Post-Digital Chrysalis
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If the 'digital' is a caterpillar (still voracious and rapidly growing), the 'post-digital' is a chrysalis (representative for astonishing metamorphosis).

At the dawn of the 4th Industrial Revolution, it is safe to assume that in the developed world (but not only) digital technologies have fully been assimilated into all aspects of our life – from flying an airplane to banking, from medical procedures to shopping etc. We are now in an era categorised by a wide range of technologies ready to hybridise the physical, digital and biological domains and ready to adapt humanity's habits and habitats to a networked, data-driven, bio-technological world. A world of interchange where cross-contaminations and constant negotiations provide less confrontational human-nature scenarios towards a more conjoint, co-operative future.

In architecture, the post-digital paradigm shift reacts to changes in society, initiating novel, synthetic, trans-disciplinary processes that shift and disrupt cultural production – transforming for example the way we design, produce and place buildings into the environment. Therefore, the term post-digital does not refer to life after, or without, or against the digital; on the contrary! It simply does not accept withdrawing back to an out-dated *modus operandi* of pre-digital bric-a-brac juxtaposition.

In a nutshell, post-digital hybridity challenges old and obsolete binary and juxtaposed conditions such as past/future, nature/architecture, man/machine, material/data, biological/artificial, object/space, analysis/artificial intelligence, craft/machine learning, fact/fiction, hand/robot, entertainment/science, vernacular/sci-fi, collage/ecology, fragment/symbiont… and suggests far more complex, ambiguous, and agile crossbreeds.

The term post-digital was first coined as a means of thinking about the aesthetics of the time beyond the digital revolution (Negroponte, 1998), in particular in music, in the arts and in architecture. As mentioned, the post-digital paradigm looks at learning and capitalizing from the digital. We do 'no longer talk about digital versus analog but instead about modulations of the digital or different intensities of the computational' (Berry, 2014). The resulting investigative synthetic approach mixing design and architecture with various other disciplines, for example 'clothing, biology, engineering' (Ayala, 2013) shifts the focus of attention to tactility, materiality, and hybridity between the digital and the human, even approaching 'critical fusion' (Benayoun, 2008). As the synthesis 'between the virtual, the actual, the biological, the cyborgian, the augmented and the mixed' (Spiller, 2009), Post-Digital is used to re-invigorate both the value and meaning of the drawing (Jacob, 2014) and of making (Buck, Bench, Ho, 2012), and the hybridization of the two (Sheil, 2008). The post-digital is something 'of or pertaining to art forms that address the humanization of digital technologies through interplay between digital, biological, cultural, and spiritual systems' (Alexenberg, 2011) – an extremely timely discourse regarding the role of the designer in a pervasive, networked and collaborative practice model as pursued today.

This aspect of hybridity and amalgamation is of particular relevance to contemporary architecture, as the discipline relies immensely on trans-disciplinary (or inter-disciplinary, or cross-disciplinary, or multi-disciplinary) working methodologies. Ergo, the post-digital merges both realms: the world of representation i.e. of drawing, and in more contemporary terms of data (that includes digital drafting, modelling/simulating, virtual reality and augmented reality) and the world of making, of crafts (including fabrication, assembly, manufacturing, but also machine learning and artificial intelligence).

In my own practice as designer, educator and researcher, I have embraced the digital paradigm shifts, too. My design-research, and through my advocacy of research-led education, contributes to the contextualization of the possibilities of computational tools, digital fabrication technologies and simulation methods to alter the understanding of reality, beauty and design in present-day society. A society, which by now can be described as Post-Digital. Post-Digital as it strives at the hybridization of virtual or augmented reality and cyberspace and materialized, biological or artificial media, spaces and technologies.

As a post-digital designer, I do not understand post-digitality as an anti-digital trend but as the next step of design evolution to make architecture adaptable and sensible to the 21st century. I would like to think that I have always been post-digital, even in my core 'digital' research time. By embracing an 'abnormal' and fragile aesthetic vocabulary: soft, feathery, fluffy, downy, cute, velvety, smooth, foamy, spiky, spiny, thorny etc. Unsurprisingly my culturally-driven non-engineered digital design-research was out of the norm then; in hindsight it is safe to say that it was, in essence, proto-post-digital – to me 'digital' was from the outset greater than its disciplinary (i.e. silo) understanding of 'efficient' and 'structural'. The project series entitled FrAgile – which denotes a fusion term combining agility and fragility by challenging Vitruvius' notion of *firmitas* (solidity) – is an attempt to materialize the above-mentioned paradigm by exploring the synthesis of agile and dexterous robotic fabrication with fragile and delicate materials – but also frail environments – to liberate architectural design from its own disciplinary silos and superseded digital techniques and technologies.

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Captions

Image Quaquaversal 2016:
Quaquaversal Centrepiece, IvH Paris Fashion Show (Musée d'Historie de la Médicine, Paris France, 8 October) 2015
REX|LAB's three robots are dressed up as fable-like creatures ready to manipulate Christie's dress before the audience's eyes.A fashion show as example of a contemporary transdisciplinary endeavour between various partners including fashion designers, artists, architects, technicians, models, make-up artists, hair stylists, photographers, caterers, DJs and many other.

Design: Iris van Herpen with Jolan van der Wiel and Marjan Colletti
Robotic centerpiece supported by the University of Innsbruck (Faculty of Architecture, Institut für experimentelle Architektur.Hochbau, REX|LAB); by UCL (The Bartlett School of Architecture); Collaborators: Pedja Gavrilovich, Pavlos Fereos
Photography: Marjan Colletti

Image Liquid Rock 2018:
Liquid Rock, Gallery Goettlicher 2018
Large-scale 3D printed prototypes exhibited at the Galerie Goettlicher in Krems-Stein, Austria 2018, and then permanently installed at the Am Wachtberg Skulpturenpark in Gars-Thunau am Kamp, Austria. Separate wall elements were exhibited in Spielberg Austria in a PR event of Baumit GmbH.

Design: Marjan Colletti, Georg Grasser, Eftihis Efthimiou
Collaborators: Javier Ruiz, Alexander Karaivanov,
Supported by Gallerie Goettlicher, Baumit GmbH, the University of Innsbruck (Faculty of Architecture, Institut für experimentelle Architektur.Hochbau, REX|LAB); UCL (The Bartlett School of Architecture)
Industry partner, sponsoring and fabrication: Baumit GmbH
Photography: Nikolaus Korab

Image Ars Electronica 2018:
Pahoehoe Beauty, Ars Electronica 2018
Robotically 3-D-printed, Pahoehoe is a biodegradable 3D printed landscape, a garden, a chimera of both natural and man-made materials, objects and species, yet with antithetical

techno-organic aesthetics. The project reflects with particular attention on the often troubled, in some cases incompatible relationship of the built environment with the natural environment. It creates a hybrid domain beyond the oppressive binaries of western modernity, defined by an ecosystem of specious symbionts and mistaken materials. With technology disappearing into the background, visitors focus more on the value of design experimentation, on the spatial experience of hybrid artefacts, and on the potentialities of architecture as cultural catalyst.