

# Color Planning in Modern Architecture: Focusing on Housing Estates in Germany during the Weimar Period

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## ABSTRACT

Modern architects developed color planning during the period of Germany's history known as the Weimar Republic. This study discusses its use in modern architecture by focusing on the Britz housing estate, designed by Bruno Taut in the second half of the 1920s in Berlin. This housing estate consists of three-story apartment houses and two-story townhouses, each of which has different color-planning characteristics. The author tries to clarify them by analyzing an architectural model made with the help of a field study and concludes that Taut's approach to color planning seemed to change within a short period of time.

## 1. INTRODUCTION

Modern architecture that appeared at the beginning of the twentieth century in Europe realized geometry-based, abstract architectural design. As we know these works mainly from black-and-white photographs, we may believe that modern architecture was largely white and without color. However, various colors were used to enrich architectural spaces; in fact, color was one of the most important elements of architecture at that time. Many architects dealt with this in Germany during the Weimar Republic, especially in the great numbers of housing estates built in this era, where various colors were used both on the inside and the outside of buildings. One of the most famous German architects in this period was Bruno Taut (1880-1938). This paper focuses on Taut's masterpiece, the Britz housing estate, and considers his approach to color planning by analyzing an architectural model made with the help of a field study.

## 2. Bruno Taut and Housing Estates in Berlin

In the history of modern architecture, Bruno Taut is famous as an expressionist architect who presented an original utopian vision in approximately 1920 as well as being known for his work in Japan during the 1930s. However, he was most productive during the Weimar Republic, especially in the second half of the 1920s. As the chief architect of a housing company named GEHAG, he planned almost ten thousand dwellings in Berlin from 1924 to 1931. After World War I, Germany faced a serious housing shortage, and many reasonable dwellings were required. For that reason, many apartment houses were planned as simple buildings in which Taut used colors to enrich the inhabitants' living environment.

As some previous studies suggest<sup>1</sup>, Taut's manner of architectural coloring gradually changed from the 1910s to the 1930s. In an early project called Garden City Falkenberg (1913-16), which was termed a "box of watercolors" at the time, he seemed to use colors freely, while the fifth section of a forest housing estate, Uncle Tom's Cabin (1930), shows a clear

regularity in coloration. In the latter project, different colors were adopted according to the facing of the wall, i.e., he used green for the east walls and red for the west walls of houses because each color corresponded to the rising or setting sun.<sup>2</sup>

The Britz housing estate was designed between these two projects. As Taut did not give any concrete explanation about the color planning of this endeavor, we must consider his concept by analyzing the existing architecture. Berlin architects Helge Pitze and Winfried Brenne researched this housing estate in the 1980s, and most of its original colors have been restored in recent years. By referring to the documents written by Pitze and Brenne<sup>3</sup>, and by constructing an original model of the housing estate, the author of this paper tried to understand Taut's concept. A study using an architectural model has the following merits: First, it allows the author to have a bird's-eye view of whole design, even a large project like a housing estate, and second, it means the author can see the colors of both the street- and garden-side walls, which are hard to observe on-site.

## 3. The Britz Housing Estate and its Architectural Model

Taut's Britz housing estate was constructed by GEHAG in six sections between 1925 and 1930, and this study focuses on sections one and two (1925-27), which are characterized by a central horseshoe-shaped building (Figs. 1, 2). These two sections consist of 555 apartments (one-story dwelling units) and 472 townhouses. The horseshoe-shaped building and the three-story buildings constructed along the peripheral roads were all planned to house apartments and were designed with flat-roofed, geometrical modern forms (Figs. 2, 3). The two-story townhouses located inside the site have seemingly traditional architectural forms with pitched roofs (Fig. 4).

The architectural model for this study was constructed with a scale of one to five hundred (1/500). Both the form and color of the houses were based on the documents written by Pitze and Brenne as well as observations made during the author's field study. The model was built of Styrofoam and colored with acrylic paints.

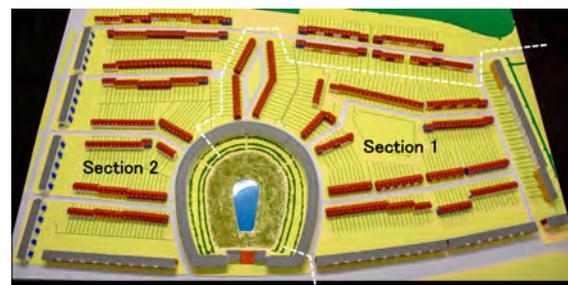


Fig. 1 Model of the Britz Housing Estate, Sections 1 and 2

#### 4. Analysis of Taut's Color Planning in Britz

The color planning of the Britz housing estate shows the different characteristics of the three-story apartment buildings and the two-story townhouses. The former buildings have an eye-catching, unified coloration, as is seen on the horseshoe-shaped building (Fig. 2) or the red buildings (called Red Front) along the eastern peripheral road (Fig. 3). While planning these, Taut seems to have wanted to create a contrasting color effect. For example, on the wall of the horseshoe-shaped building, Taut adopted white as the background color and emphasized staircases and the top floor with blue lines. The Red Front also has a contrast between its red background and pink staircases.

On the other hand, the townhouses show a relatively random coloration consisting of four colors: dark red, yellow, white, and blue. Each townhouse has one color on the street-side wall, and some of the townhouses have the same color on the garden side as that of the street side, while others have a different one. In a previous article<sup>4</sup>, the author pointed out the following characteristics of colors on the street-side walls of these townhouses:

- Taut used dark red most commonly as a fundamental color. The number of blue residences was small, and they were mainly located at the end of a building.
- He gave the townhouses arbitrary zigzag arrangements and changed colors where the houses followed this layout.
- He varied coloration from street to street. For example, in some buildings, two colors alternated between every residence (or every two residences), while some buildings were unicolored.

The author concluded that because there was no clear regularity in the color planning, it must have been laid out according to Taut's sense of design.

By making the architectural model, it became clear that his color planning seems to have changed in the short period of time between section one, constructed between 1925 and 1926 in the northern area of the site, and section two, constructed between 1926 and 1927 in the southern area (Fig. 1). For example, the townhouses along Lining street in the northeastern area show a unique coloration that is different from other streets, i.e., the whole building is colored blue (Fig. 5). On other streets, blue residences are placed only at the ends of townhouses (Fig. 6);

therefore, it can be speculated that Taut's usage of blue changed after the construction of Lining Street. There are also buildings on this street on which two colors alternate between every house, like stripes (Figs. 4, 5), a coloration which is not found elsewhere. Moreover, on many townhouses in section one, the colors of the garden-side wall are different from those of the street-side wall, while most of the townhouses in section two have the same colors on both sides.

We can say that the coloration of section two is more systematic than that of section one. For example, in section two, the buildings on Jochen-Nussler Street in the southeastern area are of great interest as they show a gradual transition from white to yellow to red in a zigzag pattern (Fig. 7). This allows us to potentially see an aspect of Taut's stance on systematic color planning.

#### 5. Conclusion

This paper discusses Bruno Taut's Britz housing estate as an example of color planning in modern architecture. Taut's color planning became more systematic after designing the Britz housing estate. Through analyzing an architectural model, the author observed that it changed between the creation of sections one and two of this project.

During the Weimar Republic, many modern architects, not only Taut, dealt with color. By considering the other architects' works, the progression of color planning in modern architecture may be traced more explicitly.

#### Acknowledgment

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#### Notes

1. e.g. W.Brenne, "Wohnbauten von Bruno Taut", in: W.Nerdinger (ed.), *Bruno Taut*, Stuttgart, 2001, pp.275-289
2. B.Taut, "Farbe", *Gehag-Nachrichten*, I 6, 1930
3. *Gross-Siedlung Britz: Dokumentation und Rekonstruktion des Originalzustandes* (Band 2A, 2B, 3A, 3C), Berlin, 1984-91
4. M.Ebisawa, "On the planning of residential buildings and their colors in the Hufeisensiedlung Britz by Bruno Taut", *Summaries of technical papers of annual meeting of AIJ*, 2019 (in Japanese)



Fig. 2 The Horseshoe-shaped building



Fig. 3 The Red Front



Fig. 4 Townhouses, Lining Street

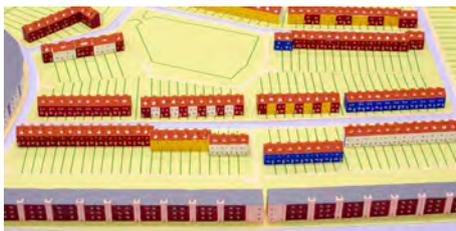


Fig. 5 Model of townhouses, Lining Street

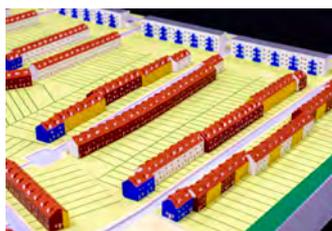


Fig.6 Model of townhouses in Section 2



Fig.7 Model of townhouses, Jochen-Nussler Street