

The Alchemy of Transparency

Stable and predictable colour pigments, when applied to materials with transparent properties like glass, polymers and fibre, yield unexpected results, restricting or multiplying the impression of colour, playing with our perceptions of colours in relation to a space or object. Report by Carla Sorrell.

In her solo exhibition *Breathing Colour* at London's Design Museum, the artist Hella Jongerius states, "Light helps colour breath and come to life. It is designed to make us question colour; one of the most elemental aspects of design." Challenging a general view of colours as consistent, Jongerius stages a series of experiments and collaborations using light and materials to create uncertainty in colour through gradients and layering, revealing that translucent colours are unstable, deceptive, infinite. Artist David Batchelor, author of *Chromophobia*, explains: "You can't contain colour, it's almost liquid, it seeps out of the containers you put it in. Transparency is created by views, layers, sequences and light. In this sense, transparency is not a material, but the substantial absence of material. It is thin air made substantial," adds architect Rasmus Wærn of Swedish architectural practice Wingårdhs.

Experimenting with this idea of uncontained colour, designers Laetitia de Allegri and Matteo Fogale built a tunnelled pathway through Victoria & Albert galleries using acrylic and ceramic tiles coloured in incremental gradients for their installation *Mise-en-Abyme*. The semi-transparent layers of construction implied depth, giving the effect of walking into a line drawn perspective grid. Likewise, for her *Spectra* collection, Rona Meyuchas Koblenz of Kukka Studio used dichroic glass for an ethereal blend of chromatism and transparency. Perceiving colour, she explains, is "Dependent on light and the environment surrounding the object. Glass is absorbent and reflective and so it behaves differently under different conditions: when it's dark the glass looks like a mirror, absorbing colours from the environment. When there is not enough light, the glass looks gently tinted. So I am using light in order to achieve the colour."

In its most basic composition, glass poses a challenge to transparency. A pure tone of glass would ideally be untreated and iron-free, but contemporary glass will be treated with oxides and other layers. Only by designing their own glass will architects or designers be able to control colour and achieve the desired relationship between an interior and the exterior. Architect David Kohn says that one of the biggest challenges he faced around transparency in the Norfolk Stable Acre project was achieving a genuine clarity in the glass, key to uniting surrounding rural views with the monochrome, contemporary interior.

At Wingårdhs, architects began using transparency to play with colour in the early 90's. Experimentations in laminating yielded varied results, with success in laminating vanceva foil on the backlit panels for the House of Sweden in Washington DC leading to more immersive use of colour in glass at Spira, a performance arts centre in Jönköping, Sweden. "Glass is our canvas. We are rather sparse when it comes to painted solid surfaces, but enjoy all the possibilities that come with colour on transparencies," says Wærn.

The Victoria Tower and Aula Medica are two buildings by Wingårdhs wrapped in different kinds of glass, transparent, reflective, isolating, serving the dual purpose of reflecting colour on the ground and floors of the interior, while creating a homogeneous effect across the exterior. The percentage of printed colour on the exterior or interior layer of glass will alter perceptions of a building; if 50 per cent of the interior is covered, transparency is maintained from the inside out, while the same external percentage creates an impression of opacity which can protect privacy while letting users enjoy the view.

The immersive visual experience of colour also intrigues Dutch designer

Germans Ermičs who explains the experience of his work as being "Stuck in a cloud of colour." Three years of research focusing on the material properties and transformative potential of coloured glass has been brought to fruition with the *Ombre Glass Chair*, *Horizon Screens* and the *Shaping Colour* collection. For Ermičs, "Colour generates the meaning of the form, transforming the pure geometry of material into an expressive object." Products with transparent properties invade their surrounding environment. A non-uniform layer of colour, regardless of material, will warp the perception of space, incorporating the distance in front of and behind the object into the object or product itself.

While glass is static, transparent textiles come alive with movement. A single piece of fabric will be perceived as one colour, but folded several times it will become another, losing its transparency to become more diffuse. Examples of paper weaves in Jongerius' *Breathing Colour* exhibition show how varied densities in warp and weft will subtly alter how light is filtered. Stine Find Oster, Design Director at Kvadrat explains: "When you have transparent materials you want to add more and more layers, it's beautiful to see the colours and depth of these coming together." Restricted by budgets, many individual clients will choose single colours, but external designers will bring new ideas, mixing colours to create depth and energy in different scenarios.

Transparency is a constant design consideration in Kvadrat's range of curtains, where movement becomes another influence in the perception of colour. Some parts of a curtain will double which means double the amount of colour and saturation, while in other places the colours will become almost absent. Colours are constantly redefined, oscillating between states of fragile translucency, semi-transparency and near opacity. The constant and close relationship with natural light allows use of heavy, neon or dark tones, as the air around the curtain removes colour.

Jongerius observes that, "Transparent volumes let colour through and soak it up." These simultaneous and counteractive properties are compelling reasons to explore colour's relationship with transparency. ■

01 Kvadrat

02 & 07 Germans Ermičs

03 Wingårdhs / Image ©Ake Eson Lindman

04 & 05 Hella Jongerius / Images Roel van Tour

06 *Mise-en-Abyme*, Laetitia de Allegri, Matteo Fogale / Image Olivia Estebanez

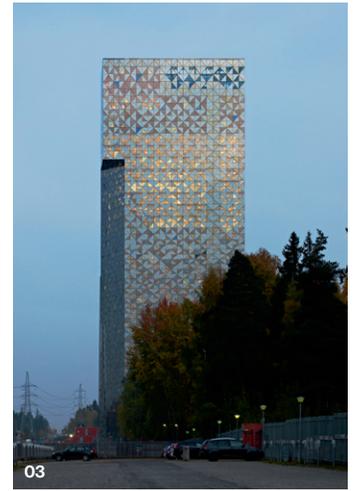
08 Wingårdhs / Image Ola Fogelstrom



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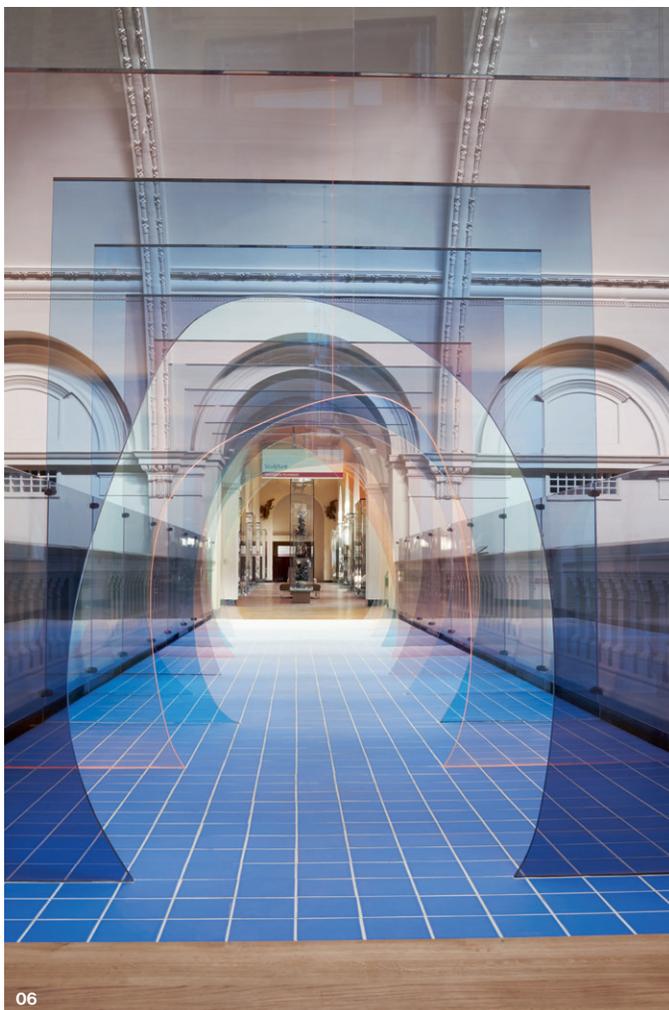
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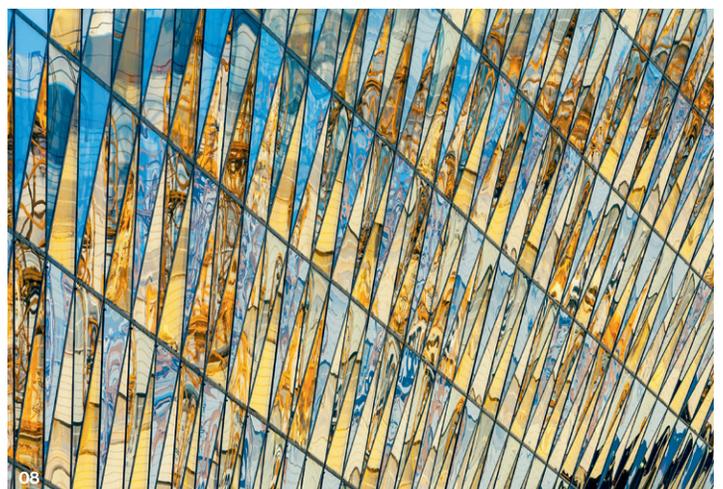
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