

两张图纸。四样东西

1 Plan-oblique drawing (top) and interior plan (bottom) for the Chen Mo Art Studio, paper and ink, 1998. Drawn and designed by Wang Shu. Wang's notes at the bottom of the drawings translates as 'two drawings and four things'.

This article examines Chinese architect Wang Shu's traditional landscape painting-inspired parallel projection drawings and focuses on his strategies to go beyond Western perspectival vision.

Beyond perspectival vision: case studies of Wang Shu's landscape painting-inspired parallel projection drawings

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*Perspective [...] pushes the observer out of the building and beyond the space. The observer who is pushed out thus discovers the building as an object and establishes a form-centred architecture.*²

(Yung Ho Chang)

In both Chinese and international architectural academia, contemporary Chinese architects' reflections on, and practices of, visual representation have received little attention. In his seminal 1997 essay 'Falling Into Space', Yung Ho Chang (张永和), a major proponent of experimental architecture in China, contended that the early twentieth-century Chinese modernists' adoption of Western linear perspective and orthogonal projection led them to interpret China's architectural heritage through a Western vision.³ Chang posited that this Western vision was essentially perspectival and derived from and reinforced a profound abyss between the spectator-subject and space.⁴ With this acknowledgement, Chang urged his contemporaries to experiment with 'how to use any [drawing] tool without being confined by it and its underlying thinking method'.⁵

Chang's call for thoughtful drawing practice sheds light on an intriguing aspect of the uncharted realm of contemporary Chinese architectural drawing. The Chinese architect Wang Shu (王澍), recipient of the 2012 Pritzker Architecture Prize, shares Chang's concern. Wang holds that 'the seemingly thoughtless methods of plan, elevation, and section [...] determine fundamentally whether we are engaging in architectural thinking'.⁶ Similarly to that of Chang, Wang's reflection on drawing canons focuses on their ingrained perspectival vision 'that operates from the external and high above'. 'It is this very perspective', Wang has argued, '[that] fosters the belief among architects that they are omniscient'.⁷ To substantiate his critique of perspectival vision, Wang has evoked traditional Chinese landscape painting as the epitome of 'a different way of seeing and experiencing the world'.⁸ Wang has repeatedly asserted that the painting is not a perspectival window through which a passive spectator gazes at a separate pictorial realm; conversely, he has claimed that '[...] to see a landscape painting, it is essential to walk into it'.⁹ More importantly, by claiming that the landscape painting's a-perspectival 'way of seeing is also the method of design', Wang has charged his perception of the landscape painting

with considerable significance regarding architectural methodology.¹⁰

Wang's claim, aiming to translate the a-perspectival vision in painting into architectural design methods, warrants an investigation. When considering Wang's claim, one must not overlook his extensive uses of modern parallel projection, such as axonometry and oblique projection.¹¹ Modern parallel projection has been one of Wang's major tools for design iteration and presentation since his formative years.¹² In addition, modern parallel projection methods seem to represent the diametrical opposite of the landscape painting's a-perspectival vision. Without a converging point of rays, parallel projection is essentially a 'God's-eye view', which sees from 'an infinite distance away', and a 'meta-perspective fulfilling the goal of a complete spatial continuum'.¹³ The crux of the matter lies in how Wang could reconcile this transcendental God's-eye view with the intimate a-perspectival vision seen in traditional Chinese landscape painting.

First, through a literature review, this paper highlights Wang's three remarks on the a-perspectival sensitivities of traditional landscape painting, namely the art genre's nonmimetic orientation, immersive spectatorship, and absence of geometrically unified pictorial space. Second, by closely examining Wang's parallel projection drawings in a comparative manner, the essay investigates Wang's specific approaches to encouraging immersive spectatorship and the strategies he has adopted to surpass the geometry-based mimetic representations of depth. The examined cases include the plan-based oblique drawing for the Chen Mo Art Studio (陈默工作室, Haiyan, 1998), the section-based oblique drawings for the Tengtou Pavilion (滕头案例馆, Shanghai, 2009–10), and the axonometric panoramas for the Xiangshan Campus of the China Academy of Art (中国美术学院象山校区, Hangzhou, Phases I [2002–04] and II [2004–08]).

This essay seeks not to chronicle Wang's development in parallel projection drawings but to highlight the key methodical changes in Wang's use of this technique. Wang has asserted that all the chosen projects were directly influenced by particular landscape paintings or informed by broader Chinese landscape traditions. The aforementioned cases, which are characterised by their inspirations from landscape paintings and distinct drawing methods, are fitting subjects for this study. By investigating Wang's drawings, this

essay provides insights into a salient yet underexamined aspect of Wang's creative works.¹⁴ The case studies are also part of the author's ongoing research project to reinvigorate the discourse surrounding contemporary Chinese architectural drawings. This discourse has been initiated by Chinese architects but continues to lack the scholarly attention it merits.

Wang Shu: Chinese landscape painting as a-perspectival vision

In the Western world, linear perspective is a fundamental technique for achieving representational realism. The Renaissance invention of perspective reinforced the notion of painting as a mimetic reproduction of an a priori reality that illusorily unfolds for a detached spectator.¹⁵ Based on Euclidean geometry and Ptolemy's cartography, perspective anticipated the Cartesian notion of absolute space, where space is abstracted into a mathematical coordination that is independent of 'time, matter, and movement'.¹⁶ Mimetic representation, disengaged spectatorship, and the geometrisation of space remain the three correlated parameters defining perspectival vision. As an ideology characterising Western visual culture, perspectival vision is expressed in various mathematically codified projection systems, including parallel projections. According to Denis Cosgrove, perspectival vision has played a pivotal role in shaping the European colonist's 'landscape way of seeing', where the landscape is perceived as a discrete entity and transformed into possessable properties.¹⁷

Chinese artists were unaware of linear perspective and Euclidean geometry until the sixteenth century.¹⁸ The European 'landscape way of seeing' is fundamentally at odds with the Chinese cosmology epitomised in traditional landscape painting. The long history of Chinese landscape painting dates to the fourth century when China was experiencing political upheaval and division following the Han Empire's collapse (206 BC to AD 220). Chinese landscape painting as a genre reached its peak during the Song Dynasty (Northern Song [AD 960–1127] and Southern Song [AD 1127–1279]), with the natural landscape becoming a dominant subject of the Chinese visual arts. Wang has never specifically used the term 'a-perspectival' in his remarks on traditional painting. However, his three general points, which concern the genre's nonmimetic orientation, immersive spectatorship, and absence of geometric unity, have always been prevalent in his essays and public lectures. First, Wang has asserted that landscape paintings:

*do not mimic nature's forms or patterns [...] but rather convey a perception of the experience of travelling amidst real landscapes of natural beauty, accompanied by memories and imagination.*¹⁹

From the standpoint of art history, Wang's statement is historically inaccurate but does not entirely miss the point. According to the art historian Won C. Fong (方闻), although Chinese painting has never entirely renounced mimesis and naturalism, 'the epochal shift [...] from pictorial representation to calligraphic self-expression' and 'surface abstraction' did occur during the transitional period between the Song Dynasty and the Yuan Dynasty (AD 1271–1368).²⁰ Wang has never explained the origins of his inclination to overgeneralise the entire genre of Chinese landscape painting as a stereotypical nonmimetic art form. His position could have been influenced by his recognition of the dominant narrative in Western art history, which

considers the early twentieth-century European avant garde's deviation from mimesis as revolutionary progress. One of the clearest demonstrations of this avant-garde rejection of mimesis can be found in Wang's essay 'When "the Space" Is Coming Into Being', which is directly influenced by Russian art historian Nikolai Tarabukin's 1923 text 'From the Easel to the Machine'.²¹ Drawing on Tarabukin's argument that the painting of the historical avant garde sought not to replicate the external reality but to create an authentic object reflecting its inherent medium conditions, Wang identifies 'a new way of perceiving space' in the painting.²² Wang has stated that:

*space is no longer a three-dimensional aesthetic object created by illusionistic means, such as perspective, but a genuine experience of things.*²³

The historical avant garde's dismissal of space as an a priori reality aligns with Wang's argument that the Chinese landscape painting's way of seeing primarily concerns perceiving space as lived experience.

Second, Wang's emphasis on space as experience also draws attention to the landscape painting's immersive mode of spectatorship. Wang has stated that:

*We do not just stand outside looking at the painting. What we call 'observable, travelable, inhabitable, and wanderable' [in the painting] means that you really enter it [the painting].*²⁴

The phrase 'observable, travelable, inhabitable, and wanderable' references the four classical canons for evaluating landscape paintings, which were formulated in the Northern Song Dynasty.²⁵ In recent literature on comparative philosophy, the aestheticised 'withinness' in landscape painting has been construed as a reflection of traditional Chinese cosmology. Edward Casey stresses that, in Chinese cosmology, the natural world is never seen as an external other to 'take over'. Affiliating with this view of nature, the aim of Chinese landscape painting is to convey a 'pregiven immanence' or to evoke viewers' 'abiding unity with the natural world'.²⁶ Wang's position adheres broadly to this perspective, and he has emphasised that the Chinese landscape tradition 'capture[s] the mutual understanding and harmonious relationship between humanity and nature'.²⁷ However, it has always been Wang's intention to translate the immersive mode of seeing into his design approaches that has endowed his acknowledgement with methodological significance. Wang once wrote:

*'It invites you to enter' [...] This sentence is pivotal for how to appreciate gardens; how to view landscape paintings, especially Song paintings; and how to discuss my experience of architecture.*²⁸

Third, Wang has pointed out that artistically expressive inconsistencies of pictorial space often characterise Chinese landscape paintings. Wang has always been particularly interested in 'the ways in which the spatial depths of mountains were represented'.²⁹ Wang's observations of Song Dynasty masterpieces have led him to conclude that such paintings' pictorial spaces are structured with conflicting compositional schema and depth cues.³⁰ In Wang's words, landscape paintings 'can simultaneously present the [diverse] experiences on the two-dimensional paper by recourse to apparently contradictory logics'.³¹

Wang's opinions resonate with those of cross-cultural art history studies, which, since the 1980s, have theorised the absence of geometric unity as one distinct virtue of Chinese paintings. For instance, the art historian John Hay

contends that ‘China’s cosmology was not fundamentally geometric’. In contrast to the predominant ‘geometric space’ found in Western classical paintings, Hay metaphorically characterises the ordering principle in Song landscape paintings as ‘algebraic space’. In this alternative algebraic paradigm of ordering, mutually complementary elements are configured additively to create a non-hierarchical whole.³²

Wang’s understanding of traditional landscape painting intersects, to some extent, with the broader cross-cultural studies of Chinese art and philosophy. These studies have highlighted the unique philosophical foundations, modes of perception, and compositional attributes of Chinese painting in contrast to the established norms of European classicism. However, the concern here is not solely about the accuracy of Wang’s interpretations of paintings in the context of art history. More importantly, the analytical focus involves testing whether Wang could effectively incorporate the a-perspectival traits of Chinese painting into his drawing strategies and design approaches. The subsequent in-depth case studies explore Wang’s efforts to bridge the a-perspectival vision in landscape painting with the perspectival ideologies in parallel projections.

Chen Mo Art Studio: plan-oblique and abstract ground

Since the late 1990s, Wang has experimented with translating traditional Chinese paintings and gardens into architectural vocabularies and organisational strategies. However, Wang’s early drawings reveal the challenges of reconciling his tradition-infused design thoughts with the perspectival vision underlying parallel projections. Two specific works represent examples of Wang’s initial attempts: his interior designs for his own residence in 1997 and the art studio that he created for his friend, the Chinese ink brush painter Chen Mo (陈默), in 1998. In the two designs, Wang drew upon the traditional garden and painting as models for an alternative mode of horizontal expansion of space. According to Wang:

In traditional Chinese thought, architecture is not conceptualised as a monolith erected on a solid foundation but rather as a horizontal extension characterised by all-inclusive mutual adaptations [of the particulars] without a preimposed framework. This idea is also present in traditional Chinese landscape painting.³³

Wang’s emphasis on the horizontal extension, which unfolds in mutual interdependencies of concrete objects, sharply contrasts with the modern conception of space as an object-free and homogeneous continuum. As this essay

demonstrates, this object-orientated horizontal expansion has played a crucial role in many of Wang’s projects. The Chen Mo Art Studio was adapted from a featureless office suite spanning 60m². In the design, Wang aimed to create an effect of spatial enlargement by intervening through architectural means users’ sensation of the office’s original spatial boundaries.³⁴ Wang’s solution was space layering, which took the form of a series of inserted vertical partitions with openings of varying sizes [1]. In his words, the goal was to establish mutual interdependencies between the inserted and existing elements by ‘reproduc[ing] the architectural vocabularies already present onsite’.³⁵

Nevertheless, Wang’s goal of unbinding the office box by introducing new correlations that would condition spatial sensations appears to be at odds with his representational drawings [1]. Wang’s published design for the Chen Mo Art Studio includes two drawings: an orthogonal plan of the interior and a worm’s-eye view oblique drawing based on that plan. In his plan-based oblique drawing, Wang deliberately omitted the office suite’s enclosing walls to express a sense of unbounded space. Ironically, Wang’s omission makes any possible link between the extant walls and the newly inserted partitions imperceptible, thereby cancelling out their mutual interdependence.

Wang’s drawings display his layering scheme as an array of groundless objects floating in the air. The interior floor is deprived of sensory concreteness but abstracted into a set of orthographic geometrics, which coordinate the layering elements in one uniform matrix. Additionally, the abstract ground plane and abnormal upward view of the worm’s-eye oblique preclude viewers’ immersive engagement with the drawn space. It is difficult for viewers to project themselves onto the pictorial space, which is too abstract to provide sufficient deictic footholds. Consequently, this preclusion of imaginary bodily engagement rules out the roles of motion and temporality in the process of spatial perception.

Wang’s drawings for the Chen Mo Art Studio expose a disparity between his design idea, which aspired to be a horizontal extension characterised by the mutual interdependencies of concrete objects, and the way he visually expressed this idea. Regarding Wang’s drawings, it remains unclear how the tensions between two distinct conceptions, namely space defined as a geometric coordinate and space understood as a lived experience, could be reconciled. Despite Wang’s endorsement of the traditional Chinese painting’s a-perspectival traits, such traits appear to have had a limited impact on his early design drawings.



2 The interior spatial layers (left) and the exterior prismatic envelope (right) of Tengtou Pavilion, Shanghai Expo, 2010. Designed by the Amateur Architecture Studio; photographed by Yige Yinghua (一格影画).

Tengtou Pavilion: section-oblique and concrete ground

In 2009, Amateur Architecture Studio, which was co-founded by Wang and his professional partner, Lu Wenyu (陆文宇), was commissioned to design the Tengtou Pavilion, Ningbo City's exhibition house, for the 2010 Shanghai Expo. In his designs for the project, Wang continued to intervene in the perception of spatial depth through the architectural layering of walls. On the restricted plot (50 m long and 15 m wide), the architects aimed to create an effect of 'ever-deeper space' by inviting visitors to circumnavigate a series of densely aligned, self-similar building layers [2].³⁶ Despite his repetition of the idea of spatial enlargement through layering, Wang's oblique drawings for the Tengtou Pavilion exhibit different, even contrasting, features from his Chen Mo Art Studio drawings. Wang's Tengtou Pavilion drawings went from plan-based oblique drawings to sectional plane-based oblique drawings. From this shift in drawing methods arose



further changes in Wang's design approaches. In the Tengtou Pavilion oblique drawings, Wang avoids reducing the building's horizontal depth to orthogonal geometrics; rather, he depicts the building's floors as sensory topographies that could stimulate viewers' imaginative inhabitations.

Entering the painting

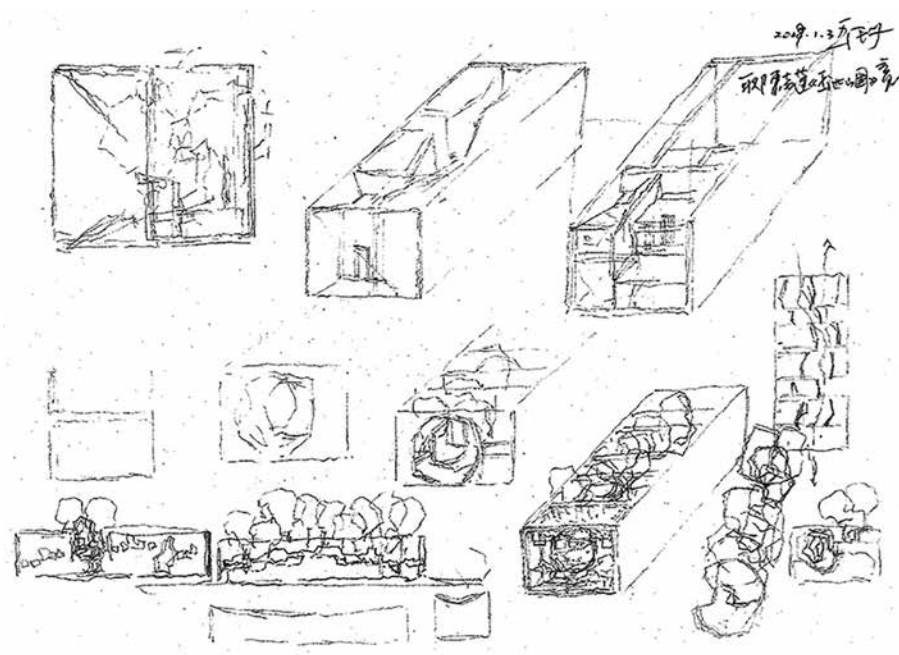
Immersive spectatorship played a prominent role in the Tengtou Pavilion's design. In fact, Wang's proposal was a product of his own experience of imaginarily walking into the Ming Dynasty (AD 1368–1644) painter Chen Hongshou's hanging scroll *The Mountain of Five Cataracts* (五泄山图, 118 cm x 53 cm, 陈洪绶, AD 1599–1652) [3]. In his drawing notes, Wang referred specifically to several elements of Chen's painting:

*A path twisted its way deep into a hollow space formed by trees, which also implied the depth of thoughts. [...] That hollow space impressed me, half natural and half artificial. They shaped a shading space on a thin, two-dimensional sheet of paper.*³⁷

Wang's notes were accompanied by a visual diagram where a cuboid frame, drawn in oblique, is overlaid onto Chen's painting. This cuboid serves a dual purpose: it visually represents the architectural volume of the envisioned pavilion and, simultaneously, extracts key elements from Chen's artwork. [3]

In his preliminary design sketches for the Tengtou Pavilion, Wang transformed the extracted elements from Chen's painting into architectural components [4]. The 'hollow space', or the holes created by trees, became the pavilion's layered wall openings. The openings' contours were depicted in 'a more geometrised vocabulary', which could be found in Chen's depictions of the background hills.³⁸ In his notes, Wang also emphasised the parallel between his process of drawing and designing the Tengtou Pavilion and his journey of imaginarily 'walk[ing] into it [Chen's painting]'.³⁹ Wang wrote:

I felt as if the building had already existed [in Chen's painting]. What I was doing was guessing and memorising around it [the envisioned building] [...]



3 Left: Chen Hongshou, *The Mountain of Five Cataracts*, Ming Dynasty, silk and ink, 118 cm x 53 cm, Cleveland Museum of Art, Cleveland. Right: design diagram of the Tengtou Pavilion, Shanghai Expo, 2009, drawn by Wang Shu and Amateur Architecture Studio.

4 Preliminary sketches of the Tengtou Pavilion, Shanghai Expo, A4 paper and pencil, 2009. Drawn and designed by Wang Shu. The translation of Wang's notes in the upper right-hand corner is '3 January 2009 Wang Shu. Taking inspiration from Chen Laolian's *The Mountain of Five Cataracts*'. Laolian (old lotus) is Chen Hongshou's sobriquet.

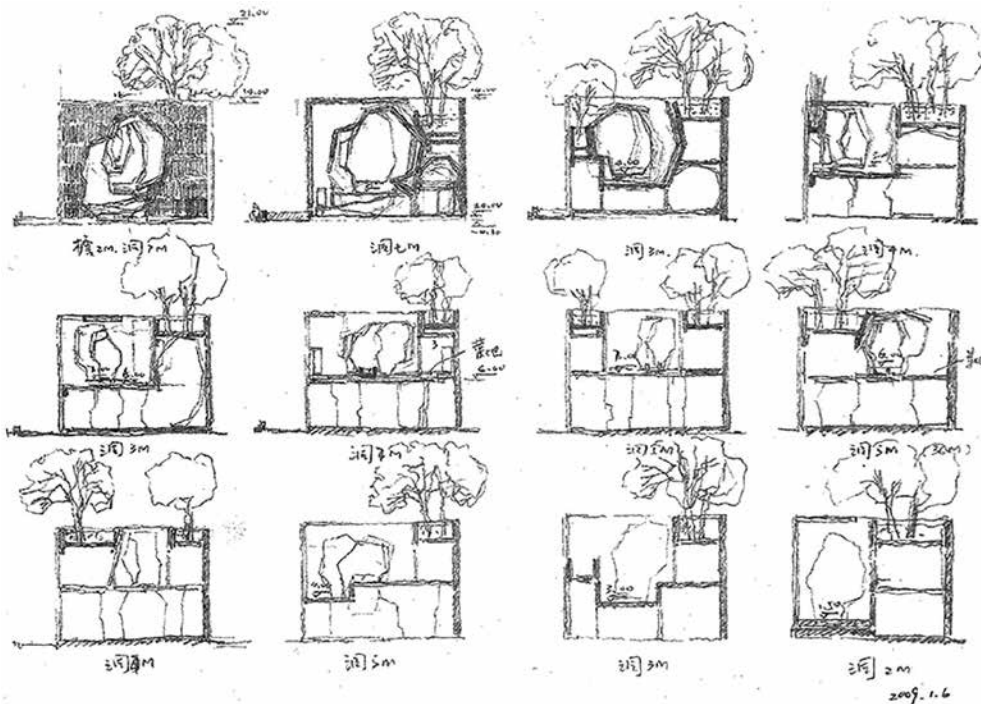
with the hand-drawn depiction on paper, my memory and guessing became more and more accurate.⁴⁰

Several aspects relating to Wang’s mental inhabitation of Chen’s painting, which were only vaguely hinted at in his notes, warrant further elaboration. First, because the architectural volume represented in oblique is superimposed onto Chen’s painting, Wang’s wandering inside Chen’s mountainous scape concurs with his imaginary walk into the envisioned pavilion [3]. Second, Wang’s mental meandering necessarily requires fictionalising the horizontal floor of the proposed pavilion. Excepting the lower section, Chen’s painting notably abstained from portraying the ground. Inside the tree hole, the scene provided limited visual cues for navigating deeper into the mountain. Essentially, Wang has to grapple with

the challenge of supplementing the absent yet implied horizontal depth in Chen’s painting by illustrating the retreating floor of the envisioned pavilion.

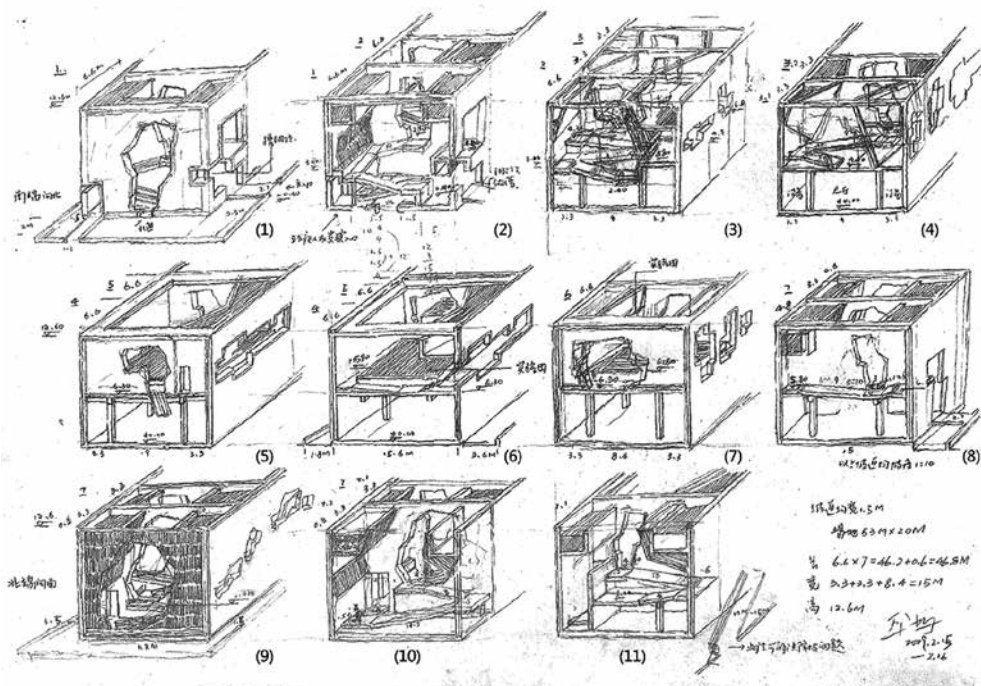
Drawing uncommon grounds

Based on a close reading of Wang’s drawings, this essay suggests that his approach encompasses two primary operations. First, he chose to delineate the horizontal space extension of the Tengtou Pavilion incrementally, section by section. This approach contrasts with his treatment for the design of the Chen Mo Art Studio, where he coordinates the horizontal extension within an overarching planar geometry. Wang has confirmed that, for the Tengtou Pavilion, he ‘decided to start drawing from sections’.⁴¹ He holds that the sequential order of



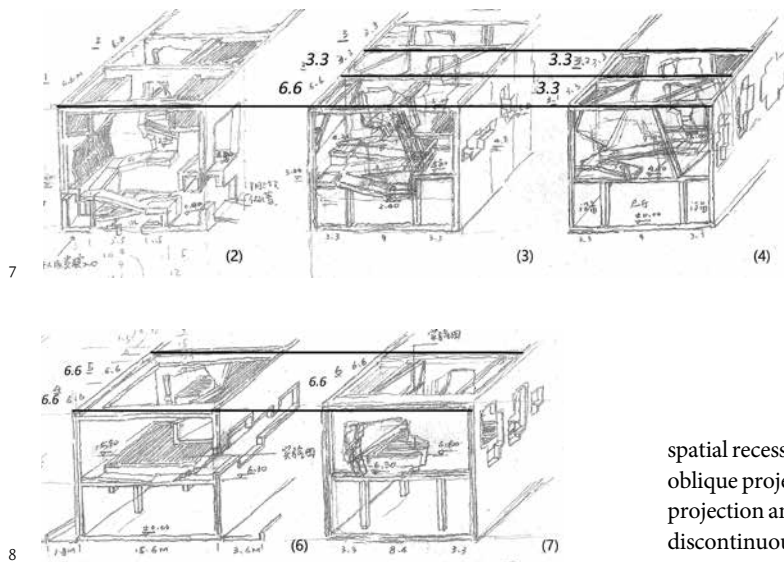
5 Twelve sectional sketches for the Tengtou Pavilion, Shanghai Expo, A4 paper and pencil, 2009. Drawn and designed by Wang Shu.

6 Eleven oblique sketches for the Tengtou Pavilion, Shanghai Expo, A3 paper and pencil, 2009. Drawn and designed by Wang Shu. Each oblique drawing is numbered by the author for analytical purposes.



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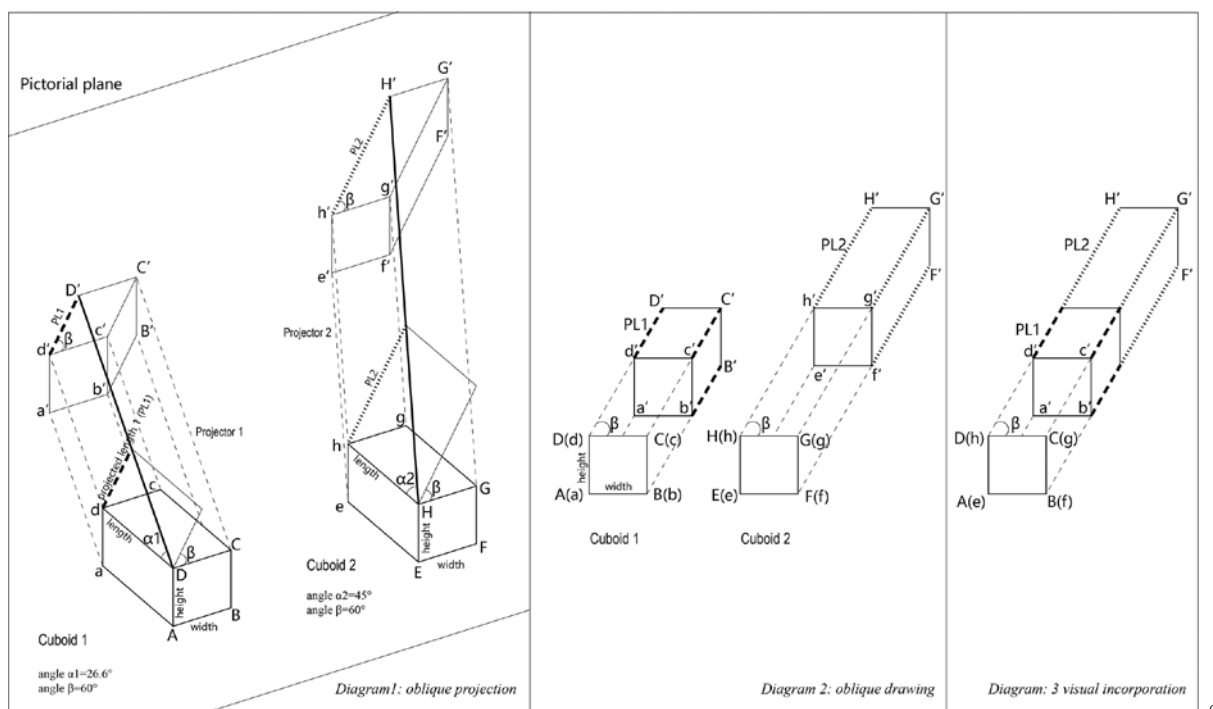
- 7 Comparisons of the diagonal extrusions across Wang's oblique drawings (Drawings 2, 3, and 4) with author-added annotations to highlight relevant details under discussion.
- 8 Comparisons of the diagonal extrusions across Wang's oblique drawings (Drawings 6 and 7) with author-added annotations to highlight relevant details under discussion.
- 9 Combination of inconsistent projected lengths in oblique drawing, drawn by the author.

drawing plan, elevation, and section reflects one's way of engaging with architecture. In this case, the pavilion's plan came later as an a posteriori product for practical uses.⁴² Wang drew twelve sectional drawings, each of which represented an architectural variant of Chen's tree hole [5]. Based on the twelve sections, Wang proceeded to draw eleven obliques to further study the intermediate floors between the sectional planes [6].

In addition, the diagonal extrusions in Wang's eleven section oblique drawings are not drawn to a consistent scale [6]. For example, in Oblique 3, the two different lengths (3.3 m and 6.6 m) are drawn as almost equal lengths. This visual equivalence of different lengths also applies when one compares Obliques 2, 3, and 4 [7]. Remarkably, the 6.6 m length shown in Oblique 7 is almost identical to the 13.2 m length shown in Oblique 6 [8]. Notwithstanding, all the frontal sections are drawn to the same scale. These instances indicate that, among Wang's eleven section oblique drawings, there is no totalising axis governing the representations of

spatial recessions. Conversely, Wang combines inconsistent oblique projection fragments resulting from changing projection angles to formulate ostensibly linear yet discontinuous diagonal recessions. In the simplest terms, Wang's oblique drawings juxtapose multiple incommensurable oblique projections to represent depth.

In [9], this essay provides additional details that further expound on the aforementioned conclusion. Nevertheless, bypassing these explanatory details will not impede our grasp of the criticality of Wang's oblique drawings in the subsequent analysis. The three diagrams in [9] demonstrate Wang's method to combine multiple incommensurable oblique projections in his drawings. Diagram 1 shows that the equal lengths dD and hH of two congruent cuboids are projected onto a pictorial plane with different sets of projectors. The two sets of projectors share the same angle β (60°), which determines the extrusion angle of the projected length (PL) of the cuboids, but do not have the same angle α ($\alpha_1 = 26.6^\circ$; $\alpha_2 = 45^\circ$), which dictates the metric measurements of the PLs. However, during the actual process of drawing the cuboids in oblique on paper (Diagram 2), which corresponds to the abovementioned systematic projection procedures, the overlap of the projector and the PL obscures angle α 's alteration. Consequently, the incommensurable PL_1 and PL_2 can be



incorporated into a single visually continuous diagonal axis (Diagram 3).

By juxtaposing multiple incommensurable oblique projections in [6], Wang employed the oblique method as a quasi-collage device. Each oblique fragment still conveys illusory spatial recession, but he went beyond this mimetic representation by creating spatial voids between the incommensurable fragments. The spatial voids defy mimetic representation since they are not modelled on spatial recession but are implied by discontinuities and inconsistencies in the representational images.

Wang's use of the collage oblique is instrumental in achieving the effect of 'ever-deeper space', which was a core concept in the Tengtou Pavilion's design. His drawings vividly depict the architectural grounds as tangible topological features, enticing viewers to traverse the episodically laid out architectural scenes. With meticulous detail, he delineates subtle changes in the elevation levels, the semi-interior corridors, the gradually ascending ramps, the short bridges, and the planting trays. Simultaneously, the voids prevent the depicted floors from merging into a single homogeneous ground plane; rather, the voids suggest the existence of more spaces beyond the confines of projection geometry. Wang's Tengtou Pavilion drawings originated from his imagination of the implied depth in *The Mountain of Five Cataracts*. In turn, his collage oblique continues to foster such imagination in viewers' minds.

Xiangshan Campus: axonometry as a wanderable experience

Chinese landscape paintings in handscroll form influenced Wang's axonometric panorama for Phase II of the Xiangshan Campus of the China Academy of Art. Completed in 2004 and 2008 respectively, Phases I and II of the CAA Campus exemplified the Amateur Architecture Studio's distinct approaches to fostering meaningful

dialogues between architecture and nature. The Phase I and II campuses sit, respectively, on the northern and southern slopes of Xiangshan Hill (象山), which is the most prominent topological presence onsite [10]. In Phase I, Wang recapitulated the reciprocal relationship between the buildings and the hill as 'planning while facing the hill [面山而营]'. He stressed that 'that hill is an a priori presence', calling for posterior design reactions.⁴³ In this light, the hill serves as a visual reference, with the Phase I buildings being deployed to enable viewers to 'see the hill over and over again in different ways, to repeatedly gaze at it'.⁴⁴ In Phase II, Wang turned to the 'architecture as a mountain [建筑如山]' motif. This motif underlies a conception of the landscape as a lived experience rather than a viewed object. Wang has explained that to design architecture as a mountain 'was not about the appearance of a hill but about creating a space people would walk into and feel the structural experience of a hill'.⁴⁵

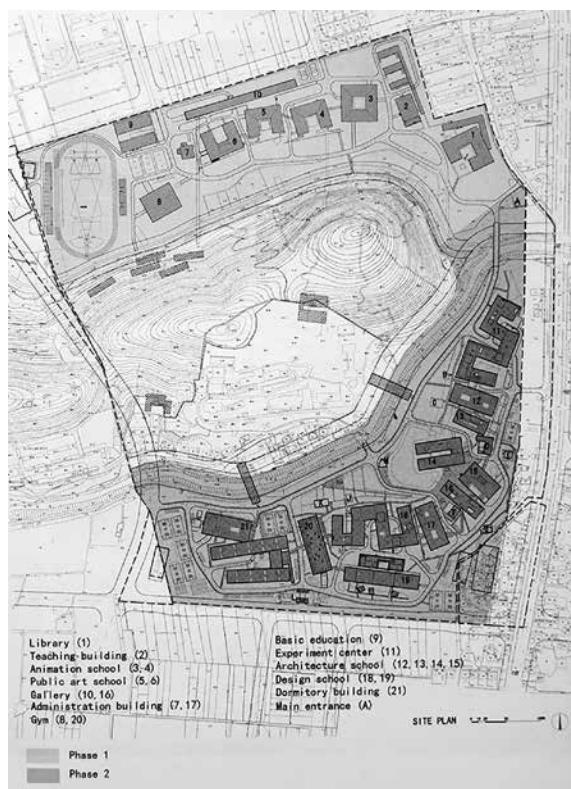
Wang's evolving motifs are evident in the differences between the Phase I and II panoramas, particularly in the techniques that he used to draw the Phase II axonometry as a wanderable image.⁴⁶ The following analysis aims to uncover Wang's techniques and elucidate how the techniques engage viewers in a time-bound, embodied journey within Wang's axonometric space.⁴⁷

Duration of seeing

Wang has clarified that the Phase II panorama was drawn in light of his apprehensions about Chinese handscroll landscape paintings [11].⁴⁸ According to him, the Phase II panorama reflects 'a similar consciousness [to that of the traditional handscroll], that is, from side to side, drawing a picture in one movement'.⁴⁹ As a distinct artistic medium characterised by elongated length and narrow width, the Chinese handscroll painting undergirds time-bound and embodied spectatorship experienced in motion.⁵⁰ When viewing a handscroll landscape, viewers manually unroll one portion of the elongated painting at a time. Viewers' participation in the ongoing framing process contrasts with the passive reception of a framed picture, as commonly experienced when viewing Western oil paintings.⁵¹ Wang has stated that he sees in the handscroll's medium-grounded temporality a philosophy of viewing: it is impossible to see all facets of the world in one transcendental moment:

*If you look at the overall picture [of the handscroll], there are many details that will escape your attention, whereas if you focus on something, you might lose sight of the overall picture.*⁵²

The handscroll landscape often thematises the medium-grounded temporality. Wang has pointed out that the duration of seeing is complicated and intensified by the artistic composition, which joins scenes implying different places and moments to create one continually unfurling picture.⁵³



10 Site plan of the Xiangshan Campus of the China Academy of Art, Phases I and II, 2002–08. Drawn by the Amateur Architecture Studio.

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Inspired by the handscroll landscape, Wang's Phase II axonometric panorama invites viewers to mentally meander within the image through time. The methods that Wang used to encourage immersive spectatorship include increasing the density of mutually interdependent scenic details [11]. These details function as deictic shifters that transport viewers into the axonometric space and prolong viewers' mental journeys inside the image. Since the vanishing point and horizon line are withdrawn to infinity, axonometric space has neither a default centre nor a predefined limitation of scope. In his panorama, Wang exploits the axonometric space's lack of centrality to multiply visual interests. Various scenes, including courtyards, roof terraces, small pavilions, walking galleries, dykes, ponds and channels, reserved farmland, and bridges, are thoroughly and evenly depicted with pencil.

Wang's meticulous depiction of the ground is even more systematically applied than it is for the Tengtou Pavilion obliques. In the Phase II panorama, Wang chose to render the site and buildings' walkable areas a continuous foot field, thereby inviting viewers to embark on an imaginative journey across the architecture and landscape [11]. The foreground of Wang's panorama represents the campus site as a 'pathscape' comprising interlinked crisscross footpaths. The crossing paths and rich details encourage viewers' eyes to drift within the axonometric space, section by section and one detail after another. If an individual considers the middle section of Wang's drawing and imagines that they are standing around the two trees (A) in the farmland, they can spot three pavilions (B, C, and D) in the distance [12]. The scenic objects (B, C, and D) are loci for the eyesight's temporary pauses and new departure points from which viewers can continue to search elsewhere. For example, once a viewer's eyesight lands at Pavilion D, they can continue to traverse bridges and access the adjacent buildings (E and F). The multitude of interconnected details in Wang's panorama encourages viewers to explore incessantly.

Consequently, viewers' drifting glances inside Wang's axonometric space can yield a network comprising ever-multiplying here-and-there correlations. Rather than being confined in a pre-given pictorial frame, viewers' actual visual scopes are defined and redefined from time to time along with viewers' constant searches for new here-and-there correlations. In this way, temporality structures the viewers' perceptions of Wang's axonometric space. Viewers experience Wang's axonometric space as a field that

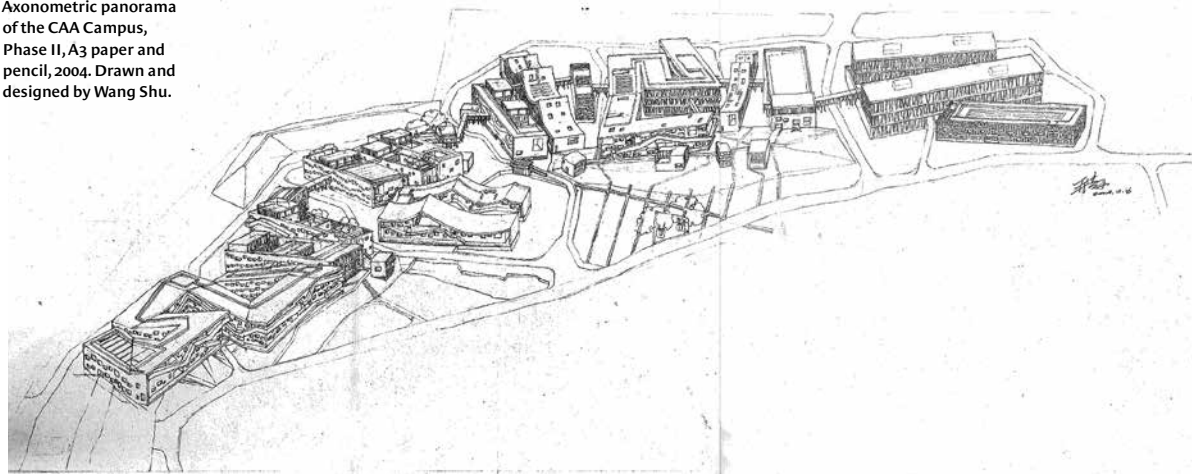
expands sequentially, from minute details to larger scopes. The prolonged duration of seeing in Wang's panorama re-temporalises the de-temporalised perspectival vision.

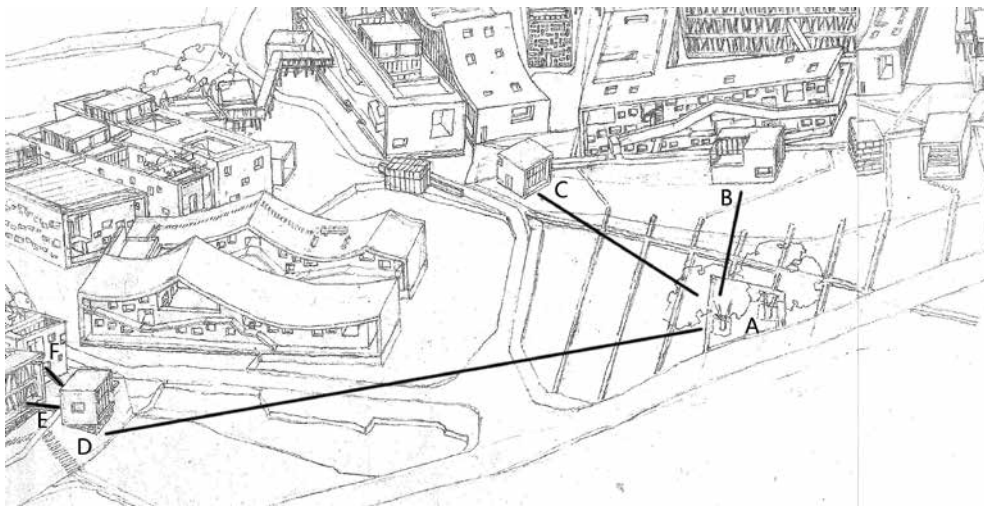
Unending transitional boundaries

Another critical aspect of Wang's Phase II panorama is the way in which he drew boundaries within and of the axonometric space. Indeed, he expended considerable effort to elaborate transitional processes within his axonometric space. As revealed in the previous analysis, a depicted scene in Wang's Phase II panorama is often a link to other scenes. Wang's meticulous delineations of boundaries, namely, inter alia, bridges, doorways, windows, steps, and intersections of walking paths, are a testament to his close attention to the various types of movement across the interior and exterior, lower and higher places, and site and architecture [13]. In sum, Wang transmutes the boundless axonometric space into a field unfurling in reiterative boundaries.

Additionally, Wang's effort to draw transitional boundaries exceeds the immediate scope of the axonometric space. This effort is signalled by his decision to omit Xiangshan Hill beyond the axonometric scope. Although Wang has insisted that Xiangshan Hill 'was heavier than anything I would design' and 'more important than the buildings', Xiangshan Hill did not once appear in his published sketches for the design of the Phase II campus.⁵⁴ Differently, this kind of omission of the hill did not apply to Phase I panorama. In Wang's Phase I and Phase II panoramas, the contrasting presence and absence of the hill mark his shifting design intentions and approaches. In the Phase I panorama, the buildings and Xiangshan Hill are represented in the same drawing as two complementary constituents of a larger realm to illustrate the idea of 'planning while facing the hill'. With this idea, the architecture and landscape correlations are primarily spatial and visual matters. Differently, Phase II's motif 'architecture as a mountain' aims to narrate a landscape experience through innovative architectural interventions. David Leatherbarrow points out that the Phase II buildings 'were designed to be seen, sensed, and enjoyed as full-size translations – resemblances – of typical elements, spaces, and environmental qualities' in the landscape painting.⁵⁵ In this spirit, Wang drew the Phase II campus as an equivalent of the hill. Wang has noted that '[the] house turns into a hill itself' and that 'the hill is invisible in the image [of the buildings], but it exists in my imagination the whole time'.⁵⁶

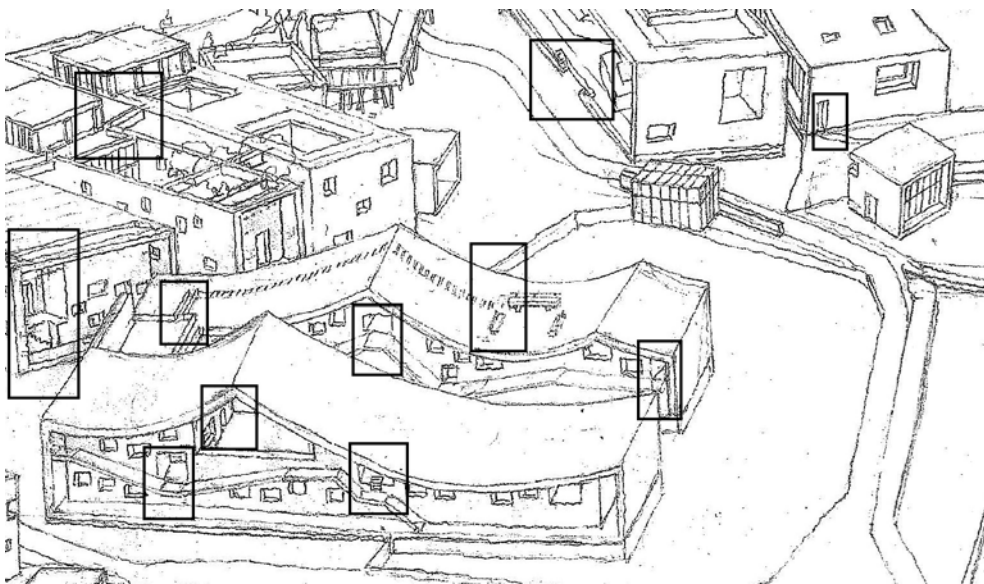
11 Axonometric panorama of the CAA Campus, Phase II, A3 paper and pencil, 2004. Drawn and designed by Wang Shu.





12 Analysis of the here-and-there correlations in Wang's bird's-eye view of the CAA Campus, Phase II, 2004.

13 Highlighted details demonstrating Wang Shu's depictions of the transitional processes in the panoramic view of the CAA Campus, Phase II, 2004.



12

13

In the Phase II panorama, Wang strategically omitted the hill to effectively express the architecture's ontological becoming into the landscape. In addition to the numerous transitional processes within the picture, the self-imposed visual limit of the panorama serves as yet another permeable boundary to traverse. The visual limit designates a threshold where the representation of architectural objects ends and the imagination of culturally valued landscape experiences begins. Thus, it can be recognised that the Phase II panorama is imbued with a systematic repetition of transitional boundaries. Essentially, the panorama is a partial and passing image that sustains fleeting perceptions. Importantly, the finitude and transitionality of Wang's axonometric panorama stands in stark contrast to the omnipotent God's-eye view, which observes the world in an eternal present. Once again, Phase II panorama serves as a reminder of the insights that Wang has gained from Chinese landscape paintings. He has written that the paintings

*never depict the visual image statically [...]; the depiction is always about our continuous experience of the world. Either a garden or a painting is just a temporary pause [of that unending experience].*⁵⁷

Drawing without perspectival vision

For Wang, traditional Chinese landscape painting epitomises a culture-bound a-perspectival vision. Retrospectively, this acknowledgement did not immediately liberate him from the visual ideologies ingrained in modern parallel projections: mimetic representation, disengaged spectatorship, and geometrically unified pictorial space.

His shift towards immersive spectatorship is evidenced in his depiction of the walking ground as sensory topographies, which is a new approach that was absent from his earlier design sketches. In the Tengtou Pavilion design, Wang's mental journey inside the landscape painting parallels his design of the pavilion's ground. In his Phase II CAA Campus panorama, the richly depicted pathscape effectively entices viewers to travel within the axonometric space. Meanwhile, when serving various architectural ideas, his drawings adopt multiple strategies to transcend the geometry-based realistic representations of space. In the Tengtou Pavilion oblique drawings, Wang creates aggregate pictorial depth with incommensurable projection fragments. His axonometric panorama for the Phase II CAA Campus is drawn as a field eliciting viewers' time-bound

landscape experiences. In both drawings, Wang implies that there is always more to imagine beyond the immediate scope of the geometrically represented spaces. Therefore, his work also makes present the finitude of the parallel projection, which is ideologically tied to the omnipresent God's-eye view.

To the best of this author's knowledge, a comprehensive history of modern Chinese architectural drawing has yet to be compiled. A chapter of this history is expected to answer the open question that the Chinese architect Yung Ho Chang once raised: how should Western canons of architectural drawings be used without perspectival vision? Historically, Chinese modernists have turned to Western drawing conventions to articulate the local architectural heritage. For contemporary Chinese practitioners,

recognising this historical context alone is inadequate unless individuals take critical action. Wang's work constitutes an example of such critical engagement. Regrettably, the realm of thoughtful drawing practices tends to remain uninterested in Chinese architectural academia, whose preoccupation is to serve state-sponsored initiatives. In this intellectual circumstance, Chang's career-long experiments with linear perspective, in the form of drawings and installations, are often trivialised as a sign of the architect's idiosyncrasy. There remains substantial work to be done if one is to have an overview of Chinese architects' thoughtful drawing practices. Currently, a pressing requirement is to sample, scrutinise, and evaluate the ignored individual instances. This type of in-depth case study is what this essay contributes.

Notes

1. Shu Wang, 'Fictionalising Cities [虚构城市]' (unpublished PhD dissertation, Tongji University, 2000), p. 19. All translations of Wang Shu's and Yung Ho Chang's writings are mine, except where otherwise indicated.
2. Yung Ho Chang, 'Falling into Space [坠入空间]', *Dushu* [读书], 10 (1997), 30–5 (p. 32).
3. *Ibid.*, p. 35. An attempt has been made to recount the history of modernising the Chinese architectural drawing in the early twentieth century; see Lina Sun, 'Architectural Drawing's Modern Transformation in China: The Changing Visual Forms and the Rise of the Architectural Profession', *The Journal of Architecture*, 7–8 (2022), 889–912.
4. Chang, 'Falling into Space', p. 32.
5. *Ibid.*, p. 35.
6. Shu Wang, 'The Field of Vision on Section [sic] [剖面的视野]', *Time+Architecture* [时代建筑], 2 (2010), 80–8 (p. 86).
7. Wang, 'Fictionalising Cities', p. 129.
8. Shu Wang, 'The Narrative of the Mountain', *Log*, 45 (2019), 10–25 (p. 12).
9. *Ibid.*, p. 17.
10. Shu Wang, 'For the Presence of a Disparaged World [为了一种曾经被贬抑的世界的呈现]', in *An Architecture towards Shanshui* [如画观法], ed. by Biqiong Yang (Shanghai: Tongji University Press, 2015), pp. 5–7 (p. 6). The idea of extending the Chinese landscape way of seeing to contemporary architectural design methods is also discussed in Shu Wang, 'Walking into the World of Trees and Rocks [走入树石的世界]', *New Arts* [新美术], 36 (2015), 3–6 (p. 6).
11. Axonometry and oblique projection are distinct forms of modern parallel projection. In axonometric projection, parallel projectors are perpendicular to the pictorial plane, which causes all three dimensions of the object to incline to the pictorial plane at equal or varying angles. Differently, oblique projections involve parallel projectors intersecting the pictorial plane at non-right angles while keeping a principal face of the object aligned with the pictorial plane. These subtypes of parallel projection were mathematically codified by descriptive geometry in the late nineteenth century and gained popularity among European military architects and engineers owing to their precise measurability. For further details, see Hilary Bryon, 'Revolutions in Space: Parallel Projections in the Early Modern Era', *arq: Architectural Research Quarterly*, 12 (2008), 337–46.
12. This observation stemmed from the author's examination of Wang Shu's architectural drawings published between 1988 and the present day.
13. Adam Jasper, 'God's Eye View', in *This Thing Called Theory*, ed. by Teresa Stoppani, Giorgio Ponzio, George Themistokleous (London: Routledge, 2017), pp. 126–34 (pp. 129, 132). Modernists, such as El Lissitzky, and De Stijl artists have used parallel projection methods to distance themselves from the stationary perspective point of view. However, this liberation continues to retain certain elements of perspectival vision, including the geometrisation of depth and mimetic representation of space. For further discussion, see: Yve-Alain Bois, 'Metamorphosis of Axonometry', *Daidalos*, 1 (1981), 40–58 (p. 45); Stan Allen, *Practice: Architecture Technique + Representation*, 2nd edn (Abingdon: Routledge, 2009), p. 28.
14. Scholarly literature focusing on Wang's drawing practices is rare. One notable exception is Xin Jin's analysis of Wang's oblique drawings, see: Xin Jin, 'Crossing Landscape and Architecture: Embodiment of A-Perspectival Space in Wang Shu's Oblique Drawings', in *Proceedings of the Society of Architectural Historians, Australia and New Zealand: 39, Ngā Pūtahitanga / Crossings*, ed. by Julia Gatley and Elizabeth Aitken Rose (Auckland: SAHANZ, 2023), pp. 231–48.
15. See Leon Battista Alberti, *On Painting*, trans. by Cecil Grayson (London: Penguin Books, 1991), p. 51; see also Norman Bryson, *Vision and Painting: The Logic of the Gaze* (New Haven, CT: Yale University Press, 1983), pp. 87–132.
16. Samuel Y. Edgerton, *The Heritage of Giotto's Geometry: Art and Science on the Eve of the Scientific Revolution* (New York, NY: Cornell University Press, 1991), p. 16.
17. Denis E. Cosgrove, *Social Formation and Symbolic Landscape* (Madison, WI: The University of Wisconsin Press, 1998), pp. 20–7.
18. Massimo Scolari, *Oblique Drawing: A History of Anti-Perspective* (Cambridge, MA: MIT Press, 2012), pp. 341–57.
19. Shu Wang, *Imagining the House* (Zürich: Lars Müller Publishers, 2013), under 'A House as Sleep' (this is the original translation).
20. Wen C. Fong, *Beyond Representation: Chinese Painting and Calligraphy 8th–14th Century* (New York, NY: The Metropolitan Museum of Art, 1992), pp. 6, 10.
21. See Shu Wang, 'When "the Space" Is Coming into Being [当“空间”开始出现]', *The Architect* [建筑师], 5 (2003), 68–70; see also Nikolai Tarabukin, 'From the Easel to the Machine [从画架到机器]', in *Modern Art and Modernism* [现代艺术与现代主义], ed. by Francis Frascina and Charles Harrison, trans. by Jian Zhang and Xiaowen Wang (Shanghai: Shanghai People's Publishing House, 1988), pp. 211–24.
22. Wang, 'When "the Space" Is Coming into Being', p. 69.
23. *Ibid.*
24. Shu Wang, 'Build a World to Resemble Nature', trans. by Jiinyi Hwang, in *Architectural Studies 02: Topography*

- and *Mental Space*, ed. by Mark Cousins and Chen Wei (Beijing: China Architecture and Building Press, 2012), pp. 173–212 (p. 182) (this is the original translation, but it has been slightly modified by the author).
25. In *The Lofty Message of Forests and Streams* [林泉高致], Northern Song master painter and theoretician Guo Xi (郭溪, active AD 1070 until after 1123) wrote that ‘it is generally [an] accepted opinion that, in landscape paintings, there are landscapes to which you may travel, those at which you may look, those through which you may wander, and those in which you may inhabit’. Susan Bush and Hsio-yen Shih, *Early Chinese Texts on Painting* (Hong Kong: Hong Kong University Press, 1985), p. 151 (this is the original translation, but it has been slightly modified by the author).
 26. Edward S. Casey, *Representing Place: Landscape Painting and Maps* (Minneapolis, MN: University of Minnesota Press, 2002), pp. 95, 96.
 27. Wang, ‘Build a World to Resemble Nature’, p. 180 (this is the original translation).
 28. Wang, ‘For the Presence of a Disparaged World’, p. 6.
 29. Wang, ‘The Narrative of the Mountain’, p. 17.
 30. For Wang’s analyses of Song paintings, see: Shu Wang, *Leçon inaugurale de l’École de Chailiot: Wang Shu*, online video recording, YouTube, 14 June 2018 <<https://www.youtube.com/watch?v=HT9MmjiTDwc&t=1296s>> [accessed 24 November 2022] (this is the original translation). See also Wang, ‘The Narrative of the Mountain’, pp. 16–17.
 31. Shu Wang, ‘The Narration and Geometry of Natural Appearance: Notes on the Design of Ningbo Historical Museum [自然形态的叙事与几何——宁波博物馆创作笔记]’, *Time+Architecture* [时代建筑], 3 (2009), 66–79 (p. 75).
 32. John Hay, ‘Some Questions Concerning Classicism in Relation to Chinese Art’, *Art Journal*, 1 (1988), 26–34 (p. 31).
 33. Shu Wang, ‘The Beginning of Design/2 [设计的开始/2]’, in *The Beginning of Design* [设计的开始], ed. by Mingxian Wang and Jian Du (Beijing: China Architecture & Building Press, 2002), pp. 12–28 (p. 14).
 34. Wang, ‘The Beginning of Design/2’, p. 17.
 35. Wang summarised his inserted elements in the Chen Mo Art Studio interior design as ‘four things’: ‘a corridor, or the corridor within the corridor; a house, or the house inside the house; several curvilinear walls, or the walls standing next to other walls; and a lifted terrace, or the ground above the ground’. Wang, ‘The Beginning of Design/2’, p. 15.
 36. Wang, *Imagining the House*, under ‘A Picturesque House’ (this is the original translation).
 37. *Ibid.* (this is the original translation).
 38. Wang, ‘The Field of Vision on Section’, p. 85.
 39. Wang, *Imagining the House*, under ‘A Picturesque House’, 4.3.
 40. *Ibid.*, 4.1, 4.2.
 41. Wang, ‘The Field of Vision on Section’, p. 86.
 42. *Ibid.*
 43. Shu Wang, ‘Zhuantang Campus of China Academy of Art [中国美术学院转塘校园设计]’, *WA Building Archives* [WA建筑档案], 8 (2005), 103–08 (p. 104).
 44. Shu Wang, *Contemplation* [凝视], online video recording, Bilibili, 3 December 2010 <https://www.bilibili.com/video/BV15z411b7x8/?spm_id_from=333.337.search-card.all.click> [accessed 16 December 2022]. (This is the author’s translation)
 45. Wang, *Imagining the House*, under ‘Memories, Dream, Time’, 3.1.
 46. The digital copies of Wang’s Phrase I panorama are available on the website of the Museum of Modern Art in New York. Shu Wang and Wenyu Lu, *Xiangshan Campus, China Academy of Art, Hangzhou, China*, 2004, pencil on paper (29.7 cm × 42 cm, left half) <https://www.moma.org/collection/works/416144?artist_id=133356&page=1&sov_referrer=artist> (29.7 cm × 42 cm, right half) <https://www.moma.org/collection/works/416293?artist_id=133356&page=1&sov_referrer=artist> [accessed 11 July 2023].
 47. In the Phase II panorama, the planar geometries of all the buildings exhibited varying degrees of distortion, indicating that the drawing was an axonometric rather than an oblique drawing.
 48. Wang has frequently referred to two masterpieces of handscroll painting from the Northern Song period: *A Thousand Li of Rivers and Mountains* by Wang Ximeng (千里江山图, 51.5 cm x 1191.5 cm, 王希孟, AD 1096–1119) and *Painting of a Country Retreat* after Li Gonglin (山庄图, 28.9 cm x 364.6 cm, 仿李公麟, AD 1049–1106). See Wang, ‘Build a World to Resemble Nature’.
 49. Wang, ‘Build a World to Resemble Nature’, pp. 198–200.
 50. See George Rowley, *Principles of Chinese Painting*, 2nd edn (Princeton, NJ: Princeton University Press, 1959), pp. 61–3.
 51. See Lihong Liu, ‘Path, Place, and Pace in Mid-Ming Suzhou Landscape Painting’, *RES: Anthropology and Aesthetics*, 67–8 (2017), 207–24 (p. 217).
 52. Wang, *Leçon inaugurale de l’École de Chailiot: Wang Shu* (this is the original translation).
 53. *Ibid.*
 54. Wang, ‘Build a World to Resemble Nature’, pp. 198, 200. From December 2004 to March 2005, Wang drew three axonometric panoramas for the Phase II campus, all of which deliberately repeated the same vantage point from the north, where the hill is, to the south of the site, where the building complex was destined to be. See Wang, *Imagining the House*, under ‘Building a Vibrant, Diverse World’, 2.11, 2.15.
 55. David Leatherbarrow, *Building Time: Architecture, Event, and Experience* (London: Bloomsbury, 2021), pp. 123–48 (p. 125).
 56. Wang, *Imagining the House*, under ‘A Teahouse and a Reading Garden’, 6.8 and ‘Building a Vibrant, Diverse World’, 2.4. (this is the original translation).
 57. Wang, *Imagining the House*, under ‘A House as Sleep’ (this is the original translation).

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The author declares none.

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