The *Landschaft* concept in architectural education at the Bauhaus under Hannes Meyer: analysis of the notes of Meyer and his students

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Abstract

It is well known that the works of the Bauhaus's second director Hannes Meyer (1889-1954) and the graduates who studied under him were innovative and expanded modernist architecture in such places as the Soviet Union, the Middle East, Asia, and South America. Although the global activities of Meyer and his graduates have been studied, little is known about their origin, i.e. the architectural education under Meyer (1928-1930), due to the destruction of the Bauhaus archive during WWII. Consequently, previous studies have focused on the architectural design based on scientific analyses as characteristics of Meyer's architectural education, and base their analysis on the historical materials of student architectural drawings and Meyer's own architectural theory. These two topics should not, however, be merged, since Meyer's own architectural theory and educational method are not identical. Therefore, this study focuses on the latter and reveals the *Landschaft* (landscape) concept in architectural education at the Bauhaus under Meyer as one origin of the global activities of Meyer and his graduates. To achieve this, it explores student reports about the Bauhaus exhibition (1931) in Moscow, his (undated) notes for a lecture at the Bauhaus, his (undated) students' records of lectures, and architectural drawings (1929). It then evaluates the characteristics of Meyer's instruction by comparing his notes for lectures at universities in Mexico (1940). Through these documents, we can understand the following: (1) The architectural works of Meyer's students were classified according to an explanation given by Phillip Tolziner, a Bauhaus graduate. This classification was verified in light of the similarity of the contents with those of Klaus Meumann's architectural drawings (1929) and Meyer's lecture manuscripts. (2) Students re-enacted the design process of 'the grown house', which was designed by Meyer based on functional analyses and dissolved layout into the landscape, as a vital exercise in an architectural theory course. (3) The resemblance between Sharon's notes on *Landschaft* and Meyer's lectures at Wien (1929) and Mexico (1940) suggest that Sharon's notes recorded aspects of a *Landschaft* lecture given by Meyer. Since Meyer related 'the grown house' to *Landschaft* in the notes for his lecture at the National Polytechnic Institute in Mexico (1940), he probably also related them in the Bauhaus lecture. This architectural education may have enabled Meyer and his graduates to work around the globe in places with completely different social structures, climates, landscapes, and historical backgrounds from those of Germany.

Keywords: Bauhaus; Hannes Meyer; Architectural education

1. Introduction

1.1. Previous research on architectural education in the Bauhaus under Hannes Meyer

The Bauhaus under the leadership of Hannes Meyer (who led the newly established Department of Architecture from April 1927, and was director of the Bauhaus from April 1928 to September 1930) has been evaluated as an early school that introduced scientific analyses (particularly sociological analyses) to architectural education at the end of 1920s Germany[1] whereby architects tried to apply scientific analyses to architectural design (e. g. sunshine calculations, optimization of circulation, etc).[2]

Director Meyer was also a famous architect who designed architecture based on scientific analyses. Meyer's own design technique, and the architectural education he provided to students, consisted of planning buildings or entire towns and cities based on a scientific analysis of natural conditions, people's living patterns, and the social structure. For example, with regard to the design for Meyer's famous project the 'Federal School of the ADGB (German Trade Unions Federation)' (Bernau bei Berlin, 1928-30), the building and premises were designed based on the technique of 'continued analysis throughout the design process'.[3] Simultaneously, his students' drawings were filled with scientific analyses (calculation of ventilation and sunshine, timetable of residents, and circulation analysis).

Meyer, however, faced the problem of how to arrange the architectural form, which was an accurate translation of the results of scientific analyses, into a singular, fixed *Landschaft* (landscape) during the design process of the 'Federal School of the ADGB'.[4] Subsequently, the *Landschaft* concept appeared in his architectural theory from 1929.[5] Meyer had the following to say about laying out an architecture upon *Landschaft*. 'Finally, all creative action is determined by the fate of the *Landschaft* (...) A conscious experience of the *Landschaft* is building as determined by fate. As creators we fulfill the fate of the *Landschaft*.'[6] Based on this outlook, the 'Federal School of the ADGB' was designed to blend in with its surroundings, which was a lakeside area in a forest.

Because the *Landschaft* concept appeared in director Meyer's theory, it may also have appeared in architectural education at the Bauhaus. In addition, the global activities and appli-

1) ——— K. J. Winkler, *Baulehre und Entwerfen am Bauhaus 1919-1933* [Architectural education and design at the Bauhaus 1919-1933], Weimar: Bauhaus Universität Weimar, 2003, p. 62.
2) ——— W. Nerdinger, *Architektur, Macht, Erinnerung* [Architecture, Power, Memory], München: Prestel, 2004, pp. 43-57.
3) ——— H. Tomita and T. Sugimoto, 'Hannes Meyer no kenchiku sakuhin niokeru gankougata- kousei no igi nitsuite [On the meaning of staggered form in Hannes Meyer's architectural works]' *Journal of Architecture, Planning and Environmental Engineering,* 566, pp. 201-207.
4) ——— H. Tomita, 'Hannes Meyer's "Biological" Concept and its Loosening Influence on Form,' *Journal of Asian Architecture and Building Engineering*, Vol. 7, No. 2, 2008, pp.179-185.
5) ——— S. Hain, 'Schicksal der Landschaft. Perspektiven oder Fluchten eines Architekten [Fate of the landscape. Perspectives or escapes of an architect],' In *Funktionalismus-Utopie und Wirklichkeit*, Bernau: baudenkmal bundesschule bernau e.V., 1998, pp. 20-37.
6) ——— H. Meyer, 'bauhaus und gesellschaft [the Bauhaus and society],' *bauhaus vierteljahr- zeitschrift für gestaltung*, 3. Jahrgang Nr. 1, Dessau: Bauhaus dessau. 1929, p. 2.

cation of *Landschaft* surveys in architectural design and city planning by graduates (e.g. Arieh Sharon, Konrad Püschel, etc.) suggest that the *Landschaft* concept as well as scientific analyses was important. The technique that Arieh Sharon (1900-1984) employed in his designs of communities in Palestine, namely, basing designs on an analysis of the landscape, social, and economic features, can be considered reflective of his training under Meyer.[7] Indeed, the same architectural inclinations can be observed in the design technique of Konrad Püschel (1907-1997).[8] However, the focus on the *Landschaft* concept in architectural education at the Bauhaus has not been observed even in Klaus-Jürgen Winkler's thesis about architectural education at the Bauhaus (2009), which is the most substantial extant work at present.[9]

1.2. Aim of this study and research materials

Therefore, this study focuses on the *Landschaft* concept in architectural education at the Bauhaus under Meyer as one origin of the global activities of Meyer and his graduates. To achieve this objective, it explores his students' reports of the Bauhaus exhibition in Moscow (1931), his (undated) notes for a lecture at the Bauhaus, and his (undated) students' records of lectures and architectural drawings (1929). It then evaluates the characteristics of Meyer's instruction by comparing these documents with his notes for lectures at universities in Mexico (1940).

The materials consulted for this paper are as follows:

(A) The manuscripts of Phillip Tolziner, a graduate of the Bauhaus, which classify student architectural works in the *Bauhaus Archiv*.[10]

(B) The photographs of Klaus Meumann's architectural drawings 'the grown house', which are in the *Bauhaus Archiv*.

(C) Meyer's manuscripts on teaching and a fourth to sixth semester architectural theory course at the Bauhaus, which are in the *Deutsches Architekturmuseum (DAM)*.[11]

(D) The lecture notes of Arieh Sharon, a graduate of the Bauhaus, which are in the *Bauhaus Archiv*.[12]

(E) Meyer's teaching plan at the National Polytechnic Institute, which is located in the *DAM*.[13]

7) ———— A. Sharon, 'Collective Settlements in Israel,' *The Town Planning Review*, Vol. XXV, No. 4, 1955, pp. 255-270.

8) ———— K. Püschel, *Wege eines Bauhäuslers* [Ways of a Bauhaus people], Dessau: Anhaltische Verlagsgesellschaft mbH, 1996. H. Tomita, 'A survey of Korean settlements by Konrad Püschel, a graduate of the Bauhaus.' In *The 13th Docomomo International Conference Seoul 2014*, Seoul: DOCOMOMO International Conference Seoul Organizing Committee, 2014, pp. 416-419.

9) ———— K. J. Winkler, 'Bauhaus 1919-1933, Baulehre und Entwerfen [The Bauhaus 1919-1933, architectural education and design]', in R. Johannes (ed.), *Entwerfen,* Hamburg: Junius Verlag GmbH, 2009, pp. 614-655.

10) ———— P. Tolziner, 'Die Moskauer Bauhausausstellung, 1931. Ihre Bedeutung für Geschichte des Bauhauses [The Bauhaus exhibition in Moscow, 1931. Its significance for the history of the Bauhaus]', Tolziner, Philipp (1906-1996) II-15-3 deutsch 2. *Bauhaus Archiv Museum für Geschtaltung.*

11) ———— H. Meyer, 'Blatt II das haus garavagno mentone [Sheet II a house for the Garavagno family in Mentone]', undated, Nachlass Hannes Meyer III3(1) Theoretische Arbeiten / Manuskripte, Unterrichtsmanuskripte, 82|1-56(2) *Deutsches Architekturmuseum.*

12) ———— A. Sharon, Notes on *Landschaft* [landscape] lecture, 1927, Inv. Nr. 2008/23-362. *Bauhaus Archiv Museum für Geschtaltung.*

13) ———— H. Meyer, 'Aufzeichnungen zum Urbanistikkurs am Instituto de Planificacion y Urbanisme (I. P. U.) [Notes for urban course at Institute of Planning and Urbanism (I. P. U.)]', 1940, Nachlass Hannes Meyer III3(2) Theoretische Arbeiten / Manuskripte, Unterrichtsmanuskripte, 82|1-105(5) *Deutsches Architekturmuseum.*

2. Classification of the student's architectural works according to Tolziner's explanation

Philipp Tolziner (1906-1996) studied architecture in the Bauhaus under Hannes Meyer. In particular in the architectural studio course, he charged static calculations of the 'Federal school of ADGB' (1928-1930) and '90 national apartments in Tölten' (Dessau, 1929-1930). He experienced Meyer's architectural education at the Bauhaus. After receiving the Bauhaus Diploma in 1930, he accompanied Meyer to the USSR as a member of the Bauhaus Brigade (seven Bauhaus graduates). In Moscow, Meyer organized the 'Bauhaus exhibition in Moscow' (1931), which showed the output of the Bauhaus under his leadership (1928-30). The contents of the exhibition, however, were unknown in many areas. Therefore, Tolziner reported on the main contents of the exhibition (architectural education and Bauhaus works) in the 'Bauhaus Colloquium' (Weimar, 1979)[14], the Exhibition catalogue '*Hannes Meyer 1889-1954: Architekt, Urbanist, Lehrer*' (1989)[15], and an unpublished manuscript (undated). These reports contain some classifications of architectural works by students in Meyer's Bauhaus. Therefore, the author merged these classifications based on Tolziner's explanation [Table.1].

Groups		Categories		Examples
A	Student work on the architectural theory course	I		K. Meumann, 'The grown house', 1929.
		II		H. Knaub, 'The Garden', 1930. S. Giesenschlag, 'Relationship to the neighbourhood and external world within a housing development', 1929.
		III		E. Collein, 'Study on periodicity of living space', 1928. R. Mensch, 'Life cycle stage of a coxswain on a small boat', 1929
B	Work of the architecture studio course	Work of the architecture department		Architecture Department of Bauhaus Dessau, 'Project for one-story settlement', 1929. Architecture Department of Bauhaus Dessau, '90 national apartments in Törten', 1929-30.
		Individual work		E. Göhl, 'Project for experimental houses Typ 6', 1929.
		Competition work	Cooperatively	M. Stam (teacher) and etc. 'Berlin - Haselhorst settlement', 1929
			Individually	All students of architecture department, 'Kornhaus',1929.
C	Free work by students of architecture department		Cooperatively and individually	A. Urban, A. Sharon, 'School in Louny', 1930.
		-		P. Tolziner, T. Weiner, 'Communal residential block',1930.

Table 1: Classification of the student's architectural work according to Tolziner's explanation (c)Author

14) P. Tolziner, 'Die Moskauer Bauhausausstellung 1931 und ihre Bedeutung für die Geschichte des Bauhauses [The Bauhaus exhibition in Moscow 1931 and its significance for the history of the Bauhaus]', Kurzvortrag auf dem Bauhauskolloquium an der Hochschule für Architektur und Bauwesen in Weimar vom 27.-29. Juni 1979. Tolziner, Philipp (1906-1996) II-15-3 deutsch 7.

15) P. Tolziner, 'Mit Hannes Meyer am Bauhaus und in der Sowjetunion [With Hannes Meyer at Bauhaus and in the Soviet Union]', in: W. Kleinerüschkamp (ed.), *Hannes Meyer 1889-1954: Architekt, Urbanist, Lehrer*, Berlin: Ernst & Sohn, 1989, pp. 234-263.

Group (A) comprised the work of students of the architectural theory course, in the fourth to sixth semesters at the Department of Architecture (the first semester was a preliminary course, the second and third semesters were workshop courses). This group was divided into three categories according to the degree of guidance: I to III.

Group (B) comprised the work of students from the architectural studio course, during the seventh to ninth semesters at the Department of Architecture. This group contains the work of the architecture department, individual work, and obligatory competition works by cooperation and individually. Tolziner pointed out that the students in the architectural theory course attended lectures; however, in the architectural studio course, the students were independent collaborators who engaged in real architectural design.

Group (C) comprised voluntary work by students of the architecture department. This group contains voluntary competition works completed by cooperation and individually.

Some of these facts have already been explained fragmentally by Magdalena Droste (1993) and Klaus-Jürgen Winkler (2009); however, it is possible to classify the students' work more clearly and holistically based on Tolziner's published and unpublished explanation, which Droste and Winkler did not use.[16)]

3. The *Landschaft* concept in the architectural theory course

3.1. Meumann's drawings and Meyer's lecture manuscripts

According to Tolziner's explanation, the work of students on the architectural theory course could be categorized into three groups according to the deference of the teacher's instruction during the exercises. For example, the exercise 'the grown house' (a detached house for the Garavagno family in Mentone, Italy) belongs to category I. Meyer attached the most fundamental importance to this exercise every semester from the summer semester of 1927 to the summer semester of 1930, a total of seven semesters. As Tolziner explained, 'This first exercise contains three sheets and they are drawn by students in every semester, following Meyer's instruction'. Meyer first conducted all the work, from deciding on a theme to the drawing of this project, and students then redrew them. Through this exercise, students learned the characteristics of architectural education at the Bauhaus, which attached great importance to the foundation of design: analysis of societies and landscape.

We verified Tolziner's classification by comparing Meyer's lecture notes (undated) on 'the grown house' to the drawings of 'the grown house' by Klaus Meumann (1929). There are two A4 typed pages used by Meyer for his lecture on 'the grown house'. One sheet contains a list of drawings while the other sheet contains a detailed list of requirements. There are also three pages of 'the grown house' drawings by Meumann. By comparing these documents, we can understand the similarities between the content of the drawings and some aspects of the requirements.

16)————M. Droste, *Bauhaus*, Köln: Taschen Verlag GmbH, 1993, p.190.

In concrete terms, Meyer's lecture notes provide a list of drawings, which are a) family development diagram, b) topography of the residential area, c) house diagram, and d) functional diagram. Meumann's drawings correspond to this list from a) to d). His family diagram, which includes development over 30 years, a yearly diagram, and a daily diagram, corresponds to a). His plan of the residential area located between the sea and the forest corresponds to b). His floor plan and cross section correspond to c). His arrow diagram of human relationships corresponds to d).

Another of Meyer's manuscripts, entitled 'Function of Garavagno family in Mentone', listed 13 assumed behaviours (sleep, eat, cook, bake, stock, wine press, olive press, supply drinking water, utilize garbage, clean, body care, supply) by residents in this project and also lists third parties (behaviour) (chimney sweep, controller of gas and electric light, brother-in-law across the common access way, postman, country policeman, visitor to a spa, hawker: total seven items). The third party (behaviour) lists have five items (the underlined words) in common with the second and third party list (visitor to a spa, postman, hawker, beggar, daily train journey, tourist industry in Mentone and Monte Carlo, chimney sweep, controller of gas and electric light, playmate, and acquaintance of children: total nine items) in the social relationships analysis of Meumann's drawing.

Therefore, Tolziner's classification and explanation can be verified in light of the similarity of contents between Meumann's architectural drawings and Meyer's lecture manuscripts. It has been clarified that students re-enacted the design process of 'the grown house', which was designed based on functional analyses, and dissolved the layout into the landscape, as a vital fundamental exercise of the architectural theory course.

3.2. Sharon's notes on *Landschaft*

According to Tolziner, the architectural theory course comprised both lectures and exercises. We have already focused on the exercises in 3.1. Therefore, here we focus on the *Landschaft* lectures.

Arieh Sharon, a Bauhaus graduate, preserved his lecture notes from the Bauhaus under Meyer. They include two pages of A4 size handwritten notes on the *Landschaft* lectures of the architectural theory course. The first page depicts the relationship between topography and agricultural production [Fig.1]. The second page contains notes on various types of landscape. On the first page, Sharon wrote the words, 'The experience of the primitive landscapes of wild beasts [for hunting], farmers, nomads, medieval townspeople, and city dwellers' (Sharon, 1927).

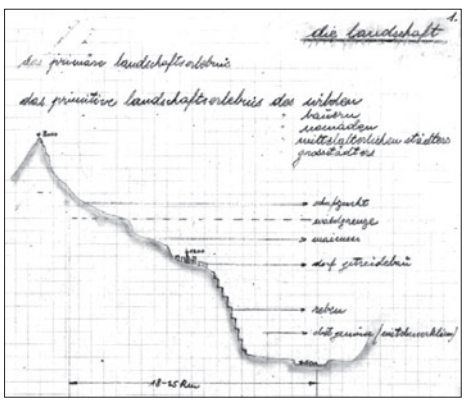

Fig.1 Arieh Sharon's notes on *Landschaft* at the Bauhaus (1927)
Bauhaus Archiv Museum für Geschtaltung. Inv. Nr. 2008/23-362

Underneath these words, he drew a topographical cross section reaching up to 2,500 metres above sea level, and noted the relationship between the topography and agricultural production based on a case study of the livelihood of the Wallis mountainfolk of Switzerland. A village is located halfway up the mountain, 1,200 metres above sea level, where grain is cultivated. At a higher level above the village, there are meadows, forest limits, and grazing land for sheep. At a lower level beneath the village, there are vineyards and the cultivation of fruits and vegetables. The lowest level is 500 metres above sea level, where the climate is Mediterranean. Sharon wrote the following conclusion: 'The experience of the landscape of non-sedentary peoples (nomads, seamen, miners, and mountainfolk) is characterized by continuously changing impressions' (Sharon, 1927).

To date, it remains unclear as to whose lecture these notes were based on. However, the present study has revealed that these notes are similar to Meyer's memorandum for a lecture at Wien (1929) and a set of notes for a lecture by Meyer at the National Polytechnic Institute of Mexico (1940), suggesting that Sharon's notes were based on Meyer's landscape lecture.

At first, in the lecture at Wien dated 22 April 1929, Meyer referred to the *Landschaft* of Wallis, which extends to 2,500 metres in the vertical and 25 kilometres in the horizontal. That section explained a new architectural theory (*Baulehre*). Meyer described how the basis of the new architectural theory was (1) recognition of the living area, (2) recognition of the periodicity of the living process, and (3) the conscious application of psychology. For (1), Meyer provided the example of a mountain farmer in Wallis for the living area and for (2) the daily or yearly process of a Norwegian fisherman, postman, and coal miner.

Secondly, Meyer drew a cross section of a mountainous district similar to that in Sharon's notes, under the living foundation, from lecture notes for the National Polytechnic Institute of Mexico dated 19 February 1940. Moreover, we can observe the words 'the case of Mentone' (in other words, the exercise 'the grown house' by Meyer) and a description of the timetable above the cross section as follows.

Living foundation: house - garden - field - water - firewood
Example: the case of Mentone!

Yearly - diagram
Daily - diagram
Family - diagram
} Timetable + functions

For these reasons, Sharon's notes could be recorded aspects of a *Landschaft* lecture by Meyer. In addition, since Meyer related 'the grown house' to *Landschaft* in a note for the National Polytechnic Institute lecture in Mexico, he probably related them also in the lecture at the Bauhaus.

4. Conclusion

Thus, through analyses of the unpublished notes of Meyer and his students, this study has revealed the following three points:

(1) The architectural works of Meyer's students can be classified according to Tolziner's explanation. The classification was verified in light of the similarity of the contents with those of Klaus Meumann's architectural drawings (1929) and Meyer's lecture manuscripts.

(2) Students re-enacted the design process of 'the grown house', which was designed by Meyer based on functional analyses and which dissolved layout into the landscape, as a vital fundamental exercise in the architectural theory course.

(3) The resemblance between Sharon's notes on *Landschaft* and Meyer's lectures at Wien (1929) and Mexico (1940) suggest that Sharon's notes recorded aspects of a *Landschaft* lecture by Meyer. Since Meyer related 'the grown house' to *Landschaft* in a note for the lecture at the National Polytechnic Institute in Mexico (1940), he probably related them also in the lecture at the Bauhaus.

It was pointed out in previous studies that Meyer's architectural education placed importance on scientific analyses. In addition, this study has clarified that Meyer's architectural education attached great importance to the *Landschaft* concept and its close relationship with scientific analyses. This architectural education may have enabled Meyer and his graduates to work around the globe in places with completely different social structures, climates, landscapes, and historical backgrounds from those of Germany. Therefore, the *Landschaft* concept in architectural education at the Bauhaus under Meyer can be evaluated as one of the origins of the global activities of Meyer and his graduates.

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