

# Colors burst into contemporary architecture

May 4 2012

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The Allianz Arena stadium in Munich can be illuminated with various colors. Red is usually chosen when Bayern is playing. Credit: André Zehetbauer

White stopped being the official colour of architecture a while ago. New buildings have now been transformed and fragmented and they display movement and innovation thanks to the versatility of colour. This is the case according to a study conducted by researchers at the Polytechnic University of Valencia (UPV, Spain). However, the guns of the defenders of white are still fully loaded.

"Modern architecture has wrongly been identified with the exclusive use of the colour white but it is not like this: it is just a myth," ensures SINC Juan Serra, lecturer at the UPV's Institute for Heritage Restoration. "In recent decades, colour has been reintroduced into [architectural design](#) and has turned out to be a useful tool in expressing versatility, which signifies change, lack of permanence and ability to adapt to new requirements."

Serra and his colleagues from the Colour Research Group, lead by Ángela García Codoñer, have analysed the work of a dozen architects from the 20th and 21st centuries. They have consequently identified four concepts that can be associated with chromatic versatility: transformation, fragmentation, movement, and innovation, according to that published in the *Color Research & Application* journal. These four notions can explain the way in which the colours used in the large part of contemporary architecture are conceived and made available.

Colour transforms buildings in the sense that they change their appearance and allow that they are perceived differently. When moving elements are placed on the front of buildings for example, the angle and intensity of light vary. This happens with Jean Nouvel's Agbar Tower in Barcelona. The use of aluminium plates and glass slats alters the buildings chromatic balance depending on the time of day or year. In addition, at night-time, LED technology generates light images over the entire façade using a sophisticated hardware and software system.

In a similar way, the panels of the Allianz Arena stadium in Munich, which will host the Champions final on the 19 May, can be independently illuminated with various colours. Red is usually chosen when Bayern is playing, blue is used for the local team, TSV 1860 Munich, and white for the German selection. Its Swiss creators, Herzog and Meuron, have also built the Caixa Forum building in Madrid on top of a former brick factory. The building uses corten steel, whose oxide patina undergoes a colour change that represents the passing of time.

Steel, copper and titanium are metals that facilitate chromatic transformation in buildings. Titanium with a natural grey finish has been used in most of Frank Gehry's architecture, such as the Guggenheim Museum in Bilbao. The metallic reflections of this material hint at immateriality and constant change in its 'organic shapes' throughout the day.

## **Breaks, movement and innovation**

The second concept associated with chromatic versatility involves breaking architectural integrity. "Contemporary colour participates in a double fragmentation process: on the one hand, the outer finish is separate from the building structure and, on the other hand, it emphasises dispersion and collision between the building's elements," states Serra.

Colour acts as a code – a code that tells the observer that each fragment has a differing use or is a different constructive system. This can be said for the Mirador de Sanchinarro in Madrid, a creation of the Dutch studio MVRDV and Blanca Lleó. The building is a large prism where colour alludes to the different sections in the interior.

The third concept is movement. Urban spaces where colours travel at high speeds are emblematic: Times Square in New York, the centre of Tokyo or Piccadilly Circus in London are some examples, all of which are places where information, advertising and spectacle merge into one in equal proportions.

Movement can also be achieved with static colour using a merely perceptive approach. Such is the case for the new T4 at Barajas airport in Madrid, by architects R. Rogers and Lamela. Serra suggests that the "range of the colours of the rainbow bring rhythm to the extensive succession of support beams. This rhythm can almost be interpreted with musicality."

Lastly, the fourth variable that influences the way of using colours in contemporary architecture is the sense of innovation brought about by IT applications, not only in a direct way with CAD (computer-aided design) programs, but also by transferring digital images and the pixel concept itself to buildings using an abstraction process.

The architect Eduardo Arroyo has 'pixelated' the El Desierto de Baracaldo square (Vizcaya, Spain) in this way. Also, Enric Miralles and Benedetta Tagliabue employed such a resource in Barcelona's Santa Caterina Market, which reflects the variety of products that are sold inside.

Another example is the work of Emilio Tuñón Álvarez and Luis Moreno Mansilla (who sadly passed away in February). They applied a similar chromatic intervention to the outside of the Contemporary Art Museum of Leon, whose glass takes inspiration from the gothic stained glass windows of the city's cathedral.

## **Opposing approaches to white**

In any case, despite those four contributions offered by colour, there are still a great number of architects that stand by the use of white in their work. They include the Portuguese Álvaro Siza or the Spaniard Santiago Calatrava. Calatrava's amazing buildings in Valencia's City of Arts and Sciences, the Auditorio of Tenerife or many of his bridges are the most well-known examples.

According to Serra, in recent years the two 'extreme' approaches have lived side by side: those architects that strive for chromatic variety in their work and those who advocates of the colour white. He suggests that there are those who "sometimes do so under a conscious desire of formal and expressive restraint and others due to the almost unconscious desire to line oneself up with the modern architecture that is wrongly associated with white."

The debate has even moved on to commercial architecture. "It seems that there is a tendency towards the use of white and grey on the front of houses, for example. The public perceives these colours as more glamorous whereas years ago differently coloured houses were in

demand as they were linked to the historicistic fantasy in the collective imagination," claims the researcher, who also destroys the myth that white is related to Mediterranean buildings: "Most of the time this comes from the whitewash that was applied mainly for hygiene reasons."

The claim of the experts is the use of colour in architecture "paying special attention to context and the landscape that surrounds the building."

Provided by Spanish Foundation for Science and Technology (FECYT)

Citation: Colors burst into contemporary architecture (2012, May 4) retrieved 16 August 2024 from <https://phys.org/news/2012-05-contemporary-architecture.html>

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