From Garden Design Approach to Spatial Configuration: The Development of the *Architektonischer Garten* Concept

LIYANG DING
University of Pennsylvania

Despite the recent studies dedicated to discussing the *architektonischer Garten* concept, its relative architects, and building manifestations, the *architektonischer Garten* or *Gartenarchitektur* discourse has not been given its justice due to the lack of a critical account of its definition and development. Presented as an examination of its historical transformation from a design approach for garden to a model of spatial configuration, this paper presents as a preliminary effort to reinterpret the history of the *architektonischer Garten* concept with a focus on a relationship between the domestic living and its surrounding topography, which underlies the legacy of this important concept in the early history of modern architecture. Starting from offering a long-overdue definition of the *architektonischer Garten* concept initiated by Hermann Muthesius, this paper places this concept among the set of models that characterize the spatial construction of early-20th-century modern architecture. Rather than "experiential" and "flowing," which were coined by many early modern architects and critics as they respectively described related spatial concepts, the central feature of the *architektonischer Garten* idea is "circumstantial" or "situational." My argument is that the *architektonischer Garten* concept was the most effective — and possibly the only — solution, by virtue of our spatial perception of depth, capable of reconciling the tension between a building's indoor living and outdoor topography.

INTRODUCTION

This papers examines the concept of *architektonischer Garten* (also called *Gartenarchitektur*),[1] an understudied idea that came to define many of the spatial compositions of early modern architecture. The new understanding indicated by this term intended the coupling or unification of artificial and natural environments into integral human situations. However, despite the recent studies dedicated to discussing the *architektonischer Garten* idea, its relative architects, and the building manifestations, the *architektonischer Garten* idea has not been given its justice due to the lack of a critical account of both its definition and development. Presented as an examination of its historical transformation from a garden design approach to a spatial configuration model, this paper embodies a preliminary effort to reinterpret the history of the *architektonischer Garten* concept by focusing on a relationship between the domestic living and its surrounding topography, which underlies the legacy of this important concept in the early history of modern architecture.

Starting from offering a long-overdue definition of the *architektonischer Garten* concept initiated by Hermann Muthesius (1861-1927), this paper places this concept among the set of configuration models that characterize the spatial construct of early-20th-century modern architecture. To a great extent, I argue that the notions of *architektonischer Garten* and *Gartenarchitektur* are essentially interchangeable, showcasing the initial attempt of Muthesius and architects of his generation to challenge the practical and conceptual boundary between the artificial and natural environment. Rather than "experiential" and "flowing," terms that were coined by many early modern architects and critics as they respectively described related spatial concepts, the central feature of the spatial experience provoked by the *architektonischer Garten* is "circumstantial" or "situational." My claim is that the *architektonischer Garten* concept was the most effective—and possibly the only—solution, by virtue of our spatial perception of depth, capable of reconciling the tension between a building's indoor living and outdoor topography.

ARCHITEKTONISCHER GARTEN AS A GARDEN DESIGN APPROACH

The German term "*architektonischer Garten*," to my knowledge, first appeared in Hermann Muthesius's writings on the country house and garden design.[2] But the particular view of the idealized garden as an extension of the house and geometric room-like spaces for outdoor living was not unprecedented before Muthesius, although he was largely responsible for a paradigm shift from the *landschaftliche* (landscape) gardening to *formaler Garten* (formal garden). Originally as a practical design approach for the design of *Landhausgarten* (country house garden), the notion of *architektonischer Garten* can be explained with reference to Hermann Muthesius's design of his own house (1906):

> … In his own house he (Muthesius) realized his ideas of surrounding the building with a series of individual, geometrically designed garden rooms, linked to the house with a pergola … Although this new style was initiated by architects, it was soon adopted by a new generation of garden designers … they called themselves *Gartenarchitekten* (garden architects) in order to set themselves apart from the landscape gardening tradition of the previous century.[3]

Rooted in the critique of both the naturalistic aspect of the picturesque garden tradition and the historical style of

the "villa" architecture in Germany, Muthesius's *architektonischer Garten* idea initially appeared as a design approach for the *Landhaus* garden,[4] reflecting his attitude toward the relationship between house and garden as an inseparable unity. To understand this "architectural" treatment of garden design is essentially to answer a simple question posed by English architect Reginald Blomfield (1856-1942), whose publication may have led Muthesius to his conception of the formal garden and to his rejection of "scenic" landscape: "Is the garden to be considered in relation to the house, and as an integral part of a design which depends for its success on the combined effect of house and garden; or is the house to be ignored in dealing with the garden?"[5] According to Blomfield, the formal approach to garden design should be understood as "the architectural treatment of gardens," with the motive to bring the house and garden into harmony, or, in his words, "to make the house grow out of its surroundings, and to prevent its begin an excrescence on the face of nature."[6] Indeed, Muthesius made a similar assertion in his *Das englische Haus*:

> Houses and garden have been inseparably linked at all periods of human civilization … In England the garden that surrounds the house is no longer designed to imitate the fortuities and chaos of nature but is set out in an orderly and regular fashion. This at least is the case with all houses designed by architects and owned by persons who keep abreast of the latest ideas … As a natural creation of the human hand and therefore a creation that has become absolutely natural, the garden has an inherent tectonic form, which in fact it had had at all periods until the false sentimentality of the eighteenth century wrought a change.[7]

Muthesius summarized the design principles of the *englische Landhaus* as follows: (1) the free location (*freie Lage*); (2) the individual qualification (*die individuelle Ausbildung*) of inhabitants' characteristics and habits; (3) the possibility of expansion in the horizontal direction (*die Ausdehnungsmöglichkeit in der Horizontale*); and (4) the presence of a garden (*das Vorhandensein eines Garten*) as the extension of the house.[8] Specifically, the first two were intended to guide the layout of the *Landhaus* in terms of the site and the building itself. For instance, the "free location" of the house on the property eschewed any predetermined idea of orienting the house so that the living areas could face toward the south and the east with the consideration the adjoining gardens. The "qualification" of inhabitants aimed at a complete fulfillment of individual needs by virtue of the "free arrangement" and "irregularity" of the programmatic plan layout, resonating with what Muthesius articulated in *Das englische Haus* — "the Englishman … lives only as he thinks it is beneficial to his inner-self and his family, meaning to live outward, to develop his individuality."[9] Therefore, the English country house that Muthesius promoted, unlike the still-dominant "villa" architecture at Muthesius's time in Germany, had "plenty of adjoining rooms (*reichlich viel Neben-räumen*)."[10] The third principle indicated that the *Landhaus* was expected to extend outward the horizontal direction into its surrounding garden, and further led to the fourth principle, namely, the presence of the garden as an extension and continuation of the corresponding interior room of the *Landhaus*. As Muthesius asserted, "the major demand … that the garden should be connected to the living rooms of the *Landhaus*, it should continue its kind as it were."[11]

The significance of the "free" plan arrangement, which was not just part of the *architektonischer Garten* concept but also in line with the central thesis of Muthesius's discourse, namely, the *inneren organismus* (inner organicism), has long been underestimated. According to Muthesius, the English country house had developed the "organic" characteristic as "inside to outside," resulting from increasing demands for spatial differentiation imposed by the corresponding demands from the inhabitants. In *Das englische Haus*, Muthesius claimed:

> All that can be done here is to record the basic features of its development by concentrating on what might be termed its inner organism, as expressed above all in the design of its floor plan. Only those aspects will be singled out that are of relevance to the house's present form.[12]

Since this tactic governed Muthesius's approach for both house and garden as inseparable components of the country-house design, we can derive the following points from this inner organicism principle for the *Landhaus* garden design: (1) to see the surrounding garden as the outdoor extension of the indoor space; (2) to design the garden in conformity with the way of organizing indoor rooms; (3) to designate each "outdoor room" in accordance with the function of its adjoining indoor one. These principles, I believe, can be used to understand the *architektonischer Garten* idea as a garden design approach, for they reflected Muthesius's bold assertion that the English country house is only validated by its associated garden.[13] In other words, his general idea of domestic living was not limited to interior space, but included exterior spaces that were integrated together into an "organic" whole.

ARCHITEKTONISCHER GARTEN AS A SPATIAL CONCEPT

Another contribution that Muthesius made to the modern domestic culture in Germany was his *Landhausideologie* (country house ideology): the most valuable characteristic to gain while living in the country house is the close connection with nature, offering a condition for both spiritual and physical well-being.[14] To achieve this extended understanding of the *Landhaus* design, Muthesius transformed his effort from the practical design approach into a more idealist one — to

unify domestic life and natural living. From an architectural standpoint, the newness of this modern lifestyle was made possible by the "flowing" characteristic of spatial experience, signifying the central structure of a new, multifaceted integration of people and nature. Therefore, before interrogating the spatial aspect of the *architektonischer Garten* idea more fully, it is necessary to briefly review the general development of modern spatial construct and the distinction between the *architektonischer Garten* and related spatial models, such *Raumplan*, *plan libre*, broken-box, and *promenade architecturale*.

The development of early modern spatial concepts is closely tied to the historical circumstances of modernism.[15] During the late 18th century, the previous idea of static interior spaces as one, or a series of box-like structural enclosures was superseded by an "experiential" one, which initiated a shift of emphasis from the physical object to the spatial experience.[16] Known for its spatial characteristics of continuity, fluidity, and interconnectivity, "experiential" refers to the fact that the space of modern architecture, conceptually and practically intertwined with the new systems of construction, can only be fully apprehended by means of ambulatory and optical movement.[17]

For a number of the figures who belonged to the generation that gave birth to modernism in architecture, spatial experience, as much as the architectonic value, was a major concern. Buildings by Frank Lloyd Wright (1867-1959), Mies van der Rohe (1886-1969), and De Stijl architects presented this new spatial paradigm especially clearly. Explanations of the experience of modern space abound in writings of architects and critics: El Lissitzky (1890-1941), Theo van Doesburg (1883-1931), Sigfried Giedion (1888-1968), László Moholy-Nagy (1895-1946), Rudolph M. Schindler (1887-1953), Gunnar Asplund (1885-1940), and George Howe (1886-1955).[18] Although these texts argue for spatial patterns of modern art and reality that are "free," "open," or "plastic," relevant studies nevertheless show that a set of spatial configuration models indeed share the general characteristic of "flowing." Among related and more widely studied spatial models — *Raumplan*, broken box, *plan libre*, and *promenade architecturale* — the *architektonischer Garten* seems to exhibit a distinctive characteristic than the "flowing" spatiality. Then, the question is how we should distinguish the *architektonischer Garten*, as being considered a model of modern spatial construct, from other related spatial concepts listed above.

First, the latter group of spatial concepts — although based on the joint interest of introducing the "flowing" spatial experience — all embrace the interior space-making culture originated from the ancient Romans, as epitomized by the Pantheon in Rome.[19] "Flowing," however, refers to a spatial characteristic that is free not only within the interior space but also across its boundary. The *architektonischer Garten* concept emphasized the particular kind of "flowing" between inside and outside, implying an absolute openness or an ultimate spatial freedom. Second, as for the spatial concepts other than the *architektonischer Garten*, the resultant buildings reflect an antithetical gesture toward their surrounding landscape. Most evidently in the case of Le Corbusier, that his Parisian villas were treated, Colin Rowe observed, as elements of a "Virgilian dream," presenting themselves as objects in their surrounding landscapes for sculptural and aesthetic contemplation.[20] The *gartenarchitektonischer* buildings, on the other hand, refused the non-contextual abstraction of formal neoclassicism. This distinctive feature leads to the third difference: rather than detaching from the site's physical ground, the ground floor levels of these buildings were always lowered to achieve a close connection with the surrounding garden, both physically and perceptually. This treatment was intended to place the main living floor on the same level as the garden, normally with a terrace as a threshold in between, with a result that the interior space of *Gartenarchitektur* passages through the house were meant to be horizontal, continuing into an elaborate and highly contrived garden with paths and "outdoor rooms." In contrast, in a building formulated with the concept of *Raumplan*, the manipulation of floor level changes — alongside those of corresponding room heights — produces an enriched and economic internal configuration. To a similar end, Le Corbusier exploited the ramp as a device to form the *promenade architecturale* throughout the whole structure. Both treatments aimed to provoke spatial experience of "3-dimensions," embodying the fact that *Raumplan* and *promenade architecturale* were intended for a full use of both the plan and the height of interior space. Meanwhile, the bodily movement evoked by the 3-dimensionally formulated continuous passage guided spectators to a sequence of well-planned vantage points, promoting the variety of the surrounding topography through framed pictorial views. Put differently, both the *Raumplan* and the *promenade architecturale* are spatial configurations that concentrated the richness of both interior settings and the exterior landscape, while exhibiting a kind of correlation between interior and exterior that is quite different from that of the *architektonischer Garten*.[21]

Then, what exactly kind of correlation between interior and exterior that the *architektonischer Garten* concept was meant to create? In order to answer this question, I now turn to Mies van der Rohe, who, according to Barry Bergdoll, was the architect transformed the *architektonischer Garten* idea from a general approach for garden design into a specific model of spatial configuration.[22] This claim arises from the heart of my study; that is, the relationship between domestic living and its surrounding topography. I will return to this concern at the end of the paper, but now it is necessary to point out two main spatial characteristics of Mies's early work, both of which may help us understand the interdisciplinary

consequence of *architektonischer Garten* concept's spatial advancement. First of all, Mies sought a sense of freedom in spatial composition not only for interior but also between interior and exterior. As he asserted, "Only now we can articulate space, open it up and connect it to the landscape."[23] Secondly, Mies's early projects seemed to reject the categorical distinction between the building and the landscape; instead, he let the order of the latter to prefigure that of the former.[24] As Mies had declared in his speech to the *Deutscher Werkbund* in 1932: "We want to investigate the potential residing in the German space and its landscape."[25] Regarding his spatial configuration, Mies's pre-World War I work, such as the Riehl House (1907), Perls House (1911-2), Wolf House (1926), Esters & Lange House (1927-30), and possibly the Tugendhat House (1928-30), among others presented a qualification of "room" arrangement that was principally in agreement with what Muthesius argued in *Das englische Haus*. Even in the unbuilt scheme of the Brick Country House (1925) that was widely considered as Mies's abolition of room-like enclosures, its unprecedented sense of "flowing" was nevertheless shaped by the tight interlocking of "broken rooms,"[26] freestanding walls, and L- and T-shaped partitions. Considering Mies's attitude toward the relationship between the dwelling and nature, he constantly employed multiple *gartenarchitektonischer* devices in his Berlin projects, namely, deliberately framed landscape views, exedra bench tied to certain vantage points, and vine-covered pergola as emblems of the harmonious unity of house and garden. The last two treatments were exploited by Karl Friedrich Schinkel (1781-1841) and Peter Joseph Lenné (1789-1866), clearly emulated by Mies, and documented by Muthesius,[27] calling for a tight spatial and categorical interweaving relationship between interior space and exterior garden.[28]

Thus far this present paper still owes the readers an explanation of Muthesius and Mies's sharing primary concern — to fulfill the ideal of the house as a frame for physical and spiritual well-being.[29] It is noteworthy that both of them not only applied the *architektonischer Garten* treatments in their respective architectural practices but also elevated the related intellectual consideration to a philosophical level. This claim can be seen as a response to the contention that garden design was not a major focus for Mies.[30] I argue that Mies, indeed, showed no particular interest in garden design per se, simply because he rather viewed building and landscape as integral parts of a more encompassing mode of human situation. This matter was less disciplinary (garden design versus architecture) than ontological. As Wolf Tegethoff pointed out, the actual unification of architectural interior and the natural world is unattainable, for it can only be conceived on the perceptual — or even intellectual — level.[31] Consider, for example, Mies's Tugendhat House. Grete Tugendhat — the daughter of Mies's client — described the spiritual effect of her immediate spatial experience: "The connection between interior and exterior space is indeed important, but the large interior space is completely closed and reposing in itself, with the glazed wall working as a perfect limitation. Otherwise, too, one would find that one would have a feeling of unrest and insecurity ..."[32] Then, how should we understand this "important connection between interior and exterior" while Grete refuted the idea that the house, "indeed," created an actual merging of inside and outside?

To answer this question, it is crucial first to stress that the notion of space has a double character: physical and non-physical.[33] Apart from its physical property, the experience and sense of space — known as spatiality — is also an indispensable element of architectural creation. Based on the fact that spatiality places the human experience at the center, the particular mode of human situation that Mies was implicitly referring to depends on people and object in space appearing, perceiving, and moving in the most important "dimension" of spatiality — depth. Due to the limited space of this paper, I have to explicate this philosophical aspect of the understanding of this mode of human situation in another occasion. But the sense of "connection" that Grete Tugendhat perceptively captured in her family house was comparable to the depth perception that functions as the central feature of the spatiality provoked by Mies's *Gartenarchitektur* and in turn articulates her phenomenological "situation" in the world. Put differently, because of its primordial role in structuring our spatial experience,[34] depth performs as the *medium* through which a building, its adjoining garden, the surrounding topography, and the perceiving subject are integrated. In light of this, everything becomes part of a special "whole" by virtue of depth. This reciprocal, holistic entity comprises both subject and object, indicating objects such as architecture and garden elements are no longer "outside me," but rather I am "in things," and everything is "in things." Therefore, the sense of space that people perceive in *Gartenarchitektur*, for instance Mies's house projects, is essentially "situational" or "circumstantial,"[35] a central structuring feature that is absolutely encompassed by, yet somehow differs from, "experiential."

CONCLUSION: *ARCHITEKTONISCHER GARTEN* AS *GARTENARCHITEKTUR*

Lastly, I want to return to the concern about the relationship between domestic living and its surrounding topography by re-prosing the question: what exactly kind of correlation between interior and exterior that the *architektonischer Garten* concept was meant to create?

My quick answer to this question is that the *architektonischer Garten* concept presented and probably inaugurated a liberation, rather than mere negation or rejection of the linear perspectival spatial construction invented in the Renaissance. This notion embodied a paradigm shift in the structure of our consciousness about the world, whose essential traits can be identified in nearly all forms of modern and contemporary

expression. This kind of creative work generally showed an attempt to free from the presupposition of the modern Galilean scientific and Cartesian philosophical tradition, with a goal of achieving a self-world fusion rather than a dualistic split. Thus, rather than *Raumplan* and *promenade architecturale*, the *architektonischer Garten*, which was initiated by Muthesius and further developed by Mies, can be understood as an important concept that characterized the "post-perspectival" consciousness, which can be identified in the common goal, method, and achievement of the early pioneers in modern art, such as Paul Cézanne (1839-1906) and Auguste Rodin (1840-1917).[36]

Furthermore, given the emphasis on the subject as the ever-present locus of consciousness of space, it is senseless to see architecture merely as a physical object made of a constellation of constructional elements. In fact, scholars have provided insights that suggest that one should view architecture as an art of man-made space rather than stylistic form.[37] In light of this, the *Landhaus* garden can conceptually be understood and practically be treated as artificial outdoor space. Thus it is safe to claim that the terms *architektonischer Garten* and *Gartenarchitektur* represent two essentially exchangeable ideas.

To sum up, among other things, two important aspects of the *architektonischer Garten* concept have contributed to the German *Hausgartenreform* movement and early modern architecture. First of all, as a *Landhaus* garden design approach, the *architektonischer Garten* concept physically and perceptually created a close correlation between the domestic space and surrounding topography. Second, as a spatial configuration model, the *architektonischer Garten* provoked a unique kind of spatiality, in which the depth perception, by virtue of its role as the central structure of the spatial experience, functions as *medium* that integrates a building, its adjoining garden, the surrounding topography, and, more importantly, the perceiving subject.

ENDNOTES

1 On the *architektonischer Garten* (architectonic garden) and *Gartenarchitektur* (garden architecture) idea and relevant topics of Hermann Muthesius, there exist a few monographs, a very limited number of Ph.D. dissertations, and many articles. Yet, there is only one book dedicated to discussing the *Gartenarchitektur*—Uwe Schneider's *Hermann Muthesius und die Reformdiskussion in der Gartenarchitektur des fruhen 20. Jahrhunderts* (2000). Relying on the rich collection from the *Werkbund Archiv* at Berlin, Schneider exhaustively demonstrates that the actual historical image was far more complicated than the dominant understanding — that is, there was a radical paradigm shift from the popularity of the irregular, picturesque garden of the early 19th century to the revival of the geometric garden at the turn of the 20th century. According to Schneider, Muthesius was telling a self-serving tale of an increasingly popular architectural garden that, by tracing back to English Elizabethan roots, simultaneously elevated architects as the designers of gardens. As an authoritative source on Muthesius, Julius Posener has written several studies of the architect between 1931 and 1971, emphasizing the extent to which Muthesius's role had been minimized or even excluded from the historiography of the modern movement. Based on a similar argument, Laurent Stalder's and Fedor Roth's books on Muthesius's multifaceted career recount some of the fateful ways that the multiple divisions of Muthesius's career reverberated in subsequent scholarship on 20th-century architectural culture. The work by a new generation of scholarship on Muthesius critiques how previous interpretation created and reinforced the modern movement's quasi-fictional narrative of a radical break around World War I. See Julius Posener, "Muthesius als Architekt," *Jahrbuch / Werkbundarchiv / Hrsg. Von Janos Frecot [U.a.]* (1972), 55-76; Uwe Schneider, *Hermann Muthesius und die Reformdiskussion in der Gartenarchitektur des frühen 20. Jahrhunderts* (Worms: Werner, 2000); Caroline Bäßler and Hermann Muthesius, *Die Landhausgärten des Hermann Muthesius. zahlr. Ill. 1.* (1991). - 74, ca. 70 Bl. 1. (1991). - 74, ca. 70 Bl; John Vincent Maciuika, *Hermann Muthesius and the Reform of German Architecture, Arts, and Crafts: 1890-1914* (Berkeley, Calif., University of California, Diss., 1998).

2 Hermann Muthesius, *Das englische Haus* (Berlin: Wasmuth, 1904), Bd. I, 216 and Bd. II, 96, 99.

3 Richard Stiles, "Germany, The *Architecturgarten*," in Patrick Goode and Michael Lancaster, ed., *The Oxford Companion to Gardens* (Oxford: Oxford University Press, 1986).

4 "*Landhaus*," literally translated as "country house," was employed by Hermann Muthesius to distinguish and promote the newness of his vision. The *Landhaus* was in direct opposition to the outmoded "villa." Although the *Landhaus* and "villa" were both suburban house of essentially the same scale, the new type was defined by the premise that house and garden should be fully integrated.

5 Reginald Theodore Blomfield, *The Formal Garden in England* (London: Macmillan and Co., 1901), 1-2.

6 Ibid., 2.

7 Hermann Muthesius, Dennis Sharp, Janet Seligman, and Stewart Spencer, *The English House* (London: Frances Lincoln, 2007), vol. 2, 82-3.

8 Hermann Muthesius, "Die Anlage des modernen Landhauses," *Die Werkkunst* 1 (1905), 25-27.

9 Muthesius, *Das englische Haus*, Bd. I, 2.

10 Muthesius, "Die Anlage des modernen Landhauses," 26.

11 Ibid., 25.

12 Muthesius, *The English House*, vol. 1, 12.

13 As Muthesius writes, "A country-house without a garden would in itself be an unimaginable idea." See Muthesius, *The English House*, vol. 2, 82.

14 Muthesius, *Das englische Haus*, Bd. I, 6.

15 The absence of "space" as a term—with both physical and non-physical connotations—in the theoretical vocabulary of architecture before the 1890s, to some extent, explains the unprecedented significance of the new spatial consciousness evoked by the development of modern architecture. See Adrian Forty, *Words and Buildings: A Vocabulary of Modern Architecture* (New York: Thames & Hudson, 2000), 256; Cornelis van de Ven, *Space in Architecture: The Evolution of a New Idea in the Theory and History of the Modern Movements* (Assen: Van Gorcum, 1978).

16 Peter Collins, *Changing Ideals in Modern Architecture, 1750-1950* (Montreal, Que: McGill-Queen's University Press, 1998), 26.

17 Mitchell Schwarzer and August Schmarsow, "The Emergence of Architectural Space: August Schmarsow's Theory of Raumgestaltung," *Assemblage*, no. 15 (1991), 49-61; Robert Vischer, Harry Francis Mallgrave, and Eleftherios Ikonomou, *Empathy, Form, and Space: Problems in German Aesthetics, 1873-1893* (Santa Monica, CA: Getty Center for the History of Art and the Humanities, 1994); and Sigfried Giedion, *Space, Time and Architecture: The Growth of a New Tradition* (Cambridge: Harvard University Press, 1941).

18 El Lissitzky, "PROUN: Not world visions, BUT—world reality," in Sophie Lissitzky-Küppers, *El Lissitzky: Life, Letters, Texts* (New York: Thames and Hudson, 1980), 347-8; Theo van Doesburg, "Toward a Plastic Architecture," (1924) in Ulrich Conrads, *Programs and Manifestoes on 20th-century Architecture* (Cambridge, Mass: MIT Press, 1971), 78-80; Sigfried Giedion, *Bauen in Frankreich, Bauen in Eisen, Bauen in Eisenbeton* (Leipzig: Klinkhardt & Biermann, 1928), trans. by J. Duncan Berry as *Building in France, Building in Iron, Building in Ferroconcrete* (Santa Monica: The Getty Center for the History of Art and the Humanities, 1995); Lászlo Moholy-Nagy, *Von Material zu Architektur* (Munich: Albert Langen, 1929), which was later translated and expanded as Lászlo Moholy-Nagy, *The New Vision* (New York: George Wittenborn, 1947); R. M. Schindler, "Space Architecture" (San Francisco, 1930) in Lionel March and Judith Sheine, *RM Schindler: Composition and Construction* (London: Academy Editions, 1995), 53-6; Gunnar Asplund, "Our Architectonic Concept of Space" (Stockholm: Tekniska Högskolan, 1931), reproduced in "Swedish Grace: Modern classicism in Stockholm," *International Architect*, no. 8, vol. 1, Iss.8 (1982, 40-41; Howe described "flowing space" as "the concept of our time," see David Leatherbarrow, *Architecture Oriented Otherwise* (New York: Princeton Architectural Press, 2009), 224; George Howe, "Flowing Space: The Concept of Our Time," in Thomas H. Creighton, *Building for Modern Man: A Symposium* (Princeton, N.J: Princeton University Press, 1949), 164-9.

19 Robert McCarter, *The Space Within: Interior Experience as the Origin of Architecture* (London: Reaktion Books, 2016), 14.

20 Colin Rowe, *The Mathematics of the Ideal Villa, and Other Essays* (Cambridge, Mass.: MIT Press, 1976), 3. Also see Le Corbusier, *Precisions on the Present State of Architecture and City Planning: with an American Prologue, a Brazilian Corollary Followed by the Temperature of Paris and the Atmosphere of Moscow* (Cambridge, Mass: MIT Press, 1991), 139.

21 For the structured view in Loos, see Beatriz Colomina, "The Split Wall: Domestic Voyeurism," in Max Risselada and Adolf Loos*, Raumplan versus Plan Libre Adolf Loos and Le Corbusier, 1919 - 1930* (Rotterdam: 010 Publ., 2008), 32-51. For the role of landscape in Le Corbusier's work, see Bruno Reichlin, "The Pros and Cons of the Horizontal Window The Perret - Le Corbusier Controversy," in *Daidalos*, no. 13 (1984), 56-78. For the claim that *plan libre*, *Raumplan*, and open plan developed out of the picturesque spatial tradition, see Leatherbarrow, *Architecture Oriented Otherwise*, 271-9.

22 Barry Bergdoll, "The Nature of Mies's Space," in Terence Riley; Barry Bergdoll, with Essays by Vittorio Magnago Lampugnani, *Mies in Berlin* (Museum of Modern Art, New York, 2001), 66-105.

23 Fritz Neumeyer and Mark Jarzombek, *Artless Word: Mies Van Der Rohe on the Building Art* (M.I.T.P, 1994), 314.

24 I here borrowed David Leatherbarrow's claim. See Leatherbarrow, *Architecture Oriented Otherwise*, 280.

25 See Neumeyer, *Artless Word*, 312.

26 This characteristic evidently reflects Wright's influence on Mies. See Sergius Ruegenberg and Eva-Maria Amberger, *Sergius Ruegenberg Architekt zwischen Mies van der Rohe und Hans Scharoun* (Berlin: Berlinische Galerie, Museumspädagogischer Dienst Berlin, 2000).

27 Muthesius exemplified his argument with Mies's Riehl House (1907) among recent German examples in the revised edition of *Landhaus und Garten* (1910). See Hermann Munthesius, *Landhaus und Garten: Beispiele Neuzeitlicher Landhäuser Nebst Grundrissen, Innenräumen Und Gärten. 2. umgearb. und verm. aufl. (8.-10. tausend)* (München: F. Bruckmann a. g., 1910), 50-1.

28 As an important interpreter of Mies, Bergdoll's study persuasively argues that not only was Mies's spatial manipulation in line with the *architektonischer Garten* tradition, but also the interweaving of interior and exterior space was a response to a long-lasting demand in the Germanic architecture and garden tradition, a demand that can be traced back to Lenné, Schinkel, and to a lesser extent Peter Behrens (1868-1940). See Bergdoll, "The Nature of Mies's Space," 74-5; Barry Bergdoll, "Mies and Schinkel: Nature and Consciousness in the Modern House," *Karl Friedrich Schinkel*, Susan M. Peik, ed., 2001, 125-35; and Barry Bergdoll, "Schinkel and Mies: Nature's Perspective," *Kenchiku to Toshi = Architecture and Urbanism: A + U.*, no. 388 (2003), 12.

29 Bergdoll, "The Nature of Mies's Space," 72.

30 See Mirka Beněs, "A Modern Classic: The Abby Aldrich Rockefeller Sculpture Garden," in John Elderfield, Kirk Varnedoe, Terence Riley, Peter Reed, and Mirka Beněs, *Philip Johnson and the Museum of Modern Art* (New York: MoMA, 1998), 105-51; also see Franz Schulze, *Mies Van Der Rohe: A Critical Biography* (Chicago: University of Chicago Press, 1985).

31 Wolf Tegethoff, Ludwig Mies van der Rohe, and William Dyckes, *Mies van der Rohe: The Villas and Country Houses* (New York: Museum of Modern Art, 1985), 130.

32 Daniela Hammer-Tugendhat and Wolf Tegethoff, *Ludwig Mies Van Der Rohe: The Tugendhat House* (Wien: Springer, 2000), 34.

33 For the concept of space from the standpoint of physics, see Max Jammer, *Concepts of Space: The History of Theories of Space in Physics* (Cambridge, Mass: Harvard University Press, 1969); for the philosophical account on space, see Maurice Merleau-Ponty, "The Spatiality of One's Own Body and Motility," and "Space," in *Phenomenology and Perception* (New York: Humanities Press, 1962), David Morris, *The Sense of Space* (Albany: State University of New York Press, 2004), or Otto Friedrich Bollnow, Christine Shuttleworth, and Joseph Kohlmaier, *Human Space* (London: Hyphen, 2011).

34 Depth is what gives bodies volume in the first place, and is what makes situations possible. As Edward Casey points out, following Merleau-Ponty, depth should be called the "first dimension" rather than the "third." In Merleau-Ponty's terms, it "immediately reveals the link between the subject and space." See Maurice Merleau-Ponty, *Phenomenology and Perception* (New York: Humanities Press, 1962), 267; Edward S. Casey, "'The Element of Voluminousness': Depth and Place Reexamined," in M. C. Dillon, ed., *Merleau-Ponty Vivant* (Albany, NY: State University of New York Press).

35 For the notion of "situational," see Merleau-Ponty's study on spatiality also makes the same point. See Maurice Merleau-Ponty, "The Spatiality of One's Own Body and Motility" and "Space" in Maurice Merleau-Ponty, *Phenomenology and Perception* (New York: Humanities Press, 1962); Merleau-Ponty, "Cezanne's Doubt," "Eye and Mind" in Maurice Merleau-Ponty, Galen A. Johnson, *The Merleau-Ponty Aesthetics Reader: Philosophy and Painting* (Evanston, Ill: Northwestern University Press, 1993). Regarding the notion of "circumstantial" and Gasset's famous maxim "*Yo soy yo y mi circunstancia*" (I am I and my circumstance). See José Ortega y Gasset, Julián Marías, Evelyn Rugg, and Diego Marín, *Meditations on Quixote* (Urbana, IL: University of Illinois Press, 2000), the first book to which Ortega referred to this idea. In fact, Ortega y Gasset, Martin Buber, and Merleau-Ponty's thinking share the same feature centered around the premise of existence as encounter.

36 Fritz Novotny, "Cézanne and the End of Perspective" (excerpt) in Christopher Wood, *The Vienna School Reader: Politics and Art Historical Method in the 1930s* (New York: Zone Books, 2000); Richard Shiff, *Cézanne and the End of Impressionism: A Study of the Theory, Technique, and Critical Evaluation of Modern Art* (Chicago: University of Chicago Press, 1984); Galen A. Johnson, "Phenomenology and Painting: 'Cezanne's Doubt'" and Forrest Williams, "Cezanne, Phenomenology, and Merleau-Ponty," in Merleau-Ponty and Johnson, *The Merleau-Ponty Aesthetics Reader,* 3-13; Leo Steinberg, "Rodin," in *Other Criteria: Confrontations with Twentieth-century Art* (New York: Oxford University Press, 1972), 322-403.

37 For an exemplary case of this understanding, see David Leatherbarrow, *The Roots of Architectural Invention: Site, Enclosure, Materials* (Cambridge [England]: Cambridge University Press, 1993).