

Notes on Materiality

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In the past months the Kamra tal-Periti has successfully organised the second series of architectural debates entitled 'Architecture Nights 07' with a number of high-profiled international architects delivering enthralling presentations of their work and theories to packed houses. Perit Antoine Zammit, KTP Events Chairperson, gives some thoughts on the theme that inspired this year's events, The stuff of architecture, or the philosophy behind materiality – what architecture is physically made of.

Erik Bryggman wrote, in the early 1920s, "We should understand that beauty is not a mysterious veil thrown over a building but a logical result of having everything in the right place." Architecture is as much about design and the pursuit of beauty as it is about the sensible and judicious use of the best materials that respond to context, imageability and the environment.

Architecture also has to do so much with good detailing – particularly the interface between different materials being used together composing the building fabric. Architects question 'where' and 'when' to use 'what' material, and which determinate characteristics are required of the material that is to be chosen and deployed. Importantly, they also ques-

tion the compatibility of these materials as well as the way they weather and fail.

Buildings can be compared to living organisms that adapt, interact and respond to environmental conditions. Buildings must be designed and built as the buffer between the outdoor and internal spaces in as much the same way as our skin acts as a buffer and protects our organs from harsh environmental and climatic conditions. Buildings are therefore not simply enclosures of space but living entities that respond to context and environmental conditions through their skins, or the materials that compose them.

There are different aspects to the debate of materiality. The most obvious is the purely functional aspect. This is of course a crucial and fundamental issue and revolves around the structural performance of a material, how the material performs and wears with exposure to varying environmental and temperature/seasonal conditions and, increasingly so, its intrinsic thermal performance. In this regard it is pertinent to mention that Maltese architects are now bound by a new Technical Guidance Document, based on the European Union's Energy Directive, which gives indications as to how one can meet the minimum requirements

for the energy performance of buildings in Malta for separate building elements composing the building fabric and with which all architectural designs must comply (2).

Materials have always been deemed secondary to the more important notion of form, the main thrust of architecture. In the words of Catherine Slessor, a renowned architectural critic, materials have remained "silent witnesses" (3). However, they are the tangible realisations of building forms – it is only possible to achieve interesting designs through the judicious use and application of the correct materials (Image 1).

Invariably, the history of architecture is therefore to a great extent the history and evolution of materials – the invention and discovery of new materials (or of new characteristics of existing materials). These have permitted new exciting building forms that have delighted us with some fantastic architectural achievements worldwide. The Industrial Revolution was, of course, a crucial turning point in this respect. Subsequent advances in transport, labour and technology allowed for more available materials that could be carried from one place to another as opposed to solely having to use materials that were to be found in the immediate environs. As production

costs decreased further, the wider use of materials increased and they became more affordable. Technological advances in the 20th and 21st centuries have fuelled daring exploits and challenged architects to use (and abuse of) materials in new and fascinating ways. Metal is now moulded into the weirdest of forms, glass is being used in compression, stone in tension, giving us buildings some of which seem to float in mid-air.

To a large extent, materials have also become architects' signatures or distinct marks. Think of Frank o'Gehry's or Zaha Hadid's sensuous and organic forms, Alvaro Siza's or Rafael Moneo's characteristic clean lines and geometrical perfection of stonework, Tadao Ando's fair-faced concrete, Massimiliano Fuksas' structural glass achievements, Mario Botta's judicious use and appreciation of stone for its own intrinsic worth, Santiago Calatrava's metalwork and his celebrated bridge structures or Jean Nouvel's wafer-thin metal roofing applied over large spans.

The discussion cannot be only about the physical characteristics of materials. Putting materials to their best use involves both an appreciation of their technical potential as well as, to a large extent, their innate sensory and aesthetic qualities. Materials have the ability to evoke emotions and feelings. This fits in perfectly with Abraham Maslow's theories. Maslow, one of last century's greatest psychologists, proposed a 'hierarchy of basic human needs', the peak of which was self-actualisation, or the potential to be what one can be. According to him, the best-civilised societies are those in which the self-actualisation needs of citizens are fully valued through the cognitive and the aesthetic. Seeing and touching materials around us increases our sense of the aesthetic. Learning and appreciating this aesthetic around us can therefore help us make advances in life.

The Maltese context

Last century provided us with some of the worst lessons in aesthetics. The 50s to the 80s are rightly considered by many to be the Dark Ages in Maltese planning and architecture. Was this a question of bad taste? Was it an affordability issue? Or was it simply a matter of non-education or non-culture? Suffice to mention the proliferation of gold-tinted aluminium (some localities still seem to literally be a showcase of this) or the four- to five-course of horrific ceramic tiling placed on building façades to control rising damp in, more often than not, the most awful of designs and patterns not even worth being placed in the most unobtrusive of spare WCs. These are just two elements that scar our streetscapes like a sharp crack on the finest porcelain doll, and they are a continuous reminder of bad taste.



Image 1: The richness and diversity of materials



Thankfully things have changed dramatically in recent years, thanks to an increasing awareness of what makes good architecture. Architects are faced with clients who are more exposed to local and foreign examples of good design that makes use of interesting, and not necessarily conventional, materials. However, at what cost is this happening? Are materials being applied judiciously and contextually, or are they applied blindly irrespective of context in as much the same way as the gold-tinted aluminium on our façades was? Has architectural design been reduced to a question of image? And have we now gone to the other extreme, abandoning the very fundamentals of why certain materials are preferred to others and what particular characteristics make some materials more suitable than others?

This therefore leads us to the fundamental concept of what is good design. We should consider ourselves lucky to still have some examples of vernacular architecture left in Malta and Gozo, which we must strive to protect for future generations. The greatness of vernacular architecture does not lie in the urge to create "an image" but in the sheer delight achieved by the building forms being in context, the seamless integration of the stonework and massing; a relaxed sense of 'appropriate architecture' – appropriate to climatic conditions, context and topography (Image 2). It is also beautiful because the buildings are harmoniously laid out; they are quite literally 'background buildings'. Unfortunately, sometimes architects expect each building they design to be a 'landmark building' that occupies the foreground rather than sitting peacefully in the background as a neutral backdrop. Instead of designing a neutral building that focuses its energies on supporting human activities and perceptions, the focus is on having a strong architectural image that fights for attention and ends up being out of context and failing to stimulate the aesthetic within us.

Back to our discussion, therefore, if materials are applied blindly without due regard to specificity and contextuality they risk becoming banal and, quite simply, pastiche. This not only results in an architecture that is completely bland and devoid of any meaning or spirituality but, in the process, it also devalues the materials themselves that become meaningless, fake and false. Materials should be therefore used wisely to be able to produce an architecture that is not only sensuous and aesthetically pleasing but is also authentic because it deploys materials that are true and that respect both the function and the form of the buildings.

Imageability and sensuality

This is not an easy argument in a day and age where image is paramount. Architecture today is experiencing challenging times – the focus is not about portraying a true and realistic picture but about bombarding people with strong three-dimensional images that can stimulate the mind and the senses and that can sell a building, just like any other product out of a glossy magazine. People buy 'on plan' where all they have of the building is a picture; architecture is reduced to a temporary virtual flashy three-dimensional image that seems to make the building timeless. Of course this is a false portrayal of reality.

In many cases architecture is therefore losing its permanence provided by the physicality of materials. The focus is on an image at a particular point in time, which will soon be replaced by another image of another structure – temporality, the present tense, as opposed to the gradual dimension of buildings that weather and age with time. Matter has its own true and unequivocal language; stones speak of their geological origins, they are a strong symbol of permanence and durability; newer materials, such as glass and steel, speak of the mechanical and technological processes lead-

Image 2 : Contextual composition

ing to their composition and formation. Materials can give us something no three-dimensional image will. The further deeper meaning of materials is connected to the human senses, how this relates to the sensory experience of a building and how it ultimately ties in with other senses. The ability of sensing, touching and smelling different materials and textures is what evokes sensations in us, not the mere looking at them (4). The rough wooden texture felt while stroking a piece of wood along its grain, the hand slipping over a cold glazed surface, the sensations triggered within the body when touching cold or hot surfaces, the pleasant warm feeling of walking

on real wood flooring, and the relief of walking on cool ceramic tiles in summer... all this triggers other sensations in our bodies and is sensual, to say the least.

Architecture is concerned with real sensory interaction because architecture is for, and interacts with, humans, who are sensory and sensual beings. In the words of architect Peter Zumthor, materials evoke sensuality in their colour, form and smell resulting in beautiful and unforgettable human experiences...

... I see the rusty metal of the door, the blue of the hills in the background, the shimmer of the air over the asphalt... Everything I see... they all show traces of wear, of use and of dwelling... And when I look more carefully, the things I see start to tell me something about why, how and for what purpose they were made.

... I like the idea that the house I build contributes to the atmospheric density of a place, a place which its inhabitants and passers-by will remember with pleasure." (5)

This, surely, is the true stuff of good architecture.

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