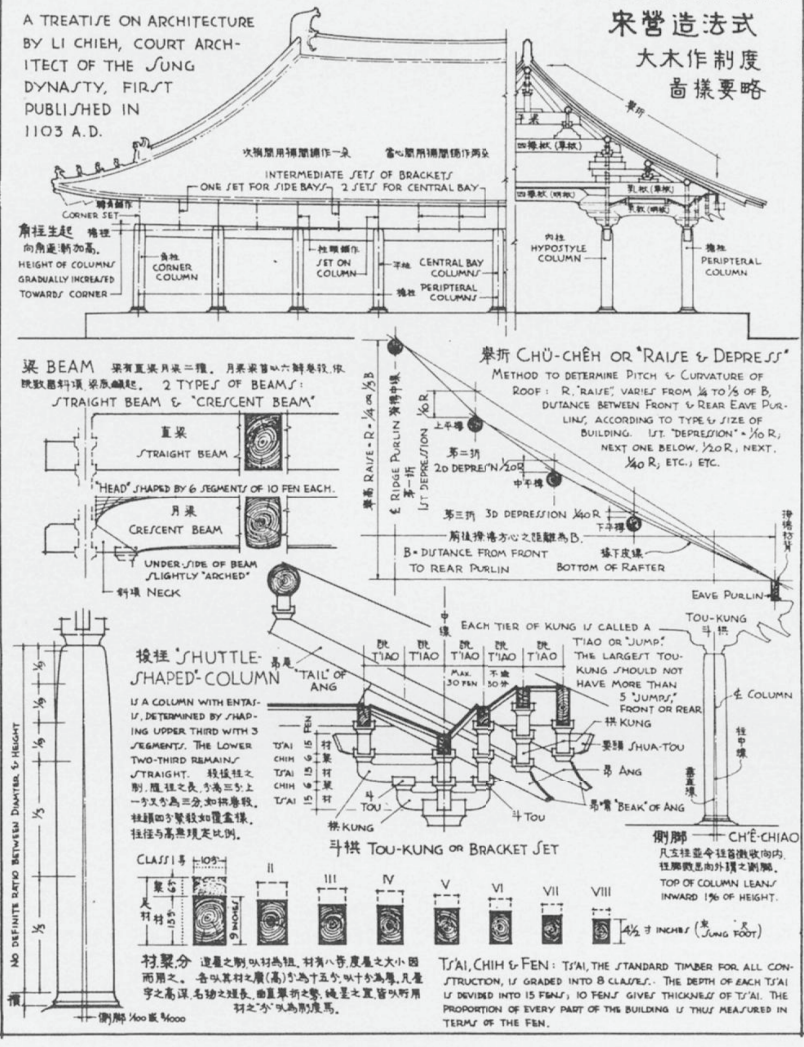


Fig.3.3 | Liang SiCheng's Yingzàofàshì (營造法式)

An annotated drawing similar to the roof section in fig.3.2 can be found on the top right corner of the page. Liang utilizes the familiar system of section cuts, breaks, dimensioning conventions of orthographic drawings in Western Architectural traditions to show that Chinese architecture exists on a level of historical importance similar to that of the West and the use of similar visual languages allows for implicit connections to be made across each culture.

source: Shiqiao Li. "Writing a Modern Chinese Architectural History: Liang Sicheng and Liang Qichao," *Journal of Architectural Education* 56, 1 2002: 35-45. <http://www.jstor.org/stable/1425751>.

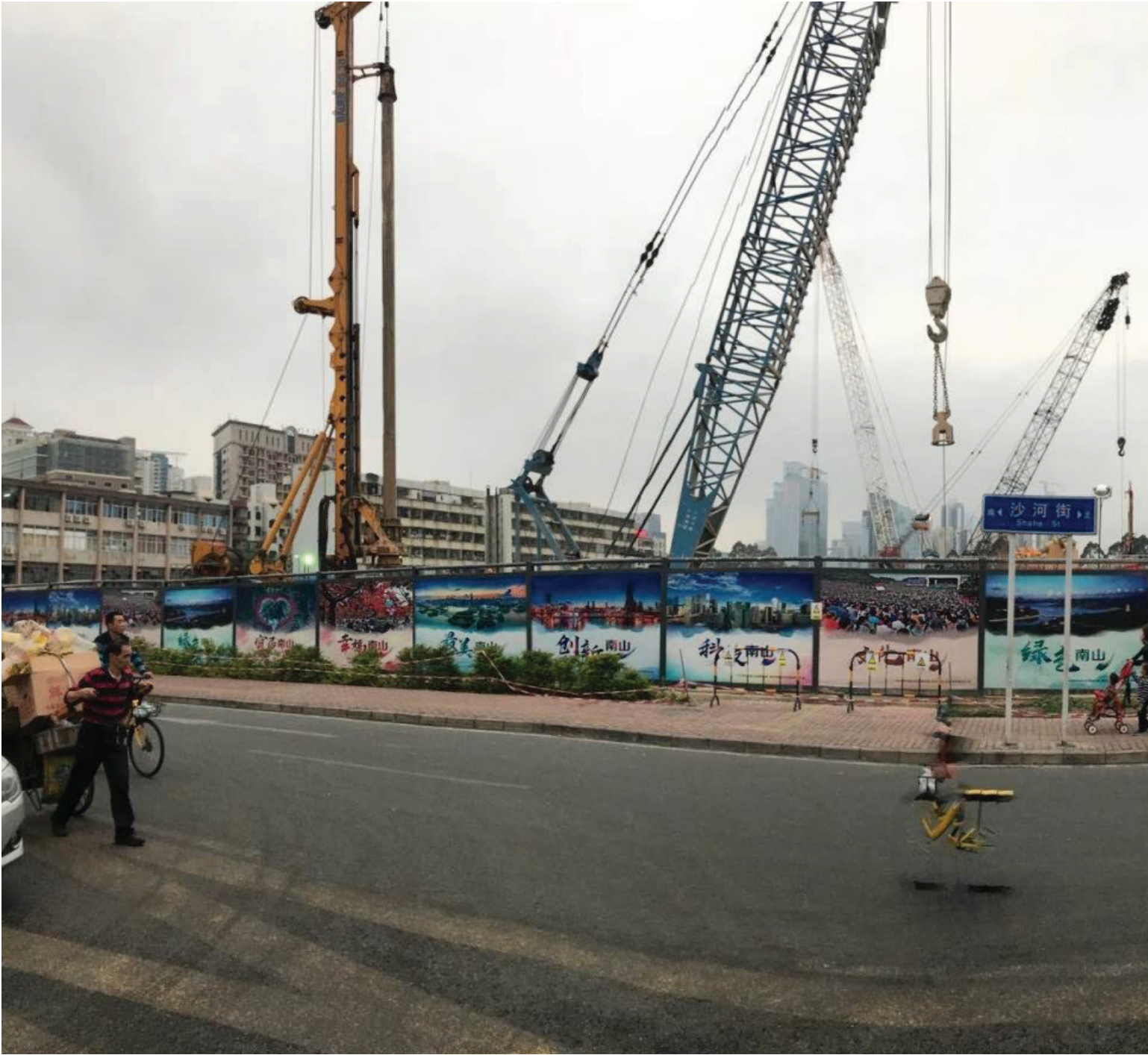
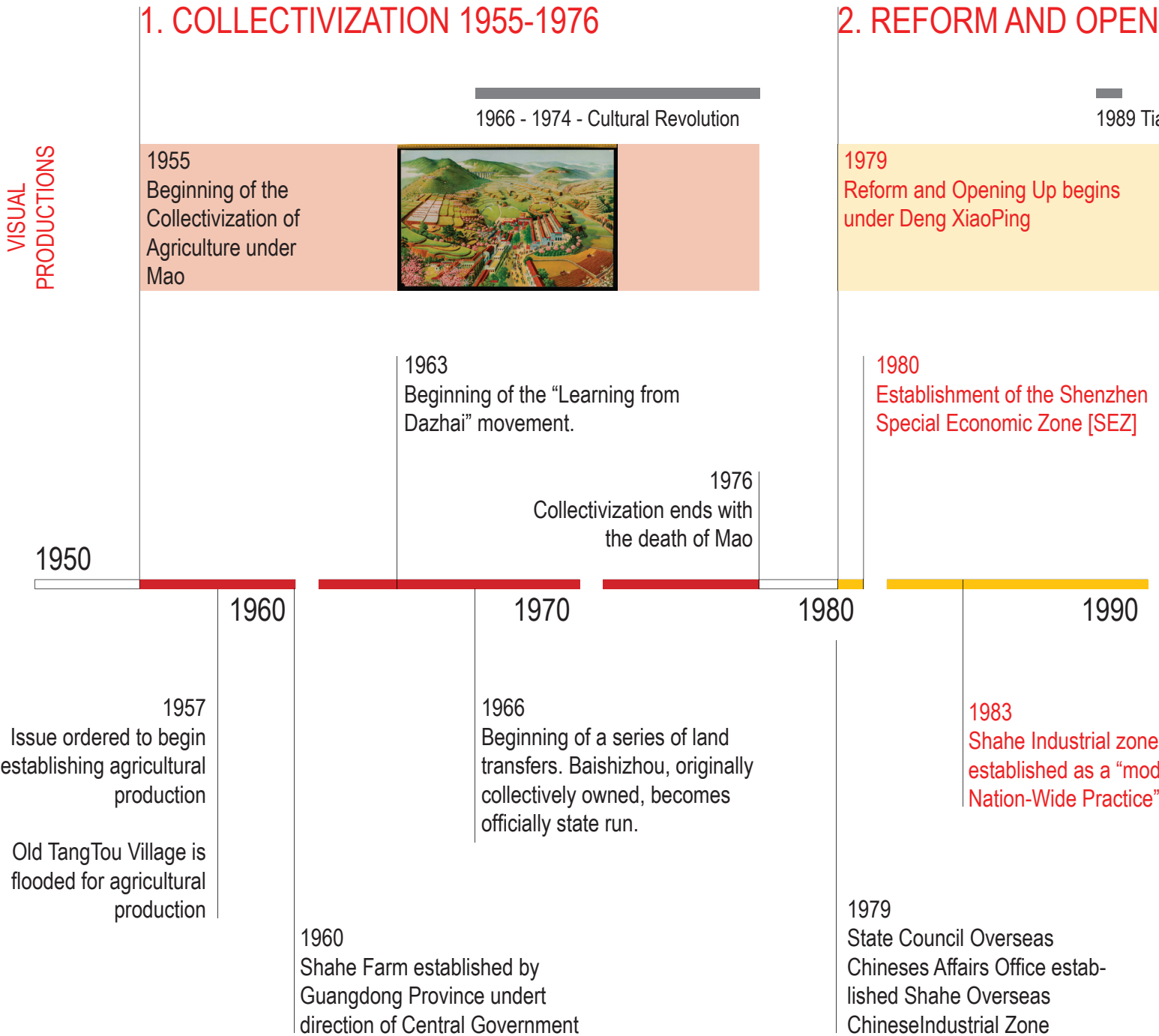




Fig.3.4 | Construction Site at Baishizhou

Shahe Industrial zone cordoned off in Baishizhou but a fence depicting great architectural sky lines and landscapes.

source: <http://gaoloumi.cc/>



ING 1979-present

Tiananmen Square Protest

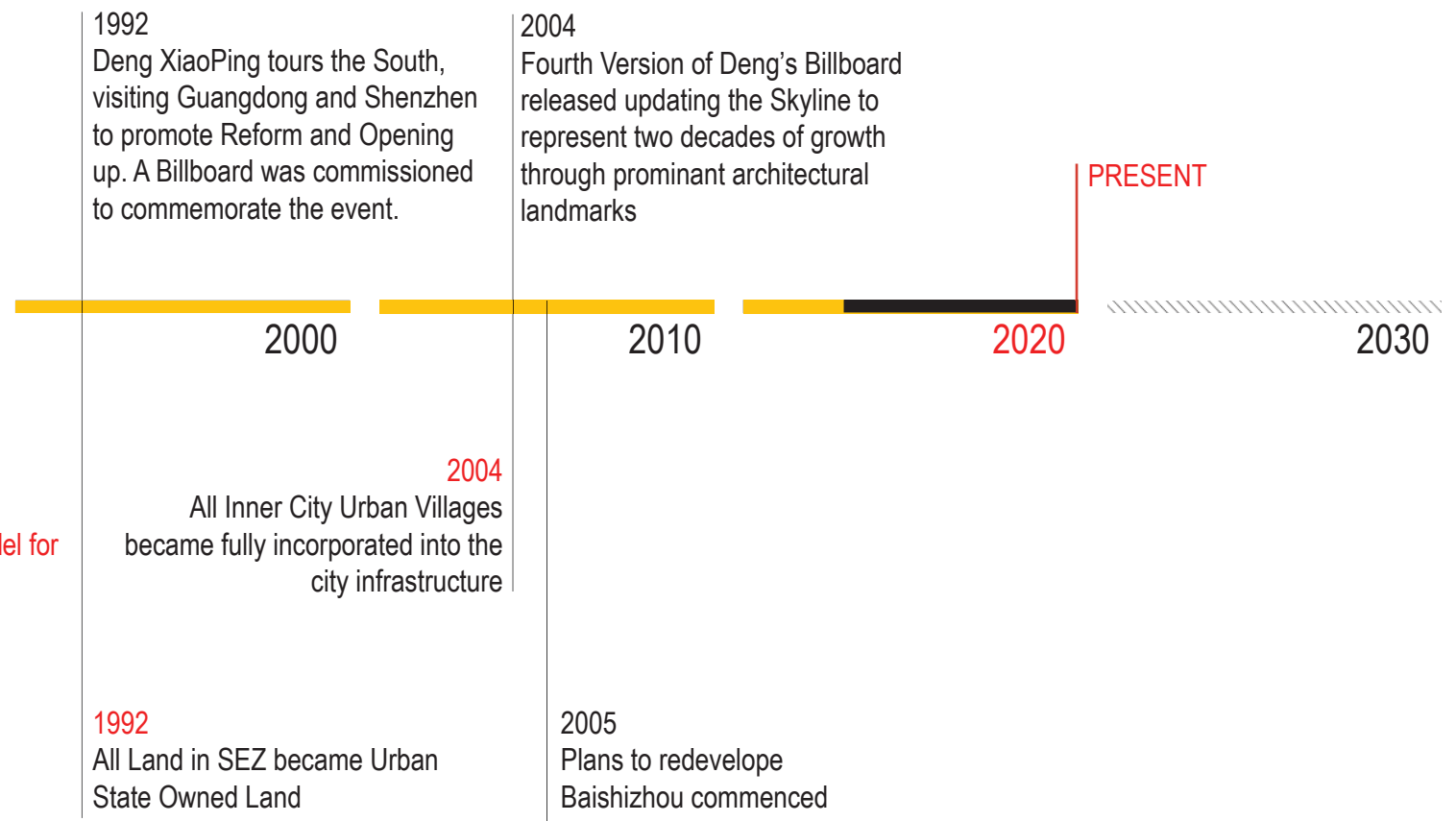


Fig.3.5 | History of Baishizhou in three visual eras (eras 1 and 2)

source: by Author

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MODEL IMAGES OF BAISHIZHOU PAST, PRESENT AND FUTURE

This last section examines the various visual models produced in China over the past century and how they have informed the direction of the Chinese architectural profession and the built environment. At this point I would like to note that the mechanism by which this is able to occur at such a large scale may not be replicable because it is so dependent on the shared and accepted cultural view of the images as visual models designed to inform behavior.

To focus the discussion, this thesis will examine how visual models have shaped the built environment of a single site, specifically Baishizhou, the largest urban village currently undergoing redevelopment in Shenzhen, China. The history of the site of Baishizhou can be broken down into three visual era's in which each is shaped by an engagement with foreign visual models in order to produce the dominant visual model of the era, embodied within the Posters and Billboards by which these models manifest.

Collectivization (1955-1976)

The first visual era occurs during the era of Collectivization 1955-1976. Modern Baishizhou is defined by the clustering of five farming villages located within close proximity to one another. While this area has been settled prior to collectivization, what brought together the final fifth village, Tangtou village, was the movement towards Collectivization which significantly reshaped the landscape. The site of Old Tangtou was flooded in 1957 for agricultural production. This prompted their relocation to nearby Baishizhou and in 1960, Shahe Farm, which comprised of all five villages was established by the Guangdong Province under direction of the central government.¹

All across the country, Collectivization was promoted to the masses by a visual campaign consisting of colored propaganda posters. Out of this overarching campaign, a few visual models were produced, depicting the ideal image of a village settlement with fertile fields and red roofed communes [Fig.3.6-8]. While it is certain that Collectivization was crucial in defining the boundaries of modern Baishizhou, it is unclear which model directly impacted the site. However, the most famous visual model produced in this era was "Learning from Dazhai" which emerged a few years after Old Tangtou was relocated. [Fig.3.6-8].

¹ Juan Du, *The Shenzhen Experiment: The Story of China's Instant City* (Cambridge, Massachusetts: Harvard University Press, 2020) 235-264.



Fig.3.6 | Learning from Dazhai Poster, 1970's

source: <https://chinese posters.net/themes/dazhai>



Fig.3.7 | Learning from Dazhai Poster, 1970's

source: <https://chinese posters.net/themes/dazhai>



Fig.3.8 | New Look fo MaoTian 1-4, 1964

MaoTian was a precursor to Dazhai as a visual model for collectivization. One of the posters for MaoTian was produced in a series recalling the 4 seasons, representing change, a common theme in Chinese painting.

source: <https://chinese posters.net/themes/dazhai>

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Fig.3.9 | Learning from Dazhai Poster

Poster heavily featuring Iron Women who were encouraged to enter the work force. In the poster they are depicted working alongside men as equals.

source: <https://chinese posters.net/posters/e15-292>



Fig.3.10 | Soviet Propaganda Poster 1950

source: <https://chinese posters.net/posters/e15-292>



Learning from Dazhai, like all other visual campaigns at the time, was largely communicated through the use of colored posters depicting hard working citizens in vast landscapes and many who lived through such an era would attest that these images heavily informed a person's beliefs and actions. [Fig.3.9]

"I grew up in a culture where posters remembered, talked back, and also constructed and reconstructed who I was and what was socially expected of me."

*Chen Xiaomei, Growing up with Posters in the Maoist Era*²

While it's common to see propaganda as shaping one's intellectual position [Fig.3.18-20], the ability for these images to also suggest and reshape the built environment is not often discussed. Campaigns like Learning from Dazhai were communicated by visuals impressed upon the built environment in the form of images. These images utilized visual rhetoric in alignment with the communist party's intentions at the time of their creation. In this case, the posters depicted the perfect model of agricultural success, converting the harsh landscape into a fertile farm through the power of hard work.

The foreign visual model that informed the production of this movement was the soviet styles of propaganda posters whose political goals were in alignment. Many of the posters of Dazhai contained the same visual subjects, conveying industrious sites and people hard at work, and all under the style of social realism.³ [Fig3.10] However, it was not simply a copy of soviet visual techniques and symbolisms, but a re-adaptation of existing visual signifiers of power and state into a new visual form and style.

Lu Xinan points to three main visual mechanisms that contributed to the success of Learning from Dazhai as a visual campaign. The first is identification, the clear depiction of the subject of the posters, be it the landscape or the people. The second is the romanticization or idealization of the depicted forms which speaks again to the value of images as a model, the image lies between reality or representation and unreality. The third technique derives from

² Xiaomei Chen, "Growing Up With Posters in the Maoist Era" in *Picturing Power in the Peoples Republic of China: Posters of the cultural revolution*, ed. Harriet Evans and Stephanie Donald (Lanham, Md. : Rowman & Littlefield, 1999), 105.

³ XinAn Lu, "Dazhai: Imagistic Rhetoric as a Cultural Instrument," *American Communication Journal* 5, 1 (2001): <https://web.archive.org/web/20100304163532/http://www.acjournal.org/holdings/vol5/iss1/articles/lu.htm>.

a sense of visual dominance of color and scale reinforced through repetition across multiple images. Specific themes such as the scale of the landscape, depictions of labour and the dominance of the color red.⁴

Many of these techniques mirror a socialist realism present in soviet propaganda posters of the same era but whose execution once again adapted into a long tradition of Eastern aesthetics of xuānchuán.⁵, often translated as propaganda, which in China is neutrally understood as mass communication or dissemination of information to the public and contains within it a sense of authority and trust (though to varying degrees).

Under móxiè one is directed to follow the models provided by existing and past masters but it is not always clear which models can be considered good models. However, as a visual campaign, Learning from Daizhai was highly effective. The posters influenced a generation of working Chinese and succeeded in changing the landscape of Shenzhen, creating the commune of five villages that make up the modern shape of Baishizhou today.

However the overall movement towards collectivization failed, for the scale of implementation was too large for any one model, and the consequences of failures as such a scale should not be taken lightly. Learning from Dazhai speaks to the efficacy of visual models but it also speaks to the dangers of following false models. In the decades following Collectivization the shifts in political powers were made to address the failure of Learning from Dazhai The next visual era was born out of this political shift.

Reform and Opening (1980-Present)

Born out of the consequences of a failed visual model, the second visual era occurs around the 1980's and is more specific to Shenzhen as a Special Economic Zone which selectively opened up its the economy to foreign investment. However the current redevelopment of Baishizhou is ushered in by the visual model of this era which spoke to the image of the future cities of China and in contrast the "backwards" way of living Baishizhou had come to represent. Deng Xiaoping's Reform and Opening spoke to the Party's continued movement towards modernization.

4 Lu, "Dazhai: Imagistic Rhetoric as a Cultural Instrument,"

5 "Xuānchuán," Xinhua Online Dictionary, accessed Jun 22, 2021, <http://xh.5156edu.com/html5/93311.html>.

Fig.3.11 | Billboards commemorating Deng XiaoPing's South Investigation Tour of Shenzhen from 29

The recent version of this billboard exists in Shenzhen and still maintains the same overall composition, with Deng overlooking an updated skyline of the city.

source: <https://chinese posters.net/posters/e15-292>



Fig.3.12 | Shenzhen City Skyline 2017

source: <https://www.cnn.com/style/article/shenzhen-skyscraper/index.html>





Fig.3.13 [left] | Guomao building

Guomao building is a featured building in billboard is a symbol of Shenzhen Speed.



Fig.3.14 [above] | Photograph of Guomao Dasha (Foreign International Trade Centre), 2006

source: https://en.wikipedia.org/wiki/Guomao_Building#/media/File:Gou-Mou_20061222_large.jpg

Fig.3.15 | Reform and Opening, 1980's

Guomao building is also a featured silhouette in this poster promoting Reform and Opening

source: <https://chinese posters.net/posters/e15-292>



The main visual model of Reform and Opening is communicated through a single billboard which acts as a major landmark of the city. [Fig.3.11] This billboard depicts Shenzhen's city skyline whose visual style has been updated to reflect the photographs of city skylines of major global cities in the west, cities that China aspires towards. However the skyline depicted alongside Deng is not the actual skyline of Shenzhen [Fig.3.12] but a composite of the various architectural landmarks of the city, filling in the gaps with anonymous buildings of similar silhouetting. Rather than depict the actual skyline, this composite shows instead the aspirations of the city embodied in architecture.

One of the main identifiable buildings across all variations of Deng's billboard is the Guomao building [Fig.3.13-15] which was the tallest building in China at the time of construction. Built in the early stages of Shenzhen's development Guomao Dasha was constructed at a rate of 1 storey every 3 days and this speed of construction soon began to refer to the speed of Shenzhen's growth as an economic centre and representative of China's growth ever since.

This solidifies the language of architectural visualizations in association with party policies. In the same way that model citizens would guide the actions and behaviors of its citizens and its citizens in turn looked to them with that expectation, the skyline, composed of its beautiful towers, became the visual model for the city and was understood as such. This differs with the sentiment that renderings should reflect "the reality of our lives"⁶. This billboard is seen to represent Shenzhen, which itself has become a model city for lower tier cities in China seeking a pathway to modernization. What started as the product of a failed model of collectivization, over time came to be the picture of a model all of its own, the *Shenzhen Model* of urban village redevelopment, of modernization, exemplified by the renderings of New Baishizhou.

Redevelopment (2014-Present)

This brings us into the third visual era which is intertwined with and overlaps the second era. This third era, the era we are currently in, is communicated in the proliferation of photorealistic renderings upon the built environment; these are the billboards, construction

⁶ Aaron Betsky, "Opinion: "Renderers, show Us Where we might Go"," *Dezeen*, September 19,2018. <https://www.dezeen.com/2018/09/19/opinion-aaron-betsky-architectural-renderings-fantasy/>.

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Fig.3.16 | Baishizhou Site photo during pre-demolition

source: <https://www.skyscrapercity.com/>



Fig.3.17 | Caiwuwei redevelopment project

Renderings plastered over construction hoarding signal to the residents the direction of the cities path to modernization.

source: <https://www.skyscrapercity.com/>

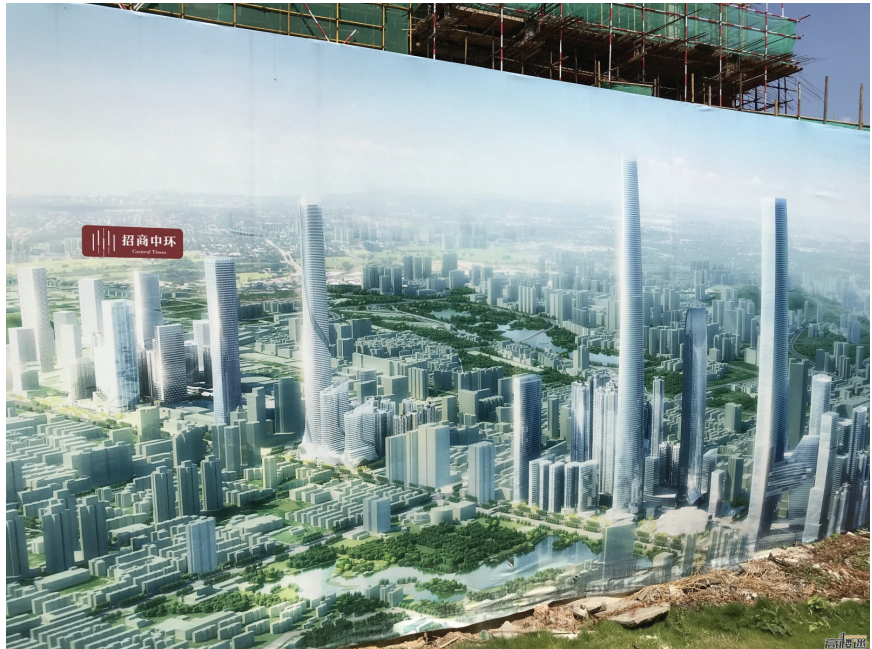




Fig.3.18 [all] | 2021 renderings of Baishizhou Redevelopment by LVGEM

source: <https://www.skyscrapercity.com/threads/shenzhen-baishizhou-redevelopment-450m-x-3-1476ft-x-3-pro.1587183/>



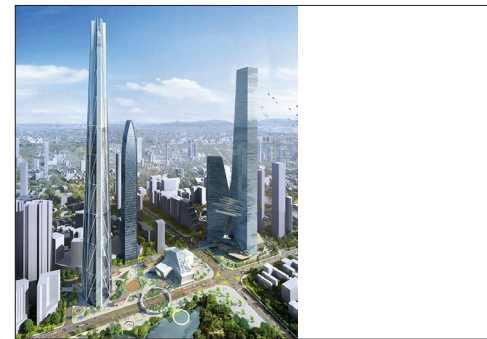
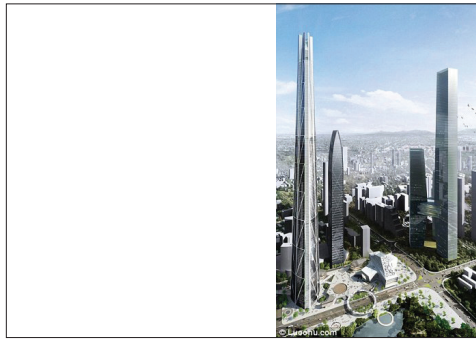
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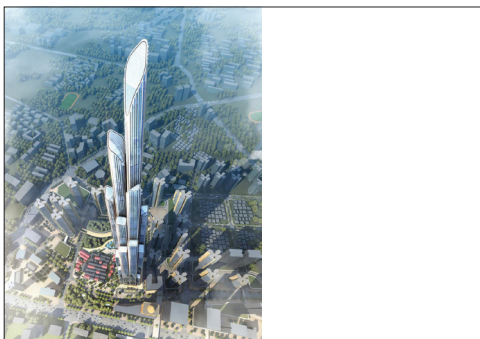
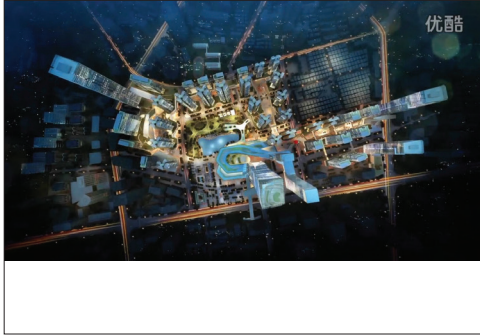
Fig.3.19 | Urban Village Redevelopment Renders

Compiled renderings of village redevelopment projects in Shenzhen in the last 20 years. All of these images have very distinct aesthetics to them. The creators of these renders are largely unknown.

(note this is not a complete compilation)

source: images collated from online forums:
<http://gaoloumi.cc/> and <https://www.sky-scrapercity.com/>





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hoarding and digital media platforms. This era specifically targets places like Baishizhou, remnants of historic China that are collateral for the rapid modernization ushered in through the second visual era. [Fig.3.19-21]

Over the past seven years the residents of the urban village of Baishizhou have encountered various iterations of its proposed re-development in various forms. [Fig.3.18,20,23] For the residents of Baishizhou, these renderings have become a part of the every day environment, as if one is simultaneously looking back at the past and forward into the future in the moments surrounding these imposed images. [Fig.3.4,16,17,20] This overlapping condition of layered perspectives has become symbolic of China's rapid development as it hurtles through a process of modernization towards a future that is familiar yet completely unfathomable for us in the West. Together these images provide a picture of the unique condition of Chinese cities; a struggle to bridge between their long histories and the complexity of modern urban life.

These rendering denote the overall structure of New Baishizhou which would replace the current compact urban village with a shining modern development emulating the skylines of prominent cities of the global West. In bold characters the billboards of Baishizhou state the cities future direction [Fig.3.20-21]:

今天的改变是为了明天的美好 白石洲从此揭开 新的一页

*Jīntiān de gǎibiàn shì wèile míngtiān dì měihǎo
báishí zhōu cóngcǐ jiē kāi xīn de yī yè*

"Today's Change is for a Happier and more Beautiful Tomorrow. Báishízhōu will now Open a New Page [in history]"

顾小家顾大家支持家园建设 识大体识大局⁷共创 美好家园

*Gùxiǎojiā gùdàjiā zhīchí jiāyuán jiànshè - shí dàtǐ shí
dàjú gòng chuàng měihǎo jiāyuán*

"Everyone is to support the reconstruction of our

⁷ Shidati, Shi daju plays on a 6 character idiom attributed to Deng XiaoPing: 邓小平《在扩大的中央会议上的讲话》：“不论工人也好，农民也好，知识分子也好，爱国民主人士也好，都是**识大体、顾大局**的，都是相信跟着党走是对的。”“识大体，顾大局。” Chengyu Huashu, accessed June 23, 2021, <https://chengyu.huashu-inc.com/N3F4NA=.html>.



Fig.3.20 | Street level billboard around Baishizhou depicting the new redevelopment renderings.

识大体识大局 [shí dàtǐ shí dàjú] is a play off of a phrase quoted from a speech given by Dengxiaoping in the 1960's “识大体，顾大局” [shí dà tǐ, gù dà jú].

This phrase has become a chengyu phrase roughly translated as the recognition of important truths pertaining to the overall situation and to heed the greater picture and overall interests.

source: <https://www.skyscrapercity.com/threads/shenzhen-baishizhou-redevelopment-450m-x-3-1476ft-x-3-pro.1587183/>



Fig.3.21 | Building level billboard around Baishizhou compared to Deng's Billboard.

The continuity of political and architectural messaging can be read across the billboards of Shenzhen.

source: [left top] <https://shenzhennoted.com/> [left bottom] <https://chineseartists.net/posters/e15-292>



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homeland - To keep in mind the greater picture,
together we will build a beautiful homeland"

The message on the billboard implores the viewer, resident of Shenzhen, to keep in mind the greater picture, not just to focus on the one in front of us. The line is delivered in a poetic tone, mixing common language, literary terms and plays with the use of *chengyu*. *Chengyu*⁸ is a form of expression that consists of well established idioms composed of a fixed set of characters and are often derived from authoritative sources. The bulk of existing *Chengyu* is derived from ancient literature with newer additions taken from prominent historical (political) figures and from fiction. While often archaic these terms are still commonly used in both spoken and written forms of Chinese. *Chengyu* is a highly intellectual manner of speaking which invokes a body of well established body of knowledge and its use lends the speaker a certain authority and status.

The use of photorealistic renderings architectural practices in China could be understood as a form of *Chengyu* [Fig.3.8]. It invokes the concept of the "West" through the use of digital photorealism in order to draw upon the values of Western modernization, values which are highly regarded and recognized around the world. Here the realistic visual style of the West is understood as inextricably connected to the intellectual entity of the West and its use cites its origins clearly with intentions in alignment with *móxiě*; learning and emulating existing masters with the intention of self improvement. In this case, a movement towards modernization of Shenzhen.

"We are encountering here not only an architectural 'style' of social and technological modernity, but also a 'style' or 'symbolic form' of science and knowledge."

*Zhu Jianfei, Architecture of Modern China*⁹

The contemporary photorealistic rendering emblazoned upon the built environment present to us the image of modernization embodied in Western global city which act as precedent for Baishizhou's redevelopment. [continued on pg 112]

⁸ Nastazja Stock, "Distinctive Features of Chinese Proverbs: A Comparative Study of Suyu and Yanyu and Other Types of Shuyu," *Roczniki Humanistyczne* 64, 9 (2019): 47-68. <https://ojs.tnku.pl/index.php/rh/article/view/6513>.

⁹ Jianfei Zhu, "Perspective as Symbolic Form: Beijing, 1729-35," in *Architecture of Modern China A Historical Critique* (New York: Routledge. 2009), 57.



Fig.3.22 | On site development office with sowroom.

source: <https://www.skyscrapercity.com/threads/shenzhen-baishizhou-redevelopment-450m-x-3-1476ft-x-3-pro.1587183/>

3. REDEVELOPMENT

2010

2013

2012

Shenye Century Valley Redevelopment greenlit to replace Eastern District of Baishizhou Shahe Industrial Zone

Design awarded to Architects CAPOL International (local architects) and Denton Corker Marshall (design architect) based in Melbourne, Australia

2013

First Master Plan for Baishizhou Redevelopment Released
Masterplan was developed for LVGEM by SOM Shanghai in collaboration with Urbanus and China Academy of Urban Planning and Design [CAUPD]

Renderings by Crystal CG along with an elaborate fly through of the project

2018 [estimate based on]

Render Released by Gordon Gill Architects based in Beijing.

Scope of involvement
Current involvement



2013-present

PRESENT

Projected
Completion Date

2020

2030

[on earliest instance]

by Adrian Smith + Gordon
based in Chicago and

nt: Master Planning
t unclear.

2019 [estimate based on earliest instance]

KPF posted LVGEM Baishizhou project on their webpage. KPF is headquartered in New York with a local office in Shanghai.

Scope of involvement: Master Planning (no plans released)
Current involvement unclear.
Rendering Firm: ATCHAIN based in Shanghai

2019 [estimate based on earliest instance]

Current main rendering used to promote LVGEM Baishizhou Redevelopment.

Local Architect and Design Architect unclear.
Rendering firm involved, unclear.



Fig.3.23 | History of Baishizhou in three visual eras (era 3)

source: Diagram by Author

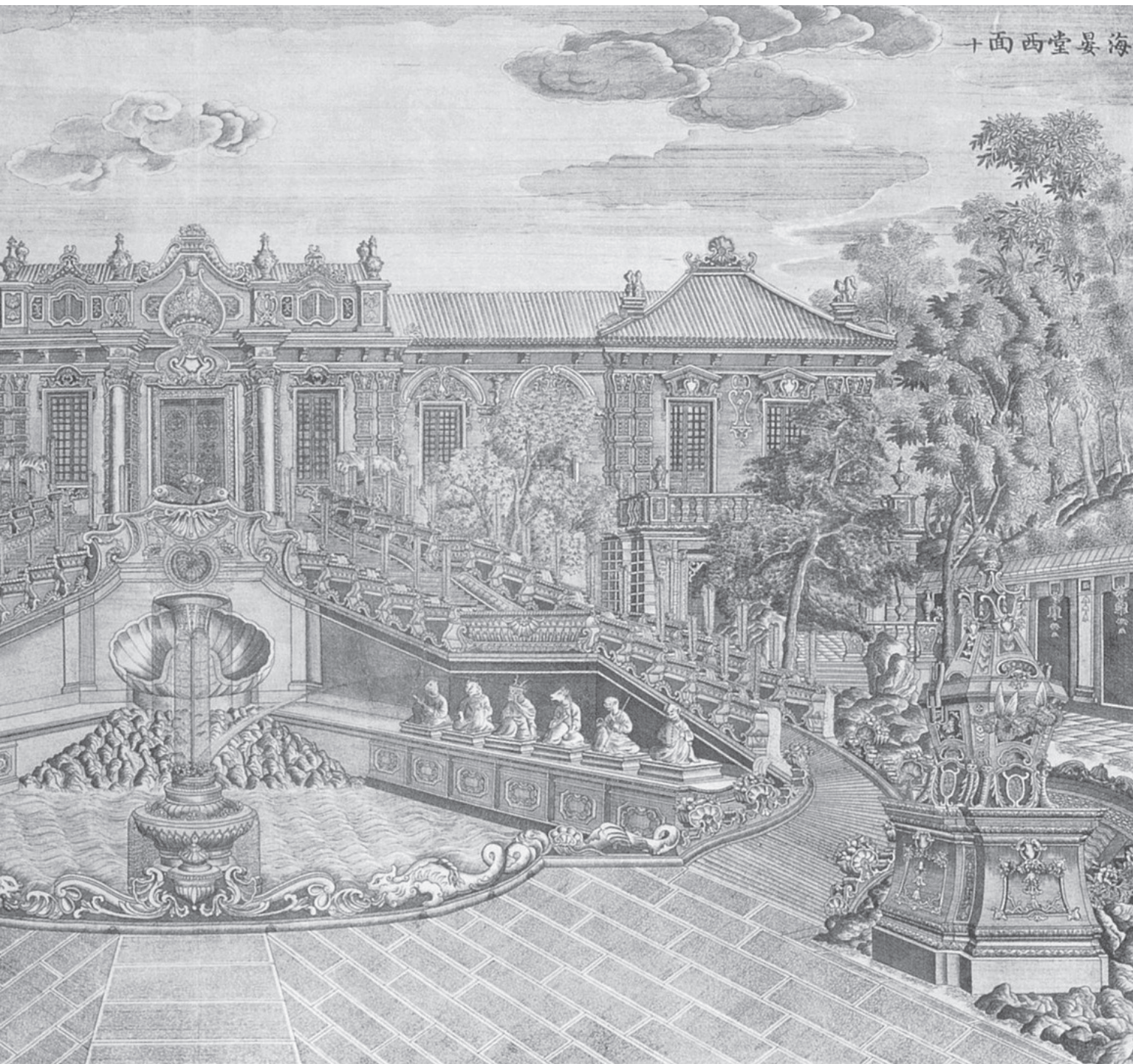
Fig.3.24 | Drawing of YuanMing Yuan

On this subject of Modernization Zhu Jianfei questions whether or not the process of becoming *modern* is the same as becoming Western for non-Western cultures. He concludes that China has been undoubtedly influenced by the lens Western perspectivalism and the values it embodies¹ but history has shown signs of alternative paths to synthesis. Zhu points to a series of hybridizations that occurred within art and architecture as signs of an ongoing process of reinternalization of Western values to work within the realities of an Eastern culture. Amongst the artistic hybridizations, there is one chief architectural example, that of Yuanmingyuan gardens' Xiyanglou. The construction of the Xiyanglou in the imperial gardens incorporated Western perspective based design principles- axially, monumentality, illusions of space and depth - but were executed and detailed to fit distinctly Chinese realities, such as the traditional choice of auspicious animals as ornament and the use of local construction techniques. In this case the principles of perspectival painting were used as a model for the creation of the Xiyanglou with conscious deviations.

¹ Jianfei Zhu, *Architecture of Modern China A Historical Critique* (New York: Routledge, 2009), 39-40.

Source: https://en.wikipedia.org/wiki/Old_Summer_Palace#/media/File:Yuanmingyuan_haiyan.jpg





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The renderings produced out of this redevelopment process communicate this process of change to its citizens-- and to the world at large-- and the visual style cites the source of its intellectual model. But what these renderings speak to is something more than what it cites.

However, modernization is not necessarily the same as Westernization [Fig.3.21] and the architectural process of China itself works to reinternalize foreign designs into the Chinese built environment so that the name of the original design firm that created these visuals becomes hard to trace, bringing to the fore the reading of renderings within a greater political and economic narrative as well as an architectural one.

The various renderings of Baishizhou's redevelopment over the last 7 years [Fig.3.20], and there have been many, have been provided largely by Western firms responding to requests for proposals issued by Lujing (LVGEM) a developer that specializes in these kinds of high profile redevelopment projects. One of the earliest masterplan proposals was provided by SOM in 2014 with renderings provided by CrystalCG, the largest most influential rendering firm in China. A few years later in 2017 the design was continued by KPF's London office which partnered with Chinese rendering firm ATchain to produce more visuals for their revised proposal before the design was handed off to the client.

Baishizhou's redevelopment process is largely opaque in terms of who is involved and when they were involved, but a sense of what occurs can be traced through the presence of various renderings produced and published by the different firms involved throughout the design process. As the core business of architecture, the working drawings that more traditionally represent the intellectual property of an architect, are never published, renderings become one of the only identifiable links between architect and project.

In the years since KPF handed over their documents, Adrian Smith+Gordon Gill architects released their own rendering of New Baishizhou in 2018 before going silent and an official redevelopment plan with new renderings was released by the developers, LVGEM, at the end of 2019 to local citizens in multiple conferences. The process of Baishizhou's redevelopment began with an engagement with the expertise of Western architectural firms before being re-internalized into the Chinese architectural system to become something

read as distinctly Chinese in execution and visual presence [Fig.3.16]

This outcome of being perceived as having Western traits but still reading as Chinese is achieved in part through the way that China handles the architectural design and construction process. International architectural firms, even those that open local Chinese offices cannot receive licences to build in China and no acceptances are made. In order for something to be built one must partner with a local architectural firm and a local construction firm. It is more likely that there will be a complete handover of the project at design development phase. Even for large high profile constructions like the Olympic Birds Nest Stadium, there was a handover at the design development phase and Herzog and Demeuron were left largely in the dark during construction.

“Herzog: It just happens to be the case that in China, you can never be quite sure how anything will turn out. Over the years, we were often completely perplexed, because we couldn't gauge how our design was being received. What was missing was a clear response. But everything fell nicely into place in the end.”

*Jacques Herzog*¹⁰

In the case of Baishizhou, the masterplan became the point of handover, but because of this unique condition preventing foreign firms from proceeding beyond design development. Because of this renderings become a crucial hinge in the overall architectural process [Fig.2.3], both the end of one process in the West and the start of another in the East. Both the local architecture firm and the construction firm looked towards the drawings produced out of the West as a visual model but worked to integrate into the project the realities of the Chinese built environment, mainly the speed at which things are built and how they are built. Migrant workers from rural China seeking work in cities like Shenzhen often find themselves employed in the construction industry. What is produced then is a Chinese sense of modernity that synthesizes both Western thought and expertise subjected to and modified by the constraints of Eastern reality.

While certainly not true for every project, Baishizhou uses the pho-

¹⁰ Jacques Herzog, "Herzog on Building Beijing's Olympic Stadium: 'Only an Idiot would have Said no'," interview by Der Spiegel. *Speigel International*, accessed June 23, 2021, <https://www.spiegel.de/international/world/herzog-on-building-beijing-s-olympic-stadium-only-an-idiot-would-have-said-no-a-569011.html>.

torealistic renderings of Western firms as a visual model and while not every urban village redevelopment project is as glamorous as Baishizhou, the intentions with each redevelopment following this visual model is inextricably tied to politics, the market¹¹ and most importantly the path to modernization. All of which cannot be divorced from a sense of Westernization embodied in the style of photorealism [Fig.3.16]. Yet as the previous visual era shows, what is being communicated is not simply the ideals of Western modernism embodied in the image of a modern city, but Shenzhen as a new model city, a model that is distinctly Chinese. Whether this new China modernism is fully realized or not is to be seen but I predict that under the visual culture of China, this new modernism will bring with it a new model of visualizing architecture that is distinctly Chinese and produced out of the principles of *móxiě* which traces a continuous thread between what currently exists and what does not yet exist.

Whether or not we in the West will be privy to this important conversation in the future will depend on whether or not we can re-engage with the conversation around architectural visualization and rethink the way we understand the role of rendering in architectural practice.

11 A unique condition of Urban Village Redevelopments is that no singular financial entity- private or government- could ever fund such a large redevelopment in such a location-- Baishizhou is located in the heart of Shenzhen with one of the largest rent gaps that exist in the city. Only through joint efforts of government and developers can this project ever exist, in some cases the government incentivizes developers to submit proposals for area's they would have otherwise ignored.

REFLECTION

「知之為知之，不知為不知。」
孔夫子 (Confucius)

zhī zhī wéi zhī zhī, bù zhī wéi bù zhī

Knowing is knowing, not knowing is not knowing,
such is wisdom¹

In retrospect, the thesis ended in a very different place than where it began and the reason for that is very much related to the reason why everything around us has changed recently; covid-19. The pandemic has exacerbated the severe limitations of our physical bodies, being unable to visit the site and take my own photographs has lead to a heavier engagement with the few images I do have access to. Yet even as we believe that the convenience of digital platforms extends the limits of our reach we are still confined within our own thought processes. It is one thing to see across the ocean through renderings and another to reposition one's mindset and in attempting to communicate from an Eastern mindset I feel like I've understood my own Western educated roots more clearly.

To return to the initial question of this thesis; *what does the standardization of photorealism reflect back onto the profession?* It is somewhat embarrassing to say that after all this time I have not a definitive answer. Instead, as I went through my research, I had hoped to illustrate instances of when images clearly reflect back onto us a multitude of things, whether it be unintentionally through the association as is the common narrative in the West or with great intention to project as is keenly executed in the East.

Therefore I can only conclude that “*what*” is perhaps the wrong question to ask and that the confrontation that I had identified between architecture and image at the Pictorial Turn -- a conflict that begs resolution -- is perhaps the wrong way to think about this entire situation. As Vilhelm Flusser aptly stated, we live in a world where there is no room for the concept of “causality”, therefore conflict does not necessarily lead to resolution but at the same time this thesis must end. In many eastern cultures there exists a method of storytelling that has no conflict and therefore, no climax and resolution. In Chinese it is called qǐ chéng zhuǎn hé [起承转

1 This specific Chengyu speaks to the nature of wisdom and knowledge and is originally sourced from 《論語。為政》, The Analects of Confucius. "知之為知之，不知為不知," Baike, accessed August 28th, 2021, <https://baike.baidu.com/item/%E7%9F%A5%E4%B9%8B%E7%82%BA%E7%9F%A5%E4%B9%8B%E7%9F%A5%E4%B8%8D%E7%9F%A5%E7%82%BA%E4%B8%8D%E7%9F%A5/1130339>.

合], describing the method of writing in 4 parts qǐ - introduction, chéng - process of continuation, zhuǎn - turning point, change in perspective, hé - result. The main point of this thesis is the shift in perspective.

I began this thesis writing in a Western framework of storytelling, introduction, conflict, rising action, only to unknowingly make a sharp turn halfway ending in an Eastern framework. a way of storytelling in which the result was not identifiable before the turn. Having gone through qǐ chéng zhuǎn hé, the realization that my initial question and assumptions when approaching this topic are incorrect is perhaps the most important result of this journey.

In hindsight the question really should have been “how” rather than “what”, because the “what” being some sort of meaning that we draw from images, even if apparently universal, has the potential to change. Such is the nature of images to take upon multiple if not contradictory meanings.

There are known knowns and known unknowns, the danger is being caught unaware with unknown unknowns. The point of the sharp turn towards a Chinese philosophy of images is done so in order to shine a light on the unknown unknowns of our own biases. Reflecting on the middle ground that the Chinese utilize to approach images shines a new light on the ways that we in the West approach them. This is not to say that we should copy China but we should widen the scope of how we look at the significance of images, even those we consider benign.

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