Revealing the Ephemeral via New Media Tools
A Digital Exploration of the Classical Chinese Private Garden

By

Tao Shi, B. Eng.

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Abstract

This thesis explores the notion of architectural representation as a temporal-spatial complex, and argues that beyond this concept, an invisible distance functions as a bridge and always connects the gap between those common forms of representation and the world to which they refer.

A comparison of sources including selected works from Plato's *Chora*, Norberg-Schultz's Existential Space Theory, and Merleau-Ponty's theory of Phenomenology of Perception rooted in the Western light; and Lao Tzu's *Tao*, Chinese *Yin* and *Yang* cosmology and notion of *Unification of Heaven and the Humankind* from the East, is examined in this thesis. Arguably, these works construed and shaped this significant distance, which facilitates the poetic exploration of real architectural expression. In addition, the history of development of perspective, the principles of Chinese visual representation and gardening are reviewed to articulate how this idea was and could be incorporated from a pragmatic perspective.

Mirroring the above, this thesis attempts to propose a new approach to the re-construction of Chinese garden in cyberspace, with an effort to reconstruct this distance in order to reflect possible parallel subjective universes.

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May 2004

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Chapter 1

Introduction

Vision is the art of seeing things invisible.

Jonathan Swife

*I can see a rose in winter when there are no roses;
Therefore the soul has the power to produce things that don't exist,
Like God that creates things out of nothing....
A thing does not come from the outside to the inside,
It arrives at the outside from inside.*

Meister Johann Eckhart

Architecture, like poetry or music, awakens human body's sensations, and directly addresses people's whole embodied experience in time. It sculpts, frames and shapes the world, responding to the often-fluid, intangible boundary of human imagination and embodied experience. On the other hand, because this openness exists, as Charles Jencks points out, *architectural words are more elastic and polymorphous than those of spoken or written language, and are more based on their physical context and the code of the viewer for their specific sense*, (Jencks 2002) its meaning might not be fully translated by language or into other media.

As a document that is visual, aural, and spatial, affecting and animating people in the first place, the key questions for digital architectural representation include whether it could be successful in developing genuine alternatives to reveal the full range of dimensional changes and possible perceptual and emotional changes besides the abstract

rationalization of concrete reality, and whether potential critical and creative ideas at the conceptual level could really get a look-in within the practice of representational works.

Accordingly, the present thesis proposes research on digital architectural representation, dedicated to the focus on reconstructing a significant distance that concerns the ontological, ephemeral and mysterious realm -- both the imaginative and programmatic character of the work that may have constructed in the mental representations of the architect, and its temporal, and experiential dimensions evoked in the spectator. With a clear desire to reflect these possible parallel subjective universes, the present thesis is an approach to exploration that does not seek to prove absolutes but instead presents the ambiguous and the autonomous.

This research initially began to examine the interrelationships of the imagination and human experience in the making of architectural space, as they might be externalized and reflected in the form of architectural representation. The core argument of the thesis explains that: for architectural representation, as a temporal-spatial complex, there always exists an invisible distance functioning as a bridge connecting the gap between those common forms of representation and the world to which they refer. It is crucial and essential for the work of architectural representation to be able to establish this significant distance in order to close the gap, provide the vehicle to spatially explore the architect's philosophical and poetic intentions, and at the same time, experientially and metaphorically, interconnect the spectator's contextual experience and eventually trigger the unknown (i.e. architectural ideas) that lies latent in his/her mind.

The concept of sentient space has been strategically defined as the fundamental conception driving this research. It aims to facilitate the investigation and formulation of this significant distance existing in the represented architectural space, and eventually reconstruct it in the multi-dimensional digital representative space using the power of the computer.

A comparative investigation of selected philosophical ideas from the West and East is examined and analysed in the thesis. This investigation serves to philosophically set the stage for the introduction of the concept of sentient space, and to demonstrate the need and methodology of the proposed approach to the multi-dimensional architectural representation in cyberspace:

Chapter 2 begins with a critical investigation of the selected philosophical ideas in light of the West. These selected ideas include: Plato's Chora, Christian Norberg-Schultz's theory of the Existential Space and Maurice Merleau-Ponty's theory of Phenomenology of Perception. These works shaped and construed the idea of sentient space, as the utmost open and primordial field of being, manifesting human embodiment, also capable of acting directly onto the body with the full range of its parallel subjective apparatus in the freedom of self-expression in art and architecture.

As a philosophical comparison and an articulation of this idea from another philosophical system, in Chapter 3, selected sources, including Lao Tzu's *Tao*, and Chinese *Yin* and *Yang* cosmology as well as their philosophical notion of *Unification of Heaven and the Humankind* from the East, are reviewed and analysed. These philosophical works have dominated Chinese visual representation and art over the past two thousand years, and

have contributed significantly in the creation of art to liberate a human's heart, free his/her spirit, and get him/her in tune with the underlying rhythms of Nature.¹ Eventually, these philosophical works ensured that a person's imaginary visions and philosophical muses were appropriately incorporated into the human condition and became the spiritual sources of inspiration for great Chinese artists.

Moreover, the developmental history of perspective in the West and the principles of Chinese visual representation, including aspects like the consonance of spirit and body in brush work such as landscape painting and calligraphy, depth in Chinese landscape painting, and bodily autonomy in Chinese calligraphy in the context of traditional Chinese ideology, are reviewed and analysed. They serve to articulate how this idea of sentient space, defined in the present thesis, was and could be accommodated and integrated to evoke the living experience of an embodied, subjective spatiality and temporality in order to achieve the full artistic meaning in traditional Chinese art production from a pragmatic perspective.

Then, the thesis refers the sentient space to the revealing of the ephemerality of classical Chinese private garden space (i.e. Suzhou garden) in Chapter 4, in an attempt to dissect how this significant distance could be expressed in the garden design. The garden's unique artistic conception, principles and techniques of spatial composition, as well as the full range of multivalent experiences emerged within the spatial journey through the garden space, are analysed. Gradually, based on the main thrusts of investigation, this direction of study allows the advantage of a more direct research route centred on a

¹ For ancient Chinese people, Nature was metaphorically exploited as the framework or medium through which human activities and experience were distilled, evaluated and harmonized with human imagination.

person's untamed spontaneous sentient space, both physical and metaphoric, to reflect on inhabitant's possible parallel subjective dimensions as projected on to specific formal structures in the garden, and accordingly serves to facilitate the digital reconstruction of garden supported by new media technologies, which emerged as the potential tools of investigation in this research.

Finally in Chapter 5, mirroring the above, this thesis proposes a new approach to rebuild the classical Chinese private garden –the Suzhou garden -- in cyberspace, emphasizing both the composition of the spatial complexity of the construction and the refined changes in time and viewpoint afforded by cinematic events. This film navigation completes the thesis research into an architectural investigation of the interrelationships between architectural forms, film sequences, movement, sound, and interactivity in the digital construction, with a clear concern on the subjective dimensions related to the imaginary journey in the spaces of the Chinese garden, with respect to the sentient space proposed in the present thesis as a continual re-making or the free space of creation and participation. The spectator's unfolding physical and experiential journey through the garden spaces enables a demonstration of the need for the proposed approach to architectural representation, which may legitimize the role of poetic imagination in the creation of architecture, and open a new research perspective on an essential component of the visual culture history: the recognition of the significant distance, *the source of the "poetic", irrespective of artistic medium.* (Perez-Gomez, Pelletier 1997)

Chapter 2

Philosophical Background and the Sentient Space

Classical philosophy believed that to know reality, people had to secure an adequate representation of being. Contemplating the role of architectural representation, despite its common origin with instrumental and technological forms, the present chapter attempts to consider the artistic mentality as necessary for their creation. It traces back to the overlapped philosophical inspirations that had profound influences to clarify the interrelationships of the imagination and human experience through the making of architectural space, as it might be expressed in the form of architectural representation. This study thereby provides a philosophical background for the research in this thesis and the architectural thinking of the represented spaces, along with serving to position the proposed method in the digital investigation of the Chinese garden in Chapter 5.

2.1 Understanding of Plato's Chora Regarding Architectural Representation

A crucial component of the present thesis's inspiration comes from Plato's philosophical worldview, which is not a simple duality of being and becoming. Articulated in his *Timaeus*, Plato believed that there must be three components to reality commencing with the unchanging form, which is an uncreated and indestructible being, divine in origin, timeless and immutable. It exists in the transcendental realm of "Ideas", "Thoughts", "Meanings", accessed only by way of reason. Second, becoming, bears the same name of the form it resembles, but is perceivable, and comes into existence in the material world in a state of mutable and constantly changes. This component could be apprehended by instinct with the aid of sensation. In addition, the concept *Chora*, which is primordial,

eternal and indestructible, provides a position for everything that comes into being and could be apprehended without the senses, and therefore is hard to grasp or believe in this component of reality. (Perez-Gomez 1992)

In *Timaeus*, on the one hand, Plato insists that the absolute truth and goodness, which he called *agatho*, like the sun itself, could never be contemplated directly nor made an object of pure knowledge, but rather had to be experienced as the lighting that makes it possible for the things of the world to be what they are. On the other hand, he reserves a positive use for *Chora*. For Plato, *Chora* is both a cosmic place and an abstract space, while it is also the substance. It allows such lighting to be experienced fully. With *Chora*, Plato points to the space of human creation and participation, an invisible ground that exists beyond the linguistic identity of being and becoming. It is a significant receptacle, and the nurse of all becoming and change. In other words, it is the space of *Chora* that offers humans the unique tool to do justice to the experience of human affairs, and build, survive and cultivate a world of his/her own, ultimately making the work of art possible. (Perez-Gomez 1992)

In *Architectural Representation and the Perspective Hinge*, Alberto Perez-Gomez interprets the meaning of Plato's *Chora*. He sees it as an insightful metaphor of reality, as neither a purely subjective construct nor an objective fact but as something in-between, the realm of ontological continuum and embodied human experience, *a "ground" itself inexplicable through reason, yet undeniable to experience*. It is analogous to the distance

between spectator and actor in the classical Greek theater,² and it brings forth a privilege of contemplation, through vision and hearing, over ritual action as the medium for the spectator's participation in the order revealed by a work. (Perez-Gomez, Pelletier 1997)

What can spectators make of all this? Regarding the representation of architectural space as the illustration of the complex of time-space in the unpredictable temporality of everyday human life, and the disclosure of order between birth and death, Plato's Chora is literally both a space for contemplation and an area of participation and recognition - the dense space of human embodiment.

Floating within the often-fluid boundary of being and becoming, Chora is not immediately accessible to the senses, but it makes it possible for people to enhance their individual and collective experiences of existence into essence, through the faculties of imagination and inner understanding, both spiritual and cultural.

With Chora, the work of architecture, structured by mathematical proportion and programmed by harmoniously measuring time and event, would therefore provide individuals in society with a place of contemplation to transcend individuality and ultimately seduce the essence. The work of architectural representation as Chora would therefore privilege the mode of human participation and demand the existence of both the designer and the spectator. It requires from them a different but intimate relationship with external reality. Rather than simply representing concepts like $a=b$, it allows meaning to present itself through this relationship.

² Here, the distance indicates the space between the stage and audience in classical Greek theaters. The musicians and singing people, who interpret the performance of the actors and constitute part of the communication, occupy the space.

2.2 Understanding Architectural Space in the Context of Norberg-Schultz's Existential Space Theory

Generally, space has been regarded as a container for, or a common characteristic of, objects of experience. Alternatively, it has been conceived as the form, which, when constituted by a transcendental subject, makes external experience possible. In short, space has been considered as either objective or subjective -- either part of an objective reality "out there", leaving people out by discussing abstract geometry; or, a principle of unification "in" the subject of experience, allowing people to be "involved" by squeezing space to subjective impressions, sensations, and eventual studies of "effects". (Norberg-Schultz 1971) The former satisfies only the cognitive world and a part of people's original need for orientation, but leaves a person's emotional relationship to the surrounding untouched. The later, cannot arrive at any useful general wisdom, and could have arrived at the absurd conclusion that "space comes into being only when experienced". It is, therefore, nonsense to say that the human is always the center of space, and that space changes with the experience of the human body.

The world everyone perceives is not simply the same, as the naïve realists maintain, but is unique as products of his/her motivations and past experiences. Modern psychology describes the perception of human space as a dynamic, complex process, where various variables are involved as reactions to the environment. *The perceptions are formed during mental development through the interaction between the individual and his environment, and by the process a man's actions or "operations" are grouped into coherent wholes,* (Norberg-Schultz 1971) which form a relatively stable structure.

Thus, in addition to cognitive spaces, the synthetic space within psychological dimension can be split into the immediate perceptual space and the more stable space schemata. Both serve humans in their orientation and adaptation to different aspects of the environment. The later is composed of elements that have certain invariances, such as universal elementary structures (archetypes) and, socially or culturally conditioned structures, and, of course, some personal idiosyncrasies. Together these contribute to a person's "image" of his/her environment: that is, a stable system of three-dimensional relation between meaningful objects. Utilizing this concept as the point of departure, Christian Norberg-Schultz unified the schemata and developed the concept of existential space.

Norberg-Schultz developed the Existential Space concept based on the theoretical consideration of the dimension of human existence. He defined the existential space as *a relatively stable system of perceptual schemata, or "image" of the environment*. As a psychological concept, this schemata, the product of interaction between a person and his/her environment, generalizes abstractly from the similarities of many phenomena, and *has "object-character"*. Starting with this concept, he provided a concept model of the hierarchical space system that consists of five level of spaces: firstly, *the pragmatic space* of physical action, integrates a person with his/her environment by accurately describing a situation and prompting him/her to anticipate experience correctly; secondly, *the perceptual space* of immediate orientation, which is essential to his/her identity as a person, relating to rhythm, movement, biology, and so on; thirdly, *the existential space*, which forms a person's relatively stable image of his/her environment, and makes him/her belong to a social and cultural totality; fourthly, *the cognitive space*, which

enables him/her to perceive, think and discover the physical world; and finally, *the logical space* of pure abstract logical relations, which offers the tool to judge and describe the others. This hierarchical series shows a growing abstraction from the pragmatic space at the lowest level to the logical space on the top, thus, developing an understanding of “information”. (Norberg-Schultz 1971)

From the perspective of the Norberg-Schultz’s theory of Existential Space, any perception and intuition must be referred to a more stable system of schemata (image) in order to be processed meaningfully. The architectural space that a person perceives, therefore, can be defined as *a concretization of man’s existential space*, that is, *as a concretization of the social and cultural totality to which the man belongs*. This comes into being only after it refers to and satisfies the schemata. As a projection of the inner world of the creator or spectator, this “creative” space’s relation to humans consists, on the one hand, tries to integrate its structure into his/her personal schemata, the existential space, to get legitimized; and on the other hand, translates his/her schemata into the imaginary, creative space, which the architectural space shapes and structures, regarding the aspects of a person’s desire to *create an intelligible equivalent for the particular complex that he/she experienced*. This space enhances freedom of self-expression in art, architecture, and urban planning, reflects a person’s aspiration for a meaningful role in society and pursues the fulfillment of his/her dreams. (Norberg-Schultz 1971)

Thus, this study provides another theoretical backbone for this research by approaching the understanding and exploration of the expression of the architectural space. It helps to identify that there is always a space functioning as a bridge between the immediately perceived forms of architectural space, and the imaginary, creative world it refers to. This

invisible space consists of universal experience and respects the context of a person's social and cultural structures as well as personal idiosyncrasies. Next, this space will be examined from another perspective.

2.3 Understanding Architectural Space in the Context of Merleau-Ponty's Theory of Phenomenology of Perception

If Plato's Chora or Norberg-Schultz's theory of Existential Space suggest the depth of art and architecture that makes them significant, then, Maurice Merleau-Ponty's phenomenological analyses point that all knowledge takes place within the horizons that are opened up by the primordial structures of perception, which pervade the entire range of reflective and scientific experience, and all forms of human co-existence, including imagination, are based upon perception.

2.3.1 Bodily Perception

Having particularly criticized the Cartesian philosophy for failing to be truly radical, *in fact being a "philosophical lie" as it "masked the origin of reflection"*, (Langer 1989) Merleau-Ponty emphasized that sight was not simply a matter of the mind, and prompted people to recognize that objective thought, which takes the form of realism (empiricism) or idealism (intellectualism), fundamentally distorted the phenomena of lived experience, estranging people from their own selves, the world in which they live and other people with whom they interact.

Next, Merleau-Ponty sought to re-establish human roots in corporeality, the perceptual world, while awakening in people an appreciation for the inherent ambiguity of concrete bodily experience. The body was commonly deemed to be the locus of experience, hence Merleau-Ponty investigated traditional conceptions of the body (separated from mind), drew people's attention to their inadequacies³, and proposed that they regard the body as a dynamic synthesis of intentionalities, which is inseparably the perception of a certain type of world in which all senses co-exist and interact by responding to the world's solicitations. He said:

The senses translate each other without any need of an interpreter; they are mutually comprehensible without the intervention of any idea.... The lived perspective, which we actually perceive, is not a geometric or photographic one. (Merleau-Ponty 1962)

Obviously, phenomenological reflection on actual sensory experience reveals this perceptual synthesis as the unity and diversity of human senses between the body-subject and its existential environment. At the same time de-centered and centered, each bodily sense has a spatial realm that overlaps, but does not coincide with others, bringing perceptual structure into being, so that the contribution of each becomes indistinguishable in the total configuration of perception. Thus, sight is integrated with the other senses in order to "make sense" of the human experience in the world.

3 Mechanistic physiology incorporated the living body into the causal system by converting human behavior into a pattern of stimulus-response, thus, the stimulus was thought to have an effect on a particular sense organ, which in turn transmitted sensations to the brain and thereby produced a predictable perception. This approach failed to explain such phenomena as the phantom limb can reawaken the subject to the actual character of the past and thus to an appreciation of the role which our body plays in our being-in-the-world.

2.3.2 Body and Body Motility

Merleau-Ponty provided an image of the body as phenomenal. It is seen to comprise of “two distinct layers”: the “habitual body” and the “present body”. (Langer 1989)

The former signifies the body as it has been lived in the past, in virtue of which it has acquired certain accustomed ways of relating to the world. The “habitual body” projects a habitual setting around itself, thereby giving a general structure to the subject’s situation. Since it outlines, prior to reflection, a “customary world” of encountered objects, this body must be considered with an “anonymous”, or “pre-personal” global intentionality, though people often tend to hide it by reducing it to the emotion or memory, as a mere recollection of ideas or images. Working as an “organic repression”, it is part of the human condition, constituting “an inborn complex”, and particularly, it explains such phenomena like the phantom limb, re-awakens people to the actual character of the past and thus arrives at an appreciation of the role that the body plays in the human’s being-in-the-world.

The later, on the other hand, indicates the body as it experiences body motility. Functioning as an immediately meaningful disclosure of ontological dimensions of the body, it opens up the most fundamental openness-to-being in an array of possible routings, orchestrating and choreographing bodily postures, gestures, attitudes, and comportments. It explains interesting phenomena such as a musician lending himself/herself completely to expressing the music without having to think about the position of the fingers, or the body autonomy in Chinese calligraphy, which is explained in Chapter 3.

With its “two layers”, the body functions as the meeting place of the past, present and future, for it evokes a comprehensive past, uniting it with the present, and anticipates a general form of a future. By virtue of having such a body in accordance with senses, one is able to open a virtual world within whose horizon all particular sensory are located, lending themselves to the unending exploration in the realm of thinking and imagination. Thus, the understanding of the body as two layers of the habitual body and the present body constitutes the foundation in the proposed thesis in the exploration of the multi-dimensional architectural space in cyberspace.

2.3.3 The Phenomenological Spatiality

From Merleau-Ponty’s phenomenological perspective, a subject is an incarnate subjectivity, and the human body is a phenomenal body. Rather than a transcendental ego, the subject of experience is the phenomenal body inseparably interrelated with the world. Therefore, the experience of space can no longer be considered to lie “out there” or “in there”, but must rather originate from and dynamically maintain a primordial communication between the body-subject and the world through which “objects” and “subjects” come into being for the human experience. (Langer 1989)

In this view, the perspective of vision has a figure-background structure, which is not merely spatial but temporal, thereby implying the temporal-spatial characteristic of the structure of perception. The adopting of any particular perspective can only take place on a perceptual horizon (spatial), and here, the object lends itself to exploration and invites one’s gaze to move around it (bodily temporal): to see is to see from somewhere, and this “where” can be understood as a position of the objective body with reference to external

objects (remaining emotionally involved in a particular past experience to such a degree, that it imposes itself on the actual present). Focusing one's gaze on any particular object inevitably means to allow others to retreat to the surroundings of the visual field as part of the background. And these surrounding objects never stop to count in the vision and one is free to draw anyone of them into the foreground if he/she chooses to let the object of the present focus retreat to the periphery. Thus, one is never imprisoned in a particular perspective; nor need a person fear that his/her concentration on any particular object will entail the others to lose identity. In short, this "figure-background" structure of perspective has an inherent openness, which makes it impossible for an object of experience ever to be absolutely rendered, for that would require the compressing of this infinity of different perspectives into a strict coexistence and this would disobey the law of perception and ultimately destroy temporality. Therefore, this phenomenological reflection challenges ordinary notions of contingency and necessity, and alters people to pay attention to something in-between, in which the primordial perceptual experience is rooted.

Next, as Merleau-Ponty points out, depth is more "existential" than other spatial dimensions because it is neither simply a barren property of the object, --like width and height -- nor a reduced intellectual construct, --like breadth between nearby and distant objects that someone observes from above, as traditional theories assert. In the lived experience of depth, he states, "*The riddle of depth lies in the connection between these two views: 'the fact that it is precisely because things disappear behind each other that I see them in place, [and] the fact that it is precisely because each is in its place that they*

are rivals for my gaze.”⁴ This illustrates, indeed, a dialectic relationship between the phenomenal body and its world, in which the body is “central”, and where depth is in the surroundings and thus directly perceivable.

This implicit change in the notion of body image, from a mosaic of associations to one’s awareness of the body as an incarnate dynamic synthesis of intentionalities, implies a crucial shift from the body as an object to the body as an vivid experience, if one is to grasp the nature of significant depth in spatial design. Furthermore, it ceaselessly carries the anonymous biological existence forward into personal existence in a cultural world and, conversely, allows the personal and the cultural to become sedimented in a general, anonymous structure. This structure, on the one hand, opens the possibilities of one’s becoming anchored in bodily experience, on the other hand, is essential to free people from the necessity of having to pay strict attention to every single action taken. Thus the dialectic of dependence and freedom characterizes the human existence as incarnate beings, and enables people to attain “mental and practical space”- the sentient space, in which people build their personal existence and a human world.

2.4 The Sentient Space

Moving a step further from Plato’s Chora, Norberg-Schultz’s Existential Space, and Merleau-Ponty’s phenomenal body, the multi-dimensional approach considered in the present research is concerned with the conception of multi-dimensional sentient space, the utmost open and primordial field of being, manifesting human embodiment. It was

⁴ Maurice Merleau-Ponty, “Eye and Mind”, quoted by Alberto Pérez-Gómez, and Louise Pelletier, in *“Architectural Representation And The Perspective Hinge”*, Cambridge, Mass.: MIT Press, c1997.

defined as a strategy to facilitate the formulation and investigation of architectural space, and eventually constructed the multi-dimensional poetic exploration of real architectural expression by the power of the computer.

In terms of self-development as human beings, the sentient space is a dynamic complex, created and maintained during mental development through the interaction between the individual and his/her environment. Dependent on the interrelated dimensions of life experiences, the immediate presence of the corporeal, and various layers of social and cultural influences, one is constantly refreshing and updating his/her founding dimensions of this space, through the dynamic communication process of encoding, transmitting, receiving, and decoding information. Navigation within this space is the navigation between the cloud of interconnected data, between a matrix of visual, behavioural, and other possibilities. Any perception, intuition must be referred to this system in order to get processed meaningfully. Any imagination and creation could happen only after this system is translated and integrated into. What is experienced within this space is contingent entirely upon the interests of the beholder, upon his/her individually selected, unforeseen, interest-driven trajectory. Thereby, the sentient space evokes temporality and various boundaries, defining the often-fluid realm of human participation and creation that invariably remains confined to the chambers of the mind.

Like Plato's Chora, it is literally the bridge or "*hinge*" (quoted from Alberto Perez-Gomez) of the distance between idea and matter, the reception and the perceived, legitimizing the role of imagination. This concept activates an ontological understanding that is already present in the corporeal nature. This explains the incredible perceptive,

cognitive, creative and reasoning abilities of human beings, and the ability to deal with ever evolving and changing external situations along with the constant progress of human civilization. As a result, it satisfies one's desire to create an intelligible equivalent for the particular complex that he/she experienced and eventually, illuminates the space of culture, of the individual and collective human existence, and enhances the infinite freedom of self-expression in art and architecture. Architectural meaning, beyond the transformation of the world into an ideal or pragmatic shelter, is the making of a physical and metaphorical order that reflects this space in human condition.

Accordingly, this concept forms and shapes the fundamental dimensions of the present research on re-constructing the multi-dimensional exploration of the architectural expression in cyberspace, which are destined to provide the vehicle to reflect upon, absorb and re-consider this space in the mental representation of both the architect and spectator, and ultimately have the potential to trigger their possible parallel imaginary ideas.

At the present time, technological sensibility tends to conceal this primordial space behind modes of presence that correspond to the instrumental technology of the Western Will to Power. The importance of the realization of this space for human access to the bodily wisdom lies in the fact that one is situated in a field that breaks down ego-structure information time and opens him/her up to the being of other sentient natures. Thus, it may contribute to his/her works by anchoring his/her vivid life in the compassion of a transpersonal field.

But how does one shift from the everyone-and-anyone phenomenal individual, in our

technological epoch, into the more authentic outstanding phenomenal individual, the one who lives and dwells in the dimensions of ontological openness, the dimensions where the lived experience in the personal-cultural realm is constantly energized and renewed, and deeply moved by its relationship to the openness of the primordial sentient space? What people need to reflect upon is a dynamically reflective process, which gets people more directly and fully in touch with their implicit comprehension of their human nature with the full range of the parallel subjective apparatus. In the next chapter, an attempt will be made to look for the answer by a clarification of Chinese visual representation (e.g. landscape painting and calligraphy) as a tradition, in the context of Chinese ideology.

2.5 A Critical Analysis on Perspective Regarding Architectural Representation

Can a person trust his/her eyes? Psychology and physiology remind people that something will always be missing when a subject recovers a certainty about what he/she is seeing. While humans are all within a world where vision seems to be the “origin” of human reality in cultural tradition, people always have to question the reciprocity of the dualistic opposition between the visible and the invisible, the revealing and concealing, and certainty and uncertainty. Thus, people may need to define the reciprocity between what they see and what regards or concerns them - this double distance between the viewer and the viewed, which as Alberto Perez-Gomez asserts, is *the source of the “poetic”, irrespective of artistic medium.* (Perez-Gomez, Pelletier 1997)

The most deeply perceived element about the world is its 3D nature. Historically, Western perspective genealogy can be traced back to the myth of the cave in Plato's Republic, where he states that a knowledge of eternal forms may be acquired from the imperfect material world by a process that is analogous to vision. It was first elaborated fully by Euclid in his *Perspectiva Natural*, the discipline of optics or the science of sight, in the third century B.C.E., which is characterized by a clear specific relationship with mathematics and geometry. As an offspring of the development of the understanding of cosmos and the human himself/herself, it had connections with traditional optics, mathematics, theology, and was manifested clearly by a concern for revealing the experiential depth by the x , y , z geometric dimensionality, which was explicitly based on a belief in the revelatory power of mathematic regularity, and was capable of demonstrating the presence of the transcendental as it framed human action in the sublunar world. Eventually, with the new science, it ceased to be the preferred cultural form for ordering nature and the built world. (Perez-Gomez, Pelletier 1997)

The conventional descriptive sets of projections that one taken for granted today were derived from the techniques of descriptive geometry prescribed by Jacques-Nicolas-Louis Durand in his *Precis des lecons d'Architecture* (1802 and 1813). (Perez-Gomez, Pelletier 1997) These operated by the Euclidean geometry system, which was a geometrized, homogeneous infinite space that was derived from a scientific reductive methodology and was dependent on the concept of the orthogonal co-ordinate system created by Descartes (1596~1650). It was the continuation of traditional perspective which relied on a visual construction in which depth was articulated within a framed geometric field presented frontally to the observer. As a projective tool, descriptive geometry coincided

Figure 1: One of Albrecht Durer's several illustrations of perspective device from his *Underweysung der Messung*, Nurnberg 1525, Albrecht Durer (1472 - 1528).

with perspective theories and became a complex product of the Western philosophical tradition and technological worldview. The re-created parallel world of the “photorealistic” projection of the architectural space in the 3-D environment by using digital technologies among contemporary architects is the direct offspring of this concept operating at the highest level. Until the eighteen century, after the overcoming of the Euclidean geometry’s limitation in a potentially controlling and transforming nature by the introduction of modern science, the perspective theory faced a dead end. But it had contributed and is still contributing significantly to the search of the “measured” world of experience through dimensionality and to the growth of a technological obsession with the control and domination of external reality through reductive and instrumental means.

As Euclidean geometry is a science of immediacy whose principles are based on optical perception, it can never become a self-referential theoretical discourse. Through the general review of perspective history above, we can see a clear tendency of abstraction and disconnection from the human world. Humans, with Descartes, *became a subject (a thinking I rather than an embodied self) who confronts the world as an extension of his thinking ego. This dualistic concept of reality made it possible for perspective to become a model of human knowledge and a truthful, scientific representation (through mathematical sciences) of the infinite universe.* (Perez-Gomez, Pelletier 1997) What happened in the modern mathematical sciences during and since the time of Galileo and Descartes, however, is that the vivid, infinite world became converted into a technical method rather than an ontological ordering of the universe. Hwa Yol Jung writes in *Heidgger’s Way with Sinitic Thinking*:

For Husserl, modern mathematics or the mathematization of nature by Galileo into the geometric boxes of triangles, circles, and squares inscribed in the “Book of Nature” is “a garb of ideas” in which “true being” (or reality) has been taken for a method. It is the mathematical sublimation of nature which “mirrors” and “represents”, that is, falsifies reality, nature, and the world__ it falsifies because what is “mirrored” or “represented” is only half true. In modern mathematics and mathematical sciences, the ontological generality of the mathematical has been replaced by the generality of method: the birth of methodology or the mathematical truth sublimated in method. For this reason, it is often said that the invention of method but not the use of mathematics is the hallmark of modern science. ⁵

The extreme degree of this approach was exemplified by the emergence of the techniques of axonometric projection. If it is said that the “subject” of traditional perspective representation was somehow an active and embodied observer, never totally disconnected from the world’s passions and motions, willing to acknowledge and remain subordinate to the large orders of nature and politics, then, here, axonometry, addresses a disembodied observer, disengaged from the limits granted by the body and the world. (Perez-Gomez, Pelletier 1997)

Thus, originated from perception and ended with method, the sentient space in the traditional perspective representation was thus missed and unfortunately not capable to evoke the living experience of an embodied, subjective spatiality and temporality.

⁵ Quoted from Hwa Yol Jung’s thesis “Heidegger’s Way with Sinitic Thinking” in book “Heidegger and Asian Thought”, by Graham Parkes.

Also, one must be aware here that to capture the essence of reality by means of representational metaphysics, that is, sequences of images, is always a risk, for an image has only a semblance of knowledge, subtraction of reality, and an appearance of participation. This “representational” metaphysics of technology may be best shown through the television technology, journalistic photography, photorealistic fiction films that “enframe” modern society, and leading to the universe of “channelled existence”, pseudo-reality, and prosaic forms of simulation. One may recall that Martin Heidegger’s diagnosis, the possibility of overcoming technological enframing -- the reduction of the world of experience to a “picture”, -- is related to a potential awareness of the inherent distance for disclosing embodied depth.

2.6 Case Studies

To illustrate how the hidden dimensions of the ontological openness could be awakened in order to unveil the true meaning of architecture from a pragmatic perspective by cultivating the sentient space concept proposed here, this multi-dimensional sentient space approach is studied through a few case studies.

2.6.1 Case Study 1: From Piranesi’s *Le Carceri* to I. M. Pei’s East Wing of National Art Gallery

In his series etchings of *Le Carceri* (The prisons), the 18th century Italian architect Giovanni Battista Piranesi (1720~1778) represented architecture from his own imagination, exemplifying his talent for combining the dramatic effects of multiple perspectives with architectural fantasies. These images of dark cavernous spaces opened

up new vistas in the world of constructing natural space, thereby, liberating dogmatic restraints to allow free rein for one's powerful imagination in order to express the state of mind and the emotions of the artist (with the help of the sentient space).

In *Architecture and Utopia*, Manfredo Tafuri reads Piranesi's *Carceri* as meditations upon the emergence of modern sensibility:

"In these etchings, the space of the building--the prison--is an infinite space. What has been destroyed is the center of that space, signifying the correspondence between the collapse of ancient values, the ancient order, and the "totality" of the disorder. Reason, the author of this destruction. . . is transformed into irrationality. But the prison, precisely because it is infinite, coincides with the space of human existence... Thus what we see in the Carceri is only the new existential condition of human collectivity, liberated and condemned at the same time by its own reason." (Tafuri 1976)

Indeed, Piranesi's genius was his ability to construct his prisons in precisely such a manner, that perspective was far from being an image related to the world of appearance that corresponds to the mathematical truth of modern science. Within a single image, while he questioned the temporal dimension of movements, which was already separated from the spatial rendering that was identified with scientific vision, a viewer was presented with a multitude of fragmentary worlds governed by different perspective systems and thus was invited to explore every corner of the image. They *embodied the first deliberate use of montage in architecture to explode and destructure the homogeneous space and linear time implied in perspective*, (Perez-Gomez, Pelletier 1997) and developed the heterogeneous compositions of perspective spaces, guided by multiple

Figure 2: *Le Carceri*, Third plate, 1760, by Giovanni Battista Piranesi.

points of view, thereby self-consciously engaging the issue of experiential space-time, challenging the linearity of perspective representation that might conceal the very depth of human existence.

While wandering within his prisons by tracing lines, escape is impossible. The numberless bridges and passageways bring human scale in proportion to multiple perspectival projections in a gigantic space, stimulate the imagination and provide endless possibilities, uncanny connections, and a never-ending journey. These infinite spaces present a very different image from that of an empty Cartesian volume stretching in all directions. Here, the insights gained about the proportion and conceptual organization allow people to understand the creative thinking instead of just memorizing the moves. A person does not know in detail how the various rooms work together, nor is he/she unable to identify the underlying conceptual organization. What one does know is, while poets and musicians have their own way of composing the meaning of human experience in the form of metaphoric imagery, Piranesi did the same excellent job.

In Piranesi's *Carceri* etchings, *meaning is saved at the expense of perspectival logic. His mysterious projections involve the beholder in a discontinuous space that invites inhabitation but ultimately awaits the rebuilding of its dislocated parts.* (Perez-Gomez, Pelletier 1997) Thus, Perez-Gomez sees *a poetic distance that resists the domination of the enframing vision, responding to the failure of a modern scientific mentality to acknowledge the unnameable dimension of representation, a poetic wholeness that can be recognized and yet is impossible to reduce to the discursive logos of science.* (Perez-Gomez, Pelletier 1997)

From the point of view of the proposed thesis, the most important aspect of Piranesi's etchings is poetic distance. It functions as a device *to transcend the perspectival enframing, to transcend dehumanizing technological values (often concealed in a world that we think we control)...thus making possible a truly relevant poetic practice in a post-modern world.* (Perez-Gomez, Pelletier 1997) Thanks to Piranesi's vision, these etchings reveal a potentially different way of recasting truth into work, and anticipate the temporality of perspective that avant-garde artists and filmmakers would embrace in the early twenties century. Their influence can still be felt in the contemporary architects such as I. M. Pei's works.

Apart from the catalytic presence of its sculptural forms of the National Gallery's East Wing Extension, Washington D.C., Pei was particularly concerned with the experiencing subject, inescapably informed by his Chinese sensitivities to light, space, and a subtle control of how the subject experiences the work of architecture. Recalling Pei's experience as a child in the Suzhou gardens' subtly manipulated environments as a clue to his handling of the gallery's space, this sensitivity of the body acquires a particularly heightened significance in the architect's worldview since it alludes to a receptive-reaction reflex that the building induces to the subject.

In this building, the particular concern for the role and presence of the corporeal in the present thesis makes it manifest in many levels at once. The triangular geometries adopted by the architect, incisively and precisely, display an uncanny capacity for the revelation of latent characteristics of the trapezoidal site, and in the mean time, sensitively affect the site in such a way that the body successively reveals its intrinsic

character. For Pei, its prime virtue was that it provided not only two vanishing points, as the square or rectangular forms, but three, making the space more active. Thus, the view is constantly changing, alternatively surprising and seducing the experiencing subject with unexpected relationships between the converging planes.

Another way that the body seems to be inscribed in this work may be characterized by the subject's passage throughout the building, which involves a carefully orchestrated spatial journey. Having been "welcomed" by the deliberately compressed entrance employed to signal the gap between the outside space and inside main space, the visitor enters into the skylit atrium that works as a hub of circulation and orientation at the heart of the East Wing, at once monumental and animated. Once inside, as Pei intended, the visitor is compelled to ascend or descend to various levels, searching out the perspectives and patterns, experiencing the spaciousness, and savoring the works of art. The space assumes a kinaesthetic character, animated by staircases, escalators, while the balconies and catwalks that open unexpectedly into the central space add a note of multivalence and exploit the movement of the body along them as an element of the composition. Here, the sensuous subject is made acutely aware of dynamic participation and involvement, always receiving and reacting with multiple possibilities, thereby creating a delightful tension. This basic ambiguity is further skilfully activated and diffused by the constantly changing patterns and intensity of the sunlight as it casts through the crystalline facets of the space-frame. They are picked up by the pink marble and concrete, producing a rare warmth for such materials, emphasizing the framed nature changes in appearance from moment to moment. (Cannell 1995)

Figure 3: Interior view 1 of National Art Gallery, Washington D. C..

Figure 4: Interior view 2 of National Art Gallery, Washington D. C..

Furthermore, the space is animated by the enormous mobile designed by Alexander Calder that hangs from the centre of the space-frame, reminding the spectator of the absence of the natural wind. It adds its constantly changing shadows to those of the visitors, the marble walls and floors, making them a canvas for an abstract composition that is a work in perpetual progress. Then, after enjoying this symphony, the visitor is free to move off into the more intimate spaces of the house galleries to see an exhibit in relative seclusion and of course, would be able to return to the main space at a later time to pause and digest what he has seen before suffering from “museum fatigue”. This unsettling Piranesian space was Pei’s answer to the pursuit of an appropriate form for twentieth century art, a chaotic “mob scene”, in which art and public could interact in democratic society. (Cannell 1995)

In this building, the Corbusian *promenade architectural* is transformed in such a way as to bring about an intense awareness of both art and human life. The more one analyses this work, the more one finds links between the different levels of experience and the more the experience becomes self-validating as the subject discovers not only Pei’s intentions, but also more possible meanings that are latent within the architecture. Here, Pei demonstrates his ability to think experientially in order to evolve the feeling derived from his childhood experience in the Suzhou gardens, creating a panoramic aura by the interplay of light, wind and movement as they affect the body. It is the power of this interplay that engages the perceiver’s power of creation, which is significant here. And it is through this power of interplay that the essence of the ineffable presence of the sentient space is sensed. Seen in this light, the building acts as a catalyst on the mind, providing wholly new possible interpretations. Ultimately, not only does this allow the architecture

to become alive in different ways, but it also stimulates unique styles of architecture to reach beyond familiar abstractions.

From Piranesi's *Le Carceri* to I. M. Pei's East Wing of National Art Gallery, one can see a clear tendency to insist on the indissoluble unity of the mind and the body as well as its experience in the constitution and realization of architectural meaning. For them, the main hope for the survival of the human species exists in its tactile awareness, the ambulatory character of the subject, rather than in the reductive abstraction affected by technology.

2.6.2 Case Study 2: A Filmic Reading of Le Corbusier's Convent Saint-Marie De La Tourette 1953-1959

*Architecture traditionally has been related to painting and sculpture as the permanent testimonies of culture. This has been particularly true since the Renaissance. Together with painting, architecture has been linked to theatre in relation to the discovery of perspective and the definition of the theatrical perspectival space. I found that a displacement from painting to film, as the most pertinent visual art to which urban architecture can relate, was necessary.*⁶

Diana Agrest

Sergei M. Eisenstein saw filmmaking through the image of various languages working together in a complex set of relationships, like an orchestra score. His theory of montage analyzed how meaning and culture worked together in filmmaking via the narrative

⁶ Quoted from Diana Agrest's article "Diana Agrest on Sergei Mikhailovich Eisenstein" in book "Architects On Architects", by Susan Gray.

developed through the sequential organization of form and image in time, and how the cinematographic montage of sequences opened up a gap between the evoked metaphoric space and the creative experience of the spectator, and eventually involved the audience at a spatial and temporal level, thereby inviting inhabitation and activating imagination.

The architectural space is related to film in terms of configurations composed in the way that various levels of narratives and actions, as well as volumes of solids and voids are articulated, superimposed and juxtaposed through time. This concept unfolds like a filmstrip, within which not only should time and movement become important parameters, but the narrative --may be reduced to a list of functions and activities-- appears also as an essential aspect for the construction of space.

Reading architectural space through film allows access into the complexity of various relationships that the body generates, the sequential organizations of fragments and the vivid human participations in a way that relates to montage as developed by Eisenstein. The fragmentation and temporalization of space initiated by film montage and modernist collage have allowed a truly infinite realm of poetic dimensions for the human imagination, which awaits their translation into architecture.

It is in this context that film appears as the most pertinent form to fascinatingly discover the mystic atmosphere of Le Corbusier's Monastery *La Tourette*, one that provides the conceptual framework from which to develop the architectural understanding of the quality of "ineffable space" that Corbusier developed both in his paintings and architecture, and eventually, helps to congeal the ambiguity of the experience referred as the sentient space as proposed in this thesis.

Designed between 1953 and 1955 by Le Corbusier under the wishes of the Dominicans, the monastery of Sainte-Marie de La Tourette near Lyons, France is an unlikely religious monument, but one of the most haunting, numinous witnesses to the cultural heritage of the 20th century.

Le Corbusier, who had oscillated between reason and sensibility, order and freedom, in his late career, finally designed the La Tourette monastery with the freedom of sensibility. Like Corbusier's other late works as the church of Ronchamp, and the High Court of Chandigarh, this architecture, however, *played a monumental role in liberating modernism from its hard shell by pointing to the alternative of free expression.*⁷

La Tourette was built as a Dominican priest school, a community to enable one hundred men to live together with strict rules: a silent place of meditation, study and prayer. The silent location and the synthesised work of art, dynamically integrated with the conceptual composition of symbolic forms, which is appropriate for the crude technology available, as well as responsive to the local culture, religion and tradition, seem to perfectly serve these needs.

In religious guise, the entire complex emphasizes its own temporality and sensibility, thereby rejecting rationality. The block-like framing of the complex unfolds like a circular flow from place to place along a dramatic movement system, which recalls the experience of the labyrinth. Indeed, the human experience of the complex, despite the remarkably simple, rectangle plan of the courtyard surrounded by the church and U-shape living quarters, at the same time has an overflowing richness. Here, Corbusier takes

⁷ Quoted from Tadao Ando's article "Tadao Ando on Le Corbusier" in book "Architects On Architects", by Susan Gray.

spectators on a journey of imagination and emotion through a series of formal compositions along the closed corridor through the substantial darkness, which can actually be “penetrated by one’s eyes”.

It begins when one passes the "gate" and enters the monastery over the bridge. Then he/she moves through the entrance area with its conversation cells, then, along the corridor, passes the oratory and the study area and enters the communal monastic area through the circular staircase. The cloister takes the person to the steel church door and into the side chapel. It ends up at the roof terrace, positioning the person to face the infinitely expanding landscape implying the intimate embracing by the sea, --the substance of motive force that provoked all of the architect’s imagination-- responding to his image of seeing the body of the church as a nave --from Latin “*navis*” = ship-- departing from the harbor (the living quarters) symbolized in the plan. (Henze 1966)

This building calls for a dynamic involvement in the process of creation, a new form of participation for the visitor. All the windows are rhythmically installed facing the courtyard, while the gaze of visitors is planned to be oriented inward. In the courtyard, relationships are very intense. There are many geometric elements: the voice of the sculptures is clear in the pyramid of the oratory, in the cylinder of the staircase tower and the chimney, the lower church and ridge-turret, the sloped and welled triangular corridor, the pillars with an irregular arch. All the forms are wildly exposed to each other, and send out a call that is answered. These elementary designs of forms carry on a narrative power, and do not remain on the surface; they penetrate transparently and spatially in depth just as in montage, and acquire a plastic effect while integrated with the architecture,

Figure 5: Aerial view of La Tourette from the west.

Figure 6: Interior view of the church, La Tourette.

Figure 7: Interior view of the crypt, La Tourette.

Figure 8: The “musical wall” and its rhythmic shadow, La Tourette.

depending on its placement in the sequence of the movement with relation to other scenes. As one walks around it, certain elements of the composition become visible while others vanish. The movement of the visitor is indispensable for the meaning of the truth that is conceived.

One could apply the same operation to each of the elements of the composition such as light and shadow with various intensities and colours, acoustic effects, smell, proportion, the “musical walls” *ondulatories* designed by means of the golden section that magically transforms light into twilight, or the raw texture of rough concrete --*beton brut*-- imposed by the poverty of means in this project, which was always emphasized by Corbusier to make a place that reveals the potential spirituality of the technological world. They are like ready-made fragments montaged in such a way that they generate different possible modes of emotion, like joy or sorrow, calmness or anxiety, and simulates the imagination by evoking innumerable images in different time sequences without a beginning or an end. In this way, Corbusier, like a film director, assembled different materials through narratives, which were programmed within particular activities taking place with indeterminate and fluctuating boundaries.

So, Isozaki writes:

After being stimulated rhythmically by the daylight penetrating a sloping forest of concrete struts that is arranged according to the modular, called pan de verre rythmique, I descended into the darkness of a basement corridor where I could only grope. Then all of a sudden, when I came across a scene in which a brightly colored altar was

*illuminated by bundles light shining through the cylindrical windows, canon de lumiere, I was more than surprised; I was intoxicated by ecstasy.*⁸

Alberto Perez-Gomez writes:

The internal space is always surprising, always new and mysterious. Time here is no longer linear; our participation with the building adds up into layers that both reveal and conceal, never resulting in a final clarification of the "idea" of the building. (Perez-Gomez, Pelletier 1997)

In the eye of the camera, La Tourette is a true "analogical" monastery, operating like a mirror that reflects something so that we can clearly see it, something slightly different that reveals what is already present but has never been truly seen. (Perez-Gomez, Pelletier 1997)

This work is a paradigmatic example of the "ineffable space", which Corbusier developed in painting and architecture. *In part what he means by this term is the interrelationship of formal elements. They set up a series of tensions within a proportioned area so that each form can develop fully in relation to the whole. (Jencks 1973)* It seems to possess the power to evoke wholeness through fragments, actively engaging fundamental dualities such as light and shadow, or space and substance (solid and void), precisely in order to dissolve them into unity while simultaneously maintaining their specificity. *But also "ineffable space" means the action of the forms on the surroundings, the way they radiate outwards and "take possession of space"...*

⁸ Quoted from Arata Isozaki's article "Arata Isozaki on Le Corbusier" in book "Architects On Architects", by Susan Gray.

vibrations, cries or shouts (such as originate from the Parthenon), darting away like rays, as if springing from an explosion". (Jencks 1973) Thus, the various spaces he experienced might be intermixed, fermented, and embodied to transform the inhabitant into a participant, and to effectively "change one's life".

The building appears as the crystallization of a sort of musical notation, ultimately made real through manifold levels of interpretation and recreation. Here, the intangible sentient space suggested in the present thesis is evoked. And what it suggests, abstract or speculative, could only be conceived or accepted passively, demanding the active mind in the pursuing of meaning. *It is as if some specific mystical interpretation existed for every form while the language that would unlock their secrets had been lost.* (Jencks 1973)

Chapter 3

Engaging the Spirit of Nature into Design

One of the purposes of this thesis is to digitally reconstruct the Chinese private garden. The visual peculiarities of the Chinese private garden can be explained in terms of the principles of visual representation and the influence from the Taoist cosmology, which has dominated Chinese visual representation over the past two thousand years. In this chapter, the Chinese philosophy and principles of Chinese visual tradition are reviewed, focusing on revealing the intimate connection between the philosophical and aesthetic system of this tradition and the sentient space proposed in the thesis, with which it is coordinated.

3.1. Review of Related Ideology

The sources of Chinese culture are found in a highly developed agricultural civilization. This ancient system of agriculture relied solely on blessings bestowed by heaven or Nature,⁹ leaving no place for human beings to oppose or remark on Nature. Throughout the long ages of her history, China has developed her distinctive forms of philosophical-religious thoughts and practice, such as Confucianism, Taoism, and Buddhism. As a manifestation of Chinese culture, they shared the same ground and fundamental world-view -- the natural mysticism world-view. In the sense that it was characterized by the regularity, which Western philosophy has called "law", the ancient Chinese's

⁹ In China, Nature served as the framework, held all the potentials to reveal or "light up" the mind, through which human activities and experience were to be absorbed and harmonized.

Figure 9: The symbol of Yin and Yang. It represents the idealized balance of the forces in the universe; the boundary between the black and white indicates *Tao*.

understanding of the universe was the unity of the eternal transformation of bipolarity, bridged and governed by *Tao* as “law”, without an outside “lawgiver”.

3.1.1. The *Tao*

As the regularity of operation in the universe, *Tao* was a substance with absolute greatness and eternity. It was the sum of everything, past, present and future. It permeated and “bridged” the eternal transformation of flux of being and becoming (*Yin* and *Yang*) in the realm of Nature and human life. Though it had no definite character of its own as non-being (*wu*), *Tao* was the ultimate reality behind appearance (the manifestation of the transformation of *Yin* and *Yang*) -- the metaphysical truth, and gave birth to all beings (*you*). (Maspero 1981) Like the God of some Western philosophies or the Void (*sunyata*) of Mahayana Buddhism, it was believed that nothing could be predicated about it, but all particular phenomena had their being from it. In a larger sense, it remained unchanging, since the sum of its forces remained the same.

As stated in *Tao Te Ching*, Lao Tzu (571BC~?) lays down the foundation of his perspective about the *Tao*:

There was something formless yet complete that existed before heaven and earth, without sound, without substance, dependent on nothing, unchanging, unfailing. One may think of it as the mother of all things under heaven. Its true name we do not know. Tao is the by-name that we give it. (Lao Tzu 2001)

Therefore, like a great homogeneous web of all creation, *Tao* was suggested to prevail in the universe. Furthermore, *Tao* existed beyond the human world of “five senses”, and was therefore unperceivable and unpredictable. It mirrors how one cannot understand the characteristic of the third dimensionality of an object in the three-dimensional world if one exists in the two-dimensional world. People existing in the “five senses” world could not understand *Tao* since it is beyond this world. But just like the object of the three-dimensional world that may cast shadow onto the two-dimensional world, one can occasionally perceive *Tao* as it casts a shadow onto the “five senses” world. *Tao* has therefore always been mysterious, coincident and unbelievable. (Xian 2004)

3.1.2. *Yin* and *Yang* Cosmology

In ancient China, expressed through the concept of *Yin* and *Yang*,¹⁰ bipolarity constituted the specific characteristic of Chinese metaphysics. This bipolarity did not simply mean that everything had its opposite, but that the opposites were necessary and complementary to each other. Actually, *Yin* and *Yang*, with its feminine and masculine qualities, were equally essential forces, and encompassed the pure harmony of heaven and earth. Furthermore, they were not in absolute and permanent opposition to each other, but in a temporary term of consonance within a constantly changing process, formed and dissolved quickly, and tended to merge into each other, even to the extent of becoming each the opposite of its former self. Nature, as the cosmos, was thus seen to operate through the ceaseless cyclical process, interacting, transforming, and replacing each other,

¹⁰ In Taoism, yin and yang represent the two primal cosmic forces in the universe. Yin (moon) is the receptive, passive, cold female force. Yang (sun) is the masculine force, movement, and heat. The Yi-Yang symbol represents the idealized balance of the forces in the universe.

exemplified as night following day followed by night, the rotation of the seasons, the interplay of birth and death, or the waxing and waning of the moon. (Chang 1981)

3.1.3 *Chi*

As *Tao* existed beyond the world of the “five senses”, Taoists had to employ some mediums or substitutes in order to get to *Tao*. There was indeed an approach to establish some fixed spiritual relationships between *Tao* and its substitutes that had some phenomena, which could be perceived by “five senses”, and to enhance these relationships by practicing meditation and concentration (*xiu lian*). In this way, it might be able to transfer the unpredictable *Tao* to an element in the “five senses” world that could be perceived or grasped.

Chi was therefore employed by Taoists as *Tao*’s substitute in the human material world. *Chi*, or “breath”, was a notion that was fundamental to the Chinese view of life. For the ancient Chinese, the pure and light *Chi* rose to become heaven; the muddy and heavy fell to become earth; the breath that harmoniously blended both became the human.

Chi existed everywhere in the world and was perceivable. Through the agencies of a person’s five senses, *Chi* called its expression in the flux of the *yin* and *yang*. If one wishes a harmonious life, he or she should live in *Tao*, thereby practicing inaction, living a simple life, reducing desires and, in a state of genuine quietude (*jing*) to get to *Chi*. Once the spiritual relationship of *Tao* and its substitute *Chi* had been established, it might become stable and transpersonal through enhancement. It not only existed as self-transformation in the world of its creator, but also could be perceived or apply to others

under certain conditions. This concept of the *Tao* or Nature was the touchstone of the Chinese Natural Mysticism World-view and thereby permeated Chinese art making. (Xian 2004)

3.1.4 Unification of Heaven and the Humankind

As illustrated in the prior chapter, from the Cartesian perspective, the world was as something “out there”, as a fixed environment (mostly hostile to humanity), or as a purely material object for exploitation.

Conversely, the Chinese sense of the world was wholeness with dynamic transformation (of *Chi* of *Yin* and *Yang*), in which humanity was not seen as opposed to Nature, but embraced by it. The regularity of the transformation, *Tao*, was believed to be reached only through the practice of meditation. But as meditation had always been involved with the uncertain and unpredictable faculties of the mind, for the ancient Chinese, *Tao* had always been likened to the Laws of Nature, or better to Nature itself, exploiting Nature as the framework through which human participation and experience were to be distilled, evaluated and harmonized. This agricultural knowledge, as an accumulation of generations of experience, demanded that people look upon Nature from a common point of view and maintain a unified relationship with it: a person was a part, only a part, and really a part.

Such a worship of Nature or belief was called “unification of Heaven and humankind”. While giving Nature the power to punish a person’s misbehaviour, it defined a human’s action and thinking as unified and harmonious with nature. It suggested that people were

made to live by appreciating and communicating with the spirits and wills of the surroundings including those of animals, plants, and non-organic objects, such as stones and stars, rivers and mountains, as well as the human being. These spirits and wills were in the form of *Chi* and could only be perceived and apprehended by the power of human meditation. Furthermore, a person in his/her understanding of his own nature arrived at an understanding of the nature of all things surrounding and intuitively experienced his/her unity with all things in a pantheistic identity of spirit.

This appreciation is indeed one of the most beautiful Chinese traditions. When a person stands in the early spring snow, oblivious of the cold, and gazing on a cloud of plum flowers, he/she feels as if his/her heart is suddenly flowering also in sympathy with the tree - as vigorously and spontaneously as the blossoms themselves. It seems to trigger the latent senses of unity with the universe. Psychologically in this way, the person liberates his/her heart, frees his/her spirit, transcends the worldly realm, and gets himself/herself in tune with the underlying rhythms of the seasons, the plants, the universe, so that he/she can sense the mysterious working of *Tao* and, become immersed in nature and spiritually survive. Indeed, it is this immanent and transcendental spiritual practice (operating in the sentient space proposed in the present thesis and creating a significant distance) that builds and re-builds Nature to ensure that his/her imaginary visions and philosophical musings on the human condition are appropriately incorporated, and becomes the spiritual source of inspiration for great Chinese artists.

According to the Western tradition of metaphysics, the human body is not capable of thinking. Thinking takes place only in the “mind”, which is contingently located in the

head, and is not counted as part of the human “body”. When talking about this insulation of “mind” and “body” in his thesis “Mudra as Thinking: Developing Our Wisdom-of-Being in Gesture and Movement”, David M. Levin writes:

*...our tradition is very deeply committed to this dualism of “mind” and “body”, because it is tightly bound to the Judaeo-Christian ideal of asceticism and its path of renunciation. When we read Descartes, for example, it becomes quite evident that the epistemological and ontological dualism of “body” and “mind” is, in the final analysis, a reflective manifestation of the dualism in our religious experience of good and evil: we have tended to see a radical split in our moral nature, a split which reverberates as a painful split in every dimension of our being. The body is evil; it is a source of sin, moral weakness and limitation, cognitive error, perceptual illusion. When separated from the body, the “mind” is essentially unpolluted and free of evil. Nothing so noble, so “lofty” as thought could ever take place in the “lower” body. Unfortunately, however, this understanding only perpetuates the moral and spiritual affliction.*¹¹

But, from the Chinese naturalistic world-view, the human body was also considered as an extremely precious gift of Nature: an “auspicious occasion” for the achievement of enlightenment. Taoism and Buddhism have survived precisely because their practitioners appreciated the human body as the primary bearer of interpretive processes. The ritual practice of *mudra* in Tibet makes use of the imitative repetition of meditative postures, and gestures, or symbolic body images as schemata to achieve enlightenment as embodiment.¹² The high appreciation of physical motor act in calligraphy, which will be

¹¹ Quoted from David M. Levin’s thesis “Mudra as Thinking: Developing Our Wisdom-of-Being in Gesture and Movement” in book “Heidegger and Asian Thought”, by Graham Parkes.

¹² Ibid.

examined later, keeps the calligrapher in touch with the “felt sense” of the gesture, so that allows his/her innate resources of bodily wisdom to develop. In this way, he/she could cultivate a skill whose potential of energy is always with him/her.

This intimate feeling of being at home in Nature is evident in many ways in the Chinese culture. In the philosophical writing, literature, music, and, visually in those landscape paintings, calligraphy, as well as garden design that places a person in perspective as a tiny observer of the vast universe - an observer who is seeking to absorb *Tao* to integrate himself into this universe (Nature), dancing and animating with the energy of *Tao* to gain the highest self-expression and enlightenment. It suggests that there always exists an intangible distance that concerns both the *Chi* of Nature and the *Chi* of the inhabitant in these cultural activities. And this distance could become more clear when examine the practice of the Chinese brushwork is examined.

3.2 The Chinese Brush Work: The Art of Consonance of Spirit and Body

Traditionally, the West employed rational approaches to the mystery of artistic creation in seeking to unveil the truth beyond the appearance, either through science that investigated the mechanics of representation, aesthetics that questioned the nature of the beauty, or psychology that explored the motivations of expression. It was inevitable that Western painting should *lean on the objective appearance of things for cohesion and on geometrical organization for order, while their reflective tendency has turned them toward the intellectual relativity of things, and mutual need and likeness of parts to give a sense of oneness.* (Rowley 1947) Therefore, the terms used by Western artists before the

eighteenth century to define the essential qualities of painting, such as unity, balance, scale, rhythm, and so on, were tangible and measurable. In forms they valued intelligibility, convincing representation, and emotional expressiveness, but with a price that solid permanence had been placed over the intangible and temporal.

For the Chinese, all things have their own individual spirits (*Shen* or *Chi*), which is the essence of their form. And the spirit is manifested in *Yun*, the universal experience, which sums up the presence of an eternal flux of being and becoming. Desiring to attain *Shen*, or *Chi*, rather than the form and features in painting (*Yi Zai Bi Xian*), the Chinese artists took a distinctive approach. In China, the highest aspiration of Chinese brushwork is to render a spiritual (*Shen Si*), rather than a purely physical likeness (*Hua Gui Zai Li Yi*). Realistic rendering of form is not the primary consideration. Each painting is suggested to have its own intellectual and philosophical world (i.e. the distance signals the sentient space defined in the thesis) to which the viewer gains access by means of the imagination.

Their method is *Xie Yi* ("express an idea, a feeling, or state of mind"). *Xie Yi* is more than an abstract or symbolic approach to art. It is a view of the inner spiritual or subjective dimensions. According to Taoist and Buddhist thought, in which color and form are understood to be illusory, the image itself has no independent status. Infused with religious and metaphysical significance, *xie yi* came to be conceived more as a means of expression and creation, a presentation of the inner being of the artist, than as a reflection or representation of what may have passed before the artist's eyes. In trying to reach the transformation of unnamable ideas (literally, *Miao yi*, which suggested the *Tao*),

Figure 10: *Early Spring*, hanging scroll dated 1072, by Kuo His.

they abandoned the external form of objects, placed intuitive experience above reason, and had to process a communion with the embodied universal experience through mediation and concentration until reaching the highest state of creative imagination, allowing its essence to become manifested by handling.

This concept is both an intuitive and an intellectual experience, combining a person's embodied experience with Nature and a person's immediate bodily experience (i.e. the steadiness of wrist and arm movement during brushwork making it like painting or calligraphy). The later explains the understanding of the principles of Nature, reflecting the Chinese philosophy of "*Unification of Heaven and the humankind*", and transporting individuals out of the person-interpreted world into the existence of other realm of being.

Unlike the Western approach, which forcefully directs the spectator's attention to sensuous effects, like Romanticism and Impressionism, the Chinese painter sought to present organic completeness in the particular, without losing the distinctive character of that specific and tended to awaken our intellectual delight in the recognition of those relationships. (Rowley 1947) According to Hsieh Ho, who codified six famous principles for judging the quality of paintings in a sixth century essay, the first condition of a "good painting" was *chi-yun sheng- tung* (literally, the universal experience animating through spirit consonance). It meant that the *Chi*, or "vital spirit" of each object in the painting must "vibrate" with the *Chi* of all the other elements, while in the mean time, the presented *Chi* of the painted forms must respond to the real forms, as they exist outside the painting. By the time of the Sung dynasty (960-1127), *Chi* had become an isolated concept first underlined as *Tao* by Ching Hao. For him, *the artist should be so perfectly*

in accord with the spirit that his own act of creation was identical with which produced the original forms in nature. He also believed that *the viewer's attitude was equally important, for emotional response was directly transferable back and forth between viewer and painting.* (Rowley 1947) Here, *Chi* became the creative force, shared the same spring as the *Tao*, and demanded the significant distance of human participation. In other words, the spirit of art was identified with the spirit of the universe or nature, and they demanded the cooperation of human embodiment and participation. When Chang Keng called *chi-yun* the “moving power of heaven which is suddenly disclosed” and claimed that “only those who are quiet could understand it,” he was experimenting the universal experience-*Yun*, as the lasting and resonant charm or attraction which, “*grows out of the wanderings of the heart and is obtained through the inspiration of heaven.*” Therefore, the Western flower would appeal primarily to the senses; instead, the Chinese painting of a flower would catch the *Chi*, the vital spirit of the flower, by presenting its *Yun*, and invite viewers to share it in its life. This is called “communing with the essence of things” (*shen hui*) in Chinese painting theory. (Rowley 1947)

Unlike the Western painter who emphasized the material manifestation as the means toward the beyond-the-material, the Chinese emphasized on embodied intuition, imagination, and primordial experience when painting, insisting first on the spirit and then on the form. The most important and fundamental aspect of classical aesthetics in Chinese paintings is the artist's idea of its meaning, which determined the mode of its production and unified the finished work, and is achieved primarily through imagination, and the temporal and experiential dimensions evoked in the inhabitant. *Once more, the Chinese have analysed more systematically and more deeply a phenomenon of which*

Western painters did not remain unaware: a painting must be invested with an inner cohesion that underlies forms and innervates the intervals between forms. (Leys 1983)

By trying to express this inexpressible of painting, human feelings were projected onto the physical forms of objects in a way that suggested the existence of *Shen*, as manifestation of the *Tao*, which could only be known by its fruit-*Yun*. Shifting from this technique to the artist's character and mood in conjunction with the embodied life experience, they "merged" with the actual subject matter to depict its "inner truth", not only in outward appearance, and employed terms like allegorical, metaphorical and exaggerated associations from arts of writing, poetry, and music, thereby preferring the intangible and the elusively inexpressive, mysterious residing in the forms and beyond the forms. To paint great works or write great calligraphy, an artist must nourish gentleness and cheerfulness in his/her heart; his/her ideas must be joyful and harmonious; only in this way would his/her spirit truly resonate with the spirit of his/her subject, and the various aspects of a person's gladness and sorrow...would appear naturally in his/her mind and out by his/her brush.

Obviously, this is a two-way relationship in which the spontaneous sentient space functions as a bridge: the outer world changes according to the artist's emotions as he/she is experiencing or has experienced, and his/her emotions follow the moods of the nature. *Instead of rationalizing the perfect in terms of engineering feats, mathematical proportion and generic types, in which rendered static mean and the extremes suffered, the Chinese created a distance in which there was a dynamic union of opposites in which one needed another for completeness, suggested the intermediate position of man's*

experience of nature, rather than his domination over nature or nature's control over man. (Rowley 1947) While the subject provided the form of visual representation, the object provided its content, and thus has constituted the elements of Chinese vision.

3.3 Depth in Chinese Landscape Painting

In the words of Cézanne, the whole trick of painting landscape was to make it go back. (Rowley 1947) Depth constitutes the first essential. To achieve depth, western Renaissance realistic painters relied, first, upon a continuous receding ground plane, which held all the verticals together, and secondly, upon a reduction in the size of the verticals according to a vanishing point or numerous points. This results in horizontal depth. *Since the fifteenth century, European painting has supplemented these principles of focal perspective with increasingly skilful techniques of figuration and coloring, developing a richly varied pictorial space, and establishing a "discourse" of realistic painting.*¹³

Thus, interested in tangibly achieving the illusion of depth and giving continuity and measurability to the spatial unit by the science of perspective, the experience of Western space was limited to a bounded quantity of space. It was articulated within a framed geometric field presented frontally to the observer as if seen through an open door but at the expense of continuous temporality.

¹³ Quoted from Ni Zhen's thesis Classical Chinese Painting and Cinematographic Signification in book Cinematic Landscapes, by Linda C. Ehrlich and David Desser.

Instead of a fixed vanishing point and enclosed perspective, the experience of depth in Chinese landscape paintings is markedly different from that of Western paintings. Neither the viewer's position, the line of sight, nor the frame are fixed. By employing the device of the multi-perspective and moving focus,¹⁴ the arrangement of space in classical Chinese landscape painting scrolls was spread out horizontally or vertically, not viewed as through a window frame. These movements from motif to motif through intervals in the plane of the painted surface, which were mostly mist and clouds, with one fading imperceptibly into the next, suggested a sequential experience in time and an open temporal ordering beyond the limits of the painting into the boundless infinity of the universe. The spectator was forced to act as a participant, thereby witnessing the only painting form in the world that brings to the art a true progression through time. As the spectator progressed through such a scroll, there unfolded a unique element of theme developing in much the same way, and incidentally, with much the same mechanics, as a theme developed in poetry or music. In other words, as Ni Zhen writes, *it is an attempt to set up on a still, flat surface a spatial plan, which contains a temporal dimension.*¹⁵

George Rowley writes about the experience of depth in Chinese landscape paintings:

Historically all early paintings, whether Egyptian, Archaic Greek or

14 I quoted from Chinese Visual Representation: Painting and Cinema, by Hao Dazheng, translation by Douglas Wilkerson: "Multiple" and "moving focus" are terms used by the Chinese to distinguish their perspective systems from that of the Renaissance, which is characterized by two vanishing points formed by a fixed viewpoint. In a multiple perspective painting, viewers can feel a seemingly normal perspective relation among the objects when they concentrate on a limited area of the picture. Once they move their eyes to a neighboring area, however, they will get an impression of another perspective relationship which bears no relationship to the previous one, and so on. Multi-perspective is used in classical landscape painting.

15 Quoted from Ni Zhen's thesis Classical Chinese Painting and Cinematographic Signification in book Cinematic Landscapes, by Linda C. Ehrlich and David Desser.

Pre-Tang Chinese, lacked spatial unity and had to be experienced as a sequence of pictorial motifs, to be read by the spectator like so many pictographs. In such an ideational art the principles of design were conditioned by the isolation of motifs, the movement of the eye through intervals, and the tying together of each motif to its adjacent motifs. These early principles were later transformed and enriched until they reached their fulfilment in the supreme creation of Chinese genius—the landscape scroll. A scroll painting must be experienced in time like music or literature. Our attention is carried along laterally from right to left, being restricted at any one moment to a short passage which can be conveniently perused. The situation entirely alters the choice of design principles. The design as a whole will, like music, have a beginning, development, and ending. Many scrolls parallel the musical sequence of exposition, development, and recapitulation, and others have a definite climax like a drama. Specific themes will be needed so that the spectator will be prepared by his memory for what is to come as the scroll unrolls, and will appreciate the various treatments of the themes and the introduction of new material. In order to describe such an experience in time we instinctively avoid the terms for spatial design and resort to the terminology of music; we speak of themes and their expansion, contraction, and inversion, of melodic lines and their counterpoint, of the accelerandos and ritardandos of spacing, and even of crescendos and diminuendos as the landscapes become thick and profuse or fade away into the nothingness of mist. The right timing of these qualities depends on lateral movement rather than on movement in depth, and the lines of movement are not mere leading lines but linear melodies which are the very substance of the design. ... No matter how few the motifs or how simple the design, we must see it step by step if we are to apprehend all of its subtleties, because design in time did not arise from the shape of the format but from a unique attitude toward space.

(Rowley 1947)

Figure 11: Xia Gui's *Streams and Mountains with a Clear Distant View*, Collection of the National Palace Museum, Taipei, China

Each of the six sections should be viewed from the right to the left, then down to the one below it.

Thus, the perspective system of Chinese paintings must be understood as a conceptual one, not dependent on biological mechanisms of the naked eye, as was the Renaissance system.¹⁶ The Chinese artists broke down the restrictions of the picture frame, which was deemed to violate man's experience of nature. They viewed the unlimited sequences of space as though stepping into that open door and compelled the eye to turn in every direction to encompass the scene. A point of view that transcended that of the individual was desired. The apparent horizon and vanishing point employed by the Renaissance perspective made the image seem concrete, but demanded substantial identification with a particular viewer. Such images were perceived as both individual and momentary, seen by a particular person at a particular time. Chinese paintings strove for a timeless, communal impression, which could be perceived by anyone, yet was not a scene viewed by anyone in particular.

After months or even years of living with nature and observing its spirit until the elements of landscape were "all in the heart", as a process of embodiment to get to *Chi*, the artist could freely dash off thousands of miles of landscape within a single scroll with which the design evolved in time like a music composition. The multi-perspective and moving focus technique, or the reversed perspective, in which the lines converged in the eyes of the spectator instead of in the vanishing point while the spectator could wander in the realm of imagination through the landscape, would be much truer psychologically and be more efficient for communication. This is because it shares many qualities with natural perception, and the brain can easily process it. Its similarity to "the real thing" has

¹⁶ Quoted from Hao Dazheng's thesis Chinese Visual Representation: Painting and Cinema in book Cinematic Landscapes, by Linda C. Ehrlich and David Desser.

the potential to allow artists to elicit emotions in the viewers, as well as to effectively synthesize nonexistent objects and scenes. By this device, one might travel through thousands of miles of landscape, scale the mountain peaks, or ever descend into the depths of the valleys and follow rivers to their course.

In short, in Chinese landscape paintings, depth was not a measurable quantity, but a vehicle for keeping the eternal mystery alive in the creation of art that could only be suggested and ambiguous.

3.4 Body Autonomy in Chinese Calligraphy

Artists know that the dynamic characteristics of the physical motor act leave reflections in their work and show up as dynamic qualities of corresponding character. But only in China, the physical motor act reached its supreme fulfilment in Chinese brush work, and especially in calligraphy.

Calligraphy enjoys the highest artistic position in China and is a spiritual tradition needed to embody the patterns of daily life and carried from generation to generation. The notion of writing is not only a linguistic record but also a form of art. It is regarded as an artistic expression, a visible manifestation of unique personality, and spirituality, a “way” to be “oneself”.

Using a resilient brush made of animal hair, or sometimes the barbs of a bird's feather, bound into a bamboo stick, with ink made of compressed pine carbon and light glue rubbed down in water, the Chinese calligrapher exploited all the possibilities of his medium. Control of the brush, of the absorbency of the paper, and of the density

of the ink, resulted in the full richness of thick and thin strokes, the subtle contrast of heavy and light strokes, and the studied expression of line – a strength of brush stroke that has nothing to do with weight, a liveliness of stroke that has nothing to do with speed of movement.
(Tregear 1997)

Calligraphy is an art of temporality, requiring highly spontaneous freedom. Written in a linear sequence from beginning to end, in an “uninterrupted flow of darting, looping brush movement,” the calligrapher writes slowly, in full control of the movements of his/her hand and his/her body at every moment. He/she does not plan the shapes of his/her characters in advance but rather let them evolve under his/her brush spontaneously. When he/she begins, he/she has not yet to know the final form the work is to take. Even shortly before the end, he/she may come up with unforeseen shapes. The subtle nuances in the width of each stroke and the delicate balance of the sophisticated composition of each character are regarded to be carrying *Chi* and therefore are inimitable: No two versions of the same handwriting are completely identical, even by the same calligrapher.

In order to explore the aesthetic ambition of calligraphy, a calligrapher has to learn spontaneous movements by spending years copying of other masters’ works. They call it “*getting the spirit*” of other masters, “*transcending formal resemblance*” and “*becoming a master in one’s own right*.” (Tregear 1997)

Not only do calligraphers practice relaxed wrist and arm motions, which will translate themselves into fluent, life-giving lines, but many will attempt to put their body in a kinaesthetic state appropriate to the nature of the subject to be represented, or even

Figure 12: Artist C.C. Wang writing in cursive script
Courtesy Tregear, Mary. Chinese Art.

practice after heavy drinking where the person's condition it is considered more "natural" in order to capture the subtle moment of emotion and body spontaneity. When representing a stroke suggesting strength, at the moment the brush is applied, the sentiment of strength must be invoked and felt throughout the calligrapher's system and imparted through his/her arm and hand to the brush, thereby transmitted into the written stroke.

Indeed, calligraphy refers to spiritual practices in which the calligrapher develops a deeper understanding of *Chi* by receiving its transmission in symbolic disciplines for the body, and in pedagogically prescribed gestures, postures and attitudes.

Here we can see the sentient space at work: practicing calligraphy, one can actually feel the significance—it is tangibly present in the body, inhabiting the gesture, flowing through the frame from his/her toes to the head, from his/her arm to the finger, forming powerful concentrations of energy in the major region of the body, and focusing on his/her bodily felt experience in a way that puts him/her in touch with the intrinsic potentials that call for development. As he/she meditatively practices, he/she may gradually enter into the cosmic flow and dance with energy to discover ontological dimensions of Being and realize, in the medium of body autonomy, the transpersonal human potential-for-being.

3.5 Conclusion

The clarification of the role of the spontaneous sentient space in Chinese brush artwork, like landscape painting and calligraphy, may call for a thinking of Being which would

take place in the practical world of human existence, the role of this space in the process of self-development. Considering the Chinese garden as a form of self-expression and enlightenment for both the designer and the visitor, it is gone a step further by studying the classical Chinese private garden space as it is related to the role of the sentient space in the next chapter, and eventually studying in Chapter 5 how the potential for the sentient space to be incorporated in the digital multi-dimensional reconstruction of the classical Chinese private garden space to facilitate the visualization and multi-sensorally experiencing of its unnamely beauty.

Chapter 4

The Multi-Dimensional Sentient Space in Classical Chinese Private Garden

4.1 Prologue

In China, the garden was not only a refuge designed for leisure, conversation, the refined pleasure involved in drinking wine, reciting poems, playing chess and music, and practicing calligraphy and brush painting, but it was also a place reserved for spiritual contemplation. In fact, the classical creation of private gardens develops two quite different themes that are also essential aspects of the Chinese garden: One concerns with the expression of the profound philosophical influence of “*unification of Heaven and humankind*”. In the context of Nature, it makes the garden a deception without malicious intention, celebrating the harmonious and subtle rhythms of the *Tao*, and reflecting the mutations between the microcosm and macrocosm embodied in the Chinese natural mystic world-view of the simple and everyday, the modest and quiet, attributable to the work of Lao Tzu and Chuang Tzu ¹⁷; the other concerns with the growth of a rich, unique and fascinating connection between the art of gardening, the freehand brushwork style of landscape painting (i.e. mountain and water painting) and calligraphy, literature, theatre, music and sculpture. When the ideas in Chinese visual representation called for expression in the creation of gardens, the unique Chinese private garden was developed.

17 Chuang Tzu (399 - 295 BC) has always been an influential Chinese philosopher. He took the Taoist position of Lao Tzu and developed it further. He took Lao Tzu's mystical leanings and perspectives and made them transcendental. His understanding of virtue (*te*) as Tao individualized in the nature of things is much more developed and clearly stated. There is also a greater and more exact attention to Nature and the human place within it, which also leads to his greater emphasis on the individual.

In appreciating these gardens, one could easily reconstruct them in terms of contemplative natural poems, the slow unfolding of Chinese landscape scrolls and music. Their value lies essentially in the suggestions they make, the ideas they express and the charm they distill, revealing an intimate contact with untamed spontaneous sentient space proposed in the present thesis. Indeed, the Chinese garden is the cooperative production of imagination (i.e. heaven of inner strength) and life experience, in which a person feels that he/she is the agent through which the abundant potential of inherent primordial energy can be triggered. Still managing to convey and mirror the purity of Chinese artists' sensibility and mentality, these gardens strive for a final synthesizing perfection to create an illusion of unworldly paradise, which has the sense of deep timelessness and infinity that is free from the secular.

From this treasure trove, one may discover many valuable aesthetic theories and practical techniques. In this chapter, the focus is on studying how the potential for the multi-dimensional sentient space is to be incorporated in the classical Chinese private garden design to construe the illusion of an unworldly paradise as it is experienced. This study is thereby aimed to set the stage for the multi-dimensionally reconstruction of the Chinese garden in cyberspace.

4.2 Unification of Landscape and Artistic Conception

The beauty and attraction of the Chinese gardens lie in the depth within which a phenomenon of ambiguity is perceived through its highly intellectual landscape design incorporating artistic conception. Within this depth, the designer sought to make sense of

the world as created and emerging around him/her in order to unveil truth of *Tao*, which exists in the philosophical theme as the unification of Heaven and humankind. He/she relied on the role of embodied sentient space proposed in the thesis to bridge the gap between the conflicting ideas of *Yin* and *Yang*, reality and fiction, reason and imagination by translating them into an architectural-natural environment entirely of his/her own making. Therefore, the concept is often compared to a Chinese scroll landscape painting, where the artist is, through his mastery of techniques like the multi-perspective and moving focus, capable of expressing an inexpressible depth, by translating it into a space of human habitation.

Full of poetic meaning, the Chinese garden introduces temporality and spatiality, emphasizes the potential of synthesis of effects produced by the movement, and opens up possibilities of creating wholly new and an infinite number of different spatial experiences in a tiny space that would last as long as the movement. Here, pure visuality is a fallacy; the spatiality could only be realized in the vast, changing, and slippery realm of the sentient space as a construct of the body. Therefore, the form of the Chinese garden is not an accidental one-off product, but the result of both the application of a consistent set of design ideas, anticipating patterns of a visitor's physical movements and emotional responses within the estate, and the appreciation and mental reconstruction by the embodied, active subject of the inhabitant. Understanding these concepts makes the gardens of China even more interesting.

According to the book *Suzhou Gardens*, "*the creation of landscape and scenery of Chinese garden is always an emotional expression of scholars, painters and garden*

owners' high esteem of nature, their attachment to mountains and water, and their search for the beauty of nature". (Kuang, Zhang, 2000) The designers believed that landscape should be bestowed with human feeling. The unification of landscape and human feeling, and its expanded imaginary dimensions constructed the realm searched for in garden art, and ultimately formed the garden's artistic conception. Without the attached human emotion and feeling, and the very possibilities of undoing the dualistic opposition between the visible and invisible (*Yin* and *Yang*), the landscape is deemed meaningless.

Therefore, the artistic conception (*Xie Yi*), *which comprises the cultural atmosphere, poetic sentiment and lingering charm expressed by spaces of landscape and scenery*, (Kuang, Zhang, 2000) is the core of garden design. It concerns with the sentient space proposed in the present thesis that exists between the evoked metaphoric space (i.e. the poetic space of the montage and vantage as experienced), and the participating experience of the visitor through that space. One might suggest that, on the one hand, the garden designer's imaginary ideas, which are expressed by the artistic organization of spaces, buildings, rocks and water, and movement routes form the static structure of his imaginary creation; natural phenomenon such as trees, plants and clear sky, rain, snow, wind, shadow as well as garden artefacts furnish his creation. On the other hand, the artistic conception is also shared by the visitor at different dimensions, and opens up an ancient infinite realm that invites inhabitation and activates the imagination. Thus, the artistic conception appears even more important than the actual images of the landscape.

4.3 Organization of Space

As most of the classical Chinese private gardens have always existed in an extremely compressed area, the garden designer had to call on series of visual devices that were used to configure garden scenes in such a unique way that only fragments of the design were revealed at one time. These carefully controlled disorientations succeeded in creating a narrative procession to arouse the visitor's curiosity and expectations, making him/her feel at first surprised by the spaces, only to later realize that the experiences had been precisely orientated to draw the visitor onto a continuing series of visual discoveries. They eventually produce a highly dramatic and dynamic representation of the unlimited spatial illusion as it "could be".

4.3.1 Hierarchical Spatial System

The garden space was divided into numerous sub-spaces, which had different sizes and shapes, based on themes of famous locales in China, or well-known settings for literary and religious works. They formed a complex hierarchical spatial system. Generally, this system was made up of three levels of spaces. The area of rockery and ponds with well-designed "natural" shapes formed the first and dominant level located in the central space, surrounded by grouped pavilions, halls, kiosks, and so on, subdividing the rest into the various smaller and less dramatically designed courtyards and individual spaces, which formed the second level of the enclosed space. Then, clusters of the smallest spaces spread out to form the third and final level of the system. They were the most varied in their shape and character, when light, shade, color and texture were used to create perfect

Figure13: Schematic showing the layout of buildings in Chinese private garden to achieve mutual and intersecting views.

settings for display of plants, specimen flowers and sculptured rockery, giving the greatest sense of intimacy and tranquility. (Johnston, 1991)

Visually interpenetrating through latticework windows and cave gates, such set pieces of spaces were connected by the criss-cross network of covered walkways and free-winding pathways. These networks were the main arteries of the garden. The covered walkways were intended to provide shelter without detracting from the sensation of being with Nature and increasing the interpenetration from one space to the other with mutual advantage. Outside them, free-winding pathways were employed, through, around, and over the two main garden elements—rocks and water. Both components might be covered by elaborate and fancy mosaics of texture and color, in an attempt to deliver some cultural messages. They functioned not only as a connecting path between buildings, but also guided the visitor through the garden as one of the most important devices for creating “segmented” scenes. Like in the Liu Yun Garden or in the Zhuo Zhen Yun Garden, which illustrated a strong concern of the dynamics of movement in mind, they were manipulated to emphasize points of importance, where a heightened overview was required or where it was desired to introduce a feeling of calmness, leading the way through to special vantage points in the garden.

4.3.2 Compositional Techniques

In order to create a spatial system of great visual complexity and variety, and achieve the effect of changing a limited space into one with the unlimited visual experience of “*small appearing large*” in Chinese garden, high skills had been applied to set up a series of

Figure14: The zigzag walkway in Liu Yuan.

strategies to the changing of layers of views and the arrangement of a number of visual objects.

bu-yi-jing-yi (Literally in Chinese, “changing step, changing view”) is a design concept fundamental to Chinese gardening. By techniques such as *ge* (i.e. screen) and *qu* (i.e. curve), while qualitatively mutual and intersecting scenes emerged one by one as the visitor walks, it was used to configure the path that led to different thematic scenes throughout the garden and eventually constructed the fluid, dynamic viewing of the world in a utopian realm. This realm was called *qu-jing tong-you* (literally in Chinese, meaning a curved path leading to the secluded and quiet), one of the most important conceptions in the Suzhou garden.

The defining characteristic of *bu-yi-jing-yi* include that fact that it does not allow for an open view of the garden in its entirety. Using both tangible and intangible barriers, such as buildings, walkways, rocks and water, as well as plants and trees, isolated scenes along the path were alternately displayed and concealed one by one. They welcome the visitor at every turn, blinding and disorientating. This transformation from the bodily fragmented experience of the shape, contours, and material composition of the space into the inner world of imagination manifests a form of overlapped memory; a memory that contains the whole of all impressions recorded throughout the journey. For the very moment, this memory is refreshing and collaging, essentially between the inside and outside, neither fully fiction nor reality, thereby suspending the mind in Merleau-Ponty’s figure-background spatiality. At this juncture, the freed “prisoner” of the Platonic cave

could begin to see a fantastical vision, enabling the new impression of the surrounding world to take form.

4.4 Multi-dimensional Experiences

According to Stewart Johnston, visual experiences in the Chinese garden are generally two types: the one that was designed principally for static observation from a fixed position, and the one whose dominated impressions were gained while one was walking through the garden. (Johnston, 1991) Along the deliberately designed routes, these two types were arranged respectively, following the wishes of the designer. Planning for the journey was indeed structured to set up an interactive relationship between isolated scenes and the visitor, whereby the visitor became a participant in the creation and unfolding discovery of each aspect of the garden estate, emphasizing the explicit subjectivity of the experience.

Through the exploitation of contrast and the interplay of opposites in space- like solid and void, dark and bright, movement and rest, the straight line and the zigzag, etc., it opens up the possibilities that wholeness could be evoked through fragments, actively engaging fundamental dualities, such as light and shadow, or space and substance (void and solid), as a manifestation of Lao Tuz's dialectic of *Yin-Yang*. Here, no scene is completely independent of the others. Each was partitioned and also linked by architectural features—primarily walkways, lattice-work windows and caved door gates. Movement brings the dynamic element of time into the equation and this too was fully exploited by the designer, moving the eyelevel both horizontally and vertically so that the visitor

following the path through the garden could experience a constantly changing series of views, although never showing itself in its entirety.

Again, the design vocabulary was extensive and fully achieved by a full development of space compositional techniques known as the making use of opposite sceneries,¹⁸ open sceneries,¹⁹ divided sceneries,²⁰ and framed sceneries, as well as borrowed sceneries.²¹ They enclosed the interior and exterior views in a variety of “frames”, collapsed space and time into sequence of images, while capturing and holding the past, present, as well as the future simultaneously. It is this simultaneity that breaks the static character of the perspective and re-enforces a critical underlying theme present in garden through which the mysterious *Tao*’s work could be re-experienced and re-discovered.

Moreover, since light, shade and aroma create imaginary, the visitor’s sense of stability and certainty would inevitably have been displaced by the dynamic characteristics of space effects caused by the changing of weather and time, by the play of light, wind, snow, rain, and clouds, by the presence of constantly flowing and reflecting water, and by

18 Opposite sceneries: The key visual points of a Suzhou classical garden often contain landscapes and objects organized in a deliberate way, so that they form various opposite sceneries. But these are different from the symmetrical landscape of western courtyards, and follow a meandering plane, with new sceneries for each step. These opposite sceneries attract people’s attention by means of spatial change caused by the forward direction of roads and corridors, the entrance, the curves, as well as the front views that can be observed through frames of doors and windows.

19 Open sceneries: Landscapes, objects and line of vision are not in any way restricted or restrained, and the line of vision is wide, letting all landscapes be viewed simultaneously, these are called open sceneries.

20 Divided sceneries involve the use of a particular method to divide the views to achieve the rich effect of change, whereby there is “emptiness in substance”, “substance in emptiness”, “half emptiness, half substance”, and is mainly in the form of obstructing and partitioning sceneries.

21 Borrowed sceneries: This type of landscape makes use of good organization of vantage point and line of vision, and they let the exterior views collapse with the line of vision in order to expand the feeling of a limited space.

the aroma of flowers. It also varies through seasons, through the course of withering and blooming. Thus, the garden as a spatial context for the sensations would literally “touch people”, thereby constituting one’s dynamic perception of reality.

Furthermore, this experience can be enhanced by creating synaesthetic experiences: the transformation of acoustic and smell into optical phenomena to feel the stillness and unlimited of space by hearing the splash of water, sound of birds in the quiet wood, catching the fresh scent of pine trees on the breeze. These stereoscopic effects are produced by the presence and gestures of the visitor’s body within the garden. Beyond them, this very experience can be further animated regarding the cultural connotation and integration of the visitor’s personality and idiosyncrasies, as well as spiritual dimensions in the respective scenario: pairs of inscribed tablets or banners containing poetic messages with deep meaning associations, the characters used to describe a pavilion or hall in the garden to awaken the memory of a great philosopher or poet, thereby expressing a rich cultural atmosphere and satisfying the Confucian literati. There also exists the method of personifying floral landscape as a metaphor to make it possible to evoke the emotions in the views and views in the emotions, such as the solitary and ignoring of frost and snow of the plum, the modesty and moral integrity of bamboo, the seclusion and fragrance of an orchid, and the lotus coming forth from mud but unspotted...

In short, the real-time experiences of space throughout the garden estate that are evoked in the visitor are truly those he/she experiences in real life, and they give the viewer n-dimensions in which to be potentially inspired, convinced, and seduced to adopt new

ways of interpreting the imagined space of the views in the context of Nature, experiencing the philosophical notion of *Unification of Heaven and humankind*, in which the experiential journey functions as a form of bridge between the mental activities of the inhabitant and the sensory experience of his/her body, between spirit and matter, and allows a person to 'see' the world of Nature in its many dimensions. More importantly, here, while Nature is the essential muse for the Chinese artist's creative inspiration, it is also at the heart of a paradox that continues to linger in the work, by physically situating a person in the spatial gap between the world as he/she exists and the world as he/she imagines. It is only from within this threshold that it is possible for the visitor to clearly see these two realms and simultaneously understand that while each realm is distinct, it is shaped and finds expression through the other, and ultimately enables the visitor, while without knowing of certain designer's intended meanings for the metaphors, to use his/her imagination for translating the reflected images into ideas, words, or dreams. Eventually, it is from this threshold that the invisible become materially visible, and has the potential to light up the mind of the visitor who is open to it.

Thus, the internal garden space is always surprising, always new and mysterious. The experience of the garden, no matter how small an area it occupies, is one of utter and permanent disorientation, symbolizing the experience of a labyrinth, dissolving the notion of perspective. The participation and interactivity with the garden add layers of embodied experience that both reveal and conceal, although never resulting in a final clarification of the "idea" of the garden by proclaiming a temporalization of depth. The mystery in spontaneous sentient space proposed in the present thesis here is that: time is no longer linear, as is the narrative, the present is "thick" and reversible, and the disclosure of depth

in the garden space appears as a primordial dimension in time, distinct from the homologous “third dimension” of space that was reduced to an aesthetic object, reductive project or prosaic photograph.

This very experience can be analogous to the experience of montage in film. Engaging time as an “artistic material” essentially for the expressive potential following a narrative form, the cinematographic montage of sequences displays a gap between each juxtaposition and involves the audience at a spatial and temporal level. The audience is invited to participate creatively in the reconstruction of the tactile space suggested by the montage. As Sergei M. Eisenstein writes:

The power of montage resides in that it includes in the creative process the emotions and mind of the spectator. The spectator is compelled to proceed along that same creative road that the author traveled in creating the image. The spectator not only sees the represented element of the finished work, but also experiences the dynamic process of the emergence and assembly of the image just as it was experienced by the author. (Eisenstein, 1958)

Architecture and cinema have more in connection in the cross-translation of two-dimensional and three-dimensional space since they share the desire to give the living feelings of the human being their proper place in a constructed world. As one walks within the garden, he/she becomes a co-author: the movement of the observer is indispensable for the meaning of the appearing images. Certain elements of the composition become visible while others vanish, as a dialectic of revealing and concealing, operating in the untamed field of the observer’s spontaneous sentient space. Based on metaphoric analogy like the montage, the designer introduced temporality and

the necessity for the visitor to participate responsibly in the reception of the work of art, and created a distance necessary for self-conscious interpretation, a distance that Nietzsche believed to be important to learn to see, “*habituating the eye to repose, to patience, to letting things come to it, ..., the essence of it is precisely not to ‘will’, the ability to defer decision*”, (Perez-Gomez, Pelletier, 1997) in the end, evoked the experience of an embodied, subjective spatiality.

In the garden of China, the designer aimed to manifest this mystery as such, through its own temporality and dimensionality, and ultimately achieved the illusion of infinity on these manifold levels of “interpretation”. In the designs that were first conceived hundreds years ago, many features familiar to twentieth-century design are present. The manipulation of a person’s hidden dimensions of perception is a theme that has been employed by many modern designers.

4.5 Case Studies

4.5.1 Case Study 1: Analysis of Spatial Composition of the Central Portion of Wang Shi Yuan (Garden of the Fisherman)

Wang Shi Yuan is one out of four famed Suzhou gardens²², representative of their artistic characteristics and cultural value. It was first laid out in AD 1174 when the city of Suzhou was just being extensively rebuilt. In its history, it was restored by a government official named Song Zongyuan in AD 1770, who named the garden Wang Shi Yuan in

²² The four famed Suzhou gardens are: Zuo zhen Yuan (The Humble Administrator’s Garden), Liu Yuan (The Lingering Garden), Wang Shi Yuan (Garden of the Fisherman), and Shi Zi Lin (The Lion Forest Garden).

order to show that he was finished with politics, and sought to withdraw from society and escape from the secular world, which was influenced by Taoism. The existing garden today is, however, a product of the Qianlong period (1735-1795), when garden design was at its most popular and its designers were at their most skillful.

The garden is a typical private garden that combines with a residence. Differently from the garden space, the entire residential area was laid out very rigorously, manifesting the Confucian rules, but with rich atmosphere, by contrasting the calm and elegant garden area.

Inside the garden, the lake and the area around it constitute the centerpiece, and according to Chen Congzhou,²³ it is a perfect example of the small garden in the Suzhou style of China. The following is an account of one visitor's experience of this space:

Starting at the Xiao Shan Cong Gui Xuan and moving clockwise around the lakeside, there are the Zhuo Yin Shui Ge or 'waterside hall for washing the tassels of one's hat', the Yue Dao Feng Lai Ting or 'pavilion of the arriving moon and wind', which is raised slightly on rocks in order to stress its important and to ensure that here indeed 'the moon in the heavens and the wind rippling the water' may be enjoyed to the hall.

To the north of this is the Kan Song Du Hua Xuan or 'veranda for viewing pines and looking at paintings' which, as its name signifies, looks out outwards over ever-changing 'pictures' of the lake through two very old pine trees and cypress trees set amidst a rockery. Moving

23 Professor Chen Congzhou (1918 ~ 2000) is a famous contemporary well-known expert in Chinese ancient architecture and classical gardening in China.

clockwise along, the Zhu Wai Yi Zhi Yuan or 'veranda of the slanting bamboo twig' was named, as was the custom, after a line of poetry by the Song poet Su Shi (AD 1036-1101), which ran:

*A thousand trees darken in spring by the riverside,
Better still is the lone bamboo twig standing out of the grove.*

The appropriateness of this tag may be judged from the design of the covered way itself, which cleverly embraces the lakeside garden and the courtyard and the hall behind it.... The covered walkway continues to the She Ya Lang or 'duck-shooting corridor', which is an open pavilion set against the long high wall of the house.... From this vantage point there is an axially arranged view of the 'moon and wind pavilion' opposite. ... (Johnston, 1991)

Throughout the whole design of the central portion of the garden, the use of *bu-yi jing-yi* and perspective techniques like “borrowed scenery” and “opposite scenery” were employed to promote pairs of reciprocal relationships between buildings and rocks, both mutual and intersecting. Each building, therefore, becomes an element in the landscape composition for others, whether the view is from Yue Dao Feng Lai Ting to She Ya Lang, from Zhuo Yin Shui Ge to Kan Song Du Hua Xuan, or Zhu Wai Yi Zhi Yuan to Yue Dao Feng Lai Ting, etc. But along the cyclical route of covered walkways and free-winding ones, it was structured in such a way that the views were intentionally obscured and revealed alternatively, so, the spectator walking through the garden is sequentially experiencing a flow of enveloping and opening. The lake, also acting as a mirror, adds to the kaleidoscopic effect of color, light and shadow. Furthermore, the use of contrast and the interplay of opposites, (*yin-yang*) of the solid and void, of movement and rest, of the straight line and zigzag, enhance the optical illusion of great depth and distance, immerse

The small bridge and the rock

A view of the western pond

Plan of the Wang Shi Yuan

A night scene

A view of the northern pond

An outlook from the True Feeling Gate

Figure15: Analysis of spatial composition of the central portion of Wang Shi Yuan.

the visitor in a complex layered form of allegorical fiction, *make this small garden like a unique poem-of-few-words; a garden in a garden, a view in a view, giving unforgettable memories.* (Kuang, Zhang, 2000)

4.5.2 Case Study 2: Analysis of the Movement in the Entrance Sequence of Liu Yuan (Lingering Garden)

The Liu Yuan Garden (Lingering Garden) is located outside of Chong Men, Suzhou. As one of the largest gardens in this city, it was built during the reign of Emperor Wan Li (1572-1620) of the Ming Dynasty (1368-1644) by Xu Shitai who named it the Dong Yuan or the East Garden. During the Jia Qing period (1736 - 1795) of the Qing Dynasty (1644 - 1911), Liu Shu rebuilt it and changed its name to Cold Green Villa (Han Bi Shan Zhuang). Emperor Guang Xu refurbished it again and renamed it Liu Yuan Garden. This time, its name was changed by using a different Chinese character from its owner's family name but with the same pronunciation, so it could now be interpreted as 'to stay or to linger' as a place reserved for "long lasting between heaven and earth". (Kuang, Zhang, 2000)

Measuring more than 3 hectares in area, Liu Yuan can be divided into four scenic areas: the central area characterized by limpid waters and quiet, secluded hills, the eastern area comprised of double-eaved buildings, winding corridors and small courtyards; the western area with natural scenery, and the northern part with rustic scenery. Most buildings in the four areas were connected by a 700-meter-long winding corridor, which

Figure16: Analysis of the movement in the entrance sequence of Liu Yuan.

twists and turns with the terrain by spiraling up hills, spanning valleys, and skirting ponds. Liu Yuan has long been called "The First Garden in the State of Wu." Its characteristics include a unique composition and infinite variety. Groups of buildings were configured ingeniously to divide and compose the space into ever-changing garden scenes.

In order to hold the interest of the spectator on the journey to the garden such as the experiencing of music, and evoke wide and profound feeling when he/she arrives in the central area, like a preamble, a dramatic effect was applied to the first group of buildings at the entrance. Movement through the specially designed long corridor was controlled and directed in a series of planned visual experiences:

As the detailed plan of the main building spine shows, the first group of buildings is entered from the street, presenting a series of spaces, which act as a preamble to be negotiated before the garden proper. In these, the problem of covering a distance of only 50 meters (one minute of time) is resolved in such a way that it is a stimulating experience and not merely a transitory passage.

A chain of reciprocal techniques of design is used so that, within the limits of two walls, an incredible variety of differing areas is encountered. In essence, one element in the design is counterbalanced by its opposite; the spaces, for example, expand-contract-expand-contract. Lighting is similarly arranged: the brightest areas are those open to the sky to provide general lighting for the larger spaces; the smaller areas are darker, relying for light on wall openings, often concealed. The movement sequence also varies. Larger and more static spaces- lingering places- are joined by a corridor which turns twice before the first climax is reached.

Having thus been guided through the preliminary space, one now begins the introduction to the garden proper, at first mysteriously glimpsed through a series of fret-screen openings from the covered walkway while, at the same time, one's attention is attracted-

or distracted- by the natural beauty of a tree posed against the boundary wall. The route continues through this composition to a point where the view, filtered through a large decorative screen, opens to the lake with its surrounding rocks, plants and buildings. In this sequence there is a graduated revealing of the climax, which may be summarized as covered-filtered-open. (Johnston, 1991)

The sequence of movement through the winding roofed walkway behind the small entrance of the garden was highly controlled, and introduces the importance of *bu-yi jin-yi*, of rhythm and harmony, in space and time. Interestingly, the view is changing at every step. While leading to the places of quietude, juxtaposition of opposite views were exploited, thereby creating a series of framed pictorial compositions. The interpenetration of space had been consciously arranged in the design for the purpose of achieving a visual situation of multiple compositions, and evoking a wide range of emotive responses.

The world no longer stands before the spectator through perspective, rather, it finds its expression visually analogous to the essential quality of Chinese landscape painting, which demonstrates the diffuse arrangement of elements with a moving focus. By strolling for about 50 meters, one is acknowledged with a realization that the clarification of transparent space is replaced by the experience of a labyrinth, through an emphasis on the constantly-shifting play of big and small, straight and zigzag, and light and shade. Ultimately, the internal space is always new, always surprising and mysterious, and time is no longer linear, for the participation of the visitor adds up layers of experience that are both revealing and concealing, although never resulting into a final clarification of the idea of the space.

Therefore, depth here is reinvested with a mysterious quality, and appears as the crystallization of some sort of musical notation, ultimately made "real" through manifold levels of "interpretation". It seems that the designer intended to confirm the idea that the garden must both reveal and constitute itself through experience-an inquiry obsessed by modern architects and artists, who strive for a world of appearances, coupled with the careful construction of temporality that is realized by embodied experience.

Chapter 5

Revealing the Ephemeral via New Media: Digital Exploration of Classical Chinese Private Garden

*The most critical function of representation is that of externalizing our thinking in time and place, of giving form to ideas. The value of placing thoughts outside our heads is that we can then look at them from different perspectives. We are able to reflect on ideas, to absorb them, and to reconsider them. Just as different instruments render different experiences of a piece of music; different representations have the potential to give us different understandings of our ideas.*²⁴

Paul Laseau

At the gate of the new millennium, architecture is challenged by information technologies. Architectonic space has usually been considered as static space, static being an object or container. But now people are experiencing an extreme liquidization of the world, of architecture, and of the human bodies. This liquidization is a situation where everything becomes mediated, where all form is blended with information, and constantly being informed by outside influence and inner coherence, thereby expressed in a plastic metastability. Nothing, no object, and no function can stay isolated, and everything is always in a process of transformation into the next.

²⁴ Laseau, Paul, *Architectural representation handbook: traditional and digital techniques for graphic communication* (New York: McGraw-Hill, c2000). In this groundbreaking book, architect, designer, and prominent educator Paul Laseau covers the entire scope of architectural representation--traditional, new media, hybrid, and emerging--and their roles in design, brings showcase examples of representation into specific design contexts, giving architects, designers, and others a real sense of their variety, subtlety, and usefulness as tools for navigating the full spectrum of architecture. In this book I adopt Laseau's idea that "we should expand the concept and option of representation to the design activities as seeing, thinking, and communication."

While cinematography seems to be able to construe the experience of architecture as it could be, the representation of architectural space through digital construction, equally be able to engage solids and voids through temporal depiction, seems to offer immense possibilities. By borrowing concepts from the art of film production and utilizing camera articulation and light manipulation techniques in space design, new computational techniques make it possible to increase the range of exploration of dimensional changes, lay multiple layers of experience, and activate this knowledge in many new ways:

In the domain of flux, the digital environment, through programmatic and constant transformation from being into becoming, provides the ultimate material flexibility and gravitational freedom for the unrestricted and unattempted manipulation of geometry and form. Emphasizing the potential for the computer to transcend its binary logic and become a tool for poetic disclosure, digital architects are stressing random access as opposed to linear memory by accidentally clashing objects, aimlessly collaging fragments, and casually montaging artifacts. Separate infrastructural layers may be classified, calculated and tested individually, to be subsequently interwoven to achieve both effective flux and effective interaction. Advanced color-texture mapping techniques are then applied to amorphous surfaces, by intentionally collapsing multi-lighting sources. Hence, in the wake of film and video, it is now easy to explore different, surprising dimensionalities in cyberspace, where interactivity is almost natural, and supported by computer artificial intelligence.

After the inactivity of the body during the past periods since space was perceived from a static point, people are now in the dynamic period in which the body is unstable, where

time and space are perceived as instants, as events instead of permanent realities. The displacement of the body inside the virtual space, the instability generated by movement and the instability that creates movement manage to change the way of perceiving space through all the senses. Conscious and unconscious sensations are evoked. One now enters into the state of autonomy in that it denies monumentality's static time, but instead reclaims presence, an infinite extension of the "now", while it is able to specify all elements -- symbolic, technical, and social -- that could contribute to a project. Autonomy here is the desire and the ability to perceive, to think and to labour within the entire complex sphere of the real. It enables the establishment of some tensions and passions between idea and concrete reality, waiting for the power of the sentient space proposed in the present thesis to turn one into another. The architectural representation work becomes an unfinished object, and a permanent continuum of projection that could define itself and be defined socially through use.

A new role for the architectural representation is thus taking shape as a co-producing technician, organizer and planner in a highly structured, cooperative system supported by computer technology. Engaging time in the visual experience and participation in events, ephemeral architecture constructed in the digital environment could conceivably function as a site for imagery and reverie.

This chapter documents the multi-dimensional digital reconstruction of the Chinese private garden-*The Wonderland*, which is a design prototype completing the thesis research into an architectural investigation of the interrelationship between architectural forms, filmic sequences, movement, sound, tension, and interactivity in digital

construction. The author's prime interests are to discover the new significances in enhancing architectural creativity and stretching imagination that could be revealed by altering the stability of architectural skins and constructing different lighting environments, and the new ideas, which concern the whole sub-text of gardening, that could be involved in the sheer interplay of these plots. This digital wandering was approached as a mental navigation aimed to allow the exploration of subjective dimensions related to the imaginary journey in the spaces of Chinese garden, regarding the sentient space proposed in the present thesis as a continual re-making or the space of recognition, creation and participation. It should be primarily conceived as a field in which everything is in a state of openness and non-fixation, capable of conveying autonomy, not only by the organization of space but also the revealing of its potential status as a "receptacle of ideas".

In *The Wonderland*, the unique architectural forms and spatial arrangements were extracted from the central portion of the famous Suzhou garden, the Wang Shi Yuan. Those constructions essentially carry the transformation into other often fantastic worlds, indicative to realms that one might recognize, exemplified in forms of constructed memory, hallucination, or *déjà vu*, without necessarily fully grasping their origins.

The collapse of architectural structure into the dynamics of fluid texture, as the crucial component of fundamentally set dimensions, has been entrusted for both narrative and compositional purposes. These fluid skins of cloudy transformation thus imbue the building with motion, and form the network in which the mind moves around freely, trying to grasp the intangible and the space-time factor that joins them together. These

magic activities of the collapse, as they are projected onto the surfaces of walls, roofs, floors and water, execute the task as mediator between the faculties of reason and perception, signalling the role of imagination. And it is through this mediation that a poetic vision realized in space-time is speculated to get materialized as one thing in the in-between. Eventually, these series of work challenge human perception and its extension for appearance, tactility, and visual and physical instability, and prompt people to question their place and role in this world, through their relationship with space in all its constructs and with time.

The animations emanating from video and computer renderings serve to narrate a type of visual story undergoing the multivalent experiences of moving through the work, following the narrative structure in order to convey fundamental architectural themes in the process of this hybridization as the underlying order of the work.

The viewpoint changes induce the perception of body movement. From the beginning, one integrates the necessity of displacement and movement of the body in space into human thinking. The effect is further enhanced by the presence and gestures of the spectator's virtual body moving with the camera. One senses his/her motion as the camera dollies through a scene. The digital camera, as an invisible agent to support the experience, undertakes the task of taking shots from impossible standpoints for the human viewer, and enables him/her to fully explore the dynamics of graphical composition. The succession of points of view, which may appear as instability, generates a dynamic vision of space. Contours fade, and forms become fluid. The

variation of perspectives and the sequential articulation of computer images create a permanent tension and a sensual ambiguity in the perception of space.

Light, as a component of the dimension set, has been created and manipulated to influence the perception of objects, spaces, and specific atmosphere, in accordance with the multi-dimensional space design.

Music, with its dramatic contribution in shaping the evocative character of the virtual investigation and in conveying abstract meaning through the unfolding of navigation, was instrumental to establish the aesthetic energy of the overall navigation. It adds to the digital space some richness to the silent mental tension with its specific ability to selectively focus on a certain idea while the rest of the imaginary energy is still present and perceived as a fully reality, although retreating in the background of dominant thought.

The spectator has been regarded as both reader and participant in the unfolding of the work. *The wonderland* dynamically engages the spectator within the often-fluid intersection of two worlds: the physical world as existed was indicated by the monochrome images; and the private inner world as imagined was suggested by the familiar and foreign geometries, surfaces, and animations in the colorful 3-D computer rendering sequences. Here, external and internal stimuli are presented, incomprehensible forces belonging to the intangible, ephemeral worlds exercise their contradictory powers to transform the relationship of 'being observed' to that of 'being inhabited', and eventually suspend the viewer between the dualities of the inside and outside, solid and

void, static and moving, light and darkness, real and fiction, while manifesting his/her heightened and substantial existence.

Ultimately, instead of directly copying the formal vocabulary of the classical Chinese garden, an alternative is created by well-established Western technologies. It criticizes the monumentality of traditional perspective, allows the poetic articulation of architectural space as a reconstruction of the experience-heightened reality of the unreal, only to be completed by body movement throughout the spaces. Material, light, shadow, reflection, colors, forms, music as well as tension, procession are all tools in the digital environment to create space that awaken the senses. The relationship between human beings and the presented architectural space is no longer polar or dialectical, but “immersive”. A significant distance has been established. One can quite literally be swallowed up in it. Architecture and the space it occupies become a realm of constant discovery in which nothing is out of bounds.

Figure17: Detail of *The Wonderland 1*.

Figure18: Detail of *The Wonderland 2*.

Figure19: Detail of *The Wonderland 3*.

Chapter 6

Conclusion

The present thesis proposes a new approach using the new media tools as a basis for the representation of the architectural ideas with the intention to help make the architect's vision more understandable and accessible. This approach is based upon a set of beliefs²⁵ upon which the represented architectural work, as a domain of the temporal and spatial, is mainly addressing the realm of subjectivity. Therefore, it is not necessarily an approach seeking for concretized forms of expression, but instead articulating visionary projection and critical thinking with ambiguous but experiential and suggestive scenarios anticipated in the final execution of the representational work. The thesis argues that it is crucial and essential for the representational work to establish a distance within which, on the one hand, it could provide the vehicle to spatially explore the architect's concepts and ideas that may have appeared in the mental representation of the architect, on the other hand, physically and metaphorically, it could interconnect the spectator's embodied experiential and subjective dimensions in order to ignite and augment his/her imaginary ideas.

This idea is presented in the digital thesis prototype—*The Wonderland*. In the field of changes constructed as the significant distance, the designers and the spectators could become active readers of this spatial text put forward in different forms – photographic or filmic materials, 3D models and renderings, to name but a few, mixed with everyone's personal experience, which the reader in turn simultaneously transforms into the interpretation through his/her appropriation. In these graphical readings, due to the

²⁵ Here, the beliefs are Plato's Chora, Norberg-Schultz's Existential Space theory, Merleau-Ponty's Phenomenology of Perception, and the Taoism, *Yin-Yang* cosmology, as well as the traditional Chinese philosophy "Unification of Heaven and humankind".

artistic character of people's parallel sentient space proposed in the present thesis as a space of engagement, this significant distance may allow visionary projections and critical thinkings to be added to the world that is represented.

This research is accordingly aimed at a simultaneous clarification of the concept of sentient space - the utmost open and primordial field of being manifesting human engagement - in the thesis as a philosophical breakthrough rooted in Western light, and the fundamental concept of traditional Chinese visual representation and gardening. In terms of self-development as human beings, the sentient space is a dynamic complex, created and maintained during mental development through the constant interaction between the individual and his/her environment. It necessitates qualities of communication, sensitivity and respects for the nature of human creation and participation as being equally important for the successful outcome of the project. As a result, it satisfies one's desire to create an intellectual equivalent for the particular complex that he/she experiences, illuminates the space of the individual and collective human existence, of culture, and eventually enhances the infinite freedom of self-expression in art and architecture. Nowadays, the sentient space inevitably features visionary digital artworks emerged from the conjunction of cybernetics (2D, 3D, interactive techniques, installations, virtual reality, multimedia, telecommunications, web art, and animation) and human vision, permitting a flexible and programmed adaptation to the individual backgrounds, and helps construct the significant distance in which one could re-experience, re-examine, and make sense of the human bodies, technologies, and culture.

Beyond that, this concept aspires to draw attention to the multitude of hidden dimensions²⁶ of human perception and subjectivities other than the Euclidean space (where no ambiguity is allowed). Also, it attempts to, as a special interest, disclose the potential for the digital multi-dimensional reconstruction of the classical Chinese private garden space in order to facilitate the visualization and multi-sensory experience of its unnamely beauty, which it is within our capacity to enjoy, by the grace of that wonderful and most precious gift, the gift of a human engagement.

Today, architecture strives to organize itself into different configurations simultaneously, and attempts to hybridize spatialities nourished by technology and media. People now live in constantly changing surroundings defined by a hierarchic ordering of all political, economic, technical and social parameters whose contours are indefinable and uncertain as much as by their own sense of themselves. Finding the accurate and effective ways to make the representation relevant to this existence is what interests the author most. The architectural representation has the role of identifying this existence, extracting and transforming its many systems into a spatial construct, which must be brought to bear on the realization of this complexity, with its multi-layered systems demanding a new spatial order to discover ways of bringing resolution/understanding to this existence.

Since new media technologies struggle to provide more advanced and sophisticated environments, facilitate to improve user experience, flexible interpretation, real time capabilities, and limitless retrieval and dissemination of information, they may inevitably advance the human communication and engagement, as well as learning, discovery and

²⁶ Here, the hidden dimensions indicate the space of Chora, the existential space, the bodily perception, body motility and the phenomenological spatiality illustrated in Chapter 2.

projection. The architectural representation work via new media tools will provide vehicle for this generation to share experience, bring the best of the culture and heritage to the global consciousness, create assemblies that are tangible and plastic in order to encourage further experimentation of the never actualized worlds projected by architects and designers in ways that would have been inconceivable in the past, and eventually become part of the universal shared heritage.

Accordingly, if one takes on the role of architectural representation as mediator between many variables that seek to the meaning of a project, he/she may need to extend from this proposed approach to establish a broader ground along a “two-way street”: the external condition of the artificial environment constructed by technology, and the internal condition of human existence.

Nowadays, the artificial space is mostly the space in the computer screen; thus, regardless of how sophisticated the workstation maybe, questions of perception are always limited to vision (or primarily to vision). It is usually assumed to be a purely intellectual process, entirely the product of imagination, leaving the expressive body, the origin of all communicative action, untouched. The proposed approach could be enhanced by encouraging real-time experience through applying the results of the virtual reality system research. The architectural researcher may interact with spatial simulation in real-time in the cyberspace, model an image that situates objects and associates sight, sound, touch, or maybe smell and taste, test the relationship of gesture and meaning, scale and movement, engaging naturally the full body from the constant negotiation and

reconciliation between senses by wearing a set of devices such as headset, data gloves, and body tracking system.

The mentalities²⁷ and our understanding of space seem to be mutually dependent. Alan Kay, computer scientist and theorist, suggests that “because none of the mentalities is supremely useful to the exclusion of the others, the best strategy in computer interface design would be to gently force synergy between them in user interface design.” (Anders 1999) The proposed approach may be also enhanced through applying the results of research in the area of artificial intelligence, cognitive psychology on issues like how people use mental and physical space to help think and make judgement, how people imbue the physical environment with meaning, externalizing thoughts. The representational work may be further organized by programming behaviours of light, colors, textures, forms and human events, and adjusting them based upon the results of these researches with the support of new media tools.

In short, the architectural potential of such a representation today depends on how it mirrors the people’s vivid landscape and be uncertain in its relation to others, the physical landscape, and themselves. One may need to build it as an open, participating site for inhabitation rather than standing out from it. It demands the distance implied by interpretation in order for the meaning of architecture to actually exist. Such an architecturally representational work would thus be an effective place in such a way that

27 In the book “Envisioning Cyberspace: Designing 3-D Electronic Spaces”, Peter Anders divides human mentalities into three levels: the enactive mentality helps human beings navigate, sense and react to the external environment. The iconic mentality lets people recognize, identify and compare objects. Finally, symbolic mentality helps people think abstractly and connect long chains of reasoning. People use these facilities in conjunction with tools to do the physical and mental work.

it does not just communicate, or document information, but becomes somewhere people can feel at home.

The following paragraph is written as a reflection on the comments the thesis defense jury articulated:

If the significant distance of sentient space in visual representation of traditional Chinese Suzhou gardens was constructed by the sensible temporality and spatiality, it will evoke active subjectivity in its many dimensions of universal experience. The immediate presence of the corporeal, as well as various layers of social and cultural influences will then further distance themselves in VR environment, which could be enhanced by well-established computer interface and computer peripherals. It will be manifesting the human-computer interactivity supported by artificial intelligence. Dream, childhood-like memory, hallucination, and *déjà vu* are believed to oppose to reason. Reason is always related to reality, and perception is not reality but drives reality. Within the VR environment, everything is revealing itself to the person, presenting the person into the world that is analogous to dream or childhood-like memory. Even though the computer is a physical artifact, the VR environment is not. In fact, the computer straddles both concrete and symbolic worlds and becomes itself a space of Chora.

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