

Color and the Quiet Discourse

It all began when two people – independently – picked a book from their bookcase, and to my surprise opened at page 100 and showed me the quotation:

Color is the most ephemeral of everything. I refrain from color. The material has color; which is enough. Red brick is not red because it is red. It is red because it is fired clay. That is why I use it. It tells how it has come into being. Architecture is volume and light, darkness and light. My visions are black and white, as dreams are said to be.

I didn't ask why they wanted to show the quotation to me and how come they knew exactly where to find it. Both realized that the statement seems provocative to a person interested in color and painting. The quotation presents one of two answers to a question in the concluding part of the book. Earlier in the book, subtitled *Conversations on the architects work*, Lennart Holm, the author, has been interviewing three architects from his own generation, and four younger architects. The conversations aimed at "the vision and the troubleshooting in the work of architects". They are gathered for a concluding discussion, where the answers are anonymously rendered. "Color has started to play a part. Does it give expression?" is also given the answer: "With color you get closer to the humans. It appeals to the senses, it defines atmosphere."

One of the attending architects was Bengt Edman. In 1950, Lennart Holm, together with Bengt Edman, designed the Villa Göth in Uppsala, which began the *brick-brutalism* in Sweden. It is quite likely that Bengt Edman is behind the words about the red brick; my interpretation makes them a manifesto for the Swedish brick-brutalism and its *visions*. The quotation serves as a point of departure for my questions about the approaches to color among Swedish architects. After the Second World War, when industrialization and the consumer society had become a reality, troublesome gaps between education and practice (production), between intention and result, and not least, between the architect and the consumer arose. Colored surfaces can tell about these changes and conflicts, as well as runaway words from the architects. Seen in the light of international discourse, where color during the

second half of the twentieth century has been used as provocation, they appear more distinctly. "Architecture is colorless", Gio Ponti stated about 1960. "A building made of bricks is a building of bricks, not red architecture ...". The predominant conception about the expression of material and structure, was that they had to be naked. Robert Venturi made his mother's house green in 1967, as a challenge: "Although trim could be colored in those days, surface material had to be natural to express the nature of the material and structure. Green was out."

Focusing on different notions of color in architecture exposes external conflicts, but also the inherent paradoxes of color. Relations between, on the one hand, materiality and permanence and, on the other, immaterial and temporary qualities can be discussed by observing color as part of architecture and by the question: In what ways is color adherent to architecture? The colored surface gathers conceptions of what architecture is, and what is not architecture. The colored surface shows if the architect was able to communicate his vision and competence; if and how it comes into conflict with its surroundings. As a "critical surface" color is characterized by outer influence and by the inherent paradoxes: Order, entirety, or chaos, are rendered from color. Color is surface and depth. It combines the ephemeral and the eternal, appearance and reality. It shows and keeps under cover.

The role of the architect and the status of color

Understanding the status and position of color in architecture after the Second World War and later, requires a history of what effect changes in society and production had on architecture and on the role of the architect. The first half-century "can be regarded as a period of greatness for Swedish architecture – and for Swedish architects", Björn Linn writes in 1984, in an article about "The education and knowledge of architects in Sweden". "Obviously, the model for knowledge and education, supporting Swedish architecture from the early 1900's, was successful", he notes, but dates a system crisis to about 1960, changing the basis for the architects work. Industrialization had changed almost all conditions, although the construction itself, according to Linn, for a long time was only half-industrialized. "Only components and equipment came prepared to the building site." About

1960 building construction was fully industrialized and architects tried to adjust their designs to the changes in production. According to Linn they did not succeed. In another article, "Pure of heart and lost. Architects in the Swedish Welfare State – and later", he writes:

By now the design process was reduced. The architects earned neither bread nor honor from a design adjusted to the production. Coloring, though, remained their assignment.

Knowledge from experience, art and craft was no longer enough. The model for knowledge had to meet the change of process. About 1970 schools of architecture introduced education by project, with a view to simulating real situations.

As a student of architecture in the 1990's I ask: Were these simulated situations real enough? Was the knowledge about them sufficient and – above all – was there a real urge to make changes? The Swedish architecture of the 1960's, -70's, and -80's is showing several ways of handling the situation. These "movements" could be given different names considering the role of color in each of them: "Concrete structuralism" trying to adjust to production and to user initiated adjustments; "Brick brutalism" searching a parallel universality as an alternative to consumer society; "Wood tradition" finding places of refuge in local and regional traditions. These three having in common that the added color in different ways was somehow beside the point. A fourth way of tackling the problems could be called colored "catalogue architecture". It concerns single family houses as well as big projects and was handled both by the architects and the users. Perhaps this movement was the most directly related to the consumer, but it also created distance among architects. Linn introduces color as a symbol when he writes:

The architects have made themselves dependent on the model of society formed during the years of rapid economic growth, when it was taken for granted that almost everyone was united by common interests. Now the model is broken and the clashes of interest are visible. The society of today is full of locked gates and guarded boundaries being of more importance to the experience of the surroundings than the most happy of postmodern cosmetics on the facades. Many get stuck in cosmetology because of the irresolution as to what model of society we are to expect for tomorrow. It also made the schools devoting disproportionate time to social studies.

In this context I chiefly focus on the way “cosmetics” – read as applied color and other adornment – represents a failure, the hasty and superficial escape from the real problems of architecture. The conditions of architecture are found in social interplay but handled in the application of material and color. “Happy postmodern cosmetics on the facades” was more severely criticized among architects than the attempts to solve the problems by use of “natural materials”. William Braham summarizes in *Modern Color / Modern Architecture: Amédée Ozenfant and the Genealogy of Color in Modern Architecture*:

... While explicitly colorful buildings are built everywhere, all the time. But when color becomes an issue of contention, the natural, neutral palette continues to offer the most reassuring logic. Like Ozenfant's ‘colour solidity’, the apparent identity of color with natural materials seems to offer its own profoundly authoritative justifications. That was true for architects at the turn of the last century when Adolf Loos identified the repression of the ornamental as a characteristic feature of modernity, and it was true throughout much of the 1990s with the reaction against the nostalgic colors of postmodern buildings, such as those by Michael Graves or Robert Venturi [original spelling mistake]. It is natural color to which architects return when they are called back to order, and colorful colors which by opposition offer a visible resistance to those assertions about the primacy of purity of form.

The conflicts of “cosmetics” and “natural material” are connected with the problems of mass production, where the products are disconnected from a certain place and new models for selection are required. Swedish architects have been doubtful about it, and still are.

Björn Linn offers background information concerning the situation in Sweden. The field of the architects work is about intentions and choices of means, he writes. During the Middle Ages in Sweden, in the “northern periphery of Europe”, most people built by the principle of “home sewing”. Wood was the “natural building material”. The technology of wood construction was locally developed; meanwhile the art of building in stone and brick was imported, as well as “experts” for more advanced projects. From the Renaissance on two fields of knowledge are identified; they do not overlap. The situation is described by Linn, as a “widely spread domestic skill of craftsmanship for conventional vernacular buildings, principally built of wood. The intellectual knowledge aiming at the design of more qualified individual objects, starting to grow in the central of Europe still was an

external phenomenon to Sweden”. The first architects, familiar with the architectural treatises of the Renaissance, were imported to Sweden, as were the classical orders, plan compositions from the French academies, and so on, that is the “idea of a correct taste”. A crisis appeared during the last decades of the nineteenth century. The uniform taste was replaced by “a pluralistic picture of knowledge” founded on remote worlds of forms as “manifestation of the means of the new bourgeois”. As a reaction the architects took an interest in the Swedish building tradition.

History, as first providing “ageless” correct ways of action as present tradition, later changed into a catalogue to choose from in a “distant” and “objective” way, where brought to light as a problem. One stands in surroundings, under transformation by industrialization, and discovers its value, not by its correctness of style but in its existence, its sensuous presence.

What is to be understood by the description of Björn Linn? The two fields of knowledge – vernacular building and “high architecture” – were merging for a while at the beginning of the twentieth century, enough to gain a mutual acceptance. Still the vernacular building was made by craft and the architects of “high architecture” were trying to gain knowledge from the history of the vernacular. The presence of the *material*, to say the *materiality* as the essential quality, was bringing the two fields together.

Subsequently the vernacular building was diverging from “high architecture”. Earlier the materials used for the vernacular buildings were chosen from limited means of raw materials, which treatment was bound to place and craft. This type of building seems to have adjusted, relatively smoothly, to industrialization, where color and design of each part are not adapted to the individual consumer, who acts by selecting from catalogues of ready-made products. The elements are adjusted to each event by *choice* and *joints*. In craft, to a great extent, the working tools were determined by the materials, meanwhile in industry, the materials are conditioned by the tools. The vernacular building adopted the catalogue architecture of the industrialization meanwhile most of the architects of “high architecture” picked from the former popular tradition to escape the loss of context.

On the one hand, the vernacular kept pace with industrialization, most manifest after the Second World War, and transformed

into building from catalogues (lacking theoretical base), integrating the changes in society and international influence (for example of the US). On the other hand, former "style architecture" (under the sway of Europe and built by craft but in its forms a "building from catalogues") now tries to handle the crisis by approaching the traditional type of building; architecture rooted in the regional (defusing international influence) – first as national romanticism and material realism and later as brick brutalism and the 'unconstrained tradition'.

Dream in Black and White (color when awake)

Are dreams said to be black and white? I have read about it earlier, in a book by Alison and Peter Smithson, *Changing the Art of Inhabitation. Mies' pieces. Eames' dreams. The Smithsons.* where Alison writes:

The point of examining the Eames phenomenon was because of their shattering of the solid concept of the chair leg; of concept thinking in black and white. This last we are only just breaking down because of the realisation that ordinary people, with colour supplements and colour television, are losing the ability to think – as it were in shorthand – in black and white ... and children may never know. Maybe even dreams are coloured now.

The Eames' light-hearted thinking in feather-weight climate-bits-and-pieces seeming off-the-peg-architecture ... the do-it-yourself out of gorgeous catalogues, the Sears-Roebuck thinking ... the whole of the blow-up, plug-in, camp-out, dump-digging type of thinking and living had flown off the spinning Eames like mud off a truck tyre.

The text is undated, but presumably from after 1970. It is illustrated by a picture of two chairs with 'Eiffel Tower' base from 1950-53 of Ray and Charles Eames and by a perspective drawing of the Eames' House (1945-1949). The aim of the text is not known, perhaps it was meant as a caption, only in 1994 was it published. The expression of "seeming off-the-peg-architecture" and "the do-it-yourself out of gorgeous catalogues" focuses on the problems of the time.

In the 1950's the home and its appliances were dominating the American Dream, the consumption and mass production. Single-family houses were built in residential districts outside the big cities. Long Island, Pennsylvania and New Jersey all got their Levittown, named from the building firm Levitt and

Sons. Charles Jencks talks about "consumer power where design initiative is decentralized and everyone is (theoretically) given the opportunity to buy what sub-systems he can find on the open market". He points at the do-it-yourself industry which in the beginning "started off catering to relatively unskilled labour in the house – such as painting, decorating [and] wiring ..."

Paint, as "you may as well do it yourself", has since caused friction between professionals and laymen, not least in Sweden. The do-it-yourself boom in the United States inspired the Swedish paint businesses to bring the water-based paint to Sweden, for the first time in 1951, under license from an American company. This was an outside architecture act, but influential. The do-it-yourself as quiet act in the homes planted the new ideals of the modern world, through buildings, but out of the control of the architects. The manufacturers went in for advertising; one company described their water-based paint:

[The color system] gives, practically, unlimited possibilities to free choice of color ... It covers better than any other paint, it dries in fifteen minutes and it hardly smells at all ... The result? Its surface is limitless washable, reject dirt and is glossy as silk.

At the same time Swedish architecture got rid of most painted surfaces, in the projects presented in the architectural press. It started about 1950, when the architect Hans Asplund called Bengt Edman and Lennart Holm 'neo-brutalists', provoked by their design for Villa Göth. As to be read in the book by Reyner Banham, *The New Brutalism: Ethic or Aesthetic?* (1966), the term 'Brutalist' was brought to England, where brutalism among other things meant that the structural materials of the building are exposed, without plaster and "frequently without paint".

The threat from below, from actions of "ordinary people" painting their homes, was probably as influential as the international discourse to provoke Swedish architects to build in natural and naked materials, stressing on structure. This influence though is not talked about, because it comes from outside architecture. On the other hand, international discourse is not talked about either as related to the Swedish context. Here a discussion follows from two built examples, a red wall and a green wall. They are chosen for their clarity as *representatives of the brick brutalism, a movement both typical of the period*

and timeless, and the do-it-yourself-painting, a continuous phenomenon after 1950.

1964 – A red wall

In *20th-century architecture. Sweden*, published in 1998 on the occasion of an exhibition in Frankfurt am Main, the Villa Hägerstrand, designed by Bengt Edman and built in Lund in 1964, was represented by two photographs and a short text. "When Torsten Hägerstrand, a professor of cultural geography, hired Bengt Edman to design his home, he gave the architect a clearly defined program, but appreciated Edman's desire to let the form of the house be determined by the inherent configuration of the site and the building materials" Claes Caldenby writes. "Now the children would each get their own room in a well-built house of brick and wood without wallpaper and paint" Hägerstrand recalls. He drew an organization plan and Edman responded to it by placing the small rooms in a long, thin building, shaped by three of the boundaries of the building site; the inner long wall forming an outdoor yard, partly partitioned by a glass wall forming indoor living and dining rooms, the garden defined in the north by a wall. To Edman the natural and cultural history of the site was part of the motive for the planning and the choice of material:

The owner is a geographer. In the long term, he sees the shape of his land as the result of a series of planning decisions. That the room configurations of the house are clearly linked to these decisions gives him a certain feeling of satisfaction. Even the choice of materials is related to the earth. Wood, brick, and cork.

When comments are made in the literature on the house similarities with a typical Scanian farmstead are noted, but foremost the choice of material is emphasized, the brick and its way from brickworks to building and from clay to ceramic gloss. Almost free of charge the bricks were bought and transported, dark-baked brick rejects, on pallets from a brickworks in Scania. All walls were built of brick. "It amused the bricklayers to build a mosaic with this material instead of regular running bonds" Hägerstrand writes. The wall between the long thin building and the yard is supporting the logic of the house. "The wall is strong enough, whether you like it or not, to direct the way of being in the house. That type of order is important. I call it structure in contrast to common mess", Edman writes. "With the presence of daylight, the wall

towards the living room appears like an outer wall; there is a house in the living room."

One of the photographs in *20th-century architecture* shows an interior from the living room exposing the main wall, white washed – which the text refrains from mentioning. Instead it says: "The raw brick was left unaltered inside." As literature the licentiate thesis of Gunilla Millisdotter from 1993, *The architecture and pedagogy of Bengt Edman* is mentioned, where the story of the white wall is told:

Using brick for the inner wall means not only that the structural material is honestly exposed but also that the users are bound to one material and one color. They cannot change wallpaper following the changes of fashion or varied requirements according to age. When the villa was built fashion provided dark earthy colors which were in accordance with the natural appearance of brick. Mr. and Mrs. Hägerstrand did not express a wish to follow the changes of fashion, but they are of the opinion that you need more light when you grow older; therefore they, in consultation with the architect, painted the main wall white.

2002 / 1964 – A green wall

About year 2002 the Swedish paint business Alcro asked "some of the best architects" to re-make ordinary houses with paint. "Their task was to create personal houses."

Lars Beskow and Björn Bahri were assigned one typical house from the 1980's. It was red with white details, had a heavy black roof and an entrance that "felt more like a kitchen entrance, not giving that welcoming impression, you ask for", the architects thought. They chose a green color for the entrance part of the front facade. The door and window frames are painted with the same green color, but the new coarse banisters are white. Everything else in the facade is painted white, with espaliers for plants. The pleasant green color helps to mark the entrance, according to the architects. The entrance stair is made broader "to give a more welcoming impression". "The green color acts as an extension of the greenery of the garden ..." The roof was made lighter, light gray. In the gable the house has a patio and an outer gable room, which are drawn in under the roof, as typical in the mass-produced single family houses from this period.

"Once upon a time a quite ordinary house, with a quite ordinary

roof, quite ordinary windows and a quite ordinary door, was also painted in quite ordinary colors." It had been conventionally red and was painted green and white with ordinary paint but in an unconventional way. That's why I think it looks like the house that Venturi designed for his mother.

The Mother's House was completed in 1964, situated in the residential district Chestnut Hill outside Philadelphia. The two gable-formed walls in front and back enclose the complexities of the inside. The walls are painted in a soft and grayish green color. The outside form, Venturi says, is simple and consistent and represents the house's public scale. "The front, in its conventional combination of door, windows, chimney, and gable, create an almost symbolic image of a house", he says. The windows look ordinary but have different sizes. Most of the window frames are painted in a color near the green color of the wall. When I visited the house, one of my colleagues was surprised to find the house green. He had only seen drawings and photographs in black and white. The daughter of the owners told us that Venturi still comes to the house when it is time to touch up the paint, to control the tints.

Venturi is using a *strange* green color to strengthen the screen-like quality of the walls. He made the house both an image of a house, dissociated from the surroundings, and, at the same time, an almost disappearing but physical part of its context. The Mother's house is "a shelter with symbols on it". The house is placed in a virtual reality, as well as a physical, perhaps where dreams are black and white. In an essay in the book on Mother's House Vincent Scully describes the immateriality:

And even if only its facade were known, or if in fact there were no building behind it, that diagram would still have a telling effect because it is a perfect drawing, weightless as pure line and transcending material ... It is carefully made to look like a cutout cardboard model of a curious color, associated with no material.

In the beginning, the house was gray. According to the editor of the book on Mother's House, Venturi painted the house pale green in 1967, "to make it 'analogous' to its suburban location of trees and shrubs and because 'there was a famous architect [Marcel Breuer] who said at the time, 'One thing I never do is use green on my houses because that's the color of nature and you never do that' ..."

The Whitney museum, an example of a gray house, was opened in 1966. It is described on the museum's home page:

It owes its striking granite presence ... to the Hungarian-born, Bauhaus-trained architect Marcel Breuer" who created "a strong modernist statement ... Considered somber, heavy, and even brutal at the time of its completion in 1966.

In his book from 1966, *Complexity and Contradiction in Architecture*, Venturi does not mention color as part of architecture. But examples from the art of painting are used in the speech for "a complex and contradictory architecture based on the richness and ambiguity of modern experience, including that experience which is inherent in art". He points out the paradoxical quality of painting – it gets its vividness from the juxtaposition of what an image is and what it seems, a paradox inherent in perception (of color).

Venturi was arguing for an inclusive architecture, at levels of experience as well as in relations to existing buildings and conventions. "An architect should use convention and make it vivid", Venturi says. The architect selects from existing conventional elements to find solutions of *what* and *how* in a building:

Through unconventional organization of conventional parts he is able to create new meanings within the whole. If he uses convention unconventionally, if he organizes familiar things in an unfamiliar way, he is changing their contexts, and he can use even the cliché to gain a fresh effect. Familiar things seen in an unfamiliar context become perceptually new as well as old.

In the publication from Alcro, *New-created*, an ordinary man tries to find a solution to a problem; his house – although he likes the planning and the garden – looks like all the other houses in the neighborhood, "quite boring". He finds the examples from Alcro attractive:

They had re-painted different ordinary houses, and changed some details. May be a good idea. Grasp the house as a whole. Creating a new character from the old. Getting a new house but keeping the nice lot and live there still.

In the middle of the entrance facade of the mother's house a square marks the entrance, or more precise a shady outer room. The front door is small, green, and placed to the right,

almost out of sight. On the Alcro-painted house, the front door was painted green to welcome, but I think that the screen-like quality, achieved from a green color, almost the same as the greenery, works as enclosure, hiding and sheltering, and, more distant from the everyday life, as a mask, which both cover and represents. "Enclosure was out, corners were taboo. My mother's house returned to enclosed space with windows", Venturi writes in 1991. "Shelter. The house is a shelter as well as an enclosure."

In *Learning from Las Vegas* (1972) the "decorated shed" is defined; ornament is applied independently of the neglected structure. In the book, Denise Scott Brown and Robert Venturi proposed a "theory of ugly and ordinary" arguing for architecture "as shelter with symbols on it". In the course "Learning from Levittown" at Yale in 1970 and on the 1976 exhibition *Signs of Life: Symbols in the American City*, they tried to be open-minded in their understanding of the vernacular. The exhibition featured headlines as "Do-it-yourself styling" and "Similar houses personalized over time". The definition from *Learning from Las Vegas* had its forerunner in the theories of Gottfried Semper.

The Essence of the Wall

In 1834, starting his long drive for colored architecture, Gottfried Semper wrote:

Collectively the arts were born when man began to adorn the first raw shelters set up against the weather and hostile pursuit. This occurred very early, since play and adornment belonged to the first need of early man. He varnished the unpretentious surface of the raw material out of which the shelter was made. His childlike imagination favored bright colors in motley combinations, as nature around him had done.

Later he described the enclosure as one of four elements generating architectural form. Woven material, colored carpets, formed the wall. Hanging carpets remained the true walls, Semper said, when later they were transformed into clay tile, brick, or stone walls. He also says: "Wickerwork was the essence of the wall." "The often solid walls behind them were necessary for reasons that had nothing to do with creation of space; they were needed for security, for supporting a load, for their permanence, and so on." Semper's theories of "dressing" and "material transformation" have been interpreted

in many different ways, as was his notion of the mask. Semper considered color

the subtlest, most bodiless coating ... the most perfect means to do away with reality, for while it dressed the material it was itself immaterial.

Using brick for the inner wall, Millisdotter wrote, means that the structural materials are *honestly* exposed, which make pretence of the dishonesty in doing otherwise, to cover the structural material. Finn Werne, in the 2003 yearbook from the museum of architecture in Stockholm, *Material and Materiality*, described the architecture of Bengt Edman and "what was to be called the new brutalism", laying stress on this aspect of morality:

... the materiality of concrete, brick, wood and steel, gave the buildings their willful characters and strong, but low-voiced, expression. ... Here the architecture was permeated with the genuineness of the material, in its parts and as a whole, not only as aesthetics but also as ethics and morals. Therefore, it must have been with difficulty Bengt Edman made the decision, to have the concrete elements painted at the student center Sparta in Lund. When it was built in 1972 of concrete elements, its surface being raked to bring out the rude materiality of the concrete, it appeared that the ballast and the rude texture had, for concrete, an untypical dark gray color. Therefore Edman decided to have the surface painted in a lighter, more concrete-like, gray color!

It was a matter of course, during the Twentieth century, in different words, to describe buildings as 'structure' and 'skin', or 'shed' and 'decoration'; the separation makes it possible to put stress on one of them, and to leave one of them out of architecture. The hierarchy of the building elements was nevertheless not definite.

Perhaps we thought that the wall, as we saw it, *white*, in modern architecture, was naked. In *White Walls. Designer Dresses* Mark Wigley describes the white in itself as a dressing. In the picture from the living room in Villa Hågerstrand the brick is half-seen under the white surface. The white is reflecting more light, but doesn't hide the joints of the structural material, the *massing*.

William Braham analyzed the use of color in modern architecture and its genealogy from the concept of the painter Amédée Ozenfant, 'colour solidity'. Braham pointed out that the concept of Ozenfant contains both the material solidity and the solidity as an "effect to be achieved with the 'virtual'

colors produced in the eye by simultaneous contrast". "Ozenfant's claim for 'color solidity' could not have been more provocative", Braham writes, quoting Ozenfant: "A 'virtual' tint is always more attractive than the same hue in reality." But Braham also emphasizes that the search for color solidity aimed at preserving "the integrity of forms". He quotes Le Corbusier, "emphasized the optical properties of different colors and their use as supporting elements":

"A red wall that is fixed, a blue wall that recedes, a warm wall, a cool wall, etc. ... these are the elements of architecture."

This aspect of red, recurring in history, explains the choice of red brick.

To return to the statement of Björn Linn; the field of the architects work is about *intentions* and *choices of means*. Primary colors and earth colors as well as natural materials as wood and brick have inherent durability and provide a limited selection. As Braham stated:

The disappearance of the traditional discipline of limited means for making paint and the recognition that color is a subjective perception have complicated the logic of architectural palettes since the beginning of the modern period.

In *Von Material zu Architektur* (1929), translated in English as *The New Vision*, László Moholy-Nagy, Hungarian artist and teacher at the Bauhaus, set up a terminology for the different aspects of materials. Four terms were used: structure, texture, surface treatment and massing. "The unalterable manner in which the material is built up constitutes its structure", Moholy-Nagy said. "The resulting outward surface we may call texture." Surface treatment "means the sensorily perceptible result (the effect) of a working process as shown by any given treatment of a material". The change in the material surface is caused by external forces. "The fourth aspect of the appearance of material is regular, rhythmical, or irregular massing." Structure and texture describe characteristics coming into existence when the material is formed. Surface treatment comes later, from outer influence, changing the surface. The aspects often overlap but, "in a general way", Moholy-Nagy writes, "structure and texture determine the choice of working tools;" meanwhile "surface aspect ... is conditioned by tools, by the possibilities of external force". By means of the terms structure and surface treatment or "Faktur" in German, it is possible to separate the making

(process) and the treatment. The terms were usable at a time when the focus was on the difference between craft and industry, authenticity and reproduction, materiality and abstraction, function and ornament.

Discussions about color as a physical and virtual phenomenon, as material and immateriality, and as material and product, have been vivid since the 1830's. I think it was particularly evident during the so called Brutalism, but also of present interest. Braham quotes Rem Koolhaas:

"There are two kinds of colours. The ones that are integral to a material, or a substance – they cannot be changed – and the ones that are artificial, that can be applied and that transform the appearance of things. The difference between colour and paint!"

The color of brick appears in and is subordinated to a manufacturing process. Bengt Edman tells about a visit to a brickworks by the Nile:

How does one describe an assembly line that is stationary while the workers and tools move: Clay carried on heads is dumped onto a table, pressed down into wooden forms, set on the ground to dry, and stacked to be brought to the kiln. In this way, the production process and the table flow in an endless loop through the aisles. I hardly know of anything more material-stimulating than being surrounded by high stacks in a brickyard store room.

Already at the place of production bricks are buildings in a way that color will never be. Color is all surface treatment. Paint is a material, but more than brick it is a product disconnected from a certain place, and the colors of paint both appear later, in the perception, after the building is completed, and disappear, because it is an impermanent material.

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