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Sensualising the Void

Void is an antithesis of architecture, but also its natural complement, component, and environment. Architecture appears in it on the same terms as sculpture: void lets them exist, and the sharp contrast between the material and the air defines their boundaries. What we live in are empty spaces between walls, but in our daily practice of interacting with the built environment this relationship remains largely unnoticed and invisible. Air is the fundamental, seemingly transparent, medium of the human body's contact with the built environment. And yet, just as any other material, including those used for construction, air also has its physical properties: density, pressure, or the ability to transfer forces. It is only the introduction of proper sound that makes air perceptible, allowing us to describe it, or at least to imagine it. Sound causes air to vibrate, thus making it denser or thinner to our perception, endowing it with weight or dynamics, revealing its properties.

Air and sound appear, react, and change depending on the space in which they are present and the materials it is bound with. Architecture can be co-built with sounds; their character greatly affects its perception. But this also works in the opposite direction: the shape of an architectural space co-builds sound, determining its distribution in space, providing it with a structure. Interiors of different shapes and cubic capacities, built using systems and materials, will produce different acoustics. Sound in a room does not solely circulate in the visible spaces between the walls but also affects them. Together with air, it penetrates materials, achieving site-specific resonance vibrations. In Katarzyna Krakowiak's

project, *The Rise and Fall of Air*, sound is introduced into space in such a way so as to highlight those specific qualities and evoke a highly tangible sense of its characteristic, individual presence. In the Zachęta project, sound is meant neither to follow any specific aesthetics nor to evoke any specific mood, but is construed instead as physical movement — a movement of air and construction — serving as an architectural surveying instrument similar to the sonar or the ultrasonograph. The purpose is to reveal the building's secret interior, but without resorting to any detailed measurements or acoustic analyses. Nor does the project consist in letting people into unused, empty interiors or spaces. Allowing the artist to work with the building in 1:1 scale, the sound sculpture facilitates an understanding of the building, making the inaccessible, the ignored, accessible to imagination. Explaining architecture with sound makes it possible to present it differently and reach deeper, into a different sphere, by changing the paradigm of its perception. Contact with architecture is no longer based on sight and touch, becoming less biased by rational habits, more direct. The building becomes physically perceptible as a unity comprised of various materials, reacting to sound, generating and conducting it like the human body does. The skeleton (and, to a lesser extent, other parts of the body) is a great transmitter of sound vibrations. A virtually tangible experience of a building's vibrations brings us closer to understanding it as a single organism, a structure seemingly immobile yet possessing a certain margin of fluidity. This spurs the imagination to activate a kind of echolocation system,



which anticipates the layout of the building's walls and voids. The need to differentiate space with respect to the visible is transgressed. Sound complements the building's image, making us aware of architecture's multidimensionality and diversity in a different manner than sections and axonometric projections do.

Architecture is a seemingly noiseless machine, a purely technical product that comprises far more than just its construction. Just like sound, it usually functions beyond the material and the visible. Both can affect viewers unbeknownst to them, organising and managing their behaviour through a range of subtle procedures and invisible means. Such an extreme version of architecture as an instrument of power (but mainly as a metaphor of its system) was described by Michel Foucault in his analysis of Bentham's Panopticon (in the chapter 'Panopticism' of *Discipline and Punish*). In such practices, the building's acoustics play an important role; the walls are not just regulators, through which one can hear too much or not enough, but, by muting or reflecting sounds, they can also drown out conversations or even render any voice communication impossible. Similarly, barring a passage space, though it reintroduces the building's historical wall (which largely remains part of the building), becomes a gesture aimed against the viewer's habits. The surprising moment of 'banging against' a wall is hard to rationalise. The sudden collision demonstrates how easy it is to cut off the possibility of passage, to exclude a crucial fragment of space from use, and also that, from the recipient's point of view, there are no fundamental qualitative differences between extant and (re)introduced constructions. They are simply barriers to which the visitor has to accommodate themselves. Krakowiak leaves the cut-off space of the passage empty, composing it into a series of fissures in the building's other walls. The Zachęta's walls are seldom monolithic, usually comprising two layers separated by a void. Amplifying these empty spaces, the artist not only demonstrates the existence of a noiseless machine but also makes evident its insincerity.

In its operating principle, the sound that fills the construction of the skylights resembles electrical muscle stimulation. For the purposes of an artistic experiment, audio impulses

are fed through the structure, repeating and amplifying the sounds of the building's life and causing the whole thing to vibrate slightly. Through this movement, they evoke the entirety of an only partly visible system. Sound moves around the construction, enhancing a sense of its inner working, of the invisible, conflicting tensions arising within it. The phenomena occurring within such structures are popularly described using sound-related metaphors; forces flow smoothly like sounds, trickling downwards with gravity, colliding, neutralising or balancing each other. The designer strives towards harmony.

By means of an audio construction utilising the Zachęta building's empty and unused spaces, Krakowiak has created an autonomous system — a sculpture. Functioning in an independent mode, the inaccessible spaces form a parallel world, with its own clearly defined shape (surprisingly similar to the institution's logo) and its own, not particularly rational, tectonics. Why is this space so important? The point of view adopted here stands in direct opposition to the highly widespread notion of buildings as Klein bottles: non-orientable surfaces of the edges so joined together that the notions of the inside and outside do not apply. Unlike mathematical surface, architecture has a specific wall thickness, yet it is perceived as a continuous plane of surfaces shaped one-sidedly with the thought in mind that they will be viewed, that they should evoke certain feelings in the viewer, be it on their own or as part of the whole. The volume and thickness of the material used in construction is usually ignored, as if it were two-dimensional. When there is an inaccessible void in a building, it clearly signals the three-dimensionality and cubage not only of the wall-delimited spaces, but also of the walls themselves. Moreover, this is a space devoid of the high-visibility aspect, unique, subject to rules of its own. Sigfried Gidion's monumental *Space, Time and Architecture* features a view of the glass roof of the Paris department store, Bon Marché (1876), designed by Louis-Charles Boileau and Gustave Eiffel, presented from the level of the roof's technical landings, thus showing something that was not aesthetically finished or meant to be viewed at all. In this way, Gidion strove to demonstrate the 'truth' of the structure, trying to make evident both the roof's construction and the designer's

concept. He assumed that a building [or a fragment thereof] could be truly itself only in such an inaccessible space. Even if we follow Krakowiak in treating the exploration of voids and exemptions as an attempt to better understand a building and discover its latent architectural potentials, we cannot imagine those spaces without proper instruments. Exploring the Zachęta building by means of sounds that are natural for it has the ring of an hermeneutic project. In this case, of course, the idea is not to interpret a text with another text but rather to investigate two highly correlated spaces in order to recognise the whole and discover latent meanings. This is done on various scales at the same time; the detail is explained through the whole, the whole through the detail. The subject and object of research ensue from each other, revealing, in the combination, not only their own meanings but also the common one, impossible to be grasped otherwise.

If empty spaces and their role in the Zachęta building are the main topic of this essay, it is worth reflecting on what they are not. They certainly have nothing to do with the deconstructivist play of full and empty forms. Nor are they the centre of attention as organising or structuring elements. Even when amplified, the gallery's 'wasteland' spaces neither evoke negative emotions, nor entail a sense of lacking (in an eschatological or nihilistic sense), nor play up the relationship between presence and absence (as in Daniel Libeskind). Krakowiak subjects the gallery building to an act of vivisection and simply finds the 'new Zachęta that is already there'. Letting things happen, void is a kind of freedom, even if the empty spaces were not originally meant to be used.

Far from being a result of neglect, Zachęta's unused spaces are, in most cases, a logical consequence of the building's construction. The distribution of materials in spatial structures, and especially the blank spaces between them — their size and frequency — are usually a result of aesthetics, economics, or uncertainty. Even with the most irrational forms of buildings, construction engineering, operating at the interstice of the exact sciences and legal regulations, should represent a possibly reasonable and economic way of thinking. And yet the building's structure is surprisingly inconsistent. If it is necessary to hollow out a wall to install

fittings or save on materials, in this case, paradoxically, it means a waste of usable space. Even more puzzling are the vast lofts, unusable in any way for technical reasons; about two-thirds of their floor area are glass surfaces that require strong supports in the building's ferroconcrete structure. The loft and the skylights are a huge ballast, supported, unevenly, by a construction whose 'tripod' shape is almost identical with Krakowiak's sculpture. The 'gaps' in the ceilings, compensated for by thicker walls, mean greater internal stress and greater effort for the building's structure. The unevenly spaced out props, which also serve as three partitions, make the exhausting, silent struggle with mass and gravity even harder, demonstrating that although the original and added parts of the building seem harmonised, they do not behave as a single system. While the use of ferroconcrete means that the hoisting volume does not need to be radically proportional to the hoisted cubages, the whole visible in a sectional drawing does not seem to correspond with an intuitive perception of tectonics as a correct distribution of forces in the construction.

Being based on the visible, or realised, this perception may, of course, have little to do with the reality of the construction. That is the case with the skylights: while suggesting what is above the glass panels, they bar access to that space. In no way do they explain the exceptional state and quantity of the air trapped between the two glass surfaces, nor the large-scale construction that supports it. What is visible functions as a membrane not only for sounds — letting them through both ways — but also for the architectural realities. Just like with the glazed-iron ceiling of the Bon Marché department store, the skylight's invisible, metal structure is special because it is unobvious. The Zachęta room's glazed ceiling is basically a version of the T-bar ceiling; the sheets of glass simply rest on the metal channels and can be removed or replaced at will. Above them is another grid, anchored firmly in the ferroconcrete rim, which — though connected to the channels only at the sides and using small hooks — in fact bears its whole weight and distributes it sideways. From today's point of view, it would be easier to solve the whole thing by connecting both surfaces to a lightweight grid. Above the system remains an empty space and only much further up, using

a three-dimensional steel construction of a different kind, a pitched skylight has been installed.

This so called concrete room holds more surprises. Perhaps the small gantry installed right beneath the ceiling is a tribute to the unrealised project of the Zachęta's extension, proposed in 1958 by Oskar Hansen, Lech Tomaszewski and Stanisław Zamecznik. Michał Libera notes the doubling of the walls and ceiling, finding it somewhat similar to an acoustic solution known as 'space within space', which serves to isolate a space in terms of sound. Although this is hardly what the designers had in mind, it creates ample scope for the artist who, struggling with the space's poor acoustics, tries to make the recipients aware of its unique character through sound-based procedures.

Krakowiak says that she tries to look at buildings as an architect would, thinking in terms of sections in order to find interesting moments: voids, architectural discontinuities, constructional inconsistencies. She uses expert knowledge and tools to identify not errors but potentials, to go beyond the building's entrenched habits, discover its new life, or, as in the case of the Zachęta building, to show one of its unique aspects. She complements the building's image by making recipients aware of the inaccessible, helping us to experience its structure as a uniform system, a whole. And while her sound sculpture allows visitors to experience architecture differently, the building's secret life resounds more loudly twenty four hours a day.