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## Sharing Images through the Haptic Sense: The Theory of Hirschfeld-Mack's *Color-Light-Play*

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### I. Demand for the New Form of Expression

As widely known, the Bauhaus Weimar, founded in 1919 by President Walter Gropius (1883–1969), was forerun by the Großherzoglich Sächsische Kunstgewerbeschule (Grand Ducal Saxon School of Arts and Crafts). Henry van de Velde (1863–1957) introduced the concept of workshops (*Werkstätte*), to the arts and crafts school; the Bauhaus used workshops as a teaching tool as well. Van de Velde is famous for his dispute with Hermann Muthesius (1861–1927) about standardization at the Deutscher Werkbund. Muthesius insisted that standardization was necessary for economic globalization, while van de Velde and other artists<sup>1</sup> argued that standardization would undermine the character and originality of artists.

In the end, Muthesius retreated from his position on standardization and started to distance himself from the Deutscher Werkbund. This has been regarded as a triumph of individualists, who feared the loss of character and the decline of quality caused by mass production<sup>2</sup>, but was also regarded as an example of the significant problem of the shape for creators during that

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<sup>1</sup>. Van de Velde, Henry, *Gegenleitsätze*, zitat.in: The Social Museum of Modern Art, Kyoto, *Vom Sofakissen zum Städtebau, Hermann Muthesius und der Deutsche Werkbund* [exh. cat.], 2002, p.214.

time. For them, the shape was not simply a creative concern, but a peculiar functional creative element, directly connected to life.

Muthesius said, “The shape is [...] highly structural and it shows us a secret of human spirit, so to speak, a secret of poetic and religious presentation of human.”<sup>23</sup> In short, the shape is only “the spiritual”<sup>24</sup>, attached to an artwork, which is just a matter. What then, is the function of the shape that embodied “the spiritual”? Muthesius answered clearly: “What we face today is no longer simple movement of arts and crafts but the formation of a new form of expression by us, by whole mankind.”<sup>25</sup> In other words, the Deutscher Werkbund was interested especially in the shape applied to living space; the foundation of their interest involved a serious demand for “spiritual band (*das geistige Band*)”<sup>26</sup>, which would connect individuals to a larger community.

Such demand was not only occurring in the art world. For example, German psychologist Wilhelm Wundt (1832–1920) planned a national approach to psychology (*Völkerpsychologie*) as a supplement to general psychology, which treated individual mentality.<sup>27</sup> Furthermore, Austrian anthropologist Rudolf Steiner (1861–1925) developed a form of mysticism that made it possible for humans to reconnect with the world while maintaining their individuality.<sup>28</sup> Wundt aimed to clarify individual mentality in a scientific and

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<sup>22</sup> Schwarz, Frederic J., Hermann Muthesius and the Early Deutscher Werkbund, in: *The Social Museum of Modern Art, Kyoto, Vom Sofakissen zum Städtebau, Hermann Muthesius und der Deutsche Werkbund* [exh. cat.], 2002, p. 371.

<sup>23</sup> Muthesius, Hermann, Wo stehen wir?, in: *Die Durchgeistigung der deutschen Arbeit: Jahrbuch des Deutschen Werkbundes*, 1921, p.12.

<sup>24</sup> Muthesius, Hermann, Wechselrede über ästhetische Fragen der Gegenwart, in: *Die Durchgeistigung der deutschen Arbeit: Jahrbuch des Deutschen Werkbundes*, 1921, p.36.

<sup>25</sup> Muthesius, Hermann, o.T., in: *Die Veredelung der gewerblichen Arbeit im Zusammenwirken von Kunst-Industrie und Handwerk: Verhandlung des Deutschen Werkbundes zu München am 11. und 12. Juli 1908*, p.42.

<sup>26</sup> Goethe, Johann Wolfgang von, *Faust*, vol.1, 1833, verse 1939.

<sup>27</sup> Wundt, Wilhelm, *Elemente der Völkerpsychologie*, 1912. However, the interest for Social Psychology owes its origin to Karl Hildebrand, as Wundt pointed out, and the term ‘Social Psychology’ owes its origin to the philosopher Moritz Lazarus and the philologist Heymann Steinthal, who edited *Zeitschrift für Völkerpsychologie und Sprachwissenschaft*.

<sup>28</sup> Steiner, Rudolf, *Die Geheimwissenschaft in Umriss*, 1910.

positive way, and Steiner aimed to discover the high-level world through mysticism; they are almost irreconcilable. But they had the same aim of founding a mutual supplemental relationship between the whole and the individual. This demand was incredibly important at that time.

The founding of the new shape, which is common to “whole mankind”, was indispensable, particularly in art. But achieving the new shape would be difficult, because the true shape is not “something made by calculated experiences nor something satisfying the purposiveness”<sup>9</sup>. The true shape cannot be created by following particular rules. How found not only a form, but also “a new form of expression”? This was the problem of great urgency for the people concerned with art in Germany at the beginning of the 20th century. In response to this problem, they looked to the newest ideas in psychological theory, mysticism, the occult, or anything they regarded to be “deep-rooted in the foundation of human,”<sup>10</sup> and proposed a new theory of creation based on other senses such as the haptic or olfactory sense, rather than on the optic sense. Ludwig Hirschfeld-Mack (1893–1965) created *Color-Light-Play* (1922–25) in an effort to adapt the abstract painting to the common form. He tried to make another new form of expression “abstract paintings” to “the medium of binding and expression for a community, which works as strong as in the past”.<sup>11</sup>

## II. An Illustration: *Color-Light-Play*

As previously discussed, common shape shared by innumerable individuals was expected to create a spiritual band that fostered a community. This chapter will look to the Bauhaus Weimar, who practically took over the suggestion of Muthesius, to clarify the efforts to found the common shape, by illustration of *Color-Light-Play*.

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<sup>9</sup>. Muthesius, *ibid.* [3].

<sup>10</sup>. Hirschfeld-Mack, Ludwig, *Farbenlichtspiele: Wesen, Ziele, Kritiken*, 1925, p. 2.

<sup>11</sup>. Hirschfeld-Mack, *ibid.* [10], p. 3.

## 1. Goal of *Color-Light-Play*

*Color-Light-Play* was created by Hirschfeld-Mack, who studied at and was active in a leading position after completion of Gesellenprüfung at Bauhaus Weimar. Similar to a moving picture, colored light is projected on a screen with organ accompaniment. *Color-Light-Play* was a creation not only based on the purely creative demand<sup>12</sup>, but also on the social function. At the beginning of a leaflet that explains a novel creative form, Hirschfeld-Mack said: “The painter these days no longer has an inspiration from the community or from ‘people’s unwavering belief in Christ’ as in the Gothic period. The creation with spontaneous necessity based on the intuition of community is no longer possible and he isolates in the nation—uprooted from his nation—and he searches a nation.<sup>13</sup> Hirschfeld-Mack also demanded that the spiritual band connect people in a mutual and supplemental way. He placed his hopes on a novel, modern “moving light image,” after stating that the traditional painting would no longer function as “a common form of expression” in the 20<sup>th</sup> century.<sup>14</sup>

Psychologists supported the moving light image, namely the moving picture founded by the Brothers Lumière in 1895, which could realize a strong “common experience.”<sup>15</sup> Hirschfeld-Mack described the effect of a moving light image like *Color-Light-Play*: “The new genre of art [developed by *Color-Light-Play*], which is strongly physical and psychological, can occur through an experience of color and a musical experience with deep pure tensions. *Color-Light-Play* touches the foundation of emotion in the same way as color and shape instinct [...]”<sup>16</sup> In short, *Color-Light-Play* could evoke a very deep, continuous experience from the optic and auditory senses in many people at once. Interestingly, his expression “touch (*rühren*)” has a connotation: To create a common image through the haptic sense.

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<sup>12</sup> Hirschfeld-Mack, *ibid.* [10], p. 2.

<sup>13</sup> Hirschfeld-Mack, *ibid.* [10], p. 3.

<sup>14</sup> Hirschfeld-Mack, *ibid.* [10], p. 3.

<sup>15</sup> Yamane, Chiaki, A New Art Form for Common Experience: Hirschfeld-Mack’s *Farbenlichtspiele*, in: *CARLS Series of Advanced Study of Logic and Sensibility Vol. 4 2010, 2011*, pp. 343–350.

<sup>16</sup> Hirschfeld-Mack, *ibid.* [10], p. 8.

## 2. Texture in *Color-Light-Play*

According to Hirschfeld-Mack, *Color-Light-Play* is “a play of moving red, green, and blue light fields (*Lichtfelder*).”<sup>17</sup> A light field is the surface of light projected on a transparent screen. The play refers to the changing light fields and their variations in “shape, position of shape, color, texture, brightness, temperature, and *chiaroscuro*.”<sup>18</sup> The concept of texture is noteworthy; it describes the surface, or the structure (*Struktur*) of a material. Another aspect is the *Faktur* (derived from the Latin *facere*, “to make”), which refers to the haptic and optic quality with regard to structure. In spite of the clear-cut distinction between texture and *Faktur*, Hirschfeld-Mack applied the expression of texture to light, which is nonmaterial and has no texture, structure, or *Faktur*. Given that a fixed screen was used for the performance, the changing of texture mentioned by Hirschfeld-Mack must refer to the changing of the texture of light fields projected on the immobile screen. In other words, Hirschfeld-Mack tried to change the texture of light fields by projecting different light fields with both clear and blurred boundaries. In short, the changing of texture in *Color-Light-Play* means the changing of boundaries of light fields.

So how did Hirschfeld-Mack express this difference among light field boundaries? Light fields with blurred boundaries had “soft-surface texture,” while light fields with clear boundaries had “hard-surface texture.” In the 1920s, the concept of texture was very new. A German psychologist, David Katz (1884–1953), classified the appearance of surface color (*oberflächen Farbe*) and film color (*flächen Farbe*) in *Die Erscheinungsweise der Farbe* (1911). A clear boundary of surface color makes a form appear hard; on the contrary, a blurred boundary of film color makes a form appear soft. Thus Hirschfeld-Mack tried to change continuously the texture of the form through light fields. This idea to incorporate the haptic sense into an image was not Hirschfeld-Mack's casual idea. It developed from the interest in the haptic sense fostered by Bauhaus Weimar over a long period of time.

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<sup>17</sup> Hirschfeld-Mack, *ibid.* [10], p. 1.

<sup>18</sup> Hirschfeld-Mack, *Sequences*, University of Melbourne Archivs, Acc. No. 71/9-4-4-2-1.

### III. Founding the Common Form of Expression Based on Haptic Sense

To clarify why Hirschfeld-Mack intentionally incorporated the haptic sense into his *Color-Light-Play*, this chapter will explore the expectations of the haptic sense, and its importance to Hirschfeld-Mack and the Bauhaus Weimar, during that time.

#### 1. Haptic Sense as “Original Sense Organ”

Johann Gottfried Herder (1744–1803), thinker and clergyman in Weimar, introduced the concept of haptic sense into the aesthetics for the first time. He focused on the etymological connection between emotion and haptic sense (*Gefühl*) and considered the haptic sense as “ground of the mind (*Grund der Seele*)”<sup>19</sup> by Alexander Gottlieb Baumgarten (1714–1762). Then he developed so-called haptic aesthetics against the optic aesthetics that originated with Plato. Herder enumerated examples demonstrating that the haptic sense does not merely assist the optic sense and that we can comprehend objects through the haptic sense better than through the optic sense. Herder said, “Sight gives us *dream*, touch gives us *truth*.”<sup>20</sup> The aesthetics developed by Herder were succeeded by various people, including Alois Riegl (1858–1905), who subdivided evolutionally Herder’s haptic aesthetics in *Die spätrömische Kunstindustrie* (1901). According to Riegl, the aesthetic experience evolves from “close-up, haptic (*nahsichtig, haptisch*),” and “haptic-optic (*normalsichtig, haptisch-optisch*),” to “long-sighted, essentially optic (*fernsichtig, wesentlich optisch*)”.<sup>21</sup> In short, the first aesthetic experience occurs in the haptic sense.

Contrary to the historically discussed superiority of the haptic sense, the real life of mankind was surrounded solely by the optic and the auditory. To improve this situation, Filippo Tommaso Marinetti (1876–1944) presented

<sup>19</sup> Baumgarten, Alexander Gottlieb, *Metaphysik*, 1783 [2004], p.114.

<sup>20</sup> Herder, Johann Gottfried, *Sämtliche Werke*, vol.3, 1967, p.9.

<sup>21</sup> Riegl, Alois, *Die spätrömische Kunstindustrie*, 1901, pp.32–35. In the original text, Riegl used the term “taktisch”, but later he admitted in *Allgemeine Zeitung*, 1902, Beilage, Nr.92, 93 that the term “haptisch” was correct. (annotated by Inomo, Nobuyuki in Japanese translated *Die spätrömische Kunstindustrie*, p. 74).

*Manifeste du Tactilisme* (1921). Influenced by both the haptic theory developed by Herder and the evolutionistic viewpoint of Riegl, Marinetti thought the insensibility of the haptic sense in modern life adapted to eye and ear prevents people from “perfection of spiritual communication.”<sup>22</sup> Then he proposed tactile education. Marinetti said, “Its [Tactilism] purpose must be [...] to contribute indirectly toward the perfection of spiritual communication among human beings, through the epidermis. The distinction among the five senses is arbitrary; many other senses will soon be discovered and catalogued. Tactilism will promote these discoveries.”<sup>23</sup> For Marinetti, the haptic sense is the basic sense, more prominent than the optic sense and the auditory sense; thus, other senses will be discovered if the haptic sense is well-trained.<sup>24</sup>

## 2. The Haptic Sense at the Scene of Creation

However, the haptic sense was not as persuasive as the “original sense organ,” not only in aesthetic theory, but also on the practical scene, namely at the preliminary course at Bauhaus. The facts are widely known: The haptic sense was so important to the creation of Bauhaus that its improvement was also quite significant. Johannes Itten (1888–1967), who led the preliminary course at Bauhaus and laid its foundation, trained to comprehend the formal qualities of various materials through not only optical experience but also haptic experience. László Moholy-Nagy (1895–1946), who succeeded Itten, expanded the formal qualities of the surface of material, understood subjectively under Itten, into the formal qualities of the inner structure of material and tried to quantify them through a numerical value. Josef Albers (1888–1976) started his educational career as an assistant of Moholy-Nagy. Influenced by Itten and Moholy-Nagy, Albers's work focused on the surface of materials.<sup>25</sup> Considering the circumstances mentioned

<sup>22</sup> Marinetti, Filippo Tommaso, *Manifeste du Tactilisme*, in: *Comoedia*, 16. Jan. 1921, zitat. in : Lista, Giovanna[ed.], *Futurisme: Manifestes, proclamations, documents*, 1974, p.345.

<sup>23</sup> Marinetti, *ibid.*[22].

<sup>24</sup> At that time, various creative theories based on senses other than the optic sense were proposed in order to found the expressive common form that could apply to innumerable individuals: *Odorismus* or *Eurhythmie*.

<sup>25</sup> Wick, Rainer K., *Teaching at the Bauhaus*, 2000.



above, at the preliminary course of Bauhaus the haptic sense was considered an important clue to the creation. But was it considered *only* as an important clue to the creation?

In fact, the opposite was true. Marinetti presented not only a manifesto but a piece of work entitled *Free-word Tactile Table* (1920). However he said, “But the Tactilism, which I created, is clearly distinct from the plastic arts. It has nothing in common with painting or sculpture, and nothing to gain or to lose in connection with them.”<sup>26</sup> This statement shows that Marinetti presented the tactile education not for creation, but for the improvement of the contemporaneous situation of life. And such attitude was shared by Muthesius: “By now, in our modern movements, the quality, the fitness of material and the fitness of structure was important for us. [...] On these bases, we start at last our true duty: To recall the comprehension about the shape.”<sup>27</sup> Teaching how to read and comprehend the spiritual from a new form of expression was the main duty of the creators at the beginning of the 20<sup>th</sup> century after founding the expressive common form of expression.

These circumstances help us understand why Hirschfeld-Mack incorporated the haptic sense as texture to his *Color-Light-Play*. Furthermore, they point to the possibility that the haptic sense was not only a clue to the creation but also the irreplaceable medium for founding the modern common form of expression.

## Epilogue

The significance of tactile training at Bauhaus Weimar is clear from the preliminary course led by Moholy-Nagy and Albers.<sup>28</sup> However, they began leading the preliminary course in 1923, so they had a little influence on *Color-Light-Play*. What influenced the creation of *Color-Light-Play* was most likely Itten’s theory, as Hirschfeld-Mack participated in the preliminary course led by Itten. The concept of haptic sense as the “original sense organ” had a pronounced influence on Bauhaus Weimar before Moholy-Nagy and

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<sup>26</sup> Marinetti, *ibid.*[22].

<sup>27</sup> Muthesius, *ibid.*[4].

<sup>28</sup> See also: Wick, Rainer K., *Teaching at the Bauhaus*, 2000.

Albers led the preliminary course. At that time, as previously pointed, the foundation of the new form for sharing images was incredibly important. The goal of *Color-Light-Play* was to lay the foundation of a new genre of expressive form, as the spiritual band connected individuals to the broader community. To achieve this common aim, the haptic sense was regarded as the most effective and only medium. Furthermore, this concept is probably succeeded by “active touch” proposed in 1962 by an american psychologist James J. Gibson (1904–1979).<sup>29</sup>

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<sup>29</sup> Gibson, James J., Observations on Active Touch, in: *Psychological Review*, vol.69, no.6, November 1962, pp.477–491.