

Is it immaterial? Matters of architectural matter

Derick de Bruyn

Department of Architecture, University of Pretoria

E-mail: derick.debruyn@up.ac.za

As a starting point of consideration, this enquiry briefly weighs up the Pre-Socratic (materialists) position of ‘the primary stuff of the universe’ with the trio Socrates-Plato-Aristotle’s differentiation between Form (*morphe*) and Matter (*hyle*). The purpose of this initial exercise is to highlight, as suggested by Vitruvian myths and revisited in recent architectural discourse by Joseph Rykwert and Aaron Betsky, the differentiation between architecture (event, notion) and building (scenography, thing). Reinforced by the essays of Jonathan Hill (*Immaterial Architecture*) that suggests a fusion of the immaterial and material in architecture and Katie Lloyd Thomas (*Material Matters*) who shifts the focus towards the material over the form, this endeavour exposes the blurred boundary between the visible material of building and the invisible immateriality of event-architecture. With the aforementioned in mind, the *Dematerialisation* of Mies Van der Rohe, *Immaterial Material* of Kengo Kuma, *Air Architecture* of Yves Klein, *Blur Building* of Diller + Scofidio and *Sound Box* of Peter Zumthor exemplify the attempt of architecture at liberating itself from material nature. Nevertheless the research hopes to paradoxically show that even in the digital age (*Space of flows*) we find ourselves in, it is the very matter of the physical that allows the immaterial of the meta-physical to come about – matter thereby matters.

Keywords: event-architecture, immateriality, dematerialisation, scenography, form, matter, paradox

Is dit immatereel? Sake van argitektoniese materie

As ’n beginpunt, oorweeg die ondersoek kortliks die posisie van, “die primêre dinge van die heelal” van die Pre-Sokratiese (materialiste) teenoor die van die Sokrates-Plato-Aristoteles trio wat onderskeid tref tussen Vorm (*morphe*) en Materie (*hyle*). Soos voorgestel deur Vitruviaanse mites en die onlangse hersiening daarvan deur Joseph Rykwert en Aaron Betsky, is die doel van hierdie aanvanklike oefening om die onderskeid tussen argitektuur (geleentheid, idee) en gebou (scenografie, ding) na vore te bring. Versterk deur die verhandelinge van Jonathan Hill (*Immaterial Architecture*) wat ’n samesmelting van die onstofflike en wesenlike in argitektuur voorstel en Katie Lloyd Thomas (*Material Matters*) wat die fokus verskuif na die materiaal bo-oor die vorm, stel hierdie poging die verwarde grens tussen die sigbare materiaal van die gebou en die onsigbare immateriele van geleentheidsargitektuur bloot. Met die voormelde in gedagte, dien die *Dematerialisation* van Mies Van der Rohe, *Immaterial Material* van Kengo Kuma, *Air Architecture* van Yves Klein, *Blur Building* van Diller Scofidio en *Sound Box* van Peter Zumthor as voorbeeld van die poging van argitektuur om te bevry van die materiële aard. Tog paradoksaal, hoop die navorsing om te wys dat selfs in die digitale tydperk (*Space of Flows*) waarin ons onself vind, dat dit die einste kwessie van die fisiese is wat toelaat dat die immateriele van die metafisiese verskyn – dus maak materie saak.

Sleutelwoorde: geleentheidsargitektuur, immateriele, dematerialisering, scenografie, vorm, materie, paradoks

Materiality is considered *Some Thing*, whereby immateriality is thought of as *No Thing*. For millennia, the enduring fascination with the threshold between the solid matter and the void of the immaterial has been a human enquiry not only in art and architecture but particularly in science. However it is the contemporary urban condition characterized by the invisibility of “services, environmental componential practice, microclimates, commercial information, and above all perceptive structures that produce systems of sensorial and intelligent tunnels...”, that have brought about a renewed interest in the idea of the ‘immaterial’ in architectural discourse (Branzi 2006: 9). Nevertheless the perspective and philosophical debates on the theme are changing with new technological developments, materials, practises and sustainable requirements (Karandinou 2007: 1). This is evident in the many exhibitions,

conferences, symposiums and festivals that have recently taken place on the notions of ‘nothing’, ‘invisible’ or ‘immaterial’.

Paradox

Despite changes in contemporary urban conditions and altered perspectives with regards consequent philosophical debates, any *a priori* position or opinion taken in this article may seem therefore presumptuous. However this investigation will attempt to highlight and exemplify the paradox that it is the very matter of the physical that allows the immaterial of the meta-physical to come about. The question therefore to ask in each selected example of this research is: Is it immaterial?

Nothing is impossible. Or, put another way, ‘nothing’ is a concept so fraught with paradox and contradictions that it defeats definition. The flipside of nothing is something and each attempt to consider the idea of nothing reveals yet another ‘thing’ or entity (McKee 2000: 16).

Immateriality can be used to explore the idea of nothingness and its limitless references (i.e. value, meaning, void, form, infinity or belief). Yet Carpenter (2000: 7) informs us how difficult it is to pin down a concept for nothingness due to it being paradoxically impossible to define “non-places of imaginary space, the incidental, the pause, or the possibility of something hidden or unknown”. Previous persistent enquiries in art and architectural practices have shown that “Nothing suitably disguised as something, is never far from the centre of things” (Barrow 2001: xi).

For instance in Non-Objective art, the attempt at “not painting pictures of the objects of the world but painting abstractions that symbolize dynamic energy and cosmic order”, reveals a paradox. Malevich’s painting *Black Square* (figure 1) first exhibited in Moscow in 1915 is an idea to project *nothing but* the black void. The black is “a riot of white cracks”, paradoxically revealing the matter of the paint which is said to be unimportant to the idea (Collings 2000: 159-165). The viewer is expected to overlook the matter and to feel the idea.



Figure 1
Kasimir Malevich, *Black Square*, 1913
(source: Collings 2000: 159).

Initially the challenge for scientists too was to explore and produce a vacuum as a physical possibility, but what appeared is that there was no empty space, but a “micro-world inhabited by the most elementary parts of matter” (Barrow 2000: xi – xiii). One hundred years after Malevich’s *Black Square*, Black Holes are today considered the emblems of nothingness. The gravity of a collapsing star is so strong that light cannot escape its powerful pull and therefore

we cannot see this phenomenon which scientists can confirm exists along with the phenomenon of gravitational redshift, quantum vacuums, virtual particles, anti-particles and ... wormholes”. Antimatter, created in particle accelerators, was previously imperceptible to our senses and understanding, yet now in reach of our technologies. The paradox is that anti-matter is matter in reverse and that the same amount of matter as anti-matter is produced, but in this “cosmic battleground, matter came out the winner and we are all here” (McKee 2001: 189).

This evolves as so-called fuzzy thinking, which no longer represents the purity of geometry and the precision of mathematical paths, and instead represents very well the fuzzy reality of the universe, for its evolutionary stage – a nebulous, milky intermediate between mass and energy (Branzi 2006: 19).

Boundless and bound

Barrow (2001: 58-61) reminds us that before the bedeviled contemplation of the paradoxes of Nothing and the infinite, it was Greek philosophy and particularly Thales and his school of Miletus, in the fifth and sixth centuries BC that denied the concept of Nothingness right from the outset (figure 2). For them “‘Something’ can never emanate from ‘Nothing’ or disappear into Nothing”. Instead the method of origin of matter and its disappearance was the material principle of things sought by the Pre-Socratics like Aniximander (610-546 BCE).

Aniximander denied both Thales’ declaration that water was the basis of all things and also his young contemporary Aniximene’s (585-525 BCE) conception that air (*aether*) was the principle of elements. Instead “Anixamander... declared the boundless to be the principle (*archê*) of existing things...some different, boundless nature, from which all the heavens arise and the *kosmoi* within them” (McEwan 1997: 10).



Figure 2
Flat Earth and Four Elements, Medieval depiction of Early Greek Concept
(source: Hawking 1996: 3).

Although the materialistic Pre-Socratics understood the “qualitative, compact experience of a mythical world still untouched by the differentiating”, the problem of the representation of the boundless divine remained. The effective and controversial solution McEwan (1997: 10) tells us was anthropomorphism, a Greek religious concept which allowed the equating of the immaterial and divine male and female with the material male and female. Matter would provide the guise for the divine and the very facility for being able to appear and reappear (*metamorphoses*) under different guises was a quality of the very essence of the divine and deathless *physis*.

Vitruvius, thanks no doubt to his Greek sources, still understood the cosmic role of artifacts perfectly... only after it had been made, when the artifice has become a *theoria* a spectacle, that the clever invention can reveal the divine cosmic order (McEwan 1997: 52)

The physical presence of these specifically wood or timber (hyle) artifacts were essential props for ancient cyclical rituals and “it should be remembered that it was through the statues presence that divinity was revealed, and without it the ritual could not have taken place”. The *kosmoi* for instance would be depicted in the surface of flowing garments clinging to the human corpus. The emphasis however was on the unbound, animated state. Hyle (cut wood) was *nothing but* the brute matter, the fuel for fire or stuff of Odysseus’ boat yet part of the divine (McEwan 1997: 49-51). At this point it is important to introduce Daedalus and wooden cult figures known as *daidalon* or *xoana* attributed to him.

He [Daedalus] was the reputed inventor of *agalmata*, statues of the gods which had open eyes and moveable limbs, a compelling manifestation of the mystery of divinity ... One of the oldest and most enduring notions in the history of ancient Greek sculpture which fuses the ideas of the sculptor’s artistic/deceptive powers, the gods’ intervention of the latter and the viewers’ reaction to them, is that of the ‘animate’ statue ... the ‘fleeting’ nature of the subject, the references inevitably vacillate between the myth, legend and reality, the stone and flesh, the divine and human...the sculptors wish then to ‘fool the eye’ of the viewer was fulfilled by his/her readiness to be deluded, for in order for naturalistic art to deceive the viewer, the viewer must first deceive himself by suspending the possibility of disbelief” (Vassiliki 2004: 1)

Daedalus is also known as the “mythical first architect” who built the Labyrinth and dancing floor (*choros*) at Knossos. Moreover he is particularly known from the story of Ovid in *Metamorphoses* (V111: 183-235) as the maker of wings in feather and wax in order for him and his son to escape airborne from Crete. Pervading Western literature are themes involving grand bi-polar gestures of flight from the shackles of matter towards an immaterial beyond and only to be grounded again.

Yet the Western tradition prefers to make the adolescent Icarus, with his defiance in daring to fly too high (figure 3), the hero of the story due to the concern for the invisible influence of airborne elements. In recent years a certain *Icarus Complex* has pervaded architectural airborne matters and attempts at shifting from “the visibly static, solid and stable to the ephemeral and unpredictable, making use of materials that are always slipping into the void and the invisible, dissolving and shifting into space” (Schrimshaw 2011: 2).



Figure 3
Marie Briot, *Daedalus and Icarus*
(source: McEwan 1997: 69).

In contrast to their forerunners, the Socrates-Plato-Aristotle trio wished to shift the primacy of motion to the primacy of knowledge (*episteme*) and finding a way of making the divine and immaterial manifest as material, was through the expedience of binding the primitive Daedalean statues with cords and chains (figure 4). McEwan (1997: 1) relays Plato's dialogue *Euthyphro* where Socrates confuses his interlocutor: "Then I must be greater than Daedalus: for whereas he only made his own inventions to move, I move those of other people as well...For I would give the wisdom of Daedalus...to be able to detain them and keep them fixed". By chaining the cult statues the divine was thought to have been brought into the realm of human experience.

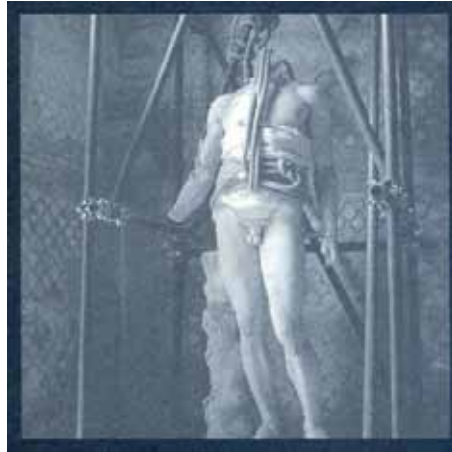


Figure 4
Geoffrey James La Campagna Romana 1990
(source: McEwan 1997: cover).

In this article thus far, Malevich's *Black Square* introduced form (*morphe*) as an idea over the matter of paint. Daedalus' animated statues introduced the brute matter of cut wood (*hyle*). In his *Metaphysics* Aristotle was the first to distinguish between form and matter whereby matter is rather that from which things develop than the thing itself. The form therefore is not a 'thing' but an 'idea'. The 19th century term 'hylomorphism' refers to the Aristotelian conception of substance as a compound of that matter and form: "Matter in itself is inert and undifferentiated; it is the servant of form and gives it presence. It does not determine form". (Thomas 2007: 3-4).

Hylomorphism, which understands materials as a subset of matter, does not provide a way of positively distinguishing materials, and underscores the architectural tendency to use materials as mere finishes, exchangeable and superficial. In turn, it is no surprise that materials become supplementary in architecture and are used to decorate or to signify (Thomas 2007: 4).

It is Plato's *Timeaus*, the first systematization of the universe marking a scientific tradition that a theory of ideal forms can only exist if in an ideal realm unaffected by matter. Matter therefore in this case does not matter and therefore less important. The *prima materia* for Plato can have no definitive character of its own, yet for the Post-Socratics it is the ultimate reality of things. That 'stuff' of the World, we learn is the idea of space-place (*chora*), a primordial element which constitutes both humans and nature. Chora is both cosmic space, a neutral receptacle (*mater*) and the matter of human crafts (Perez-Gomez 1994: 6-9).

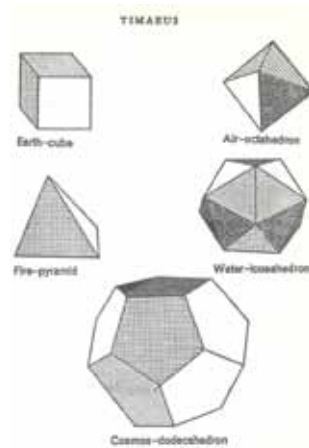


Figure 5
Plato, Platonic forms
 (source: Lee 1965: 77).

Thing and notion

It is only since the 19th century that a common distinction was made between the immaterial cosmic space (chora) and material container in architecture (Perez-Gomez 1994: 6-9). Prior to that, Joseph Rykwert lets us understand there was no differentiation of building as a material thing and architecture as an immaterial notion. In order to exemplify, Rykwert refers to the ritual of the Aranda Australian tribes who carry a totemic waninga (figure 6), that similar to trees are not buildings, but “exhibit the features” of the cut wood (hyle) as props required to demarcate space without actually enclosing space. In a sense the material object/artefact suggests the event space, which is invisible (Rykwert 1997: 186-189).



Figure 6
Waninga, Kana-Kana of the Mantuntara tribe after Roheim
 (source: Rykwert 1997: 187).

In his mythical account of the origins of architecture, Vitruvius refers to the Greek understanding of the “cosmic role” of artifacts. He tells of an event that takes place by terrified men that gather round a fire to keep them warm after they had ran from the fury of a blaze. In order to keep the fire burning they add cut wood continuously and as a result a social event takes place with the possibility of making architecture. Architecture in this sense is not a building, but by virtue of them enclosing space around the prop of burnt wood that transforms into a fire column of sparks and smoke (*axis mundi*) towards the starry skies (McEwan 1997: 113).

Particularly in the Renaissance with geometrical perspective (figure 7) do we see the prop, which was initially cut wood as in the Vitruvian or Australian tribal events, transform into *scenographia* or a stage-set (Perez-Gomez 2000:4). In light of the aforementioned it can therefore be argued that buildings as things are merely scenes in support of event-architecture. What is relevant for this study is that the event itself is the architecture, albeit temporal, intangible and immaterial. Yet it is the very matter of the props or scenography that allow or disallows the event to take place and therefore of importance.



Figure 7

Johannes Bochius, scenography for “The Ceremonial Entry of Ernest, Archduke of Austria, into Antwerp, 1594 (source: Perez-Gomez 1994: 17).

Dematerialised matters

It was the innovative thinker Augustine of Hippo (354-430) that had to grapple with the idea of the horror of Greek void and the synthesising of Greek space with Christian doctrine which considered ‘Nothing’ as the antithesis of God who was credited with creating the world out of Nothing (*creation ex nihilo*). Perhaps St Thomas Aquinas’s (c. 1225-74) efforts in *Summa Theologia* were more successful than Saint Augustine’s, although they were based on that of his predecessor, but also on the previously mentioned Aristotelian conception of form. Aquinas essentially distinguishes between the spiritual world and with its subsistent forms (*formae seperatae*) from the material world with its inherent forms which exist in combination with matter. For Saint Thomas, the cognitive mode of immateriality is *esse intentionale* and the ontological mode of materiality is *esse naturale* (Casey 1992: 3).

Both Augustine’s and Aquinas’ separation of things as ‘orders’, was for Mies van der Rohe an important guiding concept. It was especially Saint Augustine’s “disposition of equal and unequal things according to their nature that Van der Rohe would apply in his teaching that for “some buildings there are a more practical economic order and in some a more spiritual order” (Carter 1999: 10).

An appropriate example of a Miesian ‘spiritual order’ building is the International Exposition at Barcelona in 1929 (figure 9). This temporal event pavilion is considered the epitome of dematerialisation. In fact it had no real function but to enclose intangible space with the main aim of separating the structural elements from the space defining elements (Carter 1999: 20-34).

As you approach the Pavilion and then enter it, you are struck by this impression of non-utility which emanates from the open, empty rooms, from these beautiful walls of bare unadorned marble, and from the patios not lived in; and you immediately feel the shock of, I dare say, metaphysical architecture ... The ordinary interpretation of the words 'metaphysical architecture' would seem to be: architecture of the intellect (Carter 1999: 175).



Figure 9

Mies van der Rohe *Dematerialization in the German Pavilion, International Exposition, Barcelona, 1928-9*
(source: Carter 1999: 23).

Ironically this reminds us of the Greek sculptors wish then to 'fool the eye', and in the case of the Barcelona Pavilion, the deception of the intellectual viewer in believing that "architecture gives way to evocation and symbolism, leaving reality behind" and thereby becoming metaphysical (Carter 1999: 176). Yet paradoxically it is the very materiality of the large transparent tinted glass panes, the reflective marble and onyx partitions, the chromium-plated column covers and the reflectivity of the rectilinear pools that allow the possibilities of dematerialisation and virtuality of architectural space to appear.

The temporal Pavilion was dismantled after eight months: its marble sent back to Germany and the steel sold for scrap exposing its vulnerable materiality. Sixty years later it would be replicated on the same site but as a permanent edifice functioning as reception and exhibition spaces. The update was an exercise in ensuring the sustainability of material. For instance the replicated cruciform columns would be polished stainless steel in place of chromium plated mullions.

After great difficulty in replicating from black and white photographs and at completion, Kenneth Frampton pointed out: "Both the marble walls and the glass partitions are reflective: The glass, which reflects marble walls, seems solid, while the marble, reflecting glass mullions and interiors, seems transparent" (James 1986: 62). Therefore Van der Rohe's placing of the pavilion in the 'spiritual order' is questioned here due to the "confrontation of the *tangible and the intangible bodies*" which although intended to contribute to "incorporeal actualization" cannot avoid been placed also in the 'practical economic order' and thereby material corporeality. However, in his book *Immaterial Architecture* Jonathan Hill suggests the acknowledgement of multiple meanings of the term immaterial "as the perceived absence of matter as more important than the actual absence of matter" could be applied in this case (Hill 2006: 3).

Immaterial matters

The Barcelona pavilion placed on a podium purposefully aims at de-territorializing itself from the context and site. In contradiction the Japanese architect Kengo Kuma's desire is to 'erase' architecture into its surrounding. His ultimate aim is to actually make buildings disappear invisibly, one with the environment. However, he admits that his greatest struggle "is to confront the overwhelming presence of a material". His realized strategy was to "weaken materials" and by so doing they would recede into the surroundings but moreover he realizes that his "goal to erase architecture, is a goal that is impossible to achieve and laden with contradictions". Nevertheless in the very struggle of trying to make invisible architecture does he find meaning though the presence and repetition of the material itself (Bognar 2009: 8-9). This reinforces Katie Lloyd Thomas' concern in her account *Material Matters: Architecture and material practice* when the formal or conceptual is valued over the material matter and her insistence that the material always matters (Thomas 2012: 3).

The Water/Glass guest house of 1992 in Atami (figure 10) provides us with an example to investigate Kuma's strategies. Firstly, with the help of the steep hillside site with spectacular views of the sea below, a 'neutralization' of the exterior was to be achieved. Any exterior view of the house could only be possible from far away rendering the singular building 'disappeared'. Thereafter the concentration would be to eliminate solid opaque exterior walls in order to open spaces extensively to external views beyond. Also the floor and roof over the oval-shaped dining room are transparent. The frosted glass floor seems to float over the surface of a reflecting pool with its water flowing over the edge. Stainless-steel louvres under the glass roof breaks up the sky and light as it bounces onto the water and glass floor, which in itself reflects the particles of water. Kuma states: "I want to create a condition that is vague and ambiguous as drifting particles" (Bognar 2009: 24-30).

For him, particlization meant undermining the monolithic object-like appearance of a building and rendering it less definitive or solid so that it becomes permeable, ephemeral, and appears to have less bodily substance, almost as if it were a phenomenon (Bognar 2009:).



Figure 10
Kengo Kuma *Water/Glass guesthouse*, Atami, Shizuoka Prefecture, 1995
(source: Bognar 2009: 19).

Kuma's desires to create conditions that are "vague and ambiguous" rely on analogies such as a pixilation. The resulting effect he equates with a rainbow, which he says is not an object but a condition (Bognar 2009: 29). As was the case in the Barcelona pavilion, any attempt to make immaterial, relies heavily on the material. Moreover it is the idea (form) of both architects, legitimized by Aristotelian tradition and discourse that allows the form giver to privilege the

conceptual over the material, the very approach that Katie Lloyd Thomas argues against. Denial of this legitimization undermines the possibility of an immaterial phenomenon.

Atmosphere matters

The parameters of nature and the necessity of creating sheltered environments are the reason for the material enclosures and their supports. Had this not been the case then the question could arise: Why do the Van der Rohes or Kuma's need to dematerialize or immaterialize in the first place? But, by assuming that the invisible could fulfill the task of shelter (i.e. physical boundaries), irrespective of nature's parameters (i.e. gravity) what might such architectural possibilities be?

Such a different approach was taken by Yves Klein in his *Air Architecture* (1957-1962). Klein did not distinguish between art and architecture as categories in his concern with the subject- matter of space. "Architecture is space" he would say "and thus it is everything". Space for him was a "sensual, spiritual and immaterial expanse in which the body is active and immersed". Nevertheless Klein paradoxically embraces the material of natural forces of "Air, gas, fire, sound, odors, magnetic forces, electricity, electronics" for the point of view of immaterial architecture. The proposals for air roofs and fire walls apparently ecologically consider the transformation of the climate – hence no need for the definitive or solid enclosures that van der Rohe or Kuma grappled with (Hill 2006: 84 - 87).

Furthermore Klein acknowledges that movement or *Leap into the Void* (figure 11) through "an immaterial, neutral or passive void" is not the case and that it is rather through "a saturated field of invisible forces, through a thick and sometimes miasmatic cloud of particles that we can occasionally smell, taste or detect' and that the very matter of gravity could not be ignored (Schrimshaw 2011: 2). Precisely in his search for a non-functionally defined object, does Klein paradoxically embrace and focus on materials, albeit invisible to the user.



Figure 11
Yves Klein *Leap into the Void*, photograph by Harry Shunk, Paris, October 23, 1960
(source: Noever 2004: 57).

Whereas Klein's environmental projects intending to reconnect people with the earth and its elements remained visionary, Elizabeth Diller and Ricardo Scofidio reverse the approach placing the emphasis on the substance without the form enabling their Blur Building (figure 12) for the Swiss Expo 2002 to be made palpable instead of invisible. Still within the desired aesthetic of 'Nothing' in the Kuma vein, Diller + Scofidio conceal the building through blurring. Their

aim was to “synthesize architecture and technology” by de-materializing the architecture and materializing the technology (Hill 2006: 95).

The atmospheric work of architecture is placed on Lake Neuchâtel, west Switzerland and relies on the water and its various Pre-Socratic-like metamorphoses (Aymonino 2006: 362). The 100 by 66 metres temporal building “sprayed 5,000 litres of filtered lake water a minute through 31,400 nozzles to form an artificial cloud...that hovered above the lake”. The artificial white mist is experienced by the 400 visitors clad in raincoats who are also blurred between the natural environment, building and technology. Diller defines the project as “the sublime on a level of nature...but also on the level of technology” which results in, a weather condition out of the control of the architects (Hill 2006: 96).

‘To blur’ is to make indistinct, to dim, to shroud, to cloud, to make vague, to obfuscate. Blurred vision is an impairment, it’s vision mediated. A blurry image is typically the fault of a mechanical malfunction, in a display or reproduction technology. For our visually obsessed, high-resolution, high-definition culture that measures satisfaction in pixels per inch, blur is understood as a loss (Diller 2000: 1).



Figure 12
Diller + Scofidio, *Blur Building*, Yverdon-les-Bains, Lake Neuchatel, Swiss Expo 2002
(source: Aymonino 2006).

Event matters

At least it seems in the situations of the dismantled Barcelona Pavilion and the demolished Blur Building, that expositions provide the ‘immaterial’ opportunities “to define and exalt ephemeral events”. Also *The Leap into the Void* and the guests dining in the Atami glass oval are events, albeit not for mass society. Societies of minorities rediscover unity in public places and therefore unconsciously re-enact the notion of the Vitruvian story of event-architecture. Nevertheless by not considering the notion of ‘immaterial’ as a question about what is matter and what is not, Jonathan Hill rather asks one to question spatial and architectural qualities not based on things that are not visible, but on the events that allow this perception of immaterial to happen (Karandinou 2007: 8).

It is the recent non-volumetric architecture that defines and exalts open-air performances (Aymonino 2006: 361). Such non-volumetric architecture can be exemplified by the Sound Box (figure 13) designed as a Swiss pavilion for the International Expo in Hanover 2000 by the architect Peter Zumthor. This ruddy pine “labyrinthic field of changing sounds, views, smells, tastes and ambiances” is put together without fasteners in order for it to be dismantled, parts

sold or recycled (Davey 2000: 50). The very materiality of the space manifests itself through the immaterial sensorial aspects which the material sets off in the first place. For instance: the scent of the wood; the aromas of the food served therein; the sound of rain on the sheet metal guttered roofs; and the changing sound fields of the improvised music by moving musicians. The resulting sound box (*Klangkörper*) is said to bring forth “the boundary between the visible and the invisible – the material and the immaterial” (Karandinou 2007: 7).

From this perspective, then, the interpretation of buildings per se, or even the search after the meanings of buildings, is largely bankrupt... From this hermeneutical frame, it is not buildings but the human experience or apprehension of buildings that holds our attention. Or, to put it one more way: from this perspective, the locus of meaning resides neither in the building itself (a physical object) nor in the mind of the beholder (a human subject), but rather in the negotiation or the interactive relation that subsumes both building and beholder – in *the ritual-architectural event* in which buildings and human participants alike are involved (Jones 2000: 41).



Figure 13
Peter Zumthor *Sounding Body*, Swiss Pavilion, Hanover, 2000
(source: *Progressive Architecture* 2000: 51).

Invisible matters

In the Zumthor work, one could also add that in Katie Lloyd Thomas’ (2007: 2) call for: not only making the material matter but the invisible practises of those involved in the production of the event. For her it is still the materiality that influences the process and performance. But one is reminded that we are in the throws of a breakdown between the so-called physical world and the so-called immaterial digital world which changes the discipline and e-futures of architecture (Leach 2002: 6). The non-figurative data we cannot see is flowing amongst us but are difficult to represent with traditional architectural figurative codes.

Contemporary architecture still attributes its own foundation to the acts of building, constructing visible spaces; metaphors limited to a single building and single typologies, and it does not take the opportunity to represent a dispersed, inverted, and immaterial urban condition (Branzi 2006: 9)

Branzi’s sentiments are reinforced by Manuel Castells who in *The Rise of the Network Society* (1996) tells of the threshold that has been crossed to a new ‘Space of Flows’ that comes about through social real-time interaction and material infrastructure that makes it possible for immaterial data to flow. In contradiction to physics that states that space cannot be defined outside the dynamics of matter, the social practice Castells proposes is social and therefore immaterial which one could postulate is a similiar condition for event-architecture. Nevertheless what is of greater interest for this article is that despite all the virtual power of space of flows,

it all goes straight back to reality in that as Castells predicts, cities will re-invent themselves physically (Stadler 2001: 3-7). The so-called virtual practices can be exemplified by Asymptote architect's Virtual Stock Exchange or Guggenheim projects (figure 14), feeding back into the realm of matter.

While much business and social interaction will soon have been displaced to the *digital* realm, it will have a reciprocal effect upon the *physical* realm, and will have a concrete impact on the material fabric of our cities (Leach 2002: 7).

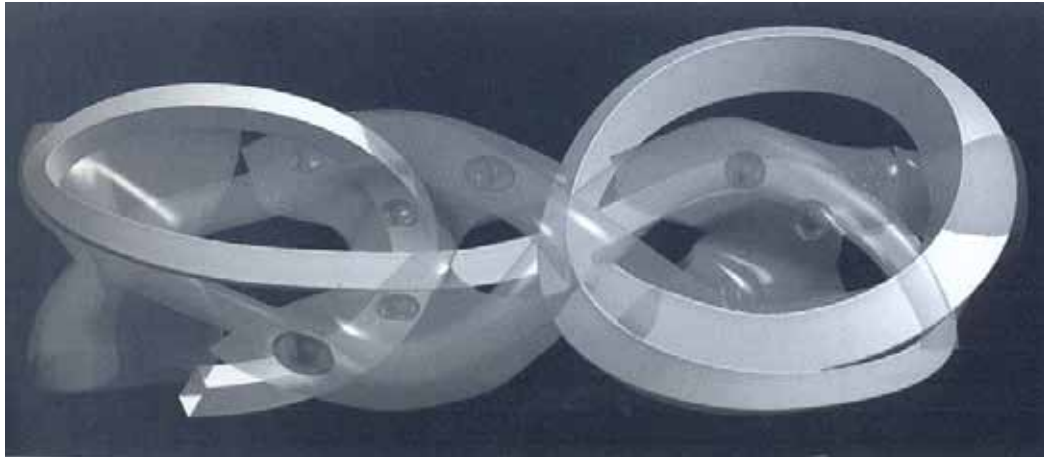


Figure 14
Hani Rashid, *Guggenheim Virtual Museum* , 1988
(source: Leach 2002: 12).

Conclusion

Hopefully through discussion and examples this article has highlighted the various matters of architectural attempts to go beyond the physicality of buildings towards a notion of immateriality. Despite these desires it seems as Neil Leach (2002: 6) points out that “it could be argued that the more ‘immaterial’ our lives become, the greater our corresponding desire for a material world” and that human beings will always paradoxically want to have recourse to materiality. This has been evident in this article from the Early Greeks to Digital culture.

In fact it seems humans have no option: the inevitability of the material does not disappear. Perhaps only if anti-matter had dominated, might the situation be otherwise; there would be no humans or things. In some sense, far from underpinning our interest in material reality, the whole domain of the digital has been shown in this study to be enhancing it.

Nevertheless, based on perception or events, architecture whether defined as material or immaterial will always need to shine beyond drabness, but drabness can no longer be equated with the material and the shine with the immaterial or in fact *visa versa*. In a courtyard, the Viennese firm Coop Himmelb(l)au burnt (1968) a giant wing (figure 15). The construction of cloth was to be “the vision of architecture of pure air that would replace the prisons of mute form with the prisms of desire”. The manifestation of this idea could only occur by burning the “most ephemeral form” the architects could make. Thereafter the makers pronounced that ‘Architecture Must Burn’ (Betsky 2000: 21). To explain and conclude:

Architecture must be the fire that transforms the materials of our lives. It must explode our indifference, revealing the unseen constructions that we take for granted. As our cities grow cold, architecture must be hot ... when architecture is truly great, it even has a metaphysical ability to change stone or wood, or plastic – into gold (Betsky 2000: 20).



Figure 15
Coop Himmelb(l)au, *Architecture Must Burn* , 1968
 (source: Betsky 2000: 1).

Notes

- 1 To exemplify: The *Nothing* touring exhibition took place from April, Sunderland to December 2001, Malmo, Sweden. The *Invisible Architectures: Exploring the Invisible & Influential Substrates of Urban Existence* festival took place in Newcastle upon Tyne, 2011.

The *Immaterial Materialities: Materiality and Interactivity in Art and Architecture* symposium was held in Sydney in January 2013.

Works cited

- Aymonino, A. & Mosco, V.P. 2006. *Contemporary Public Space: Unvolumetric Architecture*. Milan: Skira.
- Barrow, J. D. 2001. *The Book of Nothing*. London: Vintage.
- Bognar, B. 2009. *Material Immaterial: The New Work of Kengo Kuma*. New York: Princeton Architectural Press.
- Bouman, O. & van Toorn, R. 1994. *The Invisible in Architecture*. London: Academy Editions.
- Betsky, A. & Adigard, E. 2000. *Architecture Must Burn: a manifesto for an architecture beyond building*. London: Thames & Hudson.
- Branzi, A. 2006. *Weak and Diffuse Modernity: The World of Projects at the beginning of the 21st Century*. Milan: Skira.
- Carpenter, E. 2001. Something about nothing, in Gussin, G. & Carpenter, E. (eds.), *Nothing*. London: August Media
- Carter, P. 1999. *Mies van der Rohe at Work*. London: Phaidon.
- Casey, G. 1992 *Immateriality and Intentionality*. School of Philosophy: University College Dublin. <http://www.ucd.ie/philosophy/staff/casey/ImandIn.pdf>
- Collings, M. 2000. *This is Modern Art*. London: Seven Dials.
- Davey, P. 2000. Moral maze, in *Architectural Review*. Vol 208, No:1243. Sept 2000.
- Diller, E. 2000. Defining atmosphere: the blur building, in *Doors of Perception 6: Lightness*. www.doorsofperception.com

- Görgul, E. 2012. The (in)corporeal architecture: dematerialization and intangibility of space in early modern architecture, Barcelona Pavilion case, in *ITU A/Z*. 9(2) Istanbul: Istanbul Technical University.
- Hawking, S. 1996. *A Brief History of Time*. Ealing: Bantam Press.
- Hill, J. 2006. *Immaterial Architecture*. London: Routledge.
- James, W.A. 1986. Barcelona, in *Progressive Architecture*, 8 (86).
- Jones, L. 2000. *The Hermeneutics of Sacred Architecture: Experience, Interpretation, Comparison*. Cambridge, Massachusetts: Harvard University Press.
- Karandinou, A. 2007. Moving Forward Conference, University of Aberdeen. *Immaterial Architecture: the Beyond-the-built*. <http://www.karandinou.com/publications/BeyondTheBuilt-MovingForward.PDF>.
- Leach, N. (ed.). 2002. *Designing for a Digital World*. West Sussex: Wiley-Academy
- Lee, D. (trans.). 1965. *Plato: Timeaus and Critias*. London: Penguin Books.
- Maritain, J. Scanlan, J.F. (trans.). 1946. *St, Thomas Aquinas: Angel of the Schools*. London: Sheed & Ward.
- McEwan, I.K. 1997. *Socrate's Ancestor: An Essay on Architectural Beginnings*. London. The MIT Press.
- McKee, F. 2001. From zero to nothing in no time, in Gussin, G. & Carpenter, E. (eds), *Nothing*. London: August Media.
- Perrin, F. 2004. Air architecture: imagination and matter in Noever, in P. & Perrin, F. (eds.) *Air Architecture: Yves Klein*. MAK Centre Los Angeles: Hatje Cantz.
- Pérez-Gómez, A. 1994. Chora: The space of architectural representation, in Pérez-Gómez, A. & Parcell, S. (eds.), *Chora I: Intervals in the Philosophy of Architecture*. London: McGill Queens.
- Pérez-Gómez, A. & Pelletier, L. 2000. *Architectural Representation and the Perspective Hinge*. Cambridge, Massachusetts: The MIT Press.
- Rykwert, J. 1997. *On Adam's House in Paradise: The Idea of the Primitive Hut in Architectural History*. London: The MIT Press.
- Schrimshaw, W. 2011. Invisible architect: exploring the invisible & influential substrates of urban existence, *Introducing Invisible Architectures*. <http://www.sublimalcity.co.uk/introducing-invisble-architectures>.
- Stadler, F. 2001. *The Space of Flows: Notes on Emergence, Characteristics and Possible Impact on Physical Space*. Invited talk for : cITy: reload or shutdown? Paris, August 2001. http://felix.openflows.com/html/space_of_flows.html. Accessed 20/05/2013.
- Thomas, K.L. (ed.) 2012. *Material Matters: Architecture and Material Practice*. London: Routledge.
- Vassiliki, V. 2004. The Greek "mobile" statue: myths and realities, *Anistoriton: ArtHistory*, 8 (December): Section O044. <http://www.anistor.co.hol.gr/index.htm>.

Derick de Bruyn graduated with a BArch from the University of Natal, Durban in 1983 and with a MA(Architecture) from the University of Kingston, London in 2005. He has worked for several large practices in South Africa and London and been in private practice since 1994. Most of the projects undertaken have been extensively published in recognized books and journals locally and internationally. Several projects have received merit awards from respected Institutes and organizations. He is currently also Senior Lecturer at the University of Pretoria, Department of Architecture.