The tectonic quality of Miesian space is explored in the context of Oriental ideas that may have been a decisive factor in its development.

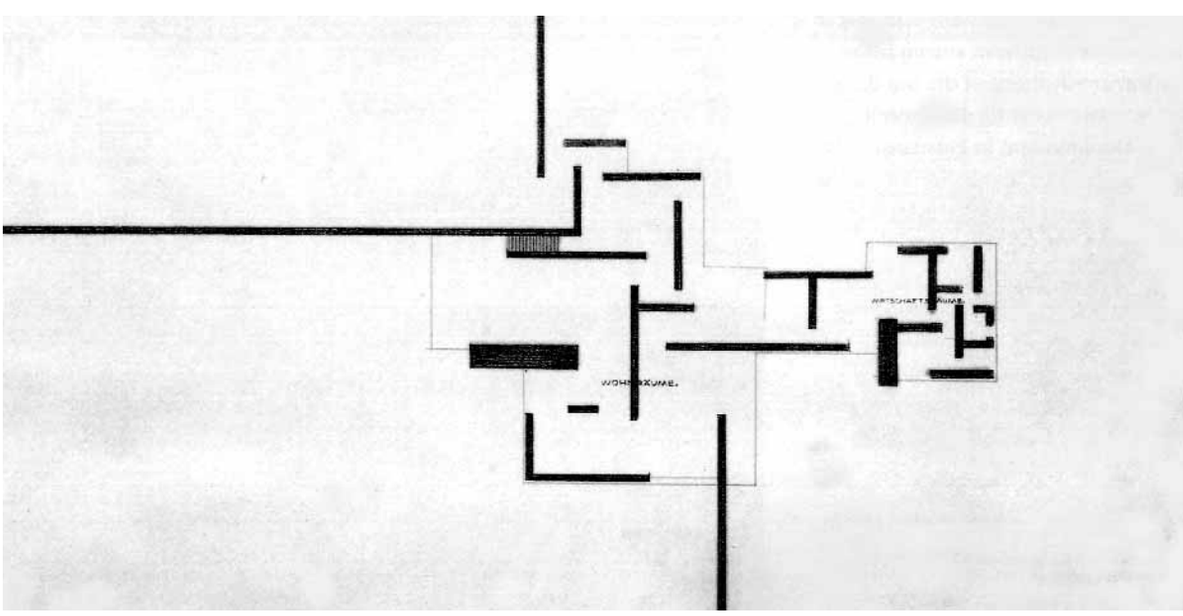
The tectonically defining space of Mies van der Rohe

Ransoo Kim

In a unique architectural style of the twentieth century, Ludwig Mies van der Rohe (1886–1969) realised a new type of modern space defined by an unobstructed clear volume enclosed by framed glass skin. This is generally referred to as Mies's universal space and this paper will attempt to interpret Miesian universal space in terms of the idea of tectonically defining space. Mies referred to the term 'tectonic', or 'architectonic',[1] as constructive appearance exposing the skeleton structure. For Mies, the concept of tectonic was connected to a glassy materiality that permitted the unambiguously constructed appearance of a skeletal structure. He regarded the glass skin as a 'tectonic means' and the instrument of a new art of building.

Etymologically, the term 'tectonics' derives from the Greek term *tekton*, signifying 'carpenter' and resembling *tectonike*, which implies the knowledge of carpentry, or 'the *techne* of carpentry'.[2] While *techne* indicates art or craft in all fields, tectonics implies the art of carpentry, that is, the art of architectural construction. Materially, one can understand tectonics by contrasting it with 'stereotomics', both terms deriving from studies of the technical arts by Gottfried Semper. In contrast to a massively constructional or stereotomic type in which solid mass is piled up, carpentry represents a linearly constructional, tectonic type in which lightweight framing elements are linked by joints.

While stereotomically confining space signifies a physical space enclosed with massive walls, the tectonically defining space of Mies includes philosophical concepts beyond physical confinement. However, it is also distinguished from so-called universal space. Mies did not actually use the term universal space, but he referred to it as an 'open room',[3] an 'open space',[4] an 'open plan',[5] a 'free plan',[6] or a 'clear, uncluttered space'.[7] The last term more concretely characterises both ideas of the undivided volume of interior space and the vivid expanse between interior and exterior spaces. In the Museum for a Small City project of 1943, Mies presented the innovative art of building that combined framed skeletons with a fully glazed skin. All sides of the interior space were visually extended to the surrounding environment by a transparent skin, becoming 'a defining rather than a confining space', as stated in Mies's description. He created a new framework of space in which works of art or interior objects were vividly delineated against the changing nature outside through the medium of his 'almost nothing' frames. The approach of this



1 Floor plan of the Brick Country House project, Potsdam-Neubabelsberg, 1924

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article, which posits the decisive role of the changing potential of voids and nature beyond tangible architecture itself, differs considerably from existing interpretations of Miesian space including that of Werner Blaser, who discussed the similarities between Mies's architecture and several Eastern philosophies without describing any reliable interpretation of the link between them.[8] However, this research has derived important evidence from Blaser: that Mies was familiar with Lao-tzu's philosophy.

Mies's statements on space

In the 1920s Mies presented a novel idea of space by visually demonstrating it with architectural drawings. In the project for a Brick Country House in 1923 *[1]*, he created an open plan by abandoning individual rooms and composing freely with masonry walls. Mies designed a continuously connecting space in which neighbouring rooms are open to each other, leading to an open view limited within a frame of a masonry exterior wall. From the point of view of spatial extroversion, one can see that Mies's spatial concerns moved from the inner effect of loosely connected space in the project of 1923 to that of more dynamic space extending to the landscape beyond glazed walls in the manuscript of 1933, which stated that 'they permit a measure of freedom in spatial composition that we will not relinquish any more. Only now can we articulate space freely, open it up and connect it to the landscape'.[9]

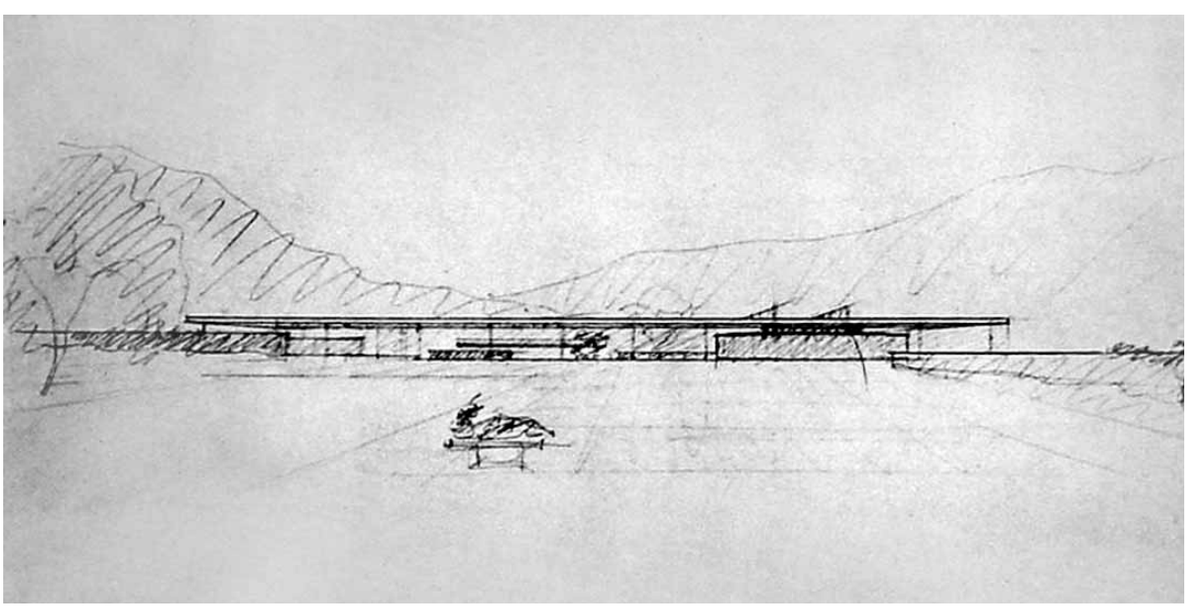
Mies created a new 'series of spatial effects'[10] in 1923. However, this flowing space was still enclosed by solid brick walls that protected inner space. He attempted to create freestanding walls, which played a major part in his open plan, but some critics remarked that Mies's freestanding walls of the Brick House had been inspired by Wright's or De Stijl's compositional approach.[11] During the study of the Barcelona Pavilion in 1928, Mies innovatively conceived a freestanding onyx wall that characteristically articulated inner space and produced a dynamic force between the material and compositional effects of the wall itself and the complementary effects of the bright landscape beyond the full glazed walls. In the 1933 manuscript referred to above, Mies discussed the need for the full glazed skin in terms of not only the free articulation of inner space but also the continuity of space that allowed open views towards the landscape, stating that his open plan could not fully exist without glass walls. The idea of the Miesian open plan, extending to the landscape, was also found in the description of the project of the Hubbe House of 1935:

> *The beautiful view was to the east; to the south the view was dull, almost disturbing. This defect would have had to be corrected by the building plan. For that reason I have enlarged the living quarters by a garden court surrounded by a wall and so locked out this view while allowing full sunshine. Toward the river the house is entirely open and melts into the landscape. Thereby I not only entered into the situation but obtained a beautiful alternation of quiet seclusion and open spaces.*[12]

His remarks of 1933 and 1935 maintained the context of spatial openness and extension. Mies intended to design the living space of the Hubbe House so that it opened to the contemplatively beautiful scenery. Although he had successfully established his architectural identity around 1930 by realising new types of open plans, such as those of the Barcelona Pavilion or the Tugendhat House, Mies's open plans evolved into more clearly free plans in which the landscape outside attained more influence on the interior space, as stated in the following description of the 'Museum for a Small City' project of 1943:

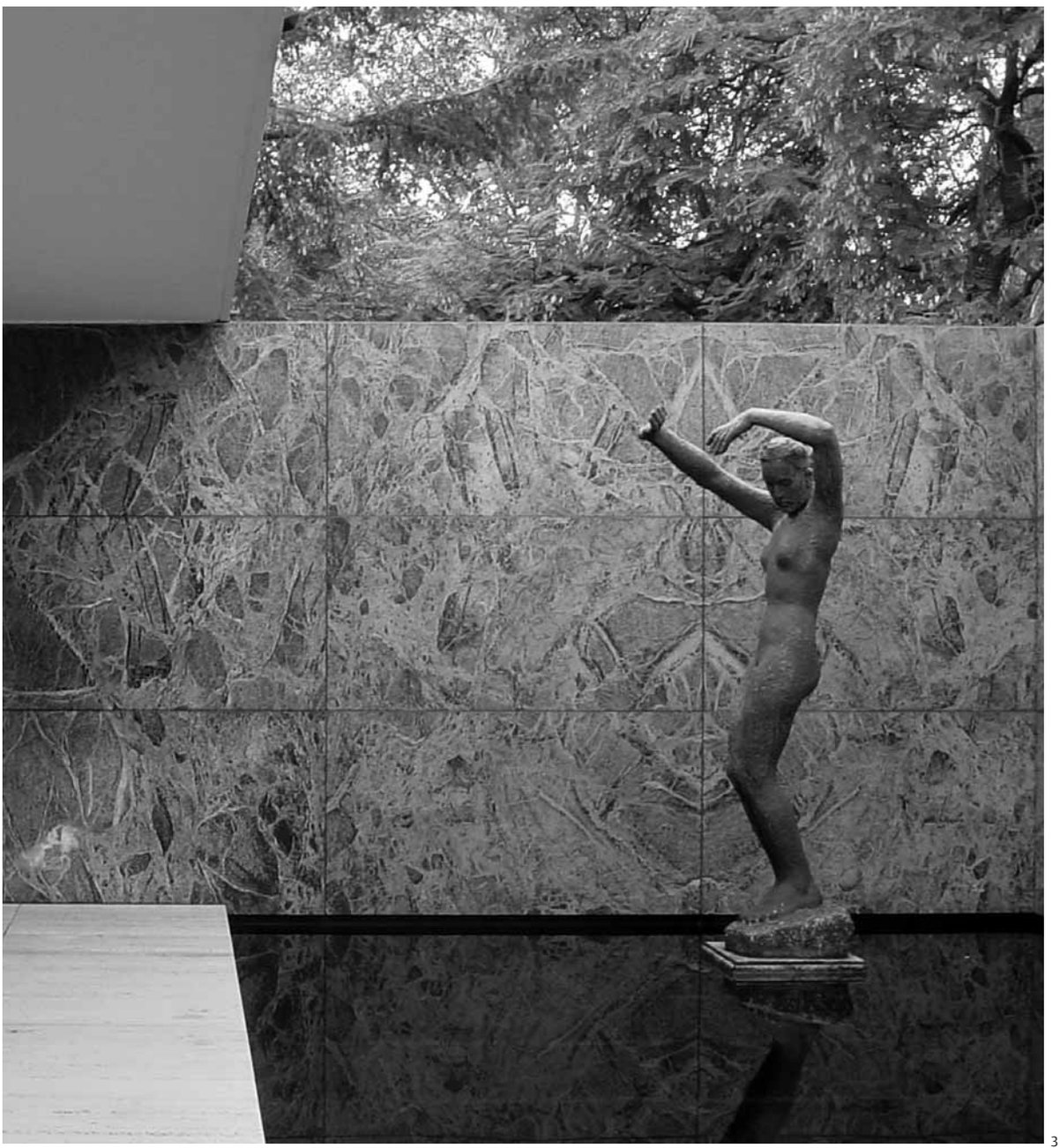
> *Interior sculptures enjoy equal spatial freedom because the open plan permits them to be seen against the surrounding hills. The architectural space, thus achieved, becomes a defining rather than a confining space. A work such as Picasso's Guernica has been difficult to place in the usual museum gallery. Here it can be shown to great advantage and becomes an element in space against a changing background.*[13]

The Museum's steel frame *[2]* had three elements – a floor slab, columns and a roof plate – and Mies explained its 'open plan' as being a space 'conceived as one large area, [allowing] every flexibility in use'.[14] In 1958, Mies explained that his 'free plan' required inner freestanding walls separated from the outer glass plane: 'The free plan asks for just as much discipline and understanding from the architect as a conventional plan. The free plan for instance demands that closed elements, which still are a



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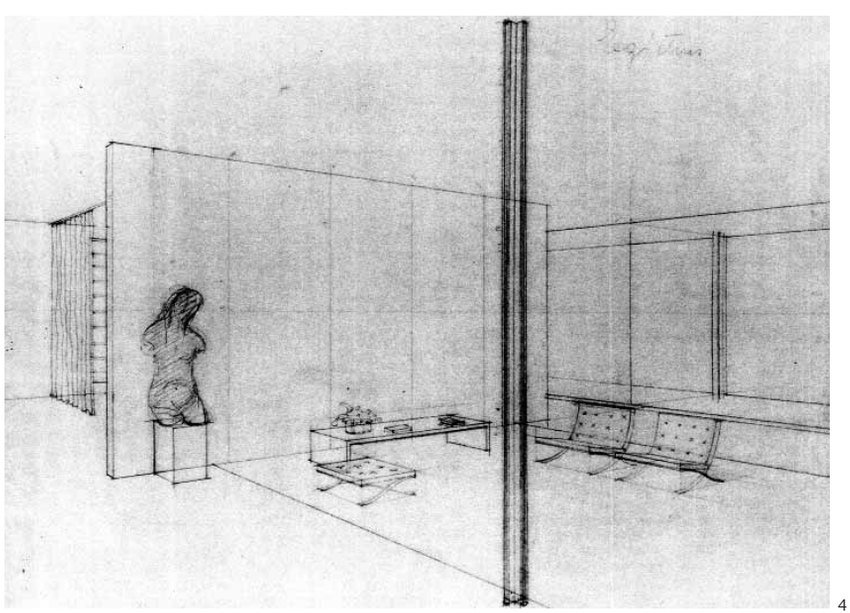


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2 Sketch of the external view of the Museum for a Small City project, Chicago, 1943

3 Kolbe's sculpture in the pool of German Pavilion, International Exposition, Barcelona, 1928–9

4 Interior perspective of the living room of the Tugendhat House, Brno, Czechoslovakia, 1928–30



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necessity, are set back from the outer walls, as done in the Farnsworth-house. Only in this way one achieves a free space.'[15] As the transparent outer skin exposed the entire interior space, it was difficult to prop objects against walls or to provide visually isolated rooms. Therefore, the visually enclosing and confining purpose of space was imposed upon the freestanding inner walls. Mies was intent on maintaining a new spatial system loosely enclosed by interior freestanding walls but entirely open to the outside environment.

The museum project of 1943 was fully glazed to create a visually undivided space between the inside and the outside. Accordingly, architectural space, in Mies's words, became 'a defining rather than a confining space'. He suggested a new idea of space in which works of art, instead of being situated in confined rooms, were set in spaces that enhanced their characteristics because the background of the spaces in which they were displayed was changing and revealing works of art more characteristically. Mies's open plans developed in two stages: in the Hubbe House of 1935, Mies designed an open plan conditionally confined or open by solid walls, whereas in the museum project of 1943, he attempted to create a tectonically-defining open plan, in which four-sided fully-glazed walls replaced stereotomically solid walls. In order to fully accept the spontaneous and inexhaustible force of nature, Mies designed his open plans based on the art of framing construction.

Intending that people experience the surrounding hills as the changing background of works of art, Mies defined his space as 'changing' by drawing living nature into inner space. By comparing Mies's open plans around 1930 with that of the museum project of 1943, one finds that his freestanding walls serve not only as the background of the Kolbe figure in the Barcelona Pavilion *[3]* but also for an anthropomorphic sculpture in the sketch of the Tugendhat House *[4]*. In the museum project of 1943 the surrounding hills begin to assume this role.

Comparing also Mies's account of 1935 and that of 1943 above, one finds that he did not use the words 'open' and 'landscape', but instead used 'changing' and 'surrounding hills' in his description of 1943. One should note the change in Mies's attitude towards nature in the creation of his open plan, as he did not use the term 'landscape' in the description of his open plans after 1943. Like Mies's terms, the meaning of landscape includes both a humanised landscape and a natural landscape. Moreover, in his description of the Hubbe House of 1935, his term signified an aesthetic representation in which natural scenery was the main subject of a beautiful 'view'. In 1935, while he regarded the landscape outside the glazed skin as a vista aesthetically providing spatial continuity, he revealed the surrounding hills as a spontaneously animating element in 1943. In other words, Mies accepted the changing nature outside as a defining background complementary to the works of art inside for the enhancement of dynamic forces in the interior space.

Mies's statements of 1943 revealed that he began profoundly to recognise the meaning of nature as a living force in his open plans. In his later buildings, one finds that he focused on a tectonically free plan maximally open and at the same time actively accepting the changing environment outside. His tectonically defining space, established on the basis of technological construction, simultaneously evoked Far Eastern sentiments that valued potential emptiness over structural frames. Although Mies did not publicly mention a relationship between his architecture and Lao-tzu's philosophy, this study proposes that his contact with Lao-tzu's conception of space promoted his idea of tectonically defining space.

Mies's collection on Lao-tzu's philosophy

In the nineteenth and twentieth centuries, Europeans became aware of Lao-tzu's philosophy through various routes. For example, Martin Heidegger, a contemporary of Mies who had become acquainted with Taoism before 1930,[16] attempted, but never completed, a translation of *Tao Teh King* into German in 1946. Frank Lloyd Wright confessed that 'my work is, in that deeper philosophic sense, Oriental. These ideals have not been common to the whole people of the Orient; but there was Laotse, for instance.'[17] Analysing Wright's statements, Kevin Nute assumed that Wright was familiar with Lao-tzu before his first visit to Japan in 1905.[18] In Rudolf Eisler's 1922 *Handwörterbuch der Philosophie*, which Mies owned, the meaning of 'Tao' was defined and Lao-tzu's *Tao Teh King* concisely introduced.[19] The first translation of *Tao Teh King* was published in 1868,[20] and since that time more than 100 different versions have been translated into English. Besides Eisler's dictionary, Mies owned the following books[21] which described Lao-tzu's philosophy: F. S. C. Northrop's *The Meeting of East and West* (1946); Amos Ih Tiao Chang's *The Existence of Intangible Content in Architectonic Form Based upon the Practicality of Laotzu's Philosophy* (1956); and a translation of the *Tao Teh King* (1958).

Tao Teh King is composed of eighty-one chapters constructed in poetic form. The phrases are ambiguous but their meanings can be so profoundly sensed that the ideology of Lao-tzu, second only to that of the great sage Confucius in Chinese culture, has deeply affected the spirituality of Far Easterners. Whereas Confucianism has influenced the Chinese in communal, public, political and ethical ways of thinking, the Taoism of Lao-tzu has deeply affected them privately by suggesting the wisdom of shunning every earthly distraction and concentrating on life itself. F. S. C. Northrop, in *The Meeting of East and West*, described that in contrast to Western, scientifically-postulated space, 'Taoist aesthetically immediate manifold'[22] signified the intuitive embrace of sensed nature and an introspective self *[5]*. Thus, the aesthetic nature and the aesthetic self become an undifferentiated continuum that Northrop identified as the Tao of Taoism. According to Northrop, only if one regards the aesthetically undifferentiated continuum as ultimate and irreducible, will that individual properly comprehend nature or appreciate art. In Mies's description of the Hubbe House, in which he recounted that 'toward the river the house is entirely open and melts into the landscape', one finds that Mies strongly intended the residents of the house to experience oneness between the house and the landscape outside and reach an ultimate state in which the aesthetic landscape and the aesthetic self become an undifferentiated continuum.

Mies also had in his collection Amos Ih Tiao Chang's architectural theory book, which interpreted Lao-tzu's concept of space from an architectural point of view. Mies's English edition of *Tao Teh King* used the

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5 Taoist painting of sage contemplating nature. Illustrated in *The Meeting of East and West*, 1946

term 'hollow space'[23] instead of voids, but original Chinese texts preserved words that corresponded to the meaning of the 'void'.[24] In contrast to the equivocal interpretation of *Tao Teh King*, Chang, under the title of *Intangible Content in Architectonic Form*, clearly contrasted the concept of the void with the solid,[25] emphasising such characteristics as spiritual life, real infinity and the interpenetrable potentiality of the void in terms of architectural space and form. Chang's book is neither long nor difficult, so any architect could have understood and used its content to interpret Lao-tzu's philosophy in terms of architectural space. To appreciate the Chinese meaning of the term 'void', one had to recognise the idea of 'allowance for growing', which was discussed as part of Chang's interpretation of *Tao Teh King* in the following couplet:

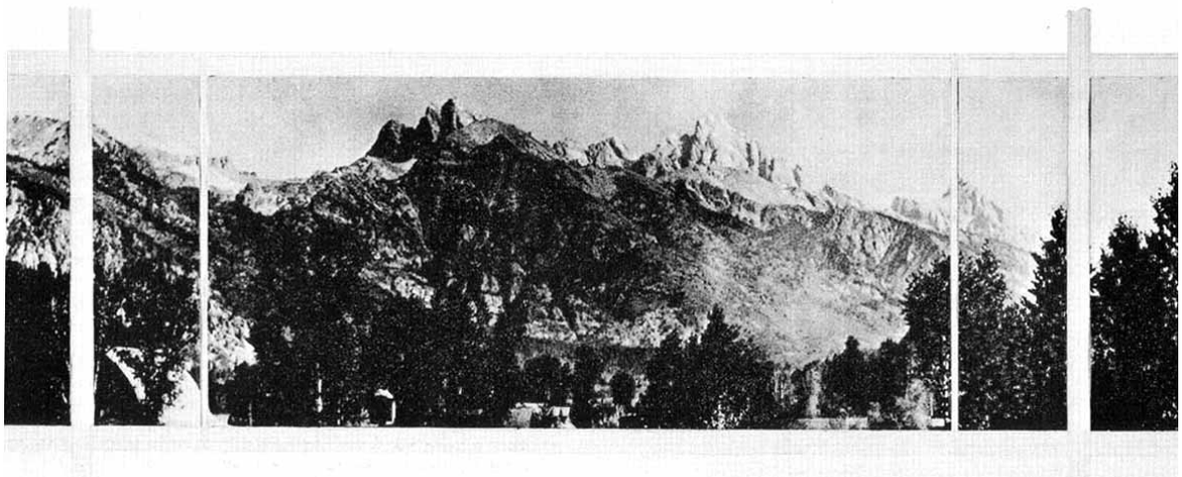
> *Without allowance for filling, a valley will run dry;*
> *Without allowance for growing, creation will stop functioning*.[26]

Chang explained Lao-tzu's notion of life as the relationship between allowance and function. As growth is considered the basic function of every living thing, things that are completely perfect and that cannot grow any more are treated as dead. Although everything organic grows until it arrives at its fullness, Lao-tzu believed that the non-living also had a lifecycle in which it grew and died. While changes during growth are generally visible, whether or not the growing force comes from an organic or non-organic source, one is not able to perceive the force itself. Emphasising the intangible rather than the tangible, Lao-tzu believed that the invisible force was more important than the object itself. Dohol Kim remarked that one of the tenets of Far Eastern ideology was that a being reveals itself through its function, so one regards a being as having autonomous existence only while it retains its usefulness. Things have names to match their functions. Nevertheless, if one being takes on the function of everything, what does it become? Lao-tzu searched for such an omni-functional being, which he called the void. To illustrate this concept, take the function of a cup, which is to contain something liquid. If the cup is full and it cannot hold any more, then the cup is no longer considered a cup, in Lao-tzu's point of view, as the loss of function means the loss of being. This logic is often referred to as 'Laoistic ontology'[27] of the void.

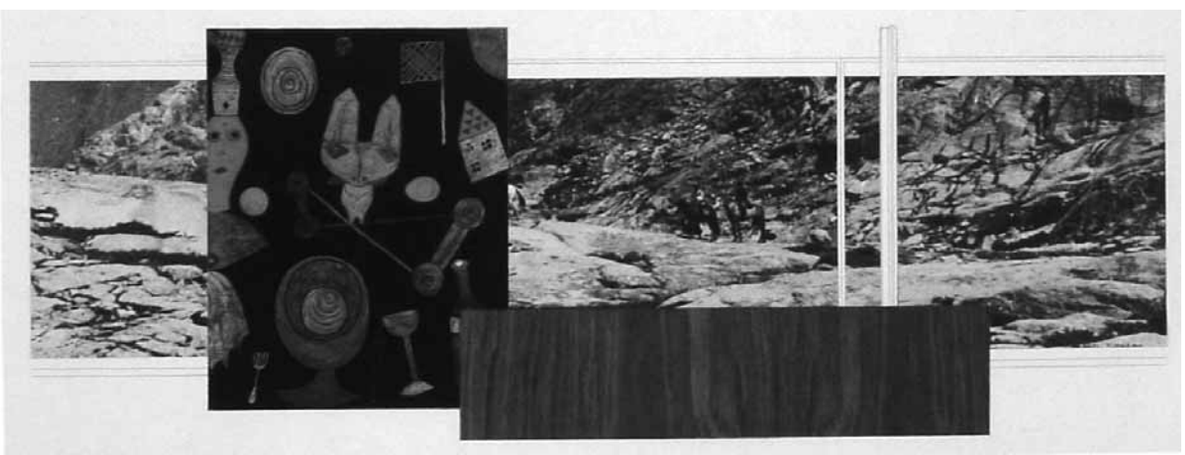
The reason why the void was so important in the theory of Lao-tzu is that he considered the void as providing an allowance for growing, that is, a potentiality for being. Potentiality implies the capability for growth in either a living or non-living entity such as architectural space. If one applies Lao-tzu's idea of voids to architectural space, a space that is not designed to be fully occupied would have the potential to accept further additions. Thus, this architectural space would make room for a more characteristic impression than one in which the architectural intention of its space had already been determined. For example, in the drawing and montage of the Resor House project of 1938 *[6, 7]*, Mies presented the living room of the house as a vacant frame containing something potential, so the main focus of these presentations was not the building itself but rather the natural vista beyond the frame of the building, or the Klee painting in the interior. These presentations showed that the void space of the house would be filled with something potential, which encourages an observer to redefine the spatial character according to the changing atmosphere of space.

In *Tao Teh King*, which Mies also owned, Lao-tzu, emphasising the spontaneous force of Tao, said: 'All-pervasive and inexhaustible, it is the perpetual source of everything else. For want of a better name, I call it "Nature" [Tao]'.[28] The author of the book interprets Tao as 'Nature' with a capital 'N'. Although Tao actually signifies more intangible meanings than nature, an architect may have regarded the spontaneous phenomena of nature through glazed walls as the most potential force in his architectural space. The Chinese term 自然 in the *Book of Lao-tzu* corresponds to two meanings in English: one is 'nature itself', as a noun, and the other implies

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6 View of nature from the living room of the Resor House Project, Wyoming, 1937–8

7 Montage with a reproduction of Paul Klee's *Colorful Meal* of the Resor House Project, Wyoming, 1937–8

'spontaneously' (自), 'following its own way', or 'becoming its own self' (然) as a gerund. Nature, changing at every moment in every season, becomes one of the most potent contents of the voids.

Voids in architecture do not signify simple nothingness but affect the countenance of the spatial silence reflecting an environmental situation. Branden W. Joseph introduced the definition of the silence of John Cage as 'the presence of ambient and unintentional noise rather than the complete absence of sound'.[29] Cage, associating this concept of silence with Mies's glass houses, stated in a lecture in 1957 that '[...] opening the doors of the music to the sounds that happen to be in the environment. This openness exists in the fields of modern sculpture and architecture. The glass houses of Mies van der Rohe reflect their environment, presenting to the eye images of clouds, trees, or grass, according to the situation.'[30] As one connects Cage's interpretation of the concept of silence to Mies's voids seen through glazed plates, the voids could be regarded as a visually silent emptiness containing the spontaneous changes of nature.

Providing other evidence that Mies read Lao-tzu's *Book*, Werner Blaser wrote that 'concerning the books that surrounded and inspired him and influenced his thoughts: in his Chicago apartment he always had books by Augustine and Laotse at hand [...]'[31] Besides, it is postulated that Karlfried Graf Dürckheim[32] may have familiarised Mies with Lao-tzu's philosophy. In 1930, when Mies became the director of the Bauhaus in Dessau, he engaged Dürckheim as a lecturer in psychology.[33] According to Blaser, Dürckheim, who had met Mies both at the Bauhaus and at his home in Chicago, said in a summary of his memories of Mies that, 'there was an element of oriental wisdom latent in the plenitude of calm which he radiated'.[34] Recalling a situation in which Dürckheim had found *Tao Teh King*, he (Dürckheim) referred to the moment when he read Chapter 11 of the book as a 'great experience of Being'.[35] The following is Chapter 11 in its entirety:

Thirty spokes converge upon a single hub;
It is on the hole in the center that the use of the car hinges.

We make a vessel from a lump of clay;
It is the empty space within the vessel that makes it useful.

We make doors and windows for a room;
But it is these empty spaces that make the room livable.

Thus while the tangible has advantages;
It is the intangible that makes it useful.[36]

These words appeared to have astounded Dürckheim,[37] who confessed that this first contact was the most decisive in his life. Chapter 11 of *Tao Teh King* influenced not only Dürckheim but also Frank

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Lloyd Wright, who confessed that his pioneering spatial concept obtained from 'the destruction of the box' had precedent: 'It was called *The Book of Tea* written by Okakura Kakuzo [...] in that little book I came upon quotations from the great Chinese poet-prophet Laotze, things he had said five hundred years before Jesus[...] "The reality of the building does not consist in the four walls and the roof but in the space within to be lived in".'[38] Kevin Nute posited that Okakura's spatial interpretation of Lao-tze's concept of voids had been influenced by Paul Carus's 1898 translation of Chapter 11 of *Tao Teh King*. Nute also posited that Wright derived the idea of 'space as reality' directly from Carus' translation of Chapter 11, as Wright used Carus's spelling of 'Laotze' rather than Okakura's original spelling of 'Laotse.' Whether Wright derived Lao-tzu's concept of void space from Carus or from Okakura, Arata Isozaki claimed that Wright misconstrued it, saying that 'Wright, however, did not understand this metaphor, but went about making space his object, trying physically to come to grips with it'.[39] According to Isozaki, while Wright interpreted Lao-tzu's concept of void as a realisable end in itself or a positive entity, Okakura signified it as part of 'the revolving universe and is thus in constant motion'. According to David Leatherbarrow, potency results from essential openness between the part and the whole and Okakura's term 'vacuum' signifies anticipated fullness,[40] the meaning of which corresponds to Lao-tzu's concept of void.

Afterwards, architectural theorist Cornelis van de Ven regarded the verses of Chapter 11 as 'the first example of an aesthetics of space' (1978).[41] After all, in Western architecture, it was not until the late nineteenth century that architectural theorists recognised the concept of space as essential to architectural creativity. In the first couplet, van de Ven referred to the assemblage of spokes constituting an entire wheel as a 'tectonic form', while in the second couplet, he related the empty space created by the hollowing out of a lump of clay to 'stereotomic form'. He interpreted Lao-tzu's different types of space by applying Semper's two materially-based constructional types. In the third couplet, van de Ven clearly showed his admiration for Lao-tzu's emphasis on a 'continuity of space' between the inside and the outside because empty space connected to the outside is the object of fundamental architectural concern. He claimed that Lao-tzu created a conscious idea of space by conceiving three kinds of built space in this poem and thus revived Lao-tzu as a 'modern thinker'.

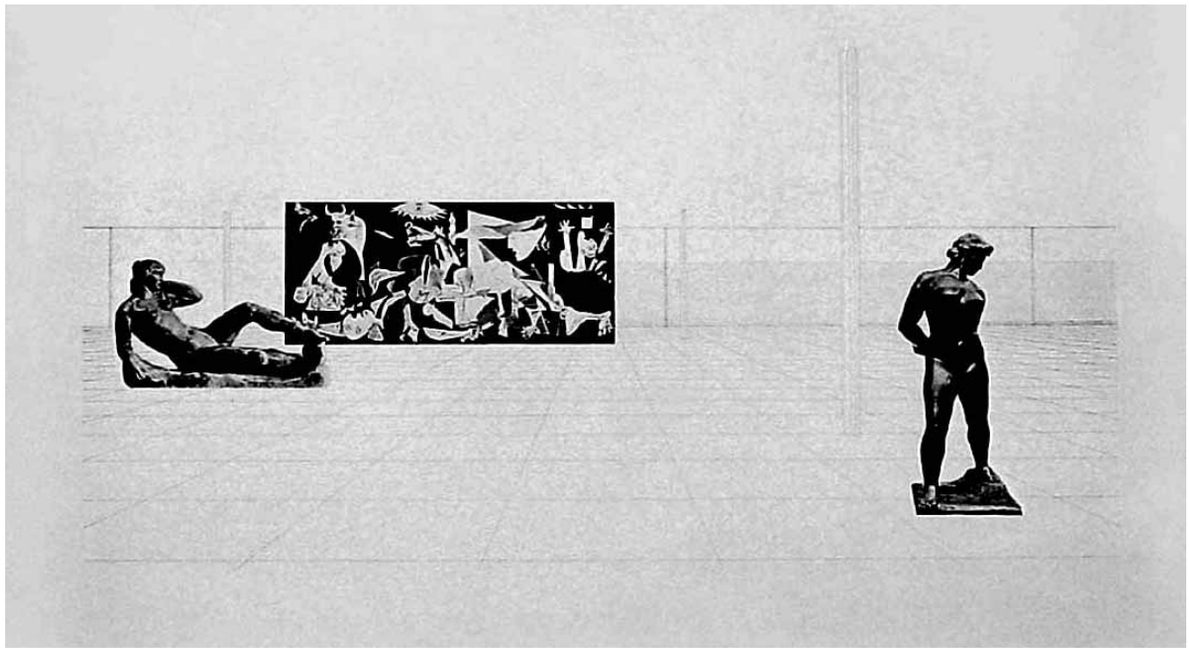
On the basis of the examples from Dürckheim, Wright and van de Ven, this paper proposes that Chapter 11 of *Tao Teh King* became the conduit through which Lao-tzu's ideas as a spatial concept reached Mies. In particular, Blaser stated that Mies had a very special relationship with writings by Dürckheim.[42] Whereas psychologist Dürckheim became aware of the existence of an invisible but essential being through the chapter, architect Mies might have been more intrinsically aware of the critical existence of 'empty spaces that make the room livable' in his art of building or *Baukunst*. One should note that in the Museum project of 1943, Mies began to focus on the idea of tectonically defining space with the intention of developing a new lifestyle and abandoning the existing tradition of confining architecture as an environmental protector.

Mies's 'almost nothing' tectonic frames for defining space

Peter Blake contrasts Mies's project for a Museum for a Small City of 1943 [8] with Frank Lloyd Wright's Guggenheim Museum of 1959, noting the degree of architectural effacement of the former: 'For in these the only elements visible [of a Museum for a Small City] at first are the photographic reproductions of important paintings and pieces of sculpture; one must actually search with a magnifying glass for any evidence of the architecture [...]'[43] Expressing architectural elements in only a few fine lines, Mies presented photographic reality that transmitted the freshness of artistic works, ensuring that their materiality was strongly perceived. Blake wrote that Mies reduced his buildings to 'almost nothing' (Mies's phrase) for the highest possible degree of freedom in order to maximise the effect of artistic works. According to Blake, this intention revealed itself as 'self-effacing modesty'.[44] In contrast to the restrained architecture of Mies, the powerfully illuminating rotunda of Wright's Guggenheim Museum is so grandiose that the works of art are relatively trivialised, and the structural compartments of the museum actually restrict their free arrangement. A contrast between the museum designs of Wright and Mies reveals how works of art might be allowed to stand out on their own within an architectural framework; Mies created the self-restrained framing art of building in order to provide more potential room for the defining outline of artefacts against surrounding space. Although buildings are essentially the central interest of an architect, Mies pioneered a new type of architecture that served as a means for a new phenomenology that encouraged more concentrated operations of the aesthetic mind.

In a description of a similar phenomenon in the Tugendhat House, Grete Tugendhat stated that, 'just as in this space one sees each flower as never before, and every work of art (for instance the sculpture that stands before the onyx wall) speaks more strongly, so too the human occupant stands out, for himself and others, more distinctly from his environment.'[45] Understanding the requirement of temperance for houses that valued defining space, Mrs. Tugendhat experienced the 'enhancement'[46] of the consciousness of life itself. In Far Eastern traditional architecture, the open pavilion type of residence was common because the intellectuals wished not only to appreciate beautiful scenery in a silent place but also to live free from worldly cares and refresh themselves, and to cleanse themselves to allow room for that development of new potential that Amos Chang, the author of a book found in Mies's collection, referred to as 'creative forgetfulness'.[47] According to Chang, the action of forgetting was considered constructive in creative work because creative power more probably derived from subconscious mentality than from existing knowledge. Although the latter is profitable at the moment, the rigid formation of knowledge tends to restrict free thinking. Chang explained that while spatially one sees through voids, mentally one thinks through creative forgetfulness. In other words, while the nature outside represents material reality, the voids defined by minimal frames represent the outlet that permits people to free themselves from daily concerns and leads to creative forgetfulness. In

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8 Photo collage of a Museum for a Small City project, 1943

9 View of transparent interior space of the Farnsworth House, Illinois 1945–50



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Mies's open plan, one feels the voids, seen through full glazed walls, as silent and contemplative, owing to the minimal appearance of his innovative structure and details whose architectural existence goes almost unnoticed. As both traditional Eastern open pavilions and Mies's pavilion houses lower their existential voice and silence the scenery beyond them, their atmosphere enables residents to become more conscious thinkers and sense life in creative ways free from ordinary and material confinements.

According to Stanley Abercrombie, Mies said that he 'wanted to realize his ideal of building *beinahe nichts*—almost nothing'[48] through the Farnsworth House. Although Mies did not use the term 'void' but instead referred to his architecture as 'almost nothing', the two terms have something in common. The enclosing wall of Mies became visually empty, so he intended his 'almost nothing' frames as a defining means of drawing into the command of view the nature outside, by transforming the exterior walls as a physical confinement into the void forces. The minimal frame of his buildings *[9]* vacates itself to maximally admit the spontaneous coming and going of nature, that is, the inexhaustible changing potential of nature. In order to more effectively reveal the changing effect on interior space, Mies intentionally painted his buildings with neutral colors, as he explained:

> *That? white? was the right colour in the country, you know, against the green. And I like black too, particularly for cities. Even in our tall glass buildings, when you are in an apartment, you see the sky, and even the city, changing every hour. I think that is really new in our concept.*[49]

Mies's profound esteem for 'almost nothing' frames for the definition of changing nature reflected in his designs may be evaluated as novel in contrast to the spatial concept of the existing architecture of his day. In an interview in 1959, when Graeme Shankland raised the problem of privacy in Mies's open plan as it applied to the Farnsworth House, Mies answered as follows:

> *No, the Farnsworth house is, I think, not really understood. I was in the house from morning to evening. I did not know how colourful nature really was. But you have to be careful in the inside to use neutral colours, because you have the colours outside. These always change and I would say it is beautiful.*[50]

Considering the clear definition of variously natural colours against interior space, Mies used neutral tones such as white or charcoal grey for his buildings, reminding one of Lao-tzu's phrase that the 'way to acquire positive is to contain negative'.[51] With regard to window design, Mies's approach contrasted with that of Wright, who, in the living room of the Robie House, used the same pattern of the glass plate in all the windows, interior surfaces and furniture, so the interior retained a sense of enclosure, creating 'an integrated whole'.[52] In contrast to Wright, whose house reads as a confined whole with a dominantly uniform design, Mies left the glass plate unadorned in all his buildings, providing an open view defined against his neutral frames.

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Recognising the potential of nature as an element crucial to his open plans, Mies not only painted his architecture with neutral tones of colour but also created it as a 'neutral frame', as he explained in an interview with Christian Norberg-Schulz:

MvdR: *I try to make the buildings a neutral frame where human beings and works of art may live their own life. To do this a humble attitude toward things is necessary.*

CNS: *When you consider architecture a neutral frame, which role has nature in relationship to the building?*

MvdR: *Nature should also live its own life, we should not destroy it with the colors of our houses and interiors. But we should try to bring nature, houses, and human beings together into a higher unity. When you see nature through the glass walls of the Farnsworth-house, it gets a deeper meaning than outside. More is asked for from nature, because it becomes a part of a larger whole.*[53]

Mies appreciated the decisive role of nonexistence and attempted to minimise artificial intentions for the sake of higher unity, apparently patterning his work based on Lao-tzu's philosophy described in Chapter 11: 'Thirty spokes converge upon a single hub; it is on the hole in the center that the use of the car hinges'. The notion of a harmonious unity is analogous to the integration of an entire wheel constituting thirty spokes regularly arranged and a single hub that is empty but crucial. Mies attempted to establish a newly tectonic proto-form that not only physically comprised his skin and bone structures but also spatially drew the changing forces outside into a building. To suggest something beyond the material level of technological construction, he searched for a way in which a physical construct could be experienced as a refreshing container for the enhancement of the consciousness of life itself. While Far Eastern architects universally find the Eastern sentiment of space in Mies's architecture, this article discussed the ideas of Laoistic voids and nature found in Mies's pursuits of the art of building as a form of tectonically defining space.

Notes

1. Mies van der Rohe, 'What Would Concrete, What Would Steel Be without Mirror Glass?', a manuscript of 1933. Published by Fritz Neumeyer in *The Artless Word: Mies van der Rohe on the Building Art*, trans. by Mark Jarzombek (Cambridge: The MIT Press, 1991), p. 314.
2. Demetri Porphyrios, 'From Techne to Tectonics', in *What is Architecture?* ed. Andrew Ballantyne (London, New York: Routledge, 2002), pp. 134–5.
3. Mies van der Rohe, 'The H. House, Magdeburg', in *Die Schildgenossen* 14, no. 6 (1935). Republished by Fritz Neumeyer, p. 314.
4. Ibid.
5. Mies van der Rohe, 'Museum for a Small City,' in *Architectural Forum* 78, no. 5 (1943), p. 84.
6. Mies van der Rohe, statements collected by Christian Norberg-Schulz, 'Talks with Mies van der Rohe', in *L'Architecture d'aujourd'hui* 79 (September 1958), p. 100.
7. Mies van der Rohe, draft of a letter on the project for the Adam Building (1928). Published by Fritz Neumeyer, p. 305.
8. In his book *West Meets East—Mies van der Rohe* (1996), Blaser illustrated the spiritual and structural resemblance between the modern works of Mies and the ancient buildings of the Far East, adopting a broad approach that situated Mies's work at its centre to study the ramifications of West meets East.
9. Mies van der Rohe, 'What Would Concrete, What Would Steel Be without Mirror Glass?' (a manuscript of 1933). Published by Fritz Neumeyer, p. 314.
10. Mies van der Rohe, 'Lecture', unpublished manuscript. Published by Fritz Neumeyer, p. 250.
11. Actually, Mies, for a time, formed a close personal relationship with van Doesburg. William J. R. Curtis remarked that 'the Brick Villa combined a generalized "unhistorical" classicism in its proportions and profile with the pinwheel qualities of Wright's pre-war house plans, and with a pattern of rhythmic lines and intervals inspired by the paintings of Mondrian, Van Doesburg, or perhaps Lissizky.' William J. R. Curtis, *Modern Architecture Since 1900* (New Jersey: Prentice Hall, 1996), p. 192.
12. Mies van der Rohe, 'The H. House, Magdeburg', in *Die Schildgenossen* 14, no. 6 (1935), pp. 514–5. Republished by Fritz Neumeyer (1991), p. 314.
13. Mies van der Rohe, 'Museum for a Small City', in *Architectural Forum* 78, no. 5 (1943), p. 84.
14. Ibid.
15. Mies van der Rohe, statements collected by Christian Norberg-Schulz, 'Talks with Mies van der Rohe', *L'Architecture d'aujourd'hui* 79 (September 1958): 100.
16. *Heidegger and Asian Thought,* edited by Graham Parkes (Honolulu: University of Hawaii Press, 1987), p. 52.
17. Frank Lloyd Wright, *The Natural House* (New York: Horizon Press Inc., 1954), p. 221.
18. Kevin Nute, *Frank Lloyd Wright and Japan: the role of traditional Japanese art and architecture in the work of Frank Lloyd Wright* (London: Chapman & Hall, Ltd., 1993), p. 123.
19. Rudolf Eisler, *Eislers Handwörterbuch der Philosophie* (Berlin: E. S. Mittler & Sohn, 1922), p. 653.
20. *Tao Teh King* was first published in 1868 in English by John Chalmers and in 1870 in German by Victor von Strauss.
21. These books are in Mies's personal library in the Ludwig Mies van der Rohe Collection of the University of Illinois in Chicago. Mies might have read other books, written in German, that introduced Lao-tzu's philosophy, ones published earlier than those referred to here. In fact, Mies's collection was believed to have been larger, but his family members had made selections from it before the Special Collections Department of UIC purchased it in 1969–70.
22. F. S. C. (Filmer Stuart Cuckow) Northrop, *The Meeting of East and West: an Inquiry Concerning World Understanding* (New York: Macmillan, 1946), pp. 331–2, 343–4.
23. Lao-tzu, *Tao Teh King: Interpreted as Nature and Intelligence,* trans. by Archie J. Bahm (New York, 1958), Chapter 11.
24. The following Chinese words correspond to the following meaning of the void.
?: the void that signifies an empty vessel in Chapter 4.
?: the void in Chapter 5.
?: empty space and non-existence in Chapter 11.
25. Amos Ih Tiao Chang, 29–30.
26. Op. cit., 4, Chapter 39.
27. Dohol Kim's definition in Korean.
28. Lao-tzu, *Tao Teh King: Interpreted as Nature and Intelligence,* trans. by Archie J. Bahm (New York: Frederick Ungar Publishing Co., 1958), Chapter XXV.
29. Branden W. Joseph, 'John Cage and the Architecture of Silence', *October* 81 (Summer, 1997), p. 85.

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30. John Cage, this lecture was entitled 'Experimental Music' in 1957, reported by Branden W. Joseph, op. cit., p. 85.
31. Werner Blaser, *Mies van der Rohe – Farnsworth House* (Basel: Birkhäuser, 1999), p. 80.
32. At the age of twenty-four (1920), Dürckheim first came into contact with Eastern philosophy when he read *Tao Teh King* of Lao-tzu and later resided in Japan from 1937 to 1947 as a German diplomat, psychologist and Zen master.
33. Werner Blaser, *Less is More – Mies van der Rohe* (Zürich: Birkhäuser Verlag, 1986), p. 14. Hans Maria Wingler also illustrated notes on the psychology lectures of Karlfried Graf Dürckheim 1930–1 at the Bauhaus. Hans Maria Wingler, *The Bauhaus: Weimar, Dessau, Berlin, Chicago,* translated by Wolfgang Jabs and Basil Gilbert, edited by Joseph Stein (Cambridge: MIT Press, 1969), p. 159.
34. Werner Blaser, p. 14.
35. Alphonse Goettmann, *Dialogue on the Path of Initiation*, translated by Theodore and Rebecca Nottingham (New York: Globe Press Books, 1984), p. 9.
36. Lao-tzu, *Tao Teh Ching*, translated by J. C. H. Wu (New York: St. John University, 1961), Chapter 11.
37. Dürckheim described his experience as follows: 'And suddenly it happened! Lightning went through me. The veil was torn asunder, I was awake! I had just experienced "It" ... two poles: one that was the immediately visible, and the other an invisible which was the essence of that which I was seeing. I truly saw Being.' Alphonse Goettmann, p. 10.
38. Edgar Kaufmann, *An American Architecture: Frank Lloyd Wright* (New York: Bramhall House), p. 80. Wright was paraphrasing Okakura's following interpretation: 'This Lao-Tz? illustrates by his favorite metaphor of the vacuum. He claimed that only in vacuum lay the truly essential. The reality of a room, for instance, was to be found in the vacant space enclosed by the roof and walls, not in the roof and walls themselves.' Kakuzo Okakura, *Book of Tea* (1906), reprinted ed. (New York: Dover, 1964), p. 24.
39. Cited in David B. Stewart, *The Making of a Modern Japanese Architecture* (Tokyo: Kodansha International, 2002), p. 237. Original text: GA1: *Frank Lloyd Wright: Johnson and Son, Administration Building and Research Tower, Racine, Wisconsin. 1936–9* (Tokyo: ADA Edita, 1970), p. 3.
40. David Leatherbarrow, *Uncommon Ground: Architecture, Technology, and Topography* (Cambridge: MIT Press, 2000), pp. 181–2.
41. Cornelis van de Ven, *Space in Architecture: the Evolution of a New Idea in the Theory and History of the Modern Movements* (Amsterdam: Van Gorcum Assen, 1978), pp. 5–8.
42. Werner Blaser, *Mies van der Rohe – Farnsworth House* (Basel: Birkhäuser, 1999), p. 80.
43. Peter Blake, *Mies van der Rohe, Architecture and Structure* (Baltimore: Penguin Books, 1960), p. 87.
44. Peter Blake, p. 87.
45. Grete Tugendhat, 'Die Bewohner des Hauses Tugendhats äussern sich', *Die Form* (Nov. 1931), pp. 437–8. Trans. by Richard Padovan, 25.
46. Richard Padovan says that Mies's intention of the Tugendhat House goes 'to the enhancement of the experience of life itself', in 'Machines à Méditer', in Rolf Achilles et al., *Mies van der Rohe: Architect as Educator* (Chicago: University of Chicago Press, 1986), p. 25.
47. Amos Ih Tiao Chang, *The Existence of Intangible Content in Architectonic Form Based Upon the Practicality of Laotzu's Philosophy* (Princeton: Princeton University Press, 1956), pp. 70–1.
48. Mies van der Rohe, in Stanley Abercrombie, 'Much Ado about Almost Nothing: Rescuing Mies's Farnsworth House, a Clear and Simple Statement of What Architecture Can Be', *Preservation* 52, no. 5 (Sept. – Oct. 2000), p. 64.
49. Ibid.
50. Mies van der Rohe, Interview of the BBC Third Program (1959). Reported by Peter Carter, in *Mies van der Rohe at Work* (New York: The Pall Mall Press, 1974), p. 181.
51. Amos Ih Tiao Chang, 13. Chang, referring to the phrase of Chapter 28, which says 'the way to acquire positive is to contain negative', explains as follows: 'Negativism in color, consequently, means that whenever a color contains greyness, it has its intangible content of its opposite and thus is capable of harmonizing its opposite at ease.'
52. The author uses Doreen Ehrlich's expression 'an integrated whole', in Doreen Ehrlich, *Frank Lloyd Wright at a Glance: Glass* (London: B. T. Batsford, 2001), p. 36.
53. Mies van der Rohe, statements collected by Christian Norberg-Schulz, p. 100.

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