

ABOUT BUILDING WITH BRICKS

We don't know who was the first to have the idea. But the invention of bricks was a most ingenious one for building construction. Time and again there have been architectural elements acclaimed to be tailored particularly to the human measure, and the assertion is made to seem something special. But if there is any one material in architecture which especially earns such a quality judgement, a convincing appeal to the human condition, then brick is undoubtedly the one. I cannot imagine any other material or construction element that has the humane measurements of a brick: width, length, height and weight are exactly adapted to fit comfortably into the human hand. The brick can be easily held in one hand, leaving the other hand free to wield the trowel, in order to add mortar to create the joint for the next brick. From a small practical module, bricks placed together form a support, a wall, a house, an entire city. The small scale encompasses from midsize to huge: No matter how large the house or building, the reference to the smaller scale is always there; the eye can always rest with satisfaction on the individual brick that everyone knows, that everyone has held in his hand at some time or other.

One could say that the construction method of laying bricks has also laid down a pattern of scale in our subconscious. The invention is thousands of years old. It seems as natural to us as if it were a part of our genes, a silent companion of our evolution. Although there were always times when the use of baked stone was less or more popular, even rejected, the handy construction material persisted so consistently over the ages that one can confidently include it among the „timeless“ materials used by man.

Aside from its easy handling, the enduring success of brick masonry can certainly be attributed to its economy and permanence. Brick constructions of Gothic cathedrals, the buildings of Karl Friedrich Schinkel or Alvar Aalto, all of them share the triad of scale, economy, and permanence. They all possess an aesthetic aura which can be considered as timeless as the material from which they are made.

Alvar Aalto is a fine example of the unbiased attributes of the modern with regard to this timeless material. This is actually astonishing, since a component of the formal vocabulary of the modern movement was founded on the use of „new“ materials, namely steel and concrete. Bricks do not play any role in the discussion of what is „new“ - at least not in the theoretical arguments. No matter whether modern or old-fashioned, independent of this discussion, Walter Gropius for instance developed the Fagus works out of light-colored brick, or Mies van der Rohe his much-publicized country house

of red brick. This never realized draft design reveals that the brick material, even though it can be easily dismissed as belonging to the category of „old-fashioned“ or traditional, well suits the demands of building material for the modern movement of architecture. And, remaining briefly by Mies, he left his mark on the residences of both Esters + Lange in Krefeld, representing the prelude to his own contribution to the „classic modern“.

It seems like bricks are far less weighted with symbolic values, much less indoctrinated, than perhaps prevalent opinion nowadays recognizes. The material as such is practically „free of ideology“.

Even an architect like Le Corbusier, who truly cannot be said to have been particularly partial to brick, later used this medium with great virtuosity. And he did so not with elements such as simple supports or walls, but in the beautiful Catalan arches of his Jaoul houses, and the subsequent building types which reflect on this development.

As carefree and free of prejudice as the modern claims to be, conservatives and political right-wingers also make use of this material, and have contributed to its association with an ideology - especially in politically difficult times, for instance during the Third Reich. True enough, architects of that period liked using brick masonry because it represented a certain tradition, and the material could directly transmit a reference to history and to a „national architectural legacy“. What is more, bricks are an outstanding medium for creating arches and vaults, structural constructions which in themselves are rejected by the modern movement as an outmoded historical architectural language form. Of course arches and vaults can be easily used to create a natural reference to the great works of architecture of our past: from Roman engineering feats such as aqueducts, to imposing dome constructions and the previously mentioned Gothic sacral buildings or brick masterpieces of the Renaissance. In this respect one can find motives enough everywhere that encourage recourse to our own history.

However even here, in the conscious consideration of historical architectural design, there are beautiful and impressive examples of a sensitive, interpretive dealing with constructions rich in imagery which are largely free of ideology. The architect Louis I. Kahn has made this the subject of his architectural message, in fact. He is the most radical advocate of the cause, skillfully and unreservedly combining old and new construction methods in a harmonious manner. Certainly he is not the first one to create a third form, something completely independent and unique, out of a mixture of „tradition and progress“. Theodor Fischer, co-founder in 1907 of the Deutscher Werkbund [German Craft Alliance], chose precisely this topic as the subject of his own creative work. The harmony of such a synthesis of tradition and progress can

be experienced at the Garrison Church in Ulm, which Fischer built in 1906-10. The church is the result of an unpretentious combination of traditional construction methods of brick masonry with new techniques using reinforced concrete. Even a few years later such a *mélange* would not have been possible, since the modern movement demanded a complete „clarity and honesty of construction“ in this respect.

This demand for the absolute, arising from modern architecture's claim of holding only the one or other method for solely legitimate, led to conflicts considerably later, namely during the oil crisis of the 70's. Since that time the purity of construction has become obsolete. This especially is true for the countries in central Europe. The energy shortage there at times led to the radical requirement that a building was permitted to consume only a limited amount of energy when in operation.

Particularly in Germany, where this topic was hotly debated, a complicated body of rules and regulations has been established for gradually reducing total energy consumption. Although other criteria play a role here and are nevertheless not taken into account, such as the permanence of the construction materials or the transportation distances involved in their use, such regulations are rigorously implemented. This state of affairs makes building techniques used for thousands of years, such as we find in ancient monolithic brick constructions, suddenly no longer feasible. Such a construction no longer achieves the required thermal insulation demanded of today's building shell. The use of brick is increasingly limited nowadays to the outer shell of a multi-layered wall. Critics say that this no longer has anything more to do with the classical methods of brick masonry. Instead, such a brick layer is simply a „stone wallpaper“ hung like a curtain facade to conceal the necessary thermal insulation and reinforced concrete construction underneath. Such critical voices, speaking in accordance with modern architectural philosophy, deem it more important to produce a „modern“ surface as well, something that fits better to a multi-layered wall, such as metal or fibrated concrete.

Our own thoughts on the subject intersect the issue just at this point: Even if the brick veneer is only there to provide weather protection for the actual thermal insulation, and is thus fully released from its original constructional supportive function, what is wrong with that? Are the „new“ materials inherently better with regard to durability, solidity, stability, or the capacity of subordination to every conceivable smaller scale? And are not metal or glass facades in similar wall constructions also nothing else but „wallpapers“? What

prevents us from using bricks in the interior of the building, as in constructing supports, arches, or vaults?

In the past few years we have increasingly discovered how much better it is to leave the bricks visibly exposed in such construction elements. In both school projects (Ostfildern and Salem) we used bricks where the interior space demanded a robust surface, where the danger of surface damage is extreme, or where the walls do not have to be painted anew every few years anyway. Several years ago in Stuttgart, we designed an office building where the courtyard cafeteria is roofed over with a naturally exposed brick vault. And in diverse buildings we have attempted to construct the supporting interior walls and loadbearing elements in brick.

In all these buildings we pay very careful attention to the joints, the way in which the joints produce an aesthetic effect, and take care that they precisely relate to the specific situation and location. In the case of the school in Ostfildern, or the new campus in Salem, these buildings are in direct contrast to the surrounding countryside. Here walls are desired which create the impression of having always been there. They by no means have to be „old-fashioned“, but rather imply a quality independent of any particular epoch, exuding a certain timeless character (whatever one might imagine by the term). In both cases we selected bricks with an irregular, almost awkwardly worked surface. The roughly-filled joints contributed to the desired detail quality, suggestive of the respective urban architectural and rural qualities.

In the above mentioned office building in Stuttgart we were faced with another quite contrary situation: in this case we had a clearly demarcated piece of property located right in the middle of the city. The exterior had to respond to the specifically urban situation. In this case we felt the location demanded a brick with an exact clean surface and joints, so that along with the almost black material, a noble surface effect resulted. We therefore specified white horizontal joints contrasting with black vertical joints. - Incidentally a method often employed in the 19th century, also used by Frank Lloyd Wright in his Robie House.

Naturally the whole discussion about an adequate material is concerned with more than simply the use of bricks in construction. We are convinced that there must be some counterpart, a reasonable counter-position to the international euphoria of steel and glass architecture of the 20th century, something that in fact continues to enrich architecture with the tangible difference between the interior and exterior, that distinguishes the interior

space from the exterior with a certain suspense, and with its body-like envelopment and deceptive qualities can tell us something of the world which is (no longer) there outside. Often enough contemporary architecture is lacking in the surprise effect which we so appreciate in older houses. But from these buildings we do not expect anything special any more, no surprises whatsoever, since we already know from the outside what they will look like inside. But if one wants to create the fine difference, it is prudent to design the walls in a material that for centuries has been able to create an exciting feeling of difference between the building exterior and interior: Bricks.

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