

**International Congress of Aesthetics 2007  
“Aesthetics Bridging Cultures”**

**Bruno Taut’s transversal approach to  
modernity. Ideas and Principles on  
Restoration from: *Bericht über die  
Renovierung der Yeşil Türbe in Bursa.***

*Giorgio Gasco, Architect, Italy*

Bruno Taut in Turkey dealt with an intense and diverse activity which permitted his curriculum to avoid the conventional professional praxis of colleagues working in the country during those same years and to disclose a strong hybrid profile. Different scholars have widely explored main episodes of his experience, from his activity as professor at Istanbul Fine Arts Academy<sup>1</sup> to his school’s projects realized as head of Architectural Office of Ministry of Culture<sup>2</sup>. Alongside these famous and, by a historiography point of view, deeply analyzed episodes, Taut faced in Turkey issues linked to historical architecture not only for personal interest but also for professional duty. I gave up an entire part of my doctoral thesis to start a first attempt in constructing a critical evaluation of this subject remained until now quite unexplored.

This new aspect of Taut’s Turkish experience regards his official involvement as foreign expert in Ancient Monuments’ Protection Program Ministry of Culture drove as from the second half of the thirties<sup>3</sup>. Actually this information is confirmed by at least one Turkish source and by evidences Taut himself recorded in his *Istanbul Journal*.<sup>4</sup> First evidence in question is an article published on a “Güzel Sanatlar Dergisi” (Fine Arts Journal) issue in 1944 by architect and restaurator Mahcit Rüstü Kural. In this article Kural gives a complete account of Bursa Yeşil Türbe’s restoration works he directed and states what follows:

As foreign expert (mühassis), Bruno Taut, at that time Professor in Architecture Department of Fine Arts Academy and Chief Architect in Architectural Office, as a result of a Ministry request, went to Bursa the last days of the September of 1938 and examined Türbe.<sup>5</sup>

In the same article Kural also referred to a previous episode occurred in 1937:

If Professor were well informed about our principles, he would have certainly accept them as he did on the restoration of Mehemet Paşa Bedesteni in Ankara... Bruno Taut, once arrived in Turkey, was asked by the Ministry to examine the Bazar. At first, he opposed to the possibility of restoration. But when our restoration principles were explained to him, he changed his opinion and with great maturity he said that we could start restoration works.<sup>6</sup>

*Istanbul Journal's* pages confirm these two different episodes and provide also information on a third one. Thanks to these annotations that it's possible to reconstruct the chronological sequence of the three episodes:

- 25/02/1937 and 03/03/1937, Mahmut Paşa Bedesteni, Ankara:

Museum: inspection to Ancient Bazaar and to Han with Nazim [?] Bey... Later with Prof. Rohde and Landsberger. I desist from opposing restoration works because alternative is demolition.<sup>7</sup>

- 20-22/01/1938, Selimiye Mosque, Uç Şerefeli Mosque, Caravanserai, Gazi Mihal Mosque, Yildirim Cami and İkinci Beyazıt's complex, Edirne:

In Edirne. There in Europa Oteli [with] Celal Esat. Then with Nü[?] and the Vice-Director. With them and with 25 students to Senior-Inspector General Kazim Dirik. With Inspector and students again with car (and truck) given us by him that in the morning was with us and wants a report.<sup>8</sup>

- 17-23/09/1938, Yeşil Türbe, Bursa:

With Hillinger to Bursa.

Murabiye Mosque - Yeşil Türbe, Yeşil Mosque.<sup>9</sup>

Last of these episodes, in spite of Taut's annotations solve it in just few sentences, is on the contrary the more suitable one to focus on, mainly for two reasons.

First reason, apart from Yeşil Türbe's both symbolic and historical value, is due to specific side of questions monument's restoration involved. Yeşil Türbe's restoration works had a quite complex iter.<sup>10</sup> As from 1937, during preliminary studies, before real restoration works, it appeared immediately clear that the most controversial matter of the whole restoration laid in glazed ceramic tiles' condition. In fact, due to water filtering, these ceramic tiles were near to come off and a major part of them were damaged as well. In particular, their turquoise color brilliance, the distinguishing mark of Türbe, was near to vanish. Original Monument's turquoise tone was quite endangered by being used, in most damaged areas, new tiles gave the building an edulcorating effect. Main point of the subject was how to intervene on wall's ceramic frame. This was really a hard task to be solved; because, there were no former examples to be followed and a real restoration culture had still to be formed. Due to this impasse, as in other cases, foreign experts were asked to evaluate the situation.<sup>11</sup>

Second reason is linked to the existence of a fundamental document to analyze this episode in a critical fashion. Erica Wittich (Taut's life-long friend and lover), carried with her all Taut's possessions on moving to Japan short after his sudden death; so that, in Iwanami Shoten Publishing House Archive in Tokyo was able to keep the integral version of report Taut drew up to address Yeşil Türbe's restoration on behalf of the Ministry of Culture: *Bericht über die Renovierung der Yeşil Türbe in Bursa*.<sup>12</sup> This document provides a valuable picture on the ideas and principles, by which Taut was led, when he had a chance to face with the restoration's matter. With this report Taut gives a quite detailed analysis of the monument's main features, by organizing text in six

paragraphs focused on a specific issue each: *Türbe in city's context*, *Sample of tiles external coating*, *What have to be done*, *Precautions in concrete's use*, *The Garden*, *The Interior*. Taut mainly dwells on necessary interventions in order to protect ceramic glazed original tiles and especially he reacts against the use of incongruous new tiles in walls' most damaged areas for providing a quite provocative solution.

This report is a surprising evidence of Taut's statements on the Restoration's issues, disclosing a quite up to date and modern approach. Actually this was not the first time that Taut faced a restoration matter. At the beginning of his professional career, when he was still a training architect in Fisher's office (1904, 1908) and after he moved to Berlin (1909, 1914), Taut, together with Franz Mutzenbecher, dealt with interior decoration and restoration works for some little village churches.<sup>13</sup>

Taut himself referred to the first of these commissions in the speech he gave at the opening of his works' exhibition held in Academy 4<sup>th</sup> June of 1938:

For all of my projects in that period ( in my youth ) the first two commissions that I had thanks to my master Theodor Fisher were important: the restoration of a little gothic church in Wurttemberg and the turbine room for the Harkort rolling-mill at Watter in Ruhr. In both cases I had to consider the architectural tradition and on the other hand the new technologies to use in the industrial plan. All my work, from the beginning up till now, shows how much these two tendencies influenced me leading me to grasp from both romanticism and sensationalism, at that age, using iron, concrete, glasses and bright colors.<sup>14</sup>

Taut's words underline the idea of continuity between past and future which had distinguished his work during all his life. This speech can be considered as a manifesto showing the guidelines of the transversal trend, which distinguished his theoretical approach on Architecture in contrast to the direction taken by his avant-garde colleagues. According to Taut the restoration of that little church as well as the new construction for Harkort rolling-mill form part of the same modern vision. There is a passage of report for Yeşil Türbe that seems to echo the previous excerpt. In this case, Taut recalls these first restoration assignments to display his approach conformed to a specific trend in restoration theory opposed to the academic one:

One side is of the opinion that it's both possible and necessary to reconstruct an old building as it had been built in ancient times. Supporters of this side belong to the restoration's academic school. They are not full trusted, because all the restorations from Viollet-le-duc's time to today were completely unsuccessful... Other restoration's trend, I agree with and for restoration of four churches I drew my inspiration from, can be summarized in the following statement: In conclusion no ancient form has to be copied. Ancient ruins have to be just protected from further deterioration, for all the rest nothing has to be done. I think it's a good choice to follow this principle in the case of Yeşil Türbe too.<sup>15</sup>

These were not experiences of slight account if 30 years later Taut mentions them to support his point of view on restoration. Moreover, these churches' restoration assumes importance because already for those early assignments Taut based himself on the last tendencies of restoration's contemporary debate. Main principle addressed the restructuring works of Nieden's church in 1911, for example, in Taut's words sounds like follows:

To preserve old exactly like it is and to make new appear as new.<sup>16</sup>

Taut declared himself to be a follower of principles of the restoration theory of his time supported against the academic school devoted to Viollet le Duc's ideas. Rule standing behind this principle forces to not imitate the past; but, to enrich it with new, soft and sensitive additions, which are able to establish a good relationship between the old and the new. Taut's ideas on restoration seem to be adjusted to contemporary trends. When Taut drew up report for Yeşil Türbe the international debate on restoration grew up and its theoretical codifications had been framed inside the International Congress of Restoration held in Athens in 1931. Time after, with the publication of Athens' Restoration Chart, a set of principles were established in order to address restoration works on international level. Taut's advises seem to be inspired by the second restoration principle:

The aim of Restoration is to re-establish the potential unity of a work, on the condition that this was possible without committing both an artistic or historic false and without removing every sign of the work passing through history.<sup>17</sup>

Already when he was in Edirne together with Celal Esat Arseven, Taut summed up this principle like follows:

With Celal 2<sup>nd</sup> Principle for studies on Antiquity: it is forbidden to copy!<sup>18</sup>

As a matter of fact those early episodes together with Turkish ones form a quite precious critical frame to light up in a different way Taut's complex activity in Turkey. Taut's cultural background in Turkey, in particular, included theoretical, technical and historical aspects related to classical Ottoman architecture, by which he was amazed since his first visit to Istanbul in 1916 in occasion of the Turkish-German Friendship House's competition. Actually Taut reached such a clever knowledge on these issues that Kural, as his article states, introduced him as a Specialist (*mütehassis* in Turkish). Report's contents completely bear out such a reputation.

Taut's advises for interventions on Türbe's tiled walls are simple, direct and precise indications that display ability in both analyzing problems and singling out practical solutions. A major part of ceramic tiles were in very bad conditions due to water filtering. But original portions, still in good conditions, kept old turquoise color's original feature. Taut pressed on the point that it was impossible to produce the same tiles with modern techniques. According to this, he questioned about the most problematic restoration's node:

Is it possible to achieve, after 500 years, same handicraft product [glazed tiles] and to position it with the same endurance of past times?<sup>19</sup>

Although the answer to this question as for Taut was irremediably negative, he stressed anyhow the necessity to intervene by considering two aspect: the specific impression of new ceramic tiles seen at close range and the general impression within surrounding landscape.<sup>20</sup> According to these considerations Taut provided a set of advices:

First of all all the new and incongruous ceramic tiles have to be removed. The old ones have to be stabilized by the use of hydraulic lime and the walls have lost their tiles have to be plastered. This means a major part of the walls, the whole south, south-east and south-west sides. In order to preserve Tomb's present appearance, for its both close and distant impressions, it could be possible to achieve a good result by employing a modern metallic

paint instead of using new ceramic tiles, which are badly reproducing old ones. Taking into account that tiles' old glazed surfaces were opaque, as for me with "Keim mineral paints" it is possible to reproduce successfully this impression of opacity from a distance. In order to enhance Türbe's general architectonic impression, I advise to put ash color clay where rich frame tiles were once in order to ensure Tomb's architectonic general impression. It is unquestionably difficult to have the same old color by using plaster; in order to have required strength on the other hand, his price would increase. Nevertheless, in relation to the perception of the building from a distance, it is possible to achieve a better result than before if colors are tested and their shades are carefully determined. Sightseer, going through the garden, will notice, of course, the difference between old tiles and additional colored plaster. But, in this way the building's reality will be manifested as much as the old has not been touched and the new points out itself just as it is.<sup>21</sup>

Taut, in this specific case, conceived Türbe as a sort of delicate and complex mechanism, which is able to be perceived in a different way depending on fruition distance. His advises for restoration quite conform to this vision too and manifest a sensitive and sophisticated approach. The idea to use a mineral paint in stead of new fake tiles meant to privilege the visual impression more than the tactile one. But, it was also a question of coherence: since it was impossible to produce tiles of the same quality as the old ones, it was then both useless and illogical to try to achieve the original effect with fake materials. Taut was able to figure out a quite reasonable arrangement at least useful to preserve the monument's general appearance. His indications display a modern vision on restoration matter and denote a bold mind able to defend such a drastic decision in relation both to traditional and historical questions. Especially, the reference to "Keim mineral paint" is worth to be taken into consideration; because, it is a demonstration that Taut was quite well-informed on restoration issues not only from the theoretical point of view but also from the practical and the operative one.<sup>22</sup> Such a deep knowledge of these kind of colors, most probably, was due to his former partnership with Franz Mutzenbecker.<sup>23</sup>

Last sentence of report's excerpt is a clear statement of Taut's ideas on restoration. The main point, which Taut carefully emphasizes, is keeping away from any imitative interventions. He claims for avoiding the pretension to reproduce both ancient technique and ancient materials. According to him, these attitudes felt off unavoidably into Kitsch manifestations; because, it was impossible to imitate ancient handicraft's skill with modern technical means. In similar cases, Taut's advises focused on soft attitudes and minimalist approaches, where he prescribed precise interventions only if they were considered as strictly necessary. In any case, new interventions had to be pointed out and kept separate from the original old features. Interventions have to be taken in keeping with the building's history and features in order not to compromise their critical reading. Actually, these restoration's principles were perfectly tuned in accordance with the ideas that distinguished Taut's architectural statements. He always refused easy formalisms and superficial imitations in his design activity. He strongly reacted against these trends, especially in the Istanbul Fine Arts Academy<sup>24</sup>, sounding a transversal path towards modernity, which was distinguished by a synthesis between the old traditions and the modern approaches. In *Mimari Bilgisi* Taut manifested this refusal like follows:

With no doubt, a superficial formal imitation should be avoided. Otherwise, this feeling of proclivity would easily slide into a 'romanticism' or into a misguided 'nationalism' that would appear as an ugly imitation, which comes to be called as 'kitsch'.<sup>25</sup>

In this way, it is possible to point out that Taut's approach to restoration too forms a part of that duality of Tradition and Modernity that always marked, as an essential ingredient, both his architectural discourse and practice. Moreover, these same statements, from which Taut tried to formalize the idea of a New Architecture, seem to fit quite well in addressing a discourse on restoration. Among them, the most meaningful, by this point of view, is the concept of *Continuity*. Taut drew up the notion of continuity between the old and the new in order to solve the dilemma between the traditional and the modern by means of synthesizing them. According to Taut, this is the right way to produce architecture for avoiding both banal copies of past and ostentatious gestures arisen out of the will to be modern at all costs. In both cases, the result would be a sterile architecture as he states in his essay titled "Proporsyion":

...we come across a rule which is the basis of architecture: "continuité = continuity", if one does not pay attention to this rule, architecture will be sterile.<sup>26</sup>

Taut always confronted with both the will for building in harmony with the traditional setting and the will for creating a modern architecture for contemporary needs. The Understanding of these aspects as a whole, that is Continuity, will give the architect the chance to use modern materials and modern technologies respecting the values of the traditions, avoiding to produce an object neither with soul nor meaning. Taut's project for the Literature Faculty of Ankara University by this point of view was the direct translation of this principle into architectural shapes. In the interview Taut granted for "Her Ay" magazine, he introduces this projects as follows:

My project of the Faculty of Literature Building, which is recently to be realized in Ankara, is an experience about the utilization of some specific formal elements belonging to Turkish architecture, in the compromise made with the modernity of the building.<sup>27</sup>

Reference to tradition, especially as for Taut, is something, which cannot be renounced; because, it keeps inside a set of still topical values that tie up the past and the present. Taut found confirmation of these ideas in Ottoman classical architecture's examples. According to him, they represent an architectural form under restless evolution that is able to give both compositive and formal criteria for design activity as well as to become a rich repertory of information about traditional technique:

Great conception of a very productive architectural period can show how it is possible to combine, with lightness and elegance, the past and the present. In Turkey, we can easily find a great example. That is the mosque.

Continuity, as a principle, allows to re-link Tradition with Modernity, Past with Present by the virtue of a common vision, a sort of unchanging "inner logic" that has always been the same:

The quality of building does not really depend on creativity, imagination or mastery of an architect, even mostly it depends on being determined in a certain manner, in a certain form of structures and in a certain scheme which have been used continuously by generations throughout ages. The concept always stays the same.<sup>28</sup>

Architectural vision that stands behind Past and Present is the same. By this point of view, it is possible to establish an interesting operative dialectic between the restoration and the design activity. Deep concept, in fact from one hand, allows ancient features to

become effective in enhancing modern design values; from other hand, it addresses modern technique in being useful for intervention on ancient buildings. To deal in continuity with this deep concept, actually becomes the common goal both for restoration and design. *Continuity* provides a bridge between these two disciplines in a way that they are no longer separate; but, form part of that *Dialectical totality*, structured between the Modern and the Traditional, by the means of which Kristina Hartmann summarizes architectural path followed by Taut.<sup>29</sup> There isn't any clear-cut gap. *Continuity* is a cultural bridge that allows evolution and development of new forms according to paths outlined through time. In the specific case of ancient monuments' protection, restoration activity has to safeguard monument's ability to manifest concept at the base of its conception more than to simply re-propose monument's external features and appearance. Still today, the ability to perpetuate this concept allows architects to deal with both the old and the new buildings by means of interventions that are in continuity with the past nevertheless being modern.

How it's possible to grasp from these issues Taut carried out the same battle in order to react against Imitation, which he considered as one of the worst evil of his time, dealing with both restoration and design activity. In design activity, he proposed an alternative idea of modernity for fighting against a modern style that is able only to apply sterile cliché, typological approach and standard layouts with random references to context. In his restoration experience, even though it was restricted to few episodes, he also strongly reacted against interventions, which he defined as *Fiascos* in his report, that in order to adhere to a supposed ancient formal unity perpetrate a historical false imposing to ruins an imitative mask. One of the Taut's famous anti-rhetorical statements seems to fit quite well with the restoration side of this battle:

It would be much more rightful to investigate what old masters looked for, rather than inspecting on what they did.<sup>30</sup>

---

<sup>1</sup> S. Bozdoğan, "Against Style: Bruno Taut's pedagogical program in Turkey, 1936-1938." *The Education of the Architect* (Cambridge: MIT Press, 1997: 163,192) and B. Nicolai, "In Oriente Lux – Bruno Tauts Revision der Modernen Architektur 1936-1938." *Moderne und Exil. Deutschsprachige Architekten in der Türkei 1925-1955* (Berlin: Verlag für Bauwesen, 1998: 133,151).

<sup>2</sup> İ. Aslanoğlu, "Dışavurumcu ve Uçuş Devirlerinde Bruno Taut (1880-1938)." *ODTÜ Mimarlık Fakültesi Dergisi* (Ankara: ODTÜ Mimarlık Fakültesi, II.1, 1976) and M. Speidel, "Doğallık ve Özgürlük: Bruno Taut'un Türkiye'deki Yapıları." *Ankara 1923-1950: The Making of a Capital* (Ankara: TMMOB, Mimarlar Odası, 1994)

<sup>3</sup> For a complete account on Ministerial Program for Ancient Monument's Protection see: E. Madran, *Tanzimat'tan Cumhuriyet'e Kültür Varlıklarının Korunmasına İlişkin Tutumlar ve Düzenlemeler: 1800-1950 (Interventions and Laws on Cultural Heritage's Protection from Empire to Republic: 1800-1959)*, (Ankara: ODTÜ Mimarlık Fakültesi, 2002: 109,126,128)

<sup>4</sup> B. Taut, "İstanbul Journal." (Berlin : Akademie der Künste Baukunst Archive, BTS 01-273, 10.11.1936 – 13.12.1938: 1,143). This notebook Taut filled with detailed and precious informations about his activity in Turkey, is the main source to reconstruct operative details and chronology of these episodes. Original handwritten text is in the archive of Iwanami Shoten Publishing House in Tokio, Taut's legacy (Iw 36).

<sup>5</sup> M. R. Kural, "Çelebi Mehemed'in Yeşil Türbesi ve 1941-1943 Restorasyonu (Mehemed Çelebi's Green Tomb and its Restoration 1941-1943)." *Güzel Sanatlar Dergisi* (5, 1944: 89)

<sup>6</sup> M. R. Kural, "Çelebi Mehemed'in Yeşil Türbesi ve 1941-1943 Restorasyonu (Mehemed Çelebi's Green Tomb and its Restoration 1941-1943)." (1944: 96)

<sup>7</sup> Taut, "Istanbul Journal." (25.02.1937: 26). At the meeting were present Public Works Minister (Kazim Bey) and two archaeologists (Rohde e Landsberger). As from 1930 studies and surveys on monument had been started under direction of Maarif Vekaleti (Ministry of Culture). Among other professionals, Jansen and Egli, had been involved as architects, Rohde, Landsberger and Güterbock as archaeologists. In 1931 Jansen drawn up a report and Egli sketched out a project. See: İ. Bayburtoğlu, "Müze Belgelerine Göre Kuruluşundan Günümüze Kadar Anadolu Medeniyetleri Müzesi." *Ankara Dergisi* (Ankara: 2, 1991: 100).

<sup>8</sup> Taut, "Istanbul Journal." (21.01.1938: 92).

<sup>9</sup> Taut, "Istanbul Journal." (17-18.09.1938: 140).

<sup>10</sup> A long-lasting and tormented preliminary study's phase came before effective interventions on monument. Kural made his first on the spot inspection in 1937 and wrote a report to inform Ministry of very bad condition of building. Then followed drawing up of restoration project signed by Kural himself, in 1941 construction site was settled up and it lasted up to 1944.

<sup>11</sup> Foreign experts still played an important role in country's modernization process. Ancient buildings' restoration and protection field in fact lacked of suitable references since Turkey just then started a methodological work in that direction. Moreover local experts with required professional skill lacked too since a specific formative training inside Academy didn't exist. Taut was quite involved in this matter due to his responsibilities as Head of Architecture Department. He dealt several time with colleagues teaching in history or archeology classes, among them for example Prof. Ginther. There are two entries in his diary referring to Taut's involvement in such a debate then under way in Academy:

"Together with C. visit to Ginther's class. During the talk, problem of including in archeological teaching of ancient building protection's education." See: Taut, "Istanbul Journal." (12.04.1937: 36).

"...I insist restorators need a specific training." See: Taut, "Istanbul Journal." (17.01.1938: 91).

<sup>12</sup> B. Taut. "Bericht über die Renovierung der Yeşil Türbe in Bursa." (Tokyo: Iwanami Shoten Publisher's Archive, Iw 45: 1938).

<sup>13</sup> Taut works' list, included in monographic book published in Germany in 1980, confirms this information, see: *Bruno Taut 1880-1938*, Ed. Ausstellung der Akademie der Künste, (Berlin: Ausstellung der Akademie der Künste, 1980: 266-267). In 1906 he face this issue for the first time with Unterriexingen church's renovation works. They consisted just in a change of spaces' original arrangement and in new color paintings. Taut kept blue, white and red colors' basic scheme distinguished church inside. See: U. Maasberg. "Le vie dell'arte passano per la natura. L'attività artistica di Bruno Taut. (Der Weg zur Kunst führt über die Natur Ein Blick auf das Künstlerische Schaffen Bruno Tauts )" *Bruno Taut 1880-1938* (Milano: Electa, 2002: 212-213). Another important assignment was a restoration of a church in Nieden. In this case Taut developed the idea of a chromatic spatial arrangement, simulating by colors a from time to time different light. He tried to give color an autonomous function inside an architectural body. See: :M. Speidel. "L'opera giovanile. (Das Frühwerk)" *Bruno Taut 1880-1938* (Milano: Electa, 2002: 238).

<sup>14</sup> B. Taut. "Ansprache zur Eröffnung der Taut – Ausstellung in Istanbul am 4.6.1938." *Bruno Taut 1880-1938* (Berlin: Akademie der Künste, 1980: 260).

<sup>15</sup> Taut, "Bericht über die Renovierung der Yeşil Türbe in Bursa." (1938 : 3-4).

<sup>16</sup> Bruno Taut quoted in :U. Maasberg, "Le vie dell'arte passano per la natura. L'attività artistica di Bruno Taut. (Der Weg zur Kunst führt über die Natur Ein Blick auf das Künstlerische Schaffen Bruno Tauts)" (2002: 213).

<sup>17</sup> C. Brandi. *Teoria del Restauro*, (Torino: Einaudi, 1977: 8).

<sup>18</sup> Taut, "Istanbul Journal." 21.01.1938: 95).

<sup>19</sup> Taut, "Bericht über die Renovierung der Yeşil Türbe in Bursa." (1938: 3).

<sup>20</sup> See: Taut, "Bericht über die Renovierung der Yeşil Türbe in Bursa." (1938: 5).

<sup>21</sup> Taut, "Bericht über die Renovierung der Yeşil Türbe in Bursa." (1938: 5-6).

<sup>22</sup> Keim Mineral Paints was founded in 1878 by A. W. Keim in Bavaria and it is still today a renowned firm of silicate paint systems. Mineral paints comprise a water borne potassium silicate paint binder with mineral fillers, such as feldspar and naturally occurring inorganic earth oxide color pigments. When applied onto a mineral substrate the binder soaks into it and forms a microcrystalline bond to it. Microcrystalline structure maintains the vapor permeability of the substrate but prevents the ingress of driven rain. This type of paints are really suitable to provide long-term protective and decorative finishes for renders subject to harsh climate conditions. In the specific case of Bursa they would have been effective to oppose water filterings and would have allowed to obtain both the right shade and brightness of green color thanks to their mineral composition.

<sup>23</sup> They started to co-operate since 1905 working together in Fisher's office. Mutzenbecker was a decorator very skilled especially in wall painting and a talented graphic designer. In architectural field he worked as

color adviser proposing a series of decorative paintings and colors to different architectural offices among them Taut and Hoffmann's one. See: U. Maasberg, "Le vie dell'arte passano per la natura. L'attività artistica di Bruno Taut. (Der Weg zur Kunst führt über die Natur Ein Blick auf das Künstlerische Schaffen Bruno Tauts) " (2002: 214).

<sup>24</sup> At the time Taut started to work in Academy, the new generation of architects began to claim for a national architectural style. This search led them to shift towards nationalistic trends ingeniously copying the traditional Turkish architecture.

<sup>25</sup> B. Taut. *Mimari Bilgisi*, (İstanbul: Güzel Sanatlar Akademisi Neşriyatı, 1938: 69).

<sup>26</sup> B. Taut, "Proporsiyon." *Arkitekt* (.8, 1938: 69).

<sup>27</sup> B. Taut, "Türk Evi, Sinan, Ankara." *Her Ay* (İstanbul.2, 1938: 95).

<sup>28</sup> B. Taut, "Proporsiyon." (1938: 235) and :Taut, *Mimari Bilgisi*, (1938: 68).

<sup>29</sup> K. Hartmann, "Bruno Taut Almanya'da: Gelenek ile Modern Arasında Bir Mimar." *Yapı* (.2, 1983: 41).

<sup>30</sup> B. Taut, "Türk Evi, Sinan, Ankara." (1938: 95- 96).