elements of architecture
Rem Koolhaas
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Architecture is a profession trained to put things together, not to take them apart. But no architect in their right mind would dare to write today an 'Elements of Architecture' that intended to describe both what the components of architecture are and how they should be put together. That impulse, once so strong and confident in all cultures that gods, deities, rulers, emperors, popes, and princes were addressed for thousands of years in grandiose dedications by the confident authors of architectural treatises has been weakening gradually over the last few centuries and is now extinct. Le Corbusier's dedication '*a l'autorité*' in his *La Ville Radieuse* (1935) was perhaps the last one, and saddled him with the lifelong accusation of authoritarianism.

Architects now have dropped proportion in favor of dimension. Neufert is our pedantic Vitruvius, with his *Bauentwurfslehre*, published in Nazi Germany in 1936, now gone global. More and more conventions, regulations, and prescriptions are embedded, often surreptitiously, in our digital tools…

Architecture is a strange mixture of persistence and flux, an amalgamation of elements that have been around for over 5,000 years and others that were (re)invented yesterday. Just as science has recently shown that all of us carry "inner" Neanderthal genes, each architectural element too carries long strands of junk DNA that dates from time immemorial…

A surprising percentage of everything architects put together in a so-called building is defined by a small number of ancient categories: wall, floor, ceiling – to name the elements with which three-dimensionality is constructed.

Even in a period of drastic change, the number of these elements remains stubbornly the same. The fact that elements change independently, according to different cycles and economies, and for different reasons, turns building into a collage of smoothness and bricolage – a complexity revealed in its full extent only by looking under a microscope at its constituent parts – the elements.

In this exhibition – and in its catalogue – we examine micro-narratives revealed by focusing on the scale of the fragment: elements of architecture looks at the fundamentals of our buildings, used by any architect, anywhere, anytime: the floor, the wall, the ceiling, the roof, the door, the window, the façade, the balcony, the corridor, the fireplace, the toilet, the stair, the escalator, the elevator, the ramp…

We do not uncover a single, unified history of architecture, but the multiple histories, origins, contaminations, similarities and differences of these very ancient elements and how they evolved into their current versions through technological advances, regulatory requirements, and new digital regimes.

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Without my parents' balcony I would not be here. They lived on the 5th floor of a new social democratic walk-up. Born in the last months of the war, a cold but very sunny winter, when everything that could burn had been burned, I was exposed to the sun, naked, every possible second to capture its heat, like a mini solar panel. I remember my first escalator – five diagonals climbing up one side of a huge, day-lit

atrium dominated by a colossal clock, mounted on irregular glass: probably the first sense of the metropolitan, even if the top floor was dedicated to inert and intimidating marital beds… the wall of my small bedroom, when it started to shudder and then cracked in two parts, my bed jumping off the floor… much later friends took me to a kampong – a hut full of intrigue, made of woven palm leaves, immune to any earthquakes. Weaves don't crack. The octagonal opening high in the attic, the first window I understood as a perforation, strong and white, with clouds passing at surprising speeds in the day, shafts of moonlight at night… no electricity, the only light coming through gaps in the floorboards... you could see straw and then, through cracks in the stucco of the ceiling, the room of the others… The monumental door of the mansion that my mother had squatted after the war. A first experience of class… First you had to climb an imposing stone staircase; then you stepped into the hall, surrounded by a second, sweeping stairway that ended somehow at our attic…Two families shared the apartment – four adults and four children; the other family occupied the room with the balcony. From the balcony, you could see the old town, framed on either side by a naked man and a naked woman carved from stone who helped to carry the weight of the roof, their backs turned to the apartment…. They dominated the façade. They made me feel protected; why did that not have the slightest consequence in my life as an architect? The second attic where we lived – "Mansard roof with concave basis and convex covering with protruded cornice and frieze"[1] – was like a Gehry sculpture supported by two Doric columns – the only ones in our city… The floor would bounce and vibrate under my negligible weight. The intricacy and variety of the parquet was probably the first evidence of complexity… Not only the patterns, but all floors were frayed: wood had been burned when there was no more coal… then the floor would suddenly be restored to perfection. Ah, to have been a child when nothing was childish… The short distance from the war made our generation appreciative of the utilitarian – what worked was endowed with aura for that reason alone… It seemed deep as a well, a distant hole, through which waste simply disappeared, the toilet, unburdened by any intent or design… You could walk straight into the huge fireplace at my grandfather's house… made from brick, glazed the color of fire – above it a huge painting of a horse stumbling over a felled tree trunk… clearly a message. To get there you passed through a short corridor that absorbed all sound, as if you barely existed… First experience of an elevator, the day my grandfather showed me his building, stacked me in a paternoster from which I did not dare to escape, once I was in… the ramp that ended my childhood when
I boarded the ship to the other end of the world…

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1. a briefest history
At the point where the 21st century is beginning to reveal some of its likely essences, *eoa* reconstructs, in stories, fables, anecdotes, scripts, inventories, how this repertoire evolved, where and when the *eoa* collided with modernity, and how they are starting to mutate in the digital age…

A short history of architecture elements could read:

• From the age man discovered fire – the loincloth moment – primitive forms of habitat emerged – partly found, partly constructed – that were slowly codified into a limited number of elements…

• From 5000–3000 BC, the way these elements were put together in new and deliberate ways that are original, beautiful, and useful, suggests the birth of a new art – architecture.

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[1] Description of building when cited for preservation status.

• In antiquity – not only in Greece and Rome, but also in Asia, South America, and Africa – this art developed to heights not seen since then, to create cities and civic complexes where the role and intention of each building, and the way they related to each other, was compelling, logical, and unquestioned.

• After a long interval in which these societies were brought down by "barbarians" or "decadence," the Renaissance resurrected these qualities – each element was defined, modernized, reinvented. Architects were part of a shared system, but also expected to challenge the rules. Originality became an ambition.

• The Enlightenment, by emphasizing rationality, revolutionized architecture... Function became the new beauty. Many elements were "improved" by adding technical, empirical, and regulatory dimensions. New construction materials and methods enabled a lightness that, in turn, affected each element.

• The steel frame and the elevator abruptly ended the first chapter of the history of architecture – the one we still dwell on – and opened a second modernity, bereft of symbolism and any vestige of solidity. The new provisional, standardized period of architecture has massive repercussions for every element, driving some to the point of extinction – fireplace – and inflating others with exaggerated importance – the ceiling, now a deep three-dimensional service space rather than a symbolic plane. Air conditioning began to erode the legitimacy of elements and privileged the envelope.

• Onto this still largely unexplored and unfinished chapter is now grafted a digital era, whose regimes offer drastically improved levels of control to feed an obsessive need for comfort and security, but we have not even begun to confront the constantly expanding vastness of the data we generate and the potential for abuse. Architectural theory has not developed in tandem, it is lagging behind at least by two centuries, in a bubble of western self-congratulation.

2. mechanics
A groundswell of technical inventions has revolutionized the nature and the performance of the *eoa*, which were previously defined by gradual and mostly formal evolution. Many architectural elements partly turned into machines, introducing a constantly expanding family of hybrids. The toilet was no longer an accumulation of waste that was then removed manually; the fireplace no longer a place where you simply burnt wood, but a more calibrated device where you could begin to control the fire; the performance of the window became more precise; the staircase became an escalator, the pavement a moving belt; in 1851, the elevator enabled, in the air and underground, new territories that went far beyond the reach of the mere staircase.

These radical transformations have registered on the technical half of the architectural brain, but they were barely registered in the profound core of architecture. The discipline is suffering from schizophrenia, flitting between architecture as an art and building as a tool of modernization. This schizophrenia implies that our role as so-called form-givers is increasingly precarious and hollow, since there is no challenge to create a 'mastery' over the mechanical side equal to our supposed control over the material side. Architects' reputations and expectations are largely based on their supposed uniqueness, but we actually assemble elements that have largely been defined by others, mass produced in series, offered in catalogues on the internet, accessible to anyone and put together by increasingly indifferent labor... We may posture as geniuses, but we play our assigned role in the uberscript of modernization... If this is true for the visible parts of the building, it is even truer for its systems, where the inventions are made in distant laboratories, and eventually applied, if affordable, in

buildings… technically, there is no specific originality possible anymore for the architect… To the point where sections of each building are the domain of others, inaccessible to the architect themselves… The most acute architectural brains of the 20th century seem aware of this challenge, elaborating potential responses but never quite succeeding on the level of doctrine, paradigm, or manifesto. Loos tried, with his Chicago Tribune Tower – the Doric elevator, antiquity married to the comfort and smoothness of America, a diagram that recombines the two halves of the architectural brain…

Did Mies come close? Physically: yes. By transplanting from Europe to Chicago, he injected himself, at 50, in the fresh but un-theorized inheritance of Chicago's ingenious precedents, putting himself shamelessly in the center – combining City Beautiful with the steel frame, services, and mechanics… But where this architecture beautifully expressed a more technological world, its inventiveness is not applied to the actual technologies that enable it, and does not question them. All his work adopts the by then inevitable paradigms of air conditioning, false ceiling, partitions, blinds, etc., all hidden behind thin layers of dignity.

Reyner Banham wrote *Architecture of the Well-Tempered Environment* in 1969, the forward thrust of his language could not hide the fact that he was reporting old events: the triumph of air conditioning that he celebrated was already 100 years old...

The brief flowering of "systems" – vertical transportation, services – and the long domination of high tech suggested that an architecture could be purely based on the new inventions – a highlighting of the duct, the exposure of vertical systems remained conceptually naïve and left us hungry because they denied architecture's endless history and the persistent, atavistic expectations that history has imposed on our public and ourselves.

So it could be that Charles Jencks could publish the *Language of Postmodern Architecture* in 1977, focused purely on the traditional elements of architecture and ignoring the elevator, escalator, and air conditioning as if they simply did not exist… So the semantic moment passed; we'll never have a Barthes of the elements (#true?), of the false ceiling, of the air conditioning duct…

By the 1980s, postmodernism had concluded the premature reburial of technology as an issue, and promoted a new architecture of arrested development… seemingly forever. The elements of architecture were taken seriously again, and in the process, consumed by technology…

3. digital regime
In the late 1980s, in the waning of the Soviet era, an unusually lumpen building was under construction in Moscow. The structure was striking: more or less a cube, of intermediate height, built from an indeterminate substance, the color of dirty snow.

Its shape was naïve, like the towers erected to train firefighters, or the burnt-out airplane carcasses that litter international runways to train security forces… a cube of seemingly identical cells, composed only of wall, ceiling, and window. The building is intended as an extension of the American embassy. The construction never reached a conclusion; the building was riddled with listening devices in such absurd quantities, embedded in every wall, floor and ceiling, that it could not be 'debugged'; whoever owned it, it would always be possessed by the Russians.

The digital became ubiquitous, like a bushfire, in the late 1990s. Working in Seattle offered an entry to the epicenter of this world: a visit to Bill Gates's already legendary house, in his absence. A wooden,

semi-Scandinavian mansion on a lake, an interior of dark wood, carpets, bouquets… many flatscreens, ubiquitous control panels flush with the wainscoting. The deep American baritone of our tour guide explains how basically from every point of the house, every other point can be controlled – temperature and humidity of course, light, movies, music, the images on the flat screens: art, patterns, mere images… The comprehensive digital mastery is staggering. But the walls of this house are exceptionally thick. A touching belief in what architecture can still do? Offer a sense of protection? Intimacy? Beauty? Then I discover a hidden door in the thickness of a wall, and open it. I suddenly enter an overheated plant room – fluorescents ablaze, roaring racks of servers multiplied in silver-foil walls. An anxious maintenance crew on permanent high alert… Later, Microsoft presents the intelligent house… its first device is the intelligent fridge. Huge, divided in many compartments, it records any change in its contents and alerts users to imminent shortage, orders missing supplies, for the moment delivered by human labor, but soon by robotic device.

Early in 2014, Ford motors announces that it will stop an ongoing project in which the car is no longer the silent witness to its driver's behaviors, a convenient tool, but a recording device that registers time, place, speed, occupancy, maintenance, transgressions, defiance of rules, and maybe even intent. The car is no longer a vehicle of individual freedom, but a spy, a machine potentially as revealing as a cat scan. We have surrendered to the benefits of the digital, at the very moment that Snowden's revelations have simultaneously demonstrated the monstrous potential of betrayal.

Where initially we wanted to reveal the history of each element's evolution and speculate about their 'future,' we began to realize half way we were documenting an invisible transformation. Elements have been mute for thousands of years. That made them trustworthy; now an increasing number of them collect information. Floors detect illness by measuring gait and temperature, and alert distant control rooms of a fall and presumably dispatch elevators; the fireplace has been superseded by communicating thermostats that can reveal entire lifetimes of habit; the door has transformed into an extension of the smart phone, each opening and closure recorded; elevator commands irrevocably reveal (and determine) the destination of the visitor or try to predict exactly what floor you want to be taken to by listening to your conversations and following your daily routines (Microsoft); smoke detectors become touchy-feely; toilets record health and diagnose illness with each drop, the elements themselves assume a degree of consciousness, in the process generating enormous amounts of data ready to be mined…

The floor, the ceiling, the roof, the door, the window, the façade, the balcony, the corridor, the fireplace, the toilet, and the elevator, all have been either digitized so they can exist in virtual form, or infiltrated so that they record the inhabitants, or the outside world's data.

Very soon, your house will betray you, or at least announce early bedtime in the name of sustainability, unless you pay more, of course...

In retrospect, the 'intelligent' building, the "smart" house, has been unmasked as a euphemism for a potential agent of intelligence… Every time you hear these words, you should reach for the barrel of your mouse.

Architects have treated the digital as a benign reinforcement… The digital's supposed ability to produce endless variation would counteract the flattening of the architect's imagination. Architecture's use of the digital was initially based on the facilitation of process, but it has been oblivious, so far, to architecture's possible enlistment in Big Data.

What is perhaps most insidious about the digital regime – and where it differs from earlier paradigms that relied on labor – is how essentially robotic and therefore effortless it is, once programmed and wired. There is no limit to quantity, duration, multiplication, connecting, cross-referencing… The digital is essentially beyond exhaustion.

The potential authoritarianism that could be the outcome of the digital regime's uncheckable condition resonates weirdly in a world that is waking up slowly to the realization that the announced neoliberal universality will not happen…

Moralism has always emanated from architecture, now a new morality is being projected on it by politics. 35 years after Reagan, as the final outcome of neo-liberalism/the yes regime, political correctness is now a system, the official ideology for the 21st century.

A perverse new human rights charter (improved, limited, achievable, value-free) is about to unite all peoples, all regimes, and is, by definition, popular.

As a substitute for the French revolution's liberteté, égalité, fraternité, it has adopted a new universal trinity: comfort, security, sustainability. This new trinity is about to impose an inescapable and irreversible dictat on every domain, and architecture has embraced it with masochistic enthusiasm. It is not hard to predict how radically this trinity will destroy our discipline in a wave of faux conscience, sweeping with it all anterior practices of architecture, and with it, the evidence that generations of smart rulers, artists, architects, clients, and individual craftsmen had understood these 'new' urgencies all along… The digital is the enabler of the new trinity… and we are only beginning to see how it will reshape and redefine the elements of architecture. One by one, they assume degrees of consciousness… maybe they could be friends. …like? Don't like?

"Big Brother is us" instead of
Sartre's "hell is other people."